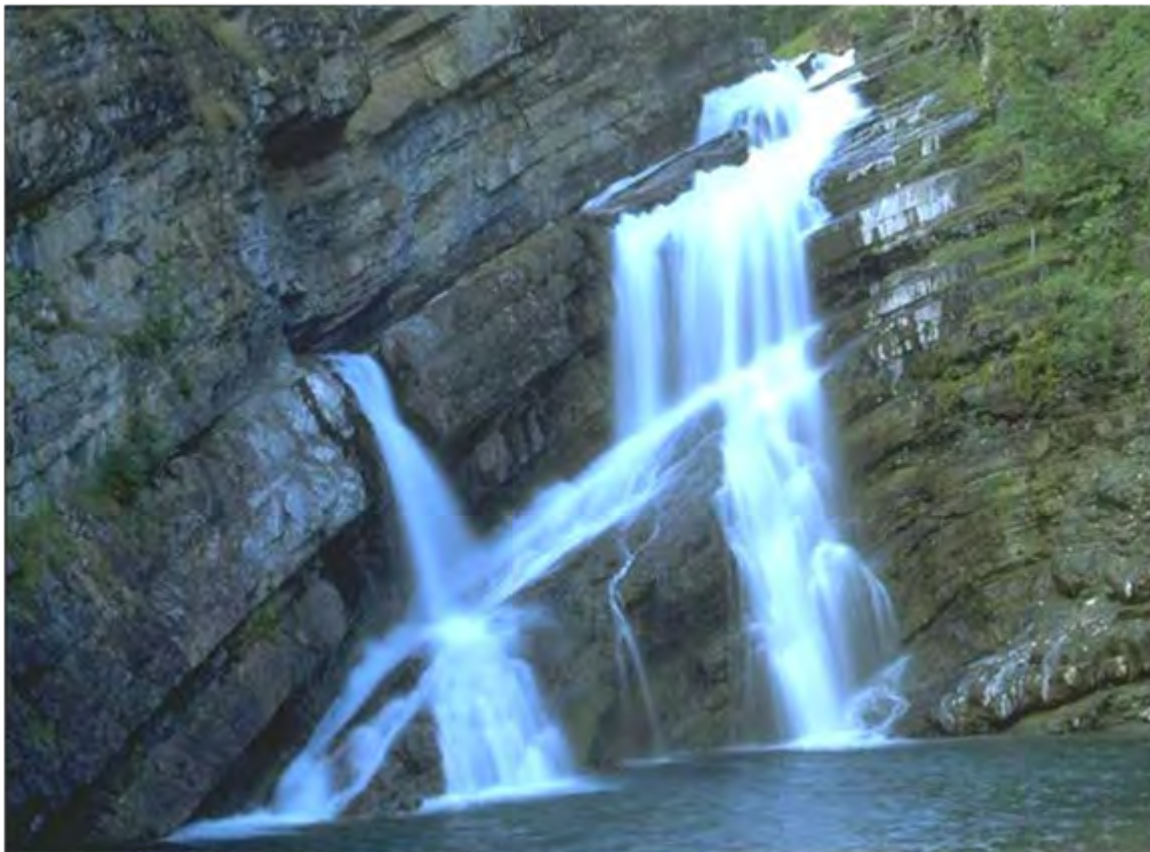


# PHASE II INVESTIGATION SOUTH MUNCIE INDUSTRIA CENTER

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MUNCIE, DELAWARE COUNTY, INDIANA 47302  
MUNDELL PROJECT NO. M20032  
DECEMBER 30, 2022



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# PHASE II INVESTIGATION SOUTH MUNCIE INDUSTRIA CENTER

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MUNCIE, DELAWARE COUNTY, INDIANA 47302

Prepared for:

Mr. Brad Bookout  
Director of Municipal & Economic Affairs  
Delaware County Redevelopment Commission  
1208 West White River boulevard, Suite 136  
Muncie, IN 47303

December 30, 2022

Prepared by:

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December 30, 2022

Mr. Brad Bookout  
Director of Municipal & Economic Affairs  
Delaware County Redevelopment Commission  
1208 West White River Boulevard, Suite 136  
Muncie, IN 47303


RE: Phase II Investigation  
**South Muncie Industria Center**  
Muncie, Delaware County, IN  
MUNDELL Project No. M20032

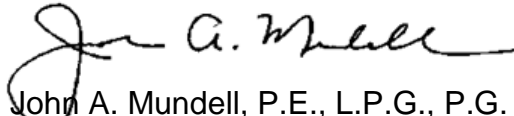
Dear Mr. Bookout:

Mundell & Associates, Inc. (MUNDELL) has completed the attached Phase II investigation for the above-referenced Industria Center in accordance with MUNDELL Proposal No. P20045.R2 and Change Order P20045.R2-CO1. This Phase II investigation was completed in order to characterize and evaluate potential environmental concerns identified in MUNDELL's *South Muncie Industrial Center Environmental Review* report dated July 31, 2020. The sampling activities completed during this investigation addressed a portion of the Sampling and Analysis Plans (SAPs) developed by MUNDELL's in the aforementioned initial environmental review. The results of this investigation and corresponding evaluation are presented herein.

We appreciate the opportunity to provide you with this report and look forward to working with you on future projects. In the meantime, if there are any questions regarding the information contained in this letter, or if we can be of further assistance, please contact MUNDELL at (317) 630-9060, [Ljohnstone@MundellAssociates.com](mailto:Ljohnstone@MundellAssociates.com), or [jmundell@MundellAssociates.com](mailto:jmundell@MundellAssociates.com).

Sincerely,  
**MUNDELL & ASSOCIATES, INC.**

  
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/ljj

MUNDELL & ASSOCIATES, INC.



## EXECUTIVE SUMMARY

The Delaware County Redevelopment Commission (the County) requested that Mundell and Associates, Inc. (MUNDELL) proceed with Phase II investigation activities based on MUNDELL's *South Muncie Industrial Center Environmental Review* report dated July 31, 2020. The South Muncie Industria Center ("the Industria Center") consists of a mixed commercial/industrial setting located southwest of Muncie, Indiana. MUNDELL's initial environmental review was conducted on behalf of the County in response to the community's concerns relating to potential environmental impacts of the Industria Center due to its history of commercial and industrial activity. MUNDELL's initial environmental review identified several potential environmental concerns related to the Industria Center based on the review of environmental databases, regulatory information, interviews, topographic maps, aerial photography, and other related items. Accordingly, MUNDELL developed ten (10) Sampling and Analysis Plans (SAPs) to address the potential concerns and identify the presence or absence of area-wide environmental impacts.

Phase II investigation activities were conducted during eight (8) field mobilizations from October 2021 through April 2022 addressing to varying degrees six (6) of the ten (10) SAPs. In total, 36 surficial soil samples, six (6) sediment samples, three (3) surface water, and twenty (20) private well groundwater samples were submitted for laboratory analysis along with 138 in-situ surficial soil samples analyzed using a field portable X-Ray Fluorescence (XRF) device. MUNDELL collected these samples on 43 private properties, in the public right-of-way, and along a legal drain. All samples were analyzed for RCRA 8 Heavy Metals, with a portion of the samples analyzed for lithium. Sediment, surface water and groundwater samples were analyzed for volatile organic compounds (VOCs), with a portion of groundwater samples also analyzed for either polychlorinated biphenyls (PCBs) or per- and polyfluoroalkyl (PFAS).

Relative to the evaluation of the Industria Center's Southwest Drainage Basin and a historical landfill situated in the Southwest Drainage Basin, the soil, sediment, and/or surface water sampling results:

- 1) did not reveal the presence of consistent, area-wide heavy metal contamination above applicable residential screening levels;
- 2) did not identify VOC contamination; and
- 3) did not identify downstream leaching or migration of heavy metal or VOC contamination.

Pertaining to the concern for historic atmospheric deposition of heavy metals surrounding the Industria Center, the surficial soil sampling results:



- 1) did not reveal the presence of consistent, area-wide heavy metal contamination above applicable residential screening levels pertaining to public health in the areas adjacent to the Industria Center.
- 2) However, trends of elevated surficial soil lead concentrations compared to published background urban Indiana levels were identified to the northeast of the Industria Center and in a retention pond/drainageway of the Southwest Drainage Basin. While elevated, these lead concentrations were still generally below residential screening levels pertaining to human health exposure criteria.

Testing results from groundwater sampling indicated that only lead was detected above the applicable residential groundwater tap screening levels (at seven of the twenty homes) of the properties analyzed for heavy metal, VOC, PCB, and/or PFAS groundwater contamination. Based on MUNDELL's evaluation which considered potential lead sources and transport mechanisms, these lead exceedances appear to be more indicative of lead from corrosion in piping and the private well water distribution systems as compared to a groundwater lead plume. However, further data is needed to confirm this assessment.

MUNDELL recommends additional private well sampling and/or groundwater monitoring to help determine the source of lead detections in the private wells. In addition, MUNDELL recommends the County conduct community outreach to raise awareness and provide citizens with resources to address two environmental occurrences which appear to be relevant to portions of the surrounding community, namely:

- 1) Elevated surficial soil lead concentrations are often found in urban regions as compared to background levels, especially closer to the City center and near industrial areas; and
- 2) Households relying on private wells tend to have an increased risk of high lead in drinking water as compared to municipally supplied households due to the lack of treatment/monitoring, groundwater corrosivity, and pipe corrosion.

Lastly, MUNDELL recommends third-party oversight of land-use, on-going remediation, and industrial activity in the Industria Center to monitor the potential for future environmental impacts in the vicinity of the Industria Center.



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## 1.0 BACKGROUND

The South Muncie Industria Center (“the Industria Center”) consists of a mixed commercial/industrial setting of about 1,040 acres (1.63 square miles) located southwest of Muncie, Indiana. The Industria Center is mainly surrounded by residential and agricultural land to the west and south; commercial land and a golf course to the east; and agricultural, residential, and commercial land to the north. A Vicinity Map is presented in **Figure 1** and an Industria Center Area Map in **Figure 2**.

In 2020, MUNDELL conducted an environmental review of the Industria Center in response to a request from the Delaware County Redevelopment Commission (the County) and local concerned citizens. In particular, the community had concerns related to the potential for environmental impacts in the vicinity of the Industria Center due to its long history of commercial and industrial activity. Accordingly, MUNDELL completed its review and issued its findings and recommendations in its *South Muncie Industrial Center Environmental Review* report dated July 31, 2020, herein referred to as MUNDELL’s 2020 Initial Environmental Review (or “2020 IER”) (MUNDELL, 2020). Key findings from MUNDELL’s initial report can be summarized as follows:

- 1) Based on the review of environmental databases, regulatory information, interviews, topographic maps, aerial photography, and other related items, MUNDELL identified several potential environmental concerns related to the Industria Center that could impact the surrounding properties.
- 2) It was often the case that the potential environmental concern was not linked to one property, but to multiple properties within the Industria Center.
- 3) The review process focused primarily on the following contaminants of concern (COCs): heavy metals, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl (PFAS), and volatile and semi-volatile organic compounds (VOCs).
- 4) MUNDELL identified ‘overarching’ potential environmental concerns based on:
  - a. Sources: Property location and history;
  - b. COCs;
  - c. Considering atmospheric, hydrologic, and geologic conditions;
  - d. Considering transport mechanisms of contaminants in the environment; and
  - e. Exposure pathways.
- 5) MUNDELL developed ten (10) Sampling and Analysis Plans (SAPs) to address the specific issues identified in the ‘overarching’ concerns. These SAPs would provide critical data in an effort to identify the potential presence or absence of area-wide impacts.

This report documents the implementation of MUNDELL’s recommended SAPs to address the concerns highlighted in the 2020 IER.





## 2.0 INDUSTRIA CENTER INVESTIGATION

### 2.1 Addressing SAPs

The County requested MUNDELL to proceed with environmental investigations in response to MUNDELL's findings related to the Industria Center. As such, MUNDELL prepared a scope of work to address a portion of the SAPs prepared in its 2020 Initial Environmental Review. The goal of the current investigation was to address the following SAPs to varying degrees:

- SAP-A: Evaluate surface water discharge and heavy metals deposition along southwest drainage channel pathways (overarching concern: Southwest Drainage Basin).
- SAP-B: Evaluate surface water discharge relative to VOC's (overarching concern: Southwest Drainage Basin).
- SAP-C: Former landfill (overarching concern: Southwest Drainage Basin).
- SAP-E: Historic atmospheric deposition (overarching concern: historic toxic releases into the atmosphere).
- SAP-H: Private well monitoring (overarching concern: potential groundwater contamination).

A detailed description of each SAP and overarching concern can be found in MUNDELL's 2020 IER. The ultimate purpose of each SAP was to investigate areas with an increased risk for environmental impacts due to historical commercial/industrial activity in the Industria Center which may impact human health or the ecology. It should be noted that the areas under investigation did not have known or documented environmental impacts prior to the investigation but were identified as potential concerns during MUNDELL's 2020 IER. The investigation's sampling activities focused on potential surficial soil, surface water, and groundwater impacts. Industria Center related investigation activities are detailed in the following sections.

### 2.2 Property Access

The sampling activities were conducted primarily on private property or in public right-of-ways (ROWs). As such, a significant effort was undertaken to acquire property access on residential, commercial, and industrial land in the Industria Center and surrounding area. Information packets (flyer, explanation letter, and/or access agreements) were prepared and sent to 356 property owners and/or current occupants. This allowed MUNDELL to access 43 private properties to



collect samples or conduct screening. In addition, multiple samples were collected in the public ROW and a legal drain.

In general, MUNDELL was able to access key properties related to each SAP and received relatively positive feedback from the surrounding community which were both needed to proceed with the SAP investigation. However, property access related issues did alter the scope of the investigation. In particular, the following issues were encountered:

- 1) SAP-C was meant to address the property at 4500 BLK S Hoyt Ave where a historic, unregulated landfill was located based on review of publicly available documentation. This property is herein referred to as the 'Former Franklin Landfill'. However, property access was not obtained to conduct investigations on the property itself. While this prevented certain portions of the planned SAP, SAP-C was still able to be addressed to a certain extent by sampling the surrounding area to test for evidence of contaminant migration from the Former Franklin Landfill property to nearby properties.
- 2) The multitude of properties contacted and included in the SAPs led to extensive communication efforts. This partnership and engagement with the community was necessary for the success of the investigation, but led to a significant amount of unanticipated work activities and associated costs. As such, the planned SAPs were adjusted to maximize the efficiency and impact of data collection for each mobilization considering the properties which had access agreements in-place and were available for sampling.
- 3) Site conditions at certain properties prevented the efficient collection of samples across properties. As such, in-field adjustments to the initial sampling plan were sometimes made considering field conditions, accessibility, and time constraints.

In addition to obtaining property access, MUNDELL sought permission from private property owners where samples were collected to include their street address in this public report. A majority of property owners agreed to release their address. For the small portion of property owners who did not agree, their address has been anonymized in the corresponding tables of results (**Table 2**, **Table 3**, and **Table 6**) out of respect for their individual concerns.

### 2.3 Sampling Activities and Results

During this phase of the investigation, MUNDELL mobilized multiple times addressing the various SAPs. This multi-stage approach allowed MUNDELL to actively evaluate results during the investigation to guide further subsequent sampling efforts and was helpful in addressing logistical challenges present in such a large-scale investigation.



### 2.3.1 October 2021: Soil Sampling

MUNDELL mobilized on October 20, 2021, to collect thirteen (13) surficial soil samples mainly addressing SAP-A and SAP-C at select locations indicated on **Figure 3**. Relative to SAP-A, the sampling locations were selected based on current and historical drainage pathways and floodplain areas associated with the Southwest Drainage Basin (MUNDELL, 2020). Relative to SAP-C, sampling locations were placed adjacent to the Former Franklin Landfill property and aligned with an apparent historical drainage pathway along the western portion of the property which could provide a source for surficial soil contamination (if present) to be tracked off-site (MUNDELL, 2020).

A steel hand trowel or steel shovel was used to excavate from the surface to a depth of approximately 6-inches. In some cases, excavation was only able to proceed to 3-in to 4-in due to the soil conditions. Vegetative material (e.g., roots, leaves, plant material), gravel, and/or other debris were removed to the extent possible. Soil was collected from this upper soil profile, homogenized in a plastic bag, and placed in a 4-oz glass sampling jar. Each soil sample was uniquely labeled, placed on ice in a cooler, and submitted to Pace Analytical (Pace) in Indianapolis, Indiana under standard chain-of-custody procedures.

Samples were submitted for analysis of eight (8) heavy metals typically associated with industrial activities (RCRA 8 Heavy Metals) including: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Soil samples were also analyzed for lithium due to local concern and the presence of battery recycling operations in the Industria Center. Heavy metals were analyzed via U.S. Environmental Protection Agency (U.S. EPA) Method 6010 (and U.S. EPA Method 7471 for mercury). After collection of the soil sample, the excess soil was returned to the sampled location, clean topsoil was added if necessary, and the vegetative material was restored.

For quality assurance and quality control (QA/QC) purposes, duplicate and matrix spike/matrix spike duplicate (MS/MSD) soil samples were also collected. An equipment blank sample was produced by pouring distilled water over the sampling equipment into a laboratory provided container and submitted for analysis. The hand trowel or shovel was decontaminated using phosphate-free detergent and rinse water following each soil sampling location.

#### 2.3.1.1 October 2021: Surficial Soil Analytical Results

Surficial soil sampling results are summarized in **Table 1**. Laboratory certificates of analysis and chains of custody are provided in **Appendix A**. The sampling locations and the corresponding lead results are visually represented in **Figure 3**. Based on laboratory analytical results, the four heavy metals cadmium, selenium, silver and mercury were not detected at the laboratory method detection limit for all samples collected during this mobilization. On the other hand, the five heavy metals arsenic, barium, chromium, lead and lithium were detected for each sample collected during



this mobilization. No chemical constituents were detected above the 2022 Indiana Department of Environmental Management (IDEM) Remediation Closure Guide (RCG) residential direct contact soil exposure screening level. However, arsenic was detected at two locations and lead at one location above the 2022 IDEM RCG Residential Soil Migration to Groundwater (R-MTG) screening level which indicates the potential to migrate to groundwater. Surficial soil analytical results are further discussed in **Section 3.0**.

### 2.3.1.2 October 2021: Geophysical Survey

A MUNDELL geophysicist mobilized on October 20, 2021, to map the surficial soils in the areas surrounding the SAP-A and SAP-C areas of interest using the CMD-Mini Explorer electromagnetic conductivity meter. This geophysical tool is a non-intrusive data gathering technique which allows for multi-depth profiling and mapping at the 0.8-ft, 1.6-ft, and 3.0-ft depth. The mapped 0 to 0.8-ft surficial soil profile is included in **Figure 4**. This geophysical survey was conducted with the intent of correlating surficial soil analytical results to soil variations which would then allow this technique to be employed later in the investigation as a screening tool to identify potential ‘hot zones’ and direct sampling activities. However, correlations between the mapped conductivity and heavy metals detected during this first mobilization were not readily apparent. As such, the use of this geophysical method as a screening tool was not employed during later stages of the investigation.

### 2.3.2 December 2021: XRF Soil Screening

On December 2, 3, and 6, 2021, MUNDELL directed the use of a field portable X-Ray Fluorescence (XRF) unit to conduct in-situ surficial soil screening in the vicinity of the Industria Center for the presence of RCRA 8 Heavy Metals. In total, 138 locations were analyzed at select locations as seen on **Figure 5**, with the XRF mainly addressing SAP-E, but also addressing SAP-A and SAP-C. Relative to SAP-A and SAP-C, XRF screening locations were selected along the historical drainage pathways and adjacent to the Former Franklin Landfill property in the Southwest Drainage Basin to compliment the surficial soil samples collected in October 2021 (MUNDELL, 2020).

Relative to SAP-E (i.e., which addressed concerns for historic atmospheric deposition of heavy metals), the ideal screening pattern for each residential property consisted of five (5) locations collected in a grid-type manner (U.S. EPA, 2002). In particular, the grid consisted of two (2) samples in the yard directly adjacent to the roadway, one (1) sample in the mid-front yard, one (1) sample in the mid-back yard, and one (1) sample in the backyard towards the property boundary. This sample grid was designed considering three potential sources of heavy metal in surficial soils:



- 1) Atmospheric deposition from commercial and industrial sources;
- 2) Deposition near the roadway from the vehicular traffic (e.g., from combustion of leaded gasoline or abraded tire material); and
- 3) Paint containing lead near the house (Davies, 1990; Fleming and Parle, 1977 as cited in Davies, 1990; IDEM, n.d.-b).

Since the focus of this investigation was to evaluate potential environmental impacts due to commercial/industrial activities rather than addressing environmental hazards which may be present at any given residential property not necessarily related to the nearby industrial activity, the sample grid was specifically designed to address only the first two potential sources of contamination (*i.e.*, related to atmospheric deposition and roadways servicing the Industrial Center). As such, no samples were collected in the immediate vicinity of a residential household structure. While the idealized grid consisted of five (5) samples per residential property, not all five (5) samples were collected at each property due to property access constraints, the size and/or orientation of structures on the property, and/or due to time constraints of sampling personnel. At minimum, at least one (1) sample directly adjacent to the roadway and at least one (1) sample in the residential property's yard were generally collected.

In-situ screening was conducted by technically qualified personnel using proper safety precautions. Personnel conducted screening using the Olympus/Vanta VCA model field portable XRF device (Serial No. 841443) in accordance with the manufacturer's instructions and U.S. EPA SW-846 Test Method 6200. A steel shovel was used to remove the upper vegetative layer (if present) and/or remove debris that may be present. Typically, this resulted in a screening depth between approximately 2-4 inches from the upper surface.

The tip of the XRF device was then placed on the soil, positioned such that the probe window was at a constant distance in close proximity to the soil but not directly touching the soil to prevent damaging or contamination of the probe window. The XRF device was then initiated by the field personnel, exposing the in-situ soil to primary radiation and detecting fluorescent and backscattered x-rays to quantitatively analyze for the presence of RCRA 8 Heavy Metals (U.S. EPA, 2007). The measurement time was typically about 50 seconds at each location. After completion of XRF screening, the sod or soil was restored to its existing state and MUNDELL documented the location with a global positioning system (GPS), photograph documentation, and typically marking the location with utility marking paint. A Trimble ProXRT with OmniSTAR differentially corrected GPS was used which offers sub-foot resolution under normal operating conditions.

For QA/QC purposes, the following standard operating procedures were implemented during the XRF field activities. The XRF energy calibrations were completed at the following frequencies at a minimum:



- 1) At the beginning of each workday, before any screening.
- 2) After changing XRF batteries or after the instrument is shut down.
- 3) At the end of the workday, after the completion of all screening.

Recalibration generally occurred at least once when ambient air temperature changed by 10°F or more.

In addition, instrument blanks were completed at the following intervals at a minimum:

- 1) At the beginning of each workday, before any screening.
- 2) Once per every twenty (20) samples (which was at least every 4 to 5 hours).
- 3) At the end of the workday, after the completion of all screening.

Field duplicate samples were completed every twenty (20) screening locations per day. A precision replicate was completed once per day which consisted of screening one location seven (7) times. The shovel was decontaminated using phosphate-free detergent and rinse water following each soil screening location. Lastly, as indicated on **Table 2**, various locations were screened on the surface without any excavation due to the absence of vegetation or debris. These locations serve, to a degree, as QA/QC equipment blank screening locations.

### 2.3.2.1 XRF Screening Results

XRF soil screening results are summarized in **Table 2**. The XRF raw data output is provided in **Appendix B**. The sampling locations and the corresponding lead results are visually represented in **Figure 5**. Based on the XRF analyses, chromium and mercury were not detected at all locations screened. Barium was detected at all screening locations; lead and silver were detected at several locations. However, barium, lead, and silver detections were below 2022 IDEM RCG R-MTG and residential direct contact soil exposure screening levels. Cadmium was only detected at one screening location where it exceeded the 2022 IDEM RCG residential direct contact soil exposure screening level. Selenium was detected at several screening locations, with a portion exceeding the 2022 IDEM RCG R-MTG screening level. Arsenic was detected at sixteen (16) locations, with five (5) exceeding the 2022 IDEM RCG R-MTG screening level, nine (9) exceeding the 2022 IDEM RCG residential direct contact soil exposure screening level, and two (2) exceeding the 2022 IDEM RCG industrial direct contact soil exposure screening level.

### 2.3.2.2 XRF Screening Limitations

XRF is a rapid, minimally invasive screening tool which allowed MUNDELL to efficiently screen a large quantity of locations to characterize heavy metals in the surficial soils in the vicinity of the Industria



Center (U.S. EPA, 2017). However, the XRF accuracy generally decreases with increasing soil heterogeneity (U.S. EPA, 2007; U.S. EPA, 2017). As such, the XRF is not as accurate when used on in-situ soils where sample homogenization is uncontrolled versus screening soil samples which are collected and homogenized (U.S. EPA, 2007; U.S. EPA, 2017). Accordingly, the use of XRF to screen in-situ soils is typically considered merely a ‘screening’ tool as compared to samples submitted for laboratory analytical analysis (U.S. EPA, 2007).

However, confirmatory soil samples may be used to validate the XRF’s degree of accuracy and precision (U.S. EPA, 2007). In particular, XRF results can be considered screening level data if a linear least squares regression analysis of XRF results compared to laboratory analytical results equates to a correlation coefficient (r) value of 0.7 or greater (U.S. EPA, 2007).

### 2.3.2.3 January 2022: Confirmatory Soil Sampling

In accordance with U.S. EPA SW-846 Test Method 6200, one soil sample was submitted for laboratory analysis per every twenty (20) XRF screening locations analyzed. In addition, MUNDELL submitted confirmatory soil samples for laboratory analysis corresponding to fourteen (14) of the highest XRF lead results and for ten (10) of the sixteen (16) XRF locations which detected arsenic. Lastly, confirmatory samples were submitted for a range of lead and arsenic results spanning from non-detect levels up to the highest detection levels of the investigation. MUNDELL returned to the XRF screening locations and collected confirmatory soil samples on January 6 and January 7, 2022. At 20 of the 22 confirmatory sampling locations, MUNDELL was able to locate the exact XRF screening location and remove the same portion of sod and/or soil as done during the XRF screening location. At the two locations where the exact XRF location was not identified, a surficial soil sample was collected at the approximate same location based on GPS coordinates and photographic documentation.

Surficial soil samples were collected at each location, homogenizing the surficial soil profile from the surface to a depth of 6-inches following the same sampling procedures and quality assurance protocols as done during the October 2021 sampling event (refer to **Section 2.3.1** for further description). In addition, it should be noted that during this January 2022 mobilization, one (1) surficial soil sample was collected related to SAP-A and not related to XRF confirmatory soil sampling (sample ID “A49S”).

### 2.3.2.4 January 2022: Confirmatory Soil Sampling Results

Confirmatory surficial soil sampling results are summarized in **Table 3**. Laboratory certificates of analysis and chains of custody are provided in **Appendix A**. The sampling locations and the corresponding lead results are visually represented in **Figure 6**. With the exception of sample “A49S”,



the primary purpose of these samples was to validate the XRF analytical results. As such, MUNDELL conducted a linear regression analysis of XRF versus laboratory results for lead and arsenic. The regression analysis for lead resulted in an r-value of 0.76 and a slope of 1.47 with a 99% confidence interval of [0.93, 2.02]. With zero (0) not within the slope's 99% confidence interval and a statistical  $p$ -value  $\ll 0.005$ , the regression analysis confirms the linear relationship with a high degree of confidence. As such, the XRF results can be used as screening level data and provide reasonable estimates of laboratory analytical results for lead (Devore, 2012, p. 496-497; U.S. EPA, 2007).

Similarly, a regression analysis for the analyte arsenic resulted in an r-value of 0.82 and a slope of 1.01 with a 99% confidence interval of [0.44, 1.58]. With zero (0) not within the slope's 99% confidence interval and a statistical  $p$ -value  $\ll 0.005$ , the regression analysis confirms the linear relationship with a high degree of confidence. The regression analysis for lead and arsenic are included in **Figures 7** and **8**, respectively.

It should be noted that due to the low regulatory screening levels as compared to the XRF detection limits for arsenic, the laboratory detected arsenic at all of the confirmatory sampling locations where the XRF did not detect arsenic (which occurred at twelve (12) sampling locations). Of these twelve locations, the average laboratory concentration of arsenic was 9.1 mg/kg. Moreover, review of XRF duplicate samples indicates similar XRF precision capabilities pertaining to arsenic detection. As such, it appears that the XRF results can provide reasonable estimates of arsenic when it is detected. However, given the apparent XRF precision limitations pertaining to low-level arsenic detections, "non-detect" XRF arsenic readings do not necessarily correlate to "non-detect" laboratory analytical results. Surficial soil analytical results are further discussed in **Section 3.0**.

### 2.3.3 January 2022: Surface Water Sampling

On January 6, 2022, MUNDELL collected three (3) surface water grab samples mainly addressing SAP-A and SAP-B, both of which relate to the potential concerns of the Southwest Drainage Basin. In particular, one sample was collected upstream of the retention pond/wetland area located at 4300 and 4400 BLK S Hoyt Ave, Parcel numbers 1130427009000 and 1130427008000 (herein referred to as the 'Retention Pond'), one sample from the Retention Pond, and one sample from Heath Ditch located downstream of the Retention Pond (Beacon™, 2022; MUNDELL, 2020; U.S. Fish and Wildlife Service [USFWS], 2020). These samples were meant to test for on-going releases to the surface water whether from industrial point-sources or from leaching of soil contamination.

Each surface water grab sample was collected with a separate laboratory-provided plastic container and poured directly in a container with the appropriate preservatives for the constituents analyzed, placed on ice in a





cooler, and submitted to Pace under standard chain-of-custody procedures. Surface water samples were submitted for the analysis of RCRA 8 Heavy Metals and lithium via U.S. EPA Method 6010 (and U.S. EPA Method 7470 for mercury) along with the analysis of VOCs via U.S. EPA SW-846 Test Method 5030/8260.

For QA/QC purposes, duplicate and MS/MSD surface water samples were also collected. A laboratory provided trip blank was placed in the sample cooler containing the surface water samples.

### 2.3.3.1 Surface Water Analytical Results

Surface water grab sampling results are summarized in **Table 4**. Laboratory certificates of analysis and chains of custody are provided in **Appendix A**. The sampling locations and the corresponding lead results are visually represented in **Figure 9**. Based on laboratory analytical results, all constituents were below detection limits with the exception of barium which was detected below all drinking water maximum contaminant or screening levels. Surface water analytical results are further discussed in **Section 3.0**.

### 2.3.4 January 2022: Sediment Sampling

On January 6, 2022, MUNDELL collected six (6) sediment samples at the bottom of drainage pathways mainly addressing SAP-A and SAP-B, both of which relate to the potential concerns of the Southwest Drainage Basin. Two (2) samples were collected in a drainage way upstream of the Retention Pond. One (1) sample was collected from Heath Ditch located downstream of the Retention Pond. Three (3) samples were collected in the Retention Pond area.

A storm drain inlet was observed at the southwest corner of the Retention Pond which discharges to Heath Ditch per review of local drainage patterns and per discussions with citizens in the area. MUNDELL observed a weir directly upstream of this inlet. As such, one of the Retention Pond samples was collected downstream of the weir adjacent to the storm drain inlet, one was collected adjacent and upstream of the weir, and one was collected further upstream of the weir near the banks of the Retention Pond. It should be noted that both the Muncie Sanitary District and the County Surveyor indicated to MUNDELL that they were not aware of this storm drain or storm drain inlet.

Each sediment sample was collected using a stainless-steel hand trowel to scoop sediment along the bottom surface of the drainage ditch or Retention Pond, scooping in the upstream direction when possible. When needed, the trowel was attached to a pole to collect the sediment sample. Care was taken to avoid loss of fine sediment to the extent possible. Each sediment sample was retained for laboratory analysis in accordance with U.S. EPA SW-846 Test Method 8260 using 5035 vial kits. In addition, sediment from each sample was placed in a 4-oz glass sampling jar. All sediment samples were placed on ice in a cooler and submitted to Pace under standard chain-of-custody procedures for the analysis of RCRA 8 Heavy Metals and lithium via U.S. EPA Method 6010



(and U.S. EPA Method 7471 for mercury) along with the analysis of VOCs via U.S. EPA SW-846 Test Method 8260.

For QA/QC purposes, duplicate and MS/MSD sediment samples were also collected. A laboratory provided trip blank was placed in the sample cooler containing the sediment water samples. An equipment blank sample was produced by pouring distilled water over the sampling equipment (hand trowel and pole). The hand trowel was decontaminated using phosphate-free detergent and rinse water following each soil sampling location.

#### 2.3.4.1 Sediment Analytical Results

Sediment sampling results are summarized in **Table 5**. Laboratory certificates of analysis and chains of custody are provided in **Appendix A**. The sampling locations and the corresponding lead results are visually represented in **Figure 10**. Based on laboratory analytical results, the four heavy metals cadmium, selenium, silver, mercury, and all VOCs were not detected at laboratory method detection levels during this mobilization. On the other hand, the five heavy metals arsenic, barium, chromium, lead, and lithium were detected for each sample collected during this mobilization. No constituents were detected above the 2022 IDEM RCG residential direct contact soil exposure screening level. However, arsenic was detected above the 2022 IDEM RCG R-MTG screening level at one sampling location which indicates the potential for the constituent to migrate to groundwater.

It should be noted that due to a laboratory oversight, sediment sample A-47-sed and the corresponding MS/MSD were not analyzed for mercury. It should also be noted that an extensive evaluation of the potential effects of sediment chemical concentrations on ecological and/or associated human food chain threats was beyond the scope of this investigation. Sediment analytical results are further discussed in **Section 3.0**.

#### 2.3.5 April 2022: Private Well Groundwater Sampling

On April 6 and 7, 2022, MUNDELL collected twenty (20) groundwater grab samples from private wells (mostly residential) mainly addressing SAP-H and SAP-C. Samples were collected at properties southwest of the Industria Center (expected cross-gradient groundwater flow), west of the Former Franklin Landfill (expected downgradient groundwater flow); west of the Industria Center (expected downgradient groundwater flow); and north-northwest of the Industria Center (expected downgradient groundwater flow) (Korinek, 2014; MUNDELL, 2020).

Prior to mobilizing, MUNDELL contacted each property owner to coordinate sampling activities, gather more information about the well, and determine the best sampling location to bypass any filters or water softeners. In total, 16 of 20 samples were taken from a location which the property owner indicated was either always or temporarily bypassing the water softener and/or filter. One (1)



property did not know if the water was directed through a water softener or filter prior to reaching the sampling location. At three (3) properties, the water passed through a water softener prior to reaching the sampling spigot. No aerator was present on any of the sampling spigots or connection points. Descriptions of the sampling locations are included on **Table 6**.

MUNDELL purged the first two properties with a ¾-in 75-ft expandable hose. However, this hose had a flow restrictor which limited the volumetric flow rate and consequently the total purge volume. As such, the MUNDELL purged the remaining 18 properties with a larger 5/8-in 50-ft garden hose with no restrictor. In-field measurements by MUNDELL indicated this change increased the flow rate from about 1.5 gallons per minute (gpm) to about 5.75 to 7 gpm. The first two properties were purged for 20 minutes, while the remaining properties were typically purged for 15 minutes. The purge time is included in **Table 6**.

After purging, the hose was removed from the spigot and the water pressure was decreased to a constant flow rate. Each groundwater grab sample was collected directly from the spigot into laboratory-provided containers with the appropriate preservatives for the constituents analyzed, placed on ice in cooler, and submitted to Pace under standard chain-of-custody procedures. The sampling containers did not touch any part of the spigot/faucet. All groundwater grab samples were submitted for the analysis of RCRA 8 Heavy Metals via U.S. EPA Method 200.8 (and EPA Method 245.1 for mercury) for drinking water along with the analysis of VOCs via U.S. EPA Method 524.2 for drinking water.

Samples at ten (10) properties located adjacent to and/or in the direction of groundwater flow from the Former Franklin Landfill (*i.e.*, downgradient from the landfill) were submitted for the analysis of PCBs via U.S. EPA Method 505 for drinking water. One (1) additional property to the northwest of the Industria Center, downgradient from a potential source of PCB groundwater contamination was also submitted for PCB analysis. Lastly, one property west of the Industria Center was submitted for the analysis of PFAS via U.S. EPA Method 537.1 for drinking water.

For QA/QC purposes, duplicate and MS/MSD groundwater samples were also collected. A laboratory provided trip blank and field blank was placed in the sample cooler and analyzed for PFAS.

### 2.3.5.1 Private Well Groundwater Analytical Results

Groundwater sampling results are summarized in **Table 6**. Laboratory certificates of analysis and chains of custody are provided in **Appendix A**. The sampling locations and the corresponding lead results are visually represented in **Figure 11**. Based on laboratory analytical results, the following constituents were below detection limits for all samples collected during this mobilization: chromium, selenium, and mercury. In addition, PCBs and PFAS were not detected for all samples analyzed for those two constituents. VOCs were below detection limits at all properties except for



one property which had detections of bromodichloromethane, chloroform, and dibromochloromethane. These VOC detections were below the 2022 IDEM RCG Residential Groundwater Tap screening levels (R-GTap).

Arsenic, barium, cadmium, selenium, and silver were detected at one or more properties but were detected below the 2022 IDEM RCG R-GTap. Lead was detected at fourteen (14) of the twenty (20) properties, with detection levels at seven (7) properties above the IDEM RCG R-GTap for lead. It should be noted that the field duplicate sample had a large relative percent difference (151%) for lead indicating an apparent lack of precision relative to the lead analytical results (U.S. EPA, 2014). Private well groundwater analytical results are further discussed in **Section 3.0**.



### 3.0 DISCUSSION

During this Phase II investigation, multiple samples were collected from varying media in the areas surrounding the Industria Center. Each sample was a part of an SAP that was previously developed to address the potential presence (or absence) of area-wide environmental impacts linked to the historical Industria Center activities which may affect the local community. Given the wide scope of work and multitude of samples collected, care must be taken to properly characterize the results. In particular, the following issues must be considered when evaluating the data:

- 1) *SAP Limitations – Individual Properties:* While samples were collected at over 40 properties, neither the quantity of samples or the sample design was meant to provide a comprehensive or complete characterization of any individual property. As such, each sample should be considered relative to the goal of each SAP and the ultimate goal of the investigation.
- 2) *SAP Limitations - General:* MUNDELL developed the SAPs based on its professional experience and judgement after extensive review of the Industria Center and considering transport mechanisms of the COCs related to the Industria Center along with the potential exposure pathways (*i.e.*, whether the nearby population would ingest, inhale or come in dermal contact with the COCs). This type of judgmental sampling is an effective method to efficiently and cost effectively conduct initial environmental investigations (U.S. EPA, 2002). However, this methodology does have certain statistical limitations and the results must be evaluated recognizing the limitations of the dataset (U.S. EPA, 2002).
- 3) *Background Concentrations:* Some COCs, in particular heavy metals (*i.e.*, lead and arsenic), occur naturally in the environment at what is considered ‘background’ concentrations (Alloway, 1990b; Gerba, 2006). As such, the mere detection of some constituents must be considered relative to these ‘background’ concentrations in order to differentiate the source of the detected COC.
- 4) *Screening Levels:* Any detection of a contaminant must be evaluated with respect to its mobility in the environment and its ability to impact human health or ecology (*i.e.*, the fate of contaminants and exposure pathways). This potential risk was evaluated, in part, by comparing each chemical constituent to the appropriate risk-based screening levels for chemicals being tested in soil and water as set forth by IDEM. These screening levels are based on conservative, long-term exposure duration assumptions for a resident considering varying exposure routes developed by the U.S. EPA.

The following sections detail the methodical review and characterization of the sampling results considering the above criteria.



### 3.1 Property Notification

While the results should be considered in relation to the SAPs and overall objectives of the investigation, each property owner was provided with the results of the sampling activities conducted on their property. The results were included in a letter report briefly describing the investigation, the results, and providing further resources to reference if the property owner should desire to address the environmental conditions found at their specific property.

### 3.2 Surficial Soil Evaluation

Surficial soils were analyzed during the October and December 2021 mobilization and the January 2022 mobilization. The October 2021 samples were submitted for laboratory analysis, while the December 2021 samples were analyzed via the field portable XRF device. The January 2022 samples submitted for laboratory analysis were generally meant as ‘confirmatory’ samples to establish the precision of the XRF device. In total, 36 surficial soil samples were submitted to the laboratory for analysis and 138 locations were analyzed with the XRF (not including QA/QC samples). As indicated in **Section 2.3.2.4**, given the high degree of correlation between the XRF and confirmatory laboratory samples, the XRF results can be utilized to guide the characterization of screened areas for lead and to an extent arsenic.

#### 3.2.1 Chemicals of Concern

A general summary of the October and December 2021 surficial soil analytical results is included in **Table 7**. The detected concentrations were consistently low and/or non-detect compared to the applicable soil screening levels for the following chemical constituents: barium, cadmium, chromium, lithium, selenium, silver, and mercury. The consistent and low detections indicate the concentrations are likely at or near background levels. As such, the data collected did not reveal the presence of a consistent, area-wide increase of these chemical constituents in surficial soil above background concentrations or applicable screening levels pertaining to public health in the areas adjacent to the Industria Center.

##### 3.2.1.1 Cadmium and Selenium Notes

It should be noted that cadmium was elevated above the 2022 IDEM RCG residential direct contact soil exposure screening level at one (1) location during the December surficial soil XRF analysis. However, multiple samples were collected at that property and in the adjacent area, and cadmium was not detected anywhere else. As such, it appears the cadmium detection is either a localized high level or an issue of precision relative to the XRF’s in-situ screening ability.



In addition, it should be noted that a small portion (less than 13%) of the XRF locations analyzed detected selenium concentrations above the 2022 IDEM RCG R-MTG screening levels. However, review of XRF duplicate samples indicates that the low screening level may be within the instrument's precision capabilities. In addition, one confirmatory laboratory sample was collected at an XRF screening location which had a selenium detection above the 2022 IDEM RCG R-MTG. The XRF analysis detected 12 mg/kg of selenium at the A30 sampling location, while it was below detection limits (<1.3 mg/kg) for the confirmatory laboratory sample. As such, the observed selenium R-MTG exceedances detected with the XRF device appear to be an issue of precision related to the XRF's capabilities. Moreover, exceedances over the R-MTG screening level indicate the potential for the constituent to migrate to groundwater and selenium was below detection levels at all homes sampled during the April 2022 private well sampling event. Furthermore, many homes around the Industria Center are connected to the public water supply. As such, the data collected did not reveal the presence of a consistent, area-wide increase of selenium in surficial soil above background concentrations or applicable screening levels pertaining to public health in the areas adjacent to the Industria Center.

### **3.2.1.2 Arsenic and Lead Notes**

The heavy metals arsenic and lead had a wider range of detected concentrations, with a portion of the sampling locations for each chemical being at least above the 2022 IDEM RCG R-MTG screening levels. However, only one (1) property had lead detections above the 2022 IDEM RCG residential direct contact soil exposure screening level (Sample E64S during the January 2022 confirmatory sampling), and only a small portion of sampling locations detected arsenic above the 2022 IDEM RCG residential direct contact soil exposure screening level. Nevertheless, it is beneficial to review the arsenic and lead results in further detail to help identify how these results compare to background concentrations and identify any trends which may be present.

## **3.2.2 Background Concentrations**

### **3.2.2.1 Lead**

While lead appears naturally in soils at low concentrations, its ubiquitous use in residential, commercial, and industrial activities for centuries has resulted in widespread surficial soil contamination particularly in urban regions (Alloway, 1990a; Davies, 1990; U.S. EPA, 2020d). Moreover, once released to surficial soil, it can be considered permanent given its inability to breakdown and its immobilization in the soil profile (Davies, 1990; U.S. EPA, 2020d). As such, lead releases occurring in years or even decades



past may still pose a threat to human health or the environment today (Davies, 1990; U.S. EPA, 2020d).

Known major sources of lead in surficial soils include but are not limited to: mining and smelting activities; vehicular combustion of leaded gasoline; and past use of lead containing pesticides on orchards (Davies, 1990; Frank et al., 1976; Merry et al., 1983). Studies have found that urban cities often have increased lead contamination in surficial soils with higher concentrations often found towards the center of the City and near industrial areas (Czarnowska et al., 1992; Czarnowska et al., 1983; Alloway, 1990a; Davies, 1990; Liberti & Pichtel, 1997, Pichtel et al., 1997). In addition, studies have found increased lead concentrations in surficial soils near urban residential homes and adjacent to roadways due to lead paint and vehicular traffic, respectively (Davies, 1990). A 1997 study completed in Muncie, Indiana, observed similar findings with increased lead concentrations in surficial soils towards the city center of Muncie and along major roadways (Liberti & Pichtel, 1997).

Considering the above factors, the sampling results were sub-divided into two categories for further evaluation:

- 1) *Directional*: Samples taken to the northeast versus those taken to the northwest, southwest, and southeast of the Industria Center (*i.e.*, closer to the city center versus further away, and in the predominant wind direction); and
- 2) *Roadway Classification*: Samples taken in the ditch of a residential property, directly adjacent to a major roadway versus those that are away from major roadways in the yard and/or are adjacent to a less traveled local street.

**Figure 12** includes the sampling areas relative to the directional split and the roadway classifications.

### 3.2.2.2 Lead Results Comparison

The sub-divided XRF analytical results between directional versus roadway classification are included in **Table 8a**. Also included in **Table 8a** are documented urban background surficial soil lead concentrations in two Indiana Cities (Indianapolis and Terre Haute) along with background surficial soil lead concentrations in rural Indiana based on a 2014 U.S. Geological Survey report (IDEM, 2014; IDEM, 2017a; Smith et al., 2014, as cited in IDEM, 2017a).

Review of the XRF data indicates the following observed trends:

*Areas with Lowest Lead Levels* – located northwest, southwest, or southeast of the Industria Center (not northeast) and adjacent to a local road or located in the yard away from a major roadway. These areas exhibit





concentrations similar to published background *rural* Indiana concentrations.

*Areas with Moderate Lead Levels* – located northwest, southwest, or southeast of the Industria Center (*not* northeast) and directly adjacent to a major roadway. These areas exhibit concentrations similar to background *urban* Indiana concentrations

*Areas with Moderate to High Lead Levels* – located to the northeast of the Industria Center, regardless of location relative to a roadway. These areas are elevated compared to background urban Indiana concentrations but are still all below 2022 IDEM RCG R-MTG and residential direct contact soil exposure screening levels.

Similarly, the sub-divided October 20, 2021 sampling results are included in **Table 8a**. Review of the October 2021 data indicates similar trends pertaining to those samples which are adjacent to a major roadway versus those which are away from the major roadways.

In addition, surficial soil samples from the October 2021, December 2021, and January 2022 sampling event were taken at locations specific to the Southwest Drainage Basin. The results at these sampling locations were also sub-divided based on their relative location (upstream/downstream) to the Retention Pond and their location on the drainage way channel or pond banks, and are included in **Table 8b**. Review of these drainage way subdivisions indicates the following trends:

*Areas with Lowest Lead Levels* – at locations which include:

- within the drainage channel downstream of Retention Pond;
- within the drainage channel upstream of the Retention Pond to the north; and
- within the drainage channel upstream of the Retention Pond to the south taken mid- to upper-bank.

These locations exhibit lead concentrations similar to background *rural* Indiana concentrations.

*Areas with Moderate to High Lead Levels* – at the sampling locations which include:

- along the banks of the Retention Pond; and
- within the drainage channel upstream of the Retention Pond to the south, taken along the lower-banks.

These locations exhibit elevated lead concentrations compared to background urban Indiana concentrations, but are still all below 2022 IDEM residential direct contact soil exposure screening levels.

This data analysis and comparison to background concentrations is further discussed relative to each SAP in **Section 3.4**.



### 3.2.2.3 Arsenic

Arsenic is another metal which is found in surficial soils and can be naturally occurring or due to anthropogenic sources (Alloway, 1990b; O'Neill, 1990; IDEM, 2004). Anthropogenic sources of arsenic releases include, but are not limited to pesticides, fertilizers (particularly phosphate fertilizers), treated wood, mining, and smelting (IDEM, n.d.-a; Minnesota Department of Health [MDH], n.d.; O'Neill, 1990). Naturally occurring background concentrations of arsenic in surficial soils in Indiana can be elevated and in some cases above risk-based screening levels (IDEM, 2004). As such, it is important to consider background concentrations of arsenic when evaluating sampling results.

### 3.2.2.4 Arsenic Results Comparison

A 2004 IDEM document reported that naturally occurring background concentrations of arsenic in Indiana surficial soil can range from about 2 mg/kg up to 13 mg/kg (IDEM, 2004). More recent studies of urban background surficial soil arsenic concentrations in two Indiana Cities (Indianapolis and Terre Haute) along with background surficial soil arsenic concentrations in rural Indiana have indicated similar findings (IDEM, 2014; IDEM, 2017a; Smith et al., 2014, as cited in IDEM, 2017a).

Included in **Tables 1** and **3** are the arsenic results for the October 2021 and January 2022 sampling activities. All surficial soil samples collected in October 2021 and January 2022 detected arsenic concentrations in surficial soils. However, comparison of these results to background concentrations indicate that all surficial soil samples were within the range of 'naturally' occurring concentrations found in Indiana soils except for samples collected at two (2) properties. Of these two (2) properties with detections above 'typical' background concentrations, both were below the maximum arsenic concentrations found in the Indianapolis and rural Indiana background studies. While these two properties are both located to the northeast of the Industria Center, the detected concentrations are relatively high compared to all other sampling locations. As such, the elevated arsenic concentrations detected at these two (2) properties appears to be localized occurrences relative to each specific property.

It should be noted that the January 2022 surficial soil sampling results were used in this data evaluation instead of the XRF results due to the XRF precision limitations relative to arsenic at low detection levels, as noted in **Section 2.3.2.4**. However, further review of the XRF and confirmatory lab results indicates the XRF data pertaining to arsenic can still be of use. In particular, the maximum arsenic concentrations at 11 of the 12 confirmatory sampling locations where the XRF analysis was 'non-detect' was 9.8 mg/kg, which is typical of background arsenic concentrations in Indiana soil. As such, it may be reasonable to infer that 'non-detect' arsenic XRF readings are still generally at or below background concentrations.



Lastly, it should be noted that while arsenic detections were typically within background concentrations for Indiana soil, many locations also detected arsenic above the 2022 IDEM RCG R-MTG, indicating the potential for arsenic to migrate to groundwater. However, arsenic was below the 2022 IDEM RCG R-GTap at all private wells sampled during the April 2022 sampling event. In addition, many homes around the Industria Center are connected to the public water supply. As such, the data collected did not reveal the presence of a consistent, area-wide increase of arsenic concentrations in surficial soil above background concentrations or applicable screening levels pertaining to public health in the areas adjacent to the Industria Center.

### 3.3 Groundwater Evaluation

#### 3.3.1 Chemicals of Concern – VOC/PCB/PFAS

Groundwater samples were collected from 20 private wells during April 2022. As indicated in **Section 2.3.5.1**, PCBs and PFAS were not detected in any of the samples submitted for PCB or PFAS analysis. The only VOCs detected, bromodichloromethane, chloroform, and dibromochloromethane, were detected at one property but were below the 2022 IDEM RCG R-GTap. Furthermore, these VOC detections occurred at a property which is connected to the public water supply for drinking water, but which reported that the spigot used for sampling in the front yard was still connected to a private well which they only use for gardening purposes. Considering that bromodichloromethane, chloroform, and dibromochloromethane are common byproducts of water which has been treated with chlorine (*i.e.*, municipal water supplies), it appears that the sampled spigot might actually be connected to the municipal water source that supplies the property with drinking water (Agency for Toxic Substances and Disease Registry [ATSDR], 2015a; ATSDR, 2015b; ATSDR, 2020). Regardless, the data collected did not reveal a consistent, area-wide presence of these chemical constituents in groundwater above applicable screening levels pertaining to public health in the areas adjacent to the Industria Center.

#### 3.3.2 Chemicals of Concern – Heavy Metals

Heavy metals can naturally occur in groundwater at background concentrations in Indiana. For example, in the 2016 Statewide Groundwater Monitoring Report completed by IDEM, 147 of 390 samples detected arsenic in the groundwater above 2 micrograms per liter ( $\mu\text{g/L}$ ), with an average of 4.34  $\mu\text{g/L}$  (IDEM, 2016). The groundwater results of MUNDELL's investigation revealed that the arsenic concentrations at the properties sampled are consistent with Indiana background concentrations. Moreover, the heavy metals were consistently non-detect or low as compared to the applicable screening levels for all heavy metals analyzed with the exception of lead. In addition, it should be noted that some surficial soil samples detected arsenic, cadmium, lead, and selenium



above the 2022 IDEM RCG R-MTG, indicating the potential to migrate to groundwater. However, the arsenic, cadmium, and selenium groundwater sampling results were non-detect or consistently low compared to the applicable screening level. As such, the data collected did not reveal the presence of a consistent, area-wide increase of these heavy metals in groundwater above background concentrations or applicable screening levels pertaining to public health in the areas adjacent to the Industria Center, with the exception of lead. Further discussion of the lead results is included in the following section considering background concentrations and potential sources.

### 3.3.3 Lead Sources in Groundwater and Private Wells

While lead is commonly found naturally occurring in minerals and soils, its potential to leach from the soil into the groundwater is typically low across the U.S. due to common geochemistry conditions and the soil's natural capacity to adsorb lead (Davies, 1990; Hem, 1985; Indiana Department of Natural Resources [IDNR], 2002; Jurgens et al., 2019). In fact, reports from the Indiana Department of Natural Resources (IDNR), the United States Geological Survey (USGS), and the National Groundwater Association indicate that naturally occurring lead in groundwater is typically low or non-detect (Belitz et al., 2016; Hem, 1985; IDNR, 2002; Jurgens et al., 2019; Virginia Department of Health [VDH], n.d.). In addition, studies have shown that anthropogenic sources of lead deposited to surficial soils typically remain in the upper soil layers and do not leach to the underlying groundwater system (Davies, 1990; Zimdahl and Skogerboe, 1977, as cited in Davies, 1990).

Nevertheless, studies have shown that households relying on private wells have an increased risk of high lead concentrations in drinking water as compared to those relying on publicly supplied drinking water (Centers for Disease Control and Prevention [CDC], 2021; Gibson et al., 2020; Jurgens et al., 2019). For instance, a recent study based on an analysis of blood lead levels from 59,483 children in North Carolina found that:

*“...children in homes relying on private wells have 25% increased odds... of elevated blood Pb (lead), compared with children in houses served by a community water system that is regulated under the Safe Drinking Water Act” (Gibson et al., 2020).*

Moreover, another recent study conducted in Wake County, North Carolina found that lead prevalence in drinking water of households relying on private wells was similar to that found in Flint, Michigan, during the recent water crisis (Gibson et al., 2020; Stillo and MacDonald Gibson, 2018).

These typical high occurrences of lead in private well water are not due to lead in the groundwater itself, but rather due to the combination of corrosive groundwater and lead found in the private well and plumbing water distribution system (Belitz et al., 2016; CDC, 2021; Gibson et al., 2020; Jurgens et al., 2019; VDH, n.d.). Unlike water utility providers which are required to monitor for lead



and apply corrosion treatment to the water, if needed, the Safe Drinking Water Act does not require monitoring or corrosion treatment of private well water (CDC, 2021; Gibson et al., 2020; Indiana Department of Health [IDH], 2022). Possible lead sources in a household supplied by a private well include the well casing, piping, lead solder, brass fittings in a submersible pump, and “packer” elements used to seal the well (CDC, 2022; IDH, n.d.; VDH, n.d.).

### 3.3.4 Groundwater Sampling Results - Lead

Review of the lead detections in groundwater samples indicated a relatively even spatial distribution of detection levels. In particular, the following was observed:

#### 1) *Detection Levels – Even Distribution*

- a. Six (6) properties: lead below detection limits;
- b. Seven (7) properties: lead above detection limits but below the regulatory screening level; and
- c. Seven (7) properties: lead above the regulatory screening level.

#### 2) *Spatial Distribution*: Properties with detections above the regulatory screening level were adjacent to properties below the screening level or below detections levels, and vice versa.

In addition, six (6) of the seven (7) properties with detection levels above the screening levels were within a consistent range (15 to 32 µg/L). The relatively even distribution of results (both spatially and in terms of magnitude) along with consideration of the subsurface transport mechanisms of lead and typical sources of lead in private wells, are more indicative of localized sources of lead at each individual property (*i.e.*, pipe corrosion) versus an area-wide groundwater plume of lead. Moreover, lead due to corrosion appears to be a more likely cause considering the expected groundwater flow in the region and the potential industrial sources of subsurface lead impacts in the region (with no apparent upgradient sources at sampling locations DW-1 through DW-8 (south of West Fuson Road)). Lastly, an industrial source of groundwater lead plume would likely be paired with other heavy metals releases, and lead was the only chemical constituent detected above background concentrations. This analysis is further discussed relative to the SAPs in **Section 3.4**.

## 3.4 SAP Discussion

Considering the aforementioned data analysis, characterization and comparison to background concentrations, the following summarizes the evaluation of results relative to each SAP:



### 3.4.1 SAP-A Drainage Channel (Southwest Drainage Basin)

The purpose of SAP-A was to evaluate the potential for heavy metal deposition and contamination of soils, sediment or water along the drainage pathways and floodplain areas downstream of the Industria Center. In particular, samples were taken in the drainage channels upstream of the Retention Pond at 4300/4400 BLK South Hoyt Avenue, within the Retention Pond area, and downstream of the Retention Pond. Sampling activities which addressed this SAP either directly or indirectly include:

- Surficial soil sampling (October 2021, December 2021, and January 2022);
- Surface water sampling (January 2022); and
- Sediment sampling (January 2022).

Based on sampling results and considering background concentrations along with exposure pathways, the data collected did not reveal the presence of a consistent, area-wide increase of heavy metal impacts above background concentrations or applicable screening levels pertaining to public health in the Southwest Drainage Basin of the Industria Center with the exception of lead.

Surficial soil and sediment samples detected elevated lead concentrations above background levels at the following sampling locations:

- 1) Along the banks of the Retention Pond (Surficial Soil Sample A9; Sediment Sample A50sed).
- 2) Channel upstream of the Retention Pond to the south taken along the lower-banks (surficial soil samples A12 and A49S; XRF sample A14X; sediment sample A48-sed).

However, these soil samples were below 2022 IDEM RCG residential direct contact soil exposure screening levels, and only one sample was above the 2022 IDEM RCG R-MTG. Moreover, surface water, sediment, and surficial soil samples downstream of the Retention Pond and along the upper banks of the south drainage ditch detected lower lead concentrations consistent with background levels. As such, it appears this increased lead concentration is currently isolated to the Retention Pond and along the southern drainage ditch leading to the Retention Pond, and no evidence of leaching or downstream transport of the lead has been detected.

It should be noted that an extensive evaluation of potential effects of sediment chemical concentrations on ecological and/or associated human food chain threats was beyond the scope of this investigation.

### 3.4.2 SAP-B Surface Water Discharge (Southwest Drainage Basin)

The purpose of this SAP was to evaluate the potential for on-going releases of heavy metals or VOCs to the surface water along the drainage pathways of the



Southwest Drainage Basin downstream of the Industria Center. The surface water samples collected in January 2022 did not reveal the presence of heavy metal or VOC surface water contamination in the Southwest Drainage Basin of the Industria Center.

### 3.4.3 SAP-C Former Landfill (Southwest Drainage Basin)

The purpose of this SAP was to further investigate the historic, unregulated Former Franklin Landfill. Due to property access issues, MUNDELL was only able to collect samples adjacent to the property in an effort to investigate the potential for off-site migration of contaminants which may impact the adjacent residential and church properties. Sampling activities which addressed this SAP either directly or indirectly include:

- Surficial soil sampling (October 2021, December 2021, and January 2022); and
- Private well groundwater sampling (April 2022).

The data collected did not reveal the presence of heavy metals in surficial soils above background concentrations or applicable screening levels pertaining to public health migrating from the Former Franklin Landfill impacting the adjacent residential and church properties.

Groundwater samples were also collected at residential and a church property downgradient or cross-gradient of the groundwater flow from the Former Franklin Landfill. As indicated in **Section 3.3**, lead was the only constituent detected in the groundwater samples above the 2022 IDEM RCG R-GTap. Moreover, the lead concentrations detected at the properties downgradient and/or cross-gradient had a wide range of lead concentrations spanning from non-detect to the highest lead detection level (at DW-17). As further discussed in **Section 3.3.5**, it appears that these elevated lead detections may be more indicative of corrosion in the private well and/or water distribution system compared to the presence of a groundwater lead plume. However, further sampling data is required to confirm this assessment and better characterize the results.

### 3.4.4 SAP-E Historic Atmospheric Deposition

The purpose of this SAP was to evaluate the potential for surficial soil impacts related to heavy metal deposition (particularly lead) from historic atmospheric releases related to industrial activity. Sampling activities which addressed this SAP either directly or indirectly included the surficial soil sampling events (October 2021, December 2021, and January 2022). As indicated in **Section 3.2**, the data collected did not reveal the presence of a consistent, area-wide increase of arsenic, barium, cadmium, chromium, lithium, selenium, silver, and mercury in surficial soils above background concentrations or applicable screening levels pertaining to public health in the areas adjacent to the Industrial Center.



Evaluation of the lead results did indicate areas with a higher occurrence of increased lead concentrations in the upper soil layer. However, the observed trends aligned with background concentrations and typical trends to be expected in urban areas. In particular, lead concentrations comparable to *rural* Indiana background concentrations were observed in areas away from major roadways and further away from the urban center (*i.e.*, to the northwest, southwest, and southeast of the Industria Center). Lead concentrations comparable to *urban* Indiana background concentrations were observed directly adjacent to major roadways but still away from the urban center. As such, the data collected did not reveal the presence of a consistent, area-wide increase of lead in surficial soil above background concentrations or applicable screening levels pertaining to public health in the areas to the northwest, southwest, and southeast of the Industria Center.

On the other hand, the highest lead detections in surficial soil samples in this investigation were observed to the northeast of the Industria Center regardless of proximity to major roadways with average detections above urban Indiana background concentration. The observed increase to the northeast of the Industria Center aligns with the predominant wind direction in the area which is from the west/southwest to the east/northeast (MUNDELL, 2020). However, as described in **Section 3.2.2.1**, surficial soil lead concentrations are typically higher towards the city center and near industrial areas, and a past study conducted in Muncie found similar trends (Czarnowska et al., 1992; Czarnowska et al., 1983; Alloway, 1990a; Davies, 1990; Liberti & Pichtel, 1997, Pichtel et al., 1997). Therefore, this observed increase of lead to the northeast may be linked not only to the Industria Center but also to other industries, both past or present, found towards the center of Muncie.

Regardless, lead concentrations at all samples except for one (1) were below the applicable 2022 IDEM RCG residential direct contact soil exposure screening level. Moreover, the average lead concentrations detected to the northeast of the Industria Center were comparable or less than lead levels found in urban residential soils, parkways, and/or garden areas in cities across the U.S. such as Chicago; Durham, North Carolina; and Washington, D.C. (Davies, 1990; Preer et al., 1984; Wade et al., 2021; Watson et al., 2022). As such, the data collected does not reveal the presence of area-wide surficial soil lead contamination above what might be expected in other cities with historical industrial activity. In addition, the lead levels did not exceed regulatory residential soil screening levels that would require any kind of large-scale remedial effort.

This observed increase of surficial soil lead contamination above background concentrations to the northeast of the Industria Center and closer to the city center highlights the importance for those who live in the proximity of the Muncie city center to:





- 1) Be aware of the increased potential of lead contamination in urban surficial soils; and
- 2) Be aware of steps that can be taken to reduce exposure to lead contamination.

### 3.4.5 SAP-H Private Well Monitoring

The purpose of this SAP was to evaluate the potential for groundwater contamination related to Industria Center activity. The groundwater private well sampling event conducted in April 2022 addressed this SAP directly. As indicated in **Section 3.3**, lead was the only chemical constituent detected in the groundwater samples above the 2022 IDEM RCG R-GTap. However, these elevated lead concentrations are more indicative of corrosion in the private well and water distribution system than possible impacts from a groundwater lead plume. Nevertheless, further sampling data is needed to confirm this assessment and better characterize the groundwater results based on the following observations:

- 1) One sampling event is not sufficient to fully characterize the groundwater quality on any individual property;
- 2) Considering the typical limited lead subsurface solubility and mobility caused by site-specific geochemical conditions, additional sampling of the wells to measure multiple additional geochemical parameters would likely resolve the potential source of the detected lead concentrations (Mundell et al., 1987); and
- 3) Varying results warrant further sampling. For example, IDEM conducted private well sampling in 2019 in the area and a portion of the properties were re-sampled during MUNDELL's 2022 investigation (see IDEM Virtual File Cabinet (VFC) document number 82828705) (IDEM, 2017b). While some of the results were similar to MUNDELL's investigation, other properties significantly differed. Most notably, the highest detected lead concentration during MUNDELL's sampling (DW-17) was below the screening level (less than 15 µg/L) during the 2019 IDEM sampling event. This property should receive additional evaluation to resolve this discrepancy since it is downgradient of the Former Franklin Landfill property.

In summary, initial review of MUNDELL's April 2022 investigation appears to confirm past studies which have indicated increased risk of lead exposure in private wells due to groundwater corrosivity and pipe corrosion, but further investigation is needed to confirm this evaluation.

### 3.4.6 SAP-G Groundwater Monitoring Vapor Intrusion

The purpose of this SAP was to evaluate the potential presence of shallow groundwater VOC impacts related to Industria Center activity which could pose



a vapor intrusion threat. The private well sampling event conducted in April 2022 provided initial results indicating no evidence of a VOC groundwater plume above applicable screening levels pertaining to public health in the areas adjacent to the Industria Center. However, the sampling activities and methodology completed during this investigation did not provide sufficient data to fully address this SAP.



## 4.0 CONCLUSIONS AND RECOMMENDATIONS

### 4.1 Investigation Summary and Findings

Based on the sampling activities conducted surrounding the Industria Center by MUNDELL and an evaluation of the sampling results, the following can be concluded:

- 1) Soil, sediment, surface water, and groundwater samples were collected on private property and in public ROW in the vicinity of the Industria Center addressing to varying degrees six (6) of the ten (10) SAPs developed during MUNDELL's 2020 Initial Environmental Review.
- 2) In total, the following sampling activities were completed during eight (8) mobilizations from October 2021 through April 2022 (not including QA/QC samples):
  - a. Fourteen (14) surficial soil samples were submitted for laboratory analysis;
  - b. 138 in-situ soil samples were analyzed via the field portable XRF device;
  - c. Twenty-two (22) confirmatory surficial soil samples were submitted for laboratory analysis confirming the XRF results;
  - d. Six (6) sediment samples and three (3) surface water samples were submitted for laboratory analysis; and
  - e. Twenty (20) private well groundwater samples were submitted for laboratory analysis.
- 3) *Southwest Drainage Basin (SAP-A & SAP-B)* - Analytical results of soil, sediment, and surface water samples collected in the Southwest Drainage Basin of the Industria Center did not reveal the presence of a consistent, area-wide heavy metal contamination above applicable residential screening levels; did not identify VOC contamination; and did not identify downstream leaching or migration of heavy metal or VOC contamination.
- 4) *Historic Atmospheric Deposition (SAP-E)* - Surficial soil analytical results did not reveal the presence of area-wide heavy metal contamination above background concentrations for all constituents analyzed, except for lead. Regarding lead, the following was observed:
  - a. Surficial soil lead concentrations in areas to the northwest, southwest, and southeast of the Industria Center (*i.e.*, further away from the Muncie city Center) were generally comparable to rural



Indiana background concentrations or urban Indiana background concentrations if directly adjacent to major roadways.

- b. Surficial soil lead concentrations to the northeast of the Industria Center (*i.e.*, closer to the Muncie city center and downwind of the Industria Center) were generally elevated compared to urban Indiana background concentrations, but still below residential screening levels pertaining to human health exposure criteria. Moreover, the average lead concentrations detected to the northeast were comparable to or less than surficial soil lead concentrations found in other urban cities across the country as indicated in **Section 3.4.4**.
- 5) *Private Well Monitoring (SAP-H)* - At the properties analyzed for heavy metal, VOC, PCB, and/or PFAS groundwater impacts, only lead was detected above 2022 IDEM RCG residential groundwater tap screening levels at seven (7) of the twenty (20) private wells sampled (*i.e.*, 35% of the wells sampled were above 15 µg/L). Based on the evaluation of the results and considering lead sources and transport mechanisms, these lead exceedances appear to be more indicative of lead from corrosion in piping and the private well water distribution systems as compared to a groundwater lead plume. However, further data is needed to confirm this assessment.
  - 6) *Former Landfill (SAP-C)* - Investigations were not conducted on the Former Franklin Landfill property, but surficial soil analytical results on adjacent properties did not reveal the presence of off-site migration of heavy metal contamination from this site. Initial evaluation of groundwater sampling from private wells downgradient and cross-gradient from this site was not indicative of a heavy metal groundwater plume, and did not reveal a VOC or PCB groundwater plume linked to this property. However, due to lead exceedances at a portion of downgradient private wells, further sampling is needed to confirm this assessment.
  - 7) *Groundwater Monitoring Vapor Intrusion (SAP-G)* - Private well sampling partially addressed this SAP, and initial results did not reveal the presence of a VOC groundwater plume. However, the sampling methodology did not fully address this SAP.

## 4.2 Recommendations

### 4.2.1 Further Investigation - Groundwater Sampling

MUNDELL recommends additional private well sampling and/or groundwater monitoring to test for the presence of lead and include additional geochemical parameters to help determine the source of lead detections in the private wells. This additional investigation would provide data to further evaluate SAP-H (private well monitoring) and SAP-C (Former Franklin Landfill).



## 4.2.2 Community Outreach

### 4.2.2.1 Surficial Soil - Lead

Higher surficial soil lead concentrations are often found in urban regions as compared to background levels. As such, countless resources have been developed and are available which provide recommendations for residents living in urban areas on ways to reduce or eliminate their exposure to lead. Given the analytical results of this investigation, it would be beneficial for the County to implement a community outreach program to raise awareness, provide resources, and promote the public health and safety of the community. Furthermore, it could be an opportune time to pursue a potential partnership with the Delaware County Board of Health and the Indiana State Health Department to coordinate lead testing for at risk populations in the community (*i.e.*, pregnant women and children 6-years and under). These efforts could also address SAP-I (voluntary lead testing of citizens) recommended by MUNDELL in its 2020 Initial Environmental Review.

### 4.2.2.2 Private Wells - Lead

In addition to conducting further private well sampling, MUNDELL recommends community outreach to private well owners considering households relying on private wells have an increased risk of elevated lead in drinking water as compared to municipally supplied sources due to:

- 1) The interactions of corrosive groundwater and lead present in the private well system; and
- 2) Private wells are not regulated (*i.e.*, not monitored or treated) by the U.S. EPA or IDEM (Belitz et al., 2016; CDC, 2021; Gibson et al., 2020; IDH, 2022; Jurgens et al., 2019; VDH, n.d.).

This voluntary outreach would provide the residents with the information necessary to appropriately test, treat, and maintain their water system and associated water quality at their property.

## 4.2.3 Continued Monitoring

### 4.2.3.1 Southwest Drainage Basin

MUNDELL recommends the County monitor the land use in the Southwest Drainage Basin of the Industria Center. This limited investigation did not indicate the presence of downstream leaching or migration of heavy metals or VOCs from the Southwest Drainage Basin due to industrial activity. However, as indicated previously, this investigation was limited in scope and the results cannot be used to thoroughly characterize any individual property. As such, there remains a concern for potential heavy metal contamination at the Retention Pond property due to historical industrial



activity in the area. In addition, a thorough on-site evaluation and characterization of the Former Franklin Landfill has not been completed at this time. Accordingly, MUNDELL recommends the County, at minimum, monitor the area for any change in land-use or development as this may disturb any contaminants which may exist on these properties altering the exposure risk in the area.

#### **4.2.3.2 On-going Remediation / Monitoring**

As indicated in MUNDELL's 2020 Initial Environmental Review, there remains known impacts within the Industria Center where either contaminant delineation or remediation is occurring and properties with Environmental Restriction Covenants (ERCs). In accordance with SAP-J, MUNDELL reaffirms its recommendation that a third party provide oversight to monitor the progress of selected properties where remediation is ongoing or where contamination still exists in the context of an ERC. This activity would also help guide any future recommendations for further investigations that may be needed.



## 5.0 LIMITATIONS

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This statement is in lieu of other statements either expressed or implied. This company is not responsible for the independent conclusions, opinions or recommendations made by others based on the records review, area observations, field exploration, and laboratory test data presented in this report.

It should be noted that environmental evaluations are inherently limited in the sense that conclusions are drawn, and recommendations developed from information obtained from limited research and area evaluation. For these types of evaluations, it is often necessary to use information prepared by others and MUNDELL cannot be responsible for the accuracy of such information. Additionally, the passage of time may result in a change in the environmental characteristics at the Industria Center and surrounding properties. This report does not warrant against future operations or conditions, nor does this warrant operations or conditions present of a type or at a location not investigated. This report is not a regulatory compliance audit and is not intended to satisfy the requirements of any state, federal, or local real estate transfer laws.

The conclusions presented in this report are also, in part, based upon environmental sampling performed at selected locations and depths. There may be conditions between sampling locations that differ significantly from those presented in this report and which cannot be predicted by this study.

Our conclusions regarding the potential environmental impact of nearby, off-site facilities are based on readily available information from the environmental databases and the indicated groundwater flow direction. A detailed file review of each facility was beyond the scope of work included in MUNDELL's Initial Environmental Review and this current Phase II study.

MUNDELL previously reviewed past ownership of the properties in the Industria Center during the 2020 Initial Environmental Review in an attempt to determine past property usage. MUNDELL is not a professional title insurance firm and makes no guarantee, explicit or implied that the listing reviewed represented a comprehensive delineation of past property ownership or tenancy for legal purposes.

MUNDELL does not warrant the correctness, completeness, currentness, merchantability, or fitness of any information related to records review provided in its previous 2020 Initial Environmental Review upon which this current study is based. Such information is not the product of an independent review conducted by MUNDELL but is



only publicly available environmental information maintained by federal, state, and local government agencies.

This report is intended for the sole use of Delaware County Redevelopment Commission. This report may not be used or relied upon by any other party without the written consent of MUNDELL. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.





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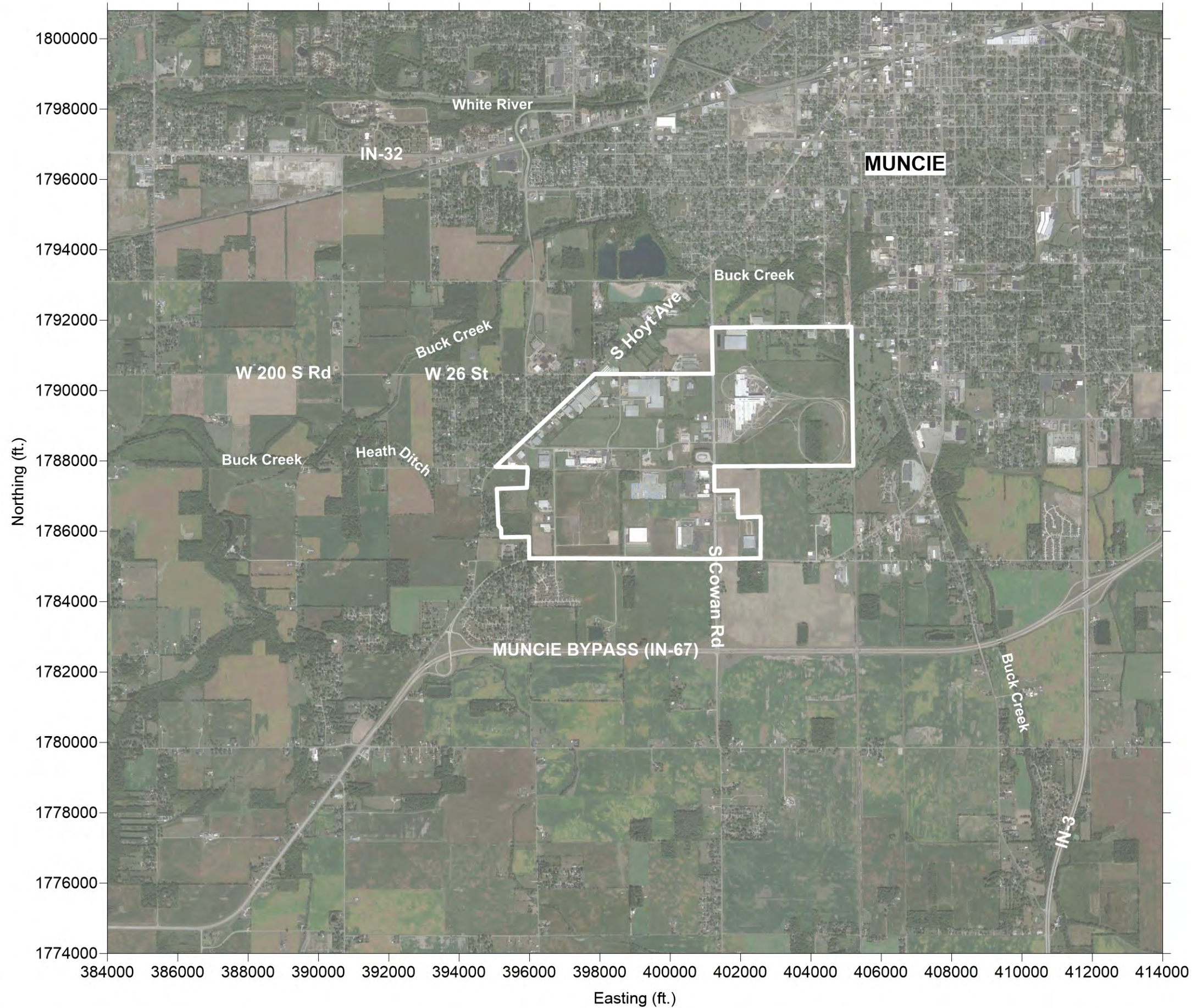
Zimdahl, R.L., and Skogerboe, R.K., 1977, Behavior of Lead in Soil, *Environmental Science & Technology*, 11 (13), 1202-1207.




## FIGURES

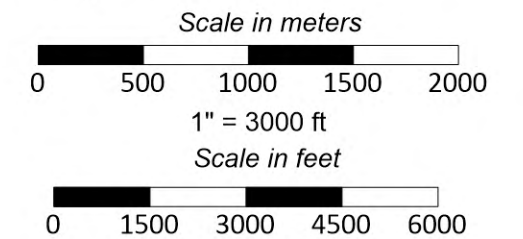
- Figure 1. Vicinity Map
- Figure 2. Industria Center Area Map
- Figure 3. Southwest Drainage Basin Surficial Soil Sampling
- Figure 4. Apparent Terrain Conductivity Map
- Figure 5. XRF Soil Screening
- Figure 6. Confirmatory Surficial Soil Sampling
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- Figure 10. Southwest Drainage Basin Sediment Sampling
- Figure 11. Private Well Groundwater Sampling
- Figure 12. Comparison XRF Directional & Roadway





**LEGEND**

 South Muncie Industria Center



**NOTES:**

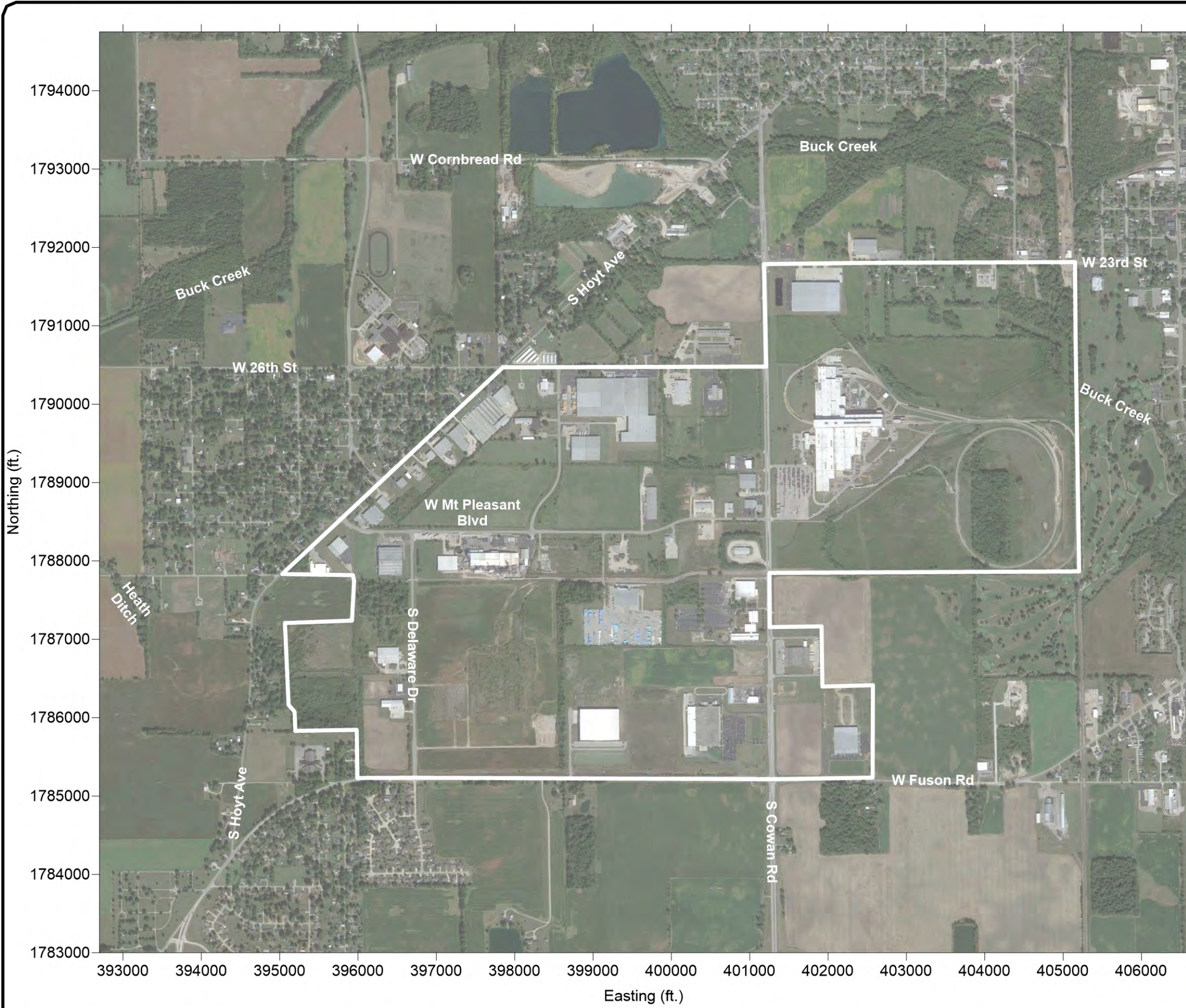
1. September 2019 aerial photograph courtesy of Google Earth Imagery and is provided for reference only. No claim is made as to the accuracy or completeness of this information.
2. Coordinates are referenced according to Indiana East (Feet) State Plane 1983 Datum.

**Vicinity Map**  
 South Muncie Industria Center  
 Phase II Investigation  
 Muncie, Delaware County, IN  
 MUNDELL Project No. M20032



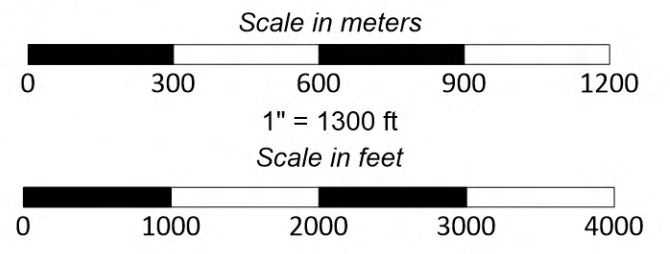
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**LEGEND**

 South Muncie Industria Center



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2. Coordinates are referenced according to Indiana East (Feet) State Plane 1983 Datum.

**Industria Center Area Map**  
 South Muncie Industria Center  
 Phase II Investigation  
 Muncie, Delaware County, IN  
 MUNDELL Project No. M20032

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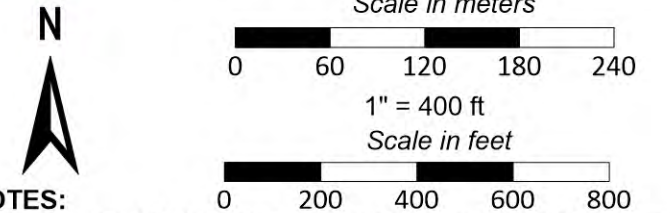


**LEGEND**

- South Muncie Industria Center
- Surface Water Flow Direction (General)
- Surface Water Drainageways
- Surficial Soil Sampling (10/2021 and A49S Collected 1/2022)
- XRF Sampling Location (12/2021)

**XRF/Laboratory Soil Lead Results**

mg/kg	Description
≤ 28.7	<b>Less than</b> Background Rural Indiana (includes "Non-Detect")
≤ 62.5	<b>Less than</b> Background Urban Indiana (Indianapolis/Terre Haute)
≤ 92	<b>Less than</b> Average XRF Results to Northeast of Industria Center
≤ 270	<b>Less than</b> 2022 IDEM Residential Migration to Groundwater
≤ 400	<b>Less than</b> 2022 IDEM Residential Direct Contact
≤ 800	<b>Less than</b> 2022 IDEM Industrial Direct Contact
≥ 800	<b>Greater than</b> 2022 IDEM Industrial Direct Contact



- NOTES:**
1. September 2019 aerial photograph courtesy of Google Earth Imagery and is provided for reference only. No claim is made as to the accuracy or completeness of this information.
  2. Coordinates are referenced according to Indiana East (Feet) State Plane 1983 Datum.
  3. Approximate drainageway locations based on Elevation data courtesy of the 2012 Indiana Statewide LiDAR acquisition program along with data derived from the local-resolution National Hydrography Dataset current as of April 26, 2019, courtesy of <https://maps.indiana.edu/>.

**Southwest Drainage Basin  
Surficial Soil**

South Muncie Industria Center  
Phase II Investigation  
Muncie, Delaware County, IN  
MUNDELL Project No. M20032

**3**

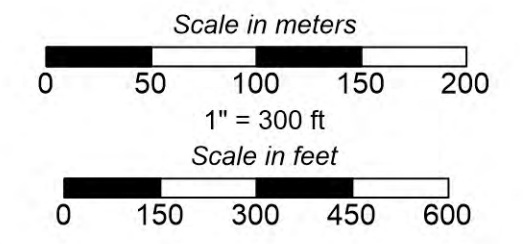
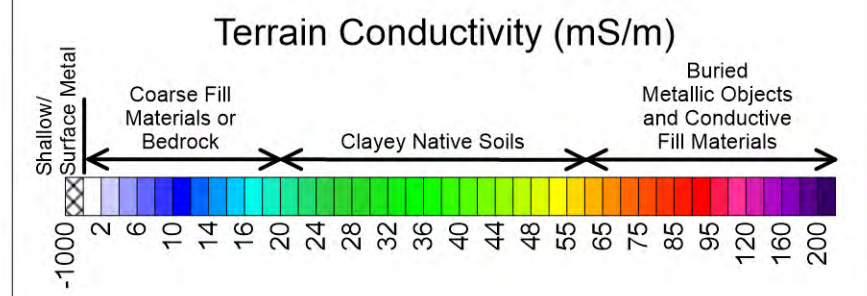


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**LEGEND**

-  South Muncie Industria Center
-  Terrain Conductivity Survey Area



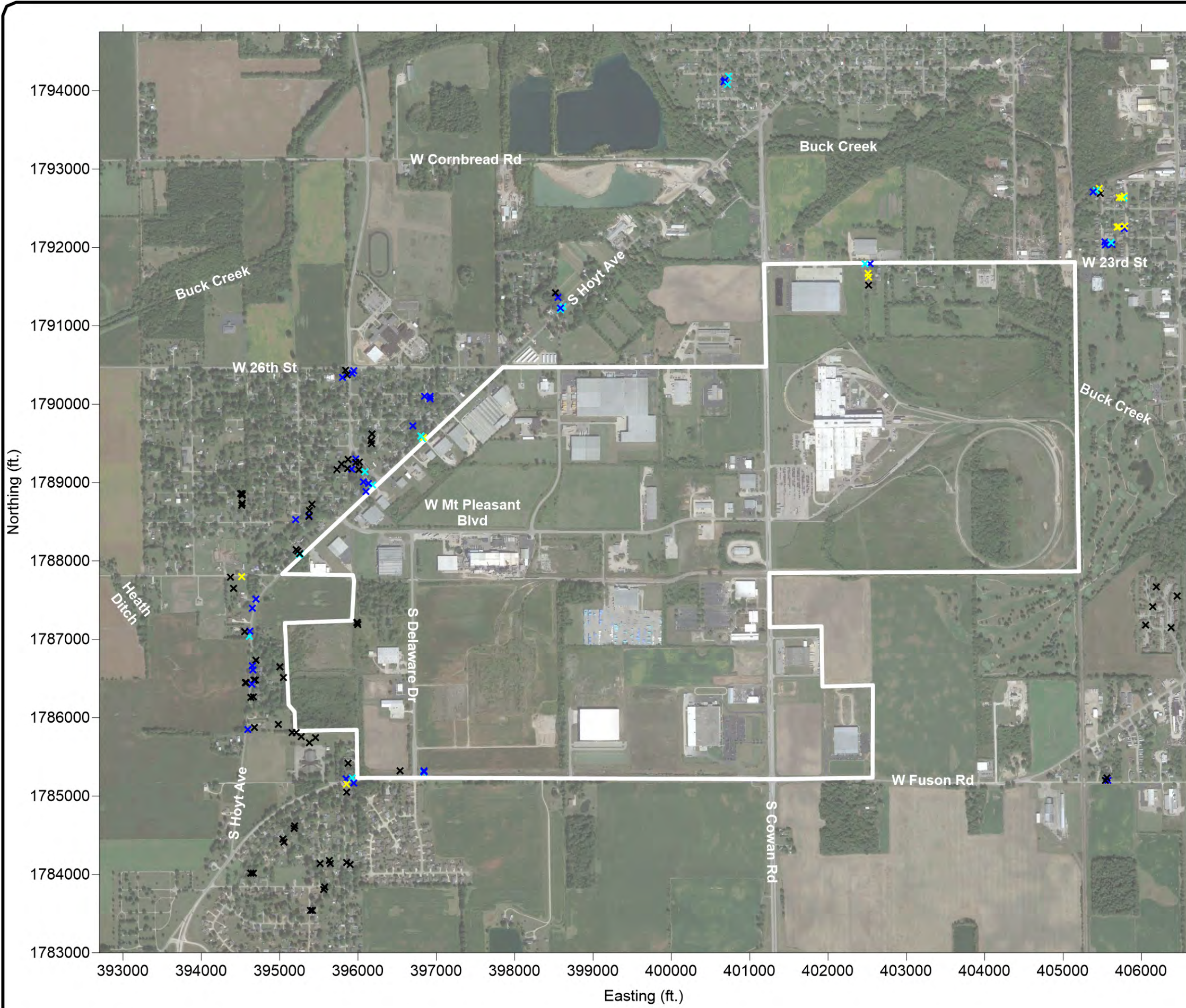
**NOTES:**

1. September 2019 aerial photograph courtesy of Google Earth Imagery and is provided for reference only. No claim is made as to the accuracy or completeness of this information.
2. Coordinates are referenced according to Indiana East (Feet) State Plane 1983 Datum.
3. Conductivity data collected 10/20/2021 with a CMD Mini Explorer multi-depth meter. Data gridded with 0.5-meter grid spacing and using a kriging algorithm with a search radius of 3 meters.


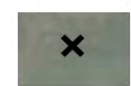
**Apparent Terrain Conductivity Map  
Effective Depth 0.8 ft (Surficial Soil)**  
 South Muncie Industria Center  
 Phase II Investigation  
 Muncie, Delaware County, IN  
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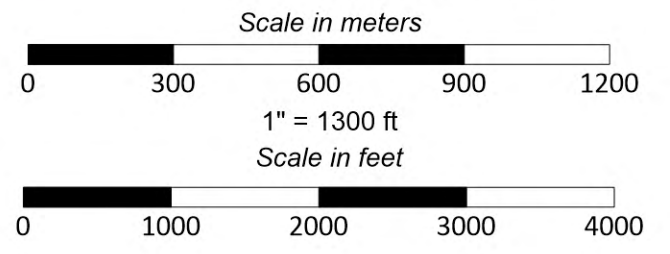


**LEGEND**

-  South Muncie Industria Center
-  XRF Sampling Location (12/2021)

**XRF Soil Lead Results**

mg/kg	Count	%	Description
 ≤ 28.7	73	53	<b>Less than</b> Background Rural Indiana (includes "Non-Detect")
 ≤ 62.5	36	26	<b>Less than</b> Background Urban Indiana (Indianapolis/Terre Haute)
 ≤ 92	17	12	<b>Less than</b> Average XRF Results to Northeast of Industria Center
 ≤ 270	12	9	<b>Less than</b> 2022 IDEM Residential Migration to Groundwater
 ≤ 400	0	0	<b>Less than</b> 2022 IDEM Residential Direct Contact
 ≤ 800	0	0	<b>Less than</b> 2022 IDEM Industrial Direct Contact
 ≥ 800	0	0	<b>Greater than</b> 2022 IDEM Industrial Direct Contact



**NOTES:**

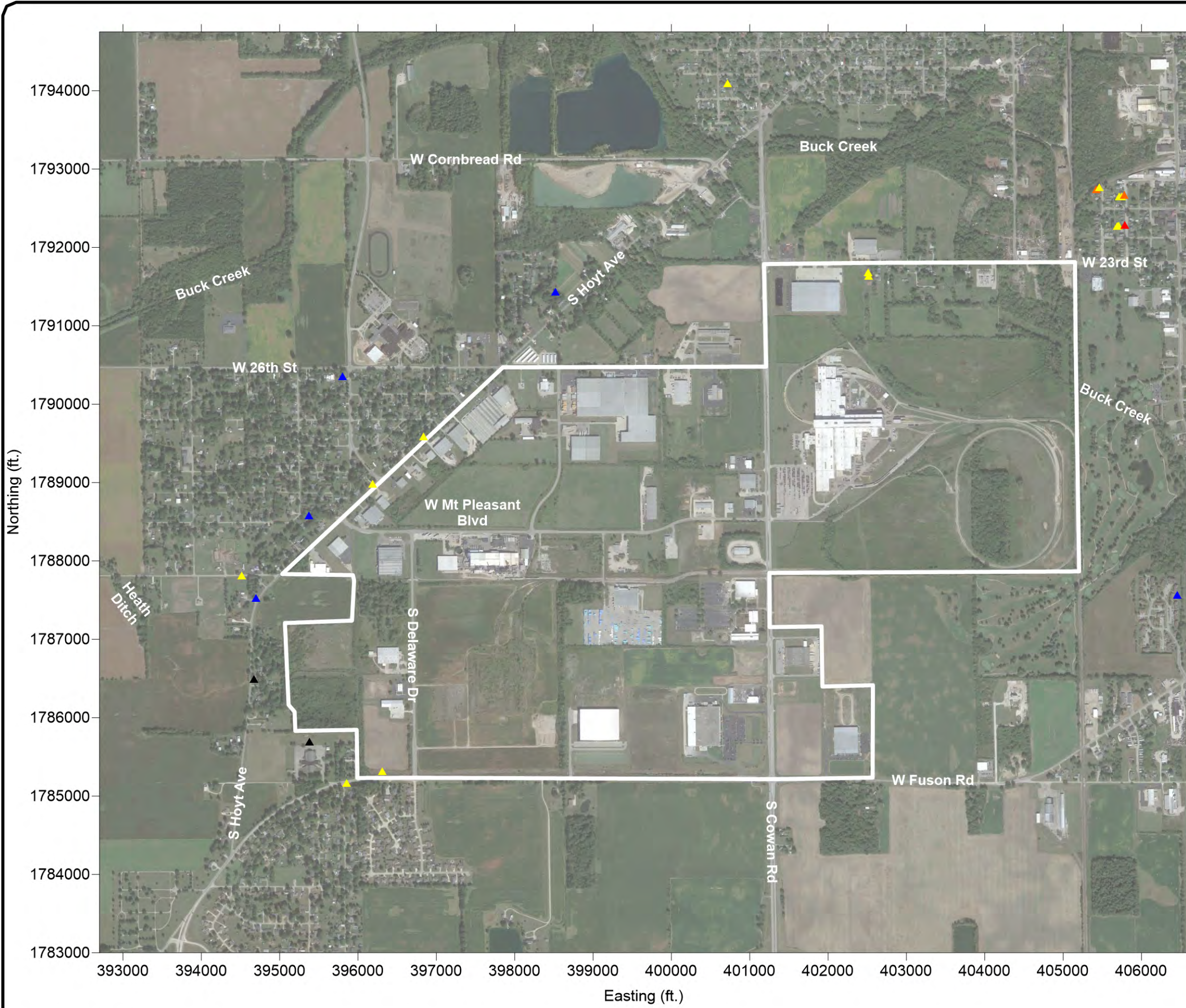
1. September 2019 aerial photograph courtesy of Google Earth Imagery and is provided for reference only. No claim is made as to the accuracy or completeness of this information.
2. Coordinates are referenced according to Indiana East (Feet) State Plane 1983 Datum.

**XRF Soil Screening**  
 South Muncie Industria Center  
 Phase II Investigation  
 Muncie, Delaware County, IN  
 MUNDELL Project No. M20032


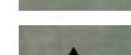
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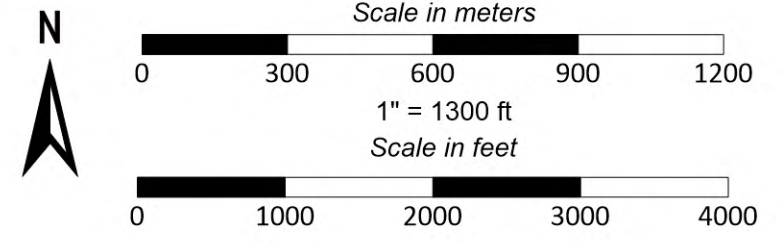


**LEGEND**

-  South Muncie Industria Center
-  Confirmatory Surficial Soil Sampling (1/2022 and A49S included in Southwest Drainage Basin Review)

**Laboratory Soil Lead Results**

mg/kg	Description
 ≤ 28.7	<b>Less than</b> Background Rural Indiana (includes "Non-Detect")
 ≤ 62.5	<b>Less than</b> Background Urban Indiana (Indianapolis/Terre Haute)
 ≤ 92	<b>Less than</b> Average XRF Results to Northeast of Industria Center
 ≤ 270	<b>Less than</b> 2022 IDEM Residential Migration to Groundwater
 ≤ 400	<b>Less than</b> 2022 IDEM Residential Direct Contact
 ≤ 800	<b>Less than</b> 2022 IDEM Industrial Direct Contact
 ≥ 800	<b>Greater than</b> 2022 IDEM Industrial Direct Contact



- NOTES:**
- September 2019 aerial photograph courtesy of Google Earth Imagery and is provided for reference only. No claim is made as to the accuracy or completeness of this information.
  - Coordinates are referenced according to Indiana East (Feet) State Plane 1983 Datum.

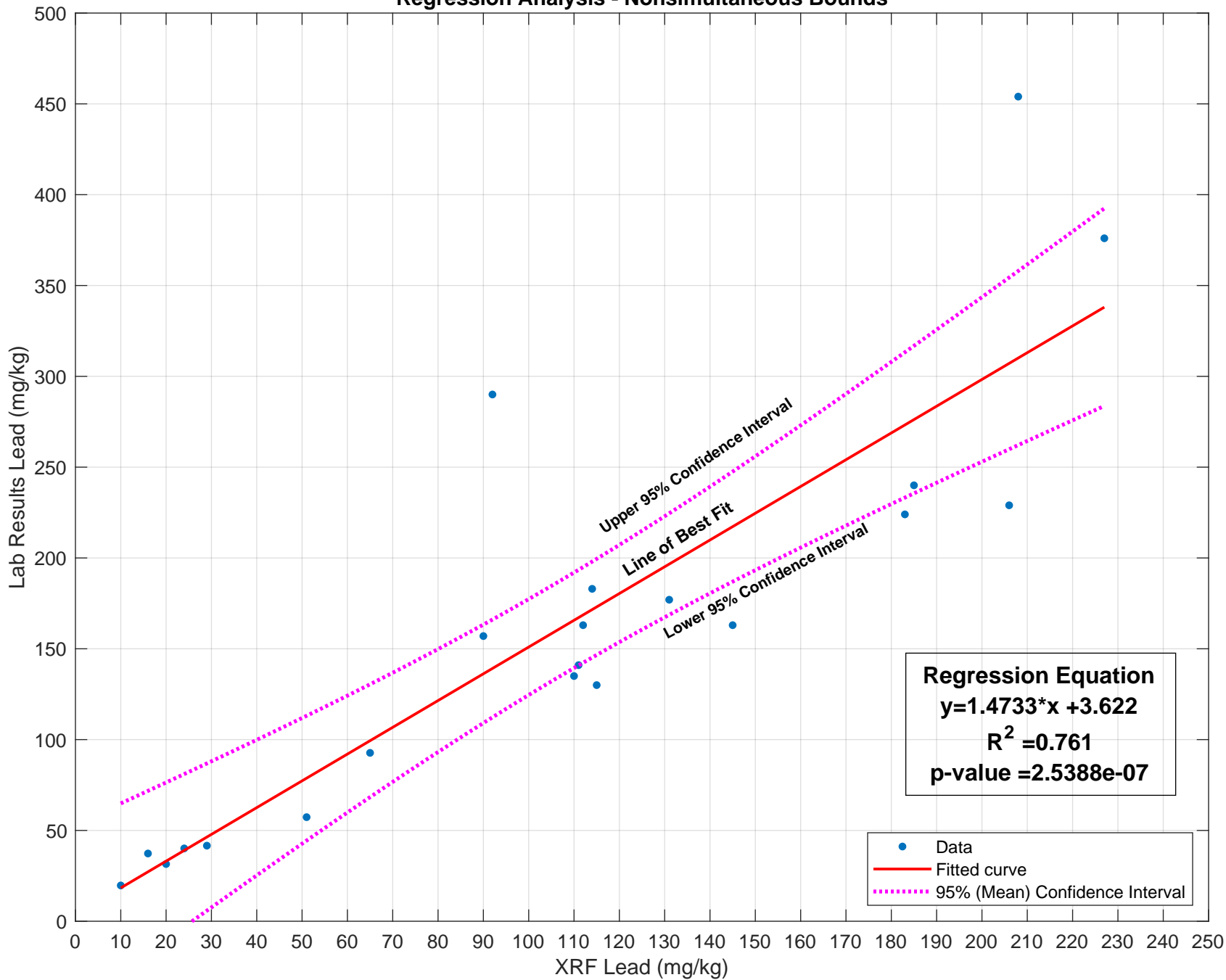
**Confirmatory  
Surficial Soil Sampling**  
South Muncie Industria Center  
Phase II Investigation  
Muncie, Delaware County, IN  
MUNDELL Project No. M20032

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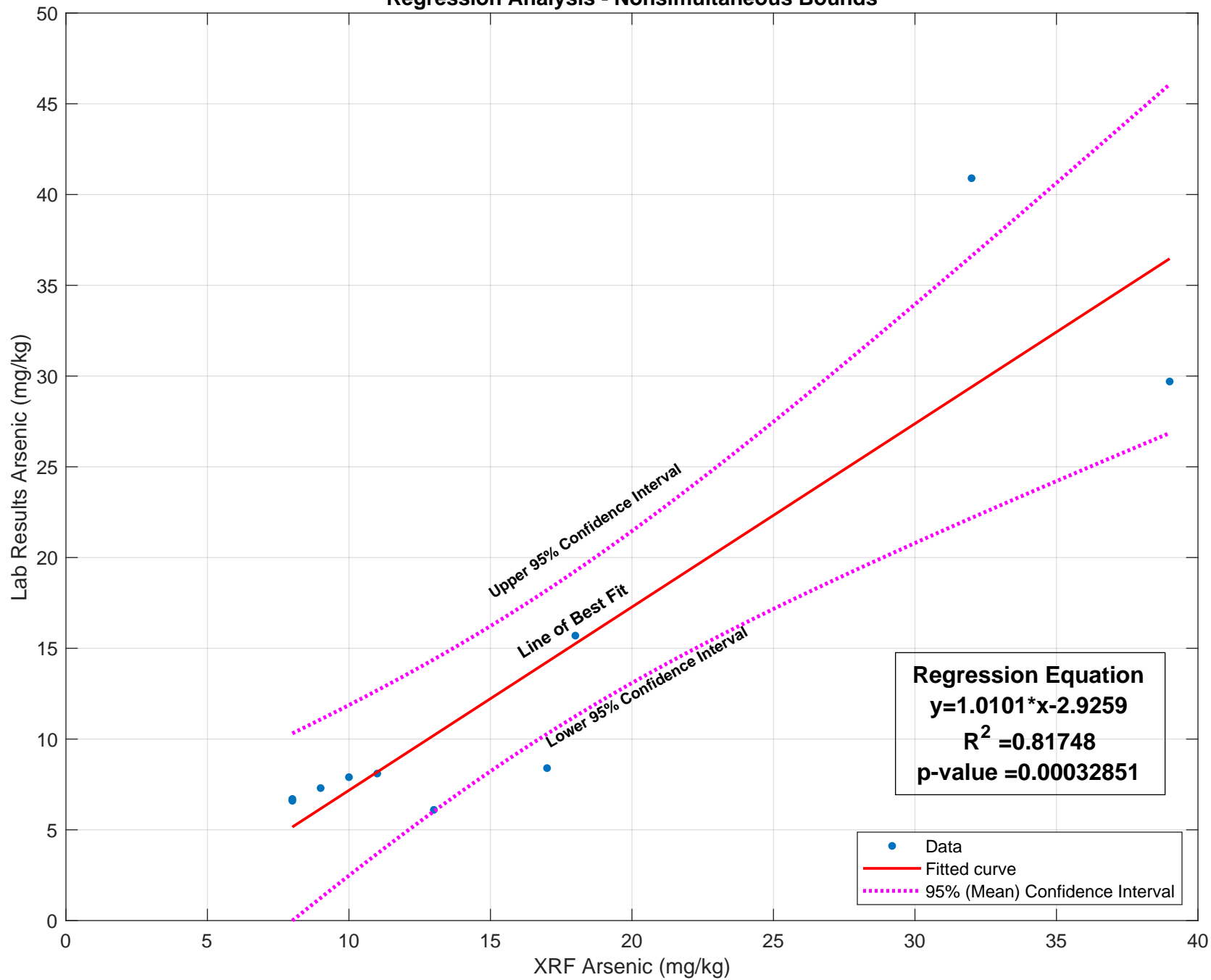


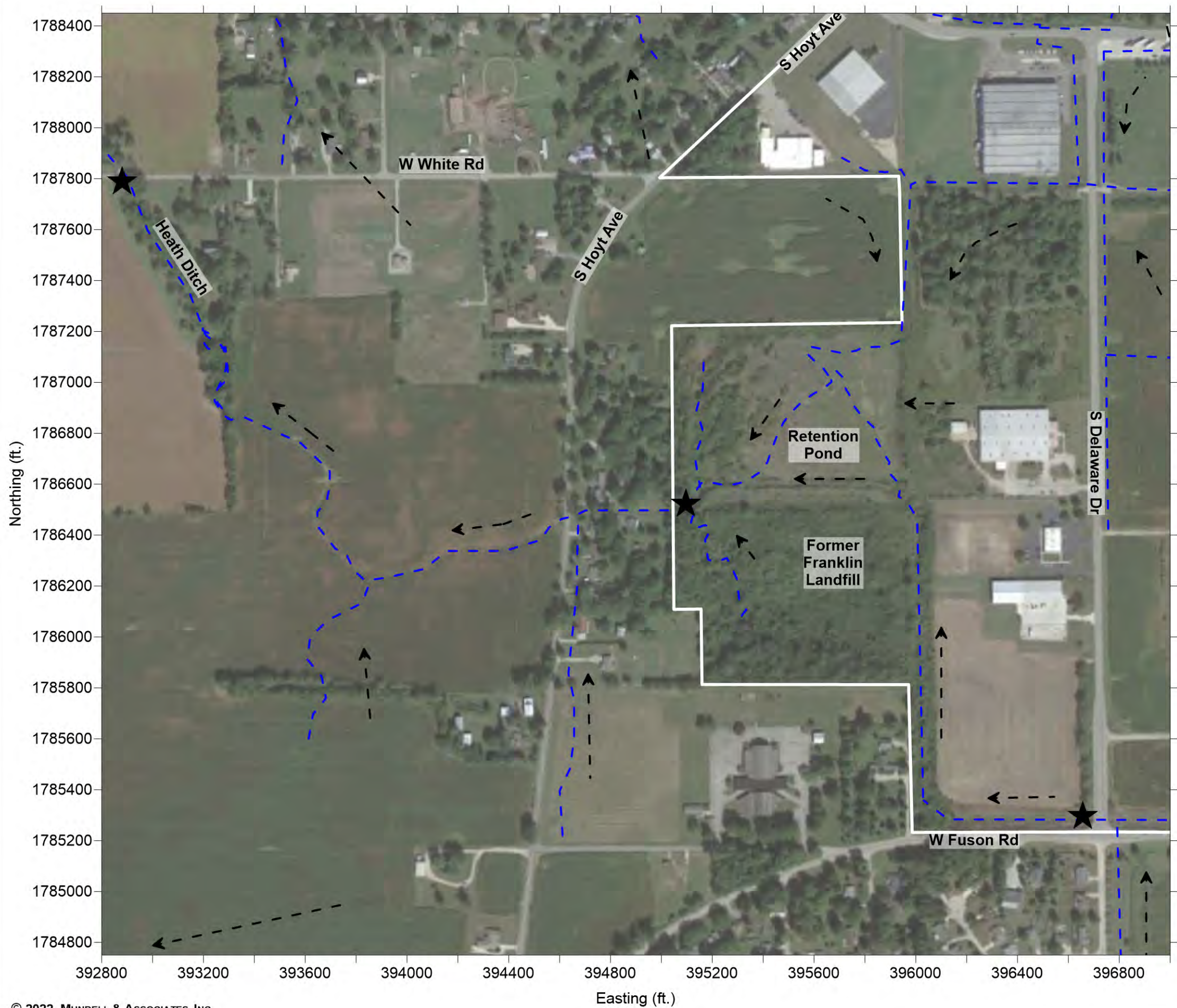
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**Figure 7**  
**Lead XRF vs. Lab Results**  
**Regression Analysis - Nonsimultaneous Bounds**



**Figure 8**  
**Arsenic XRF vs. Lab Results**  
**Regression Analysis - Nonsimultaneous Bounds**



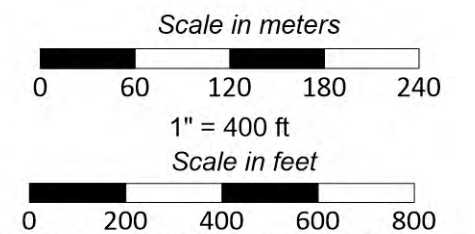


**LEGEND**

- South Muncie Industria Center
- Surface Water Flow Direction (General)
- Surface Water Drainageways
- Surface Water Sampling Location (1/2022)

**Laboratory Lead Results**

ug/L	Description
<10.0	<b>Less than</b> Laboratory Detection Limit ("Non-Detect")
<15.0	<b>Less than</b> 2022 IDEM Residential Groundwater Tap Screening Level
>=15.0	<b>Greater than</b> 2022 IDEM Residential Groundwater Tap Screening Level



**NOTES:**

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2. Coordinates are referenced according to Indiana East (Feet) State Plane 1983 Datum.
3. Approximate drainageway locations based on Elevation data courtesy of the 2012 Indiana Statewide LiDAR acquisition program along with data derived from the local-resolution National Hydrography Dataset current as of April 26, 2019, courtesy of <https://maps.indiana.edu/>.

**Southwest Drainage Basin  
Surface Water Sampling**

South Muncie Industria Center  
Phase II Investigation  
Muncie, Delaware County, IN  
MUNDELL Project No. M20032

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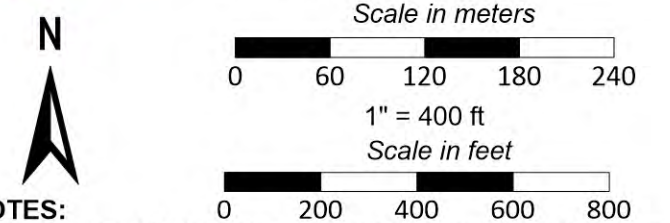


**LEGEND**

- South Muncie Industria Center
- Surface Water Flow Direction (General)
- Surface Water Drainageways
- Sediment Sampling Location (1/2022)

**Laboratory Lead Results**

mg/kg	Description
≤ 28.7	<b>Less than</b> Background Rural Indiana (includes "Non-Detect")
≤ 62.5	<b>Less than</b> Background Urban Indiana (Indianapolis/Terre Haute)
≤ 92	<b>Less than</b> Average XRF Results to Northeast of Industria Center
≤ 270	<b>Less than</b> 2022 IDEM Residential Migration to Groundwater
≤ 400	<b>Less than</b> 2022 IDEM Residential Direct Contact
≤ 800	<b>Less than</b> 2022 IDEM Industrial Direct Contact
≥ 800	<b>Great than</b> 2022 IDEM Industrial Direct Contact



**NOTES:**

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3. Approximate drainageway locations based on Elevation data courtesy of the 2012 Indiana Statewide LiDAR acquisition program along with data derived from the local-resolution National Hydrography Dataset current as of April 26, 2019, courtesy of <https://maps.indiana.edu/>.

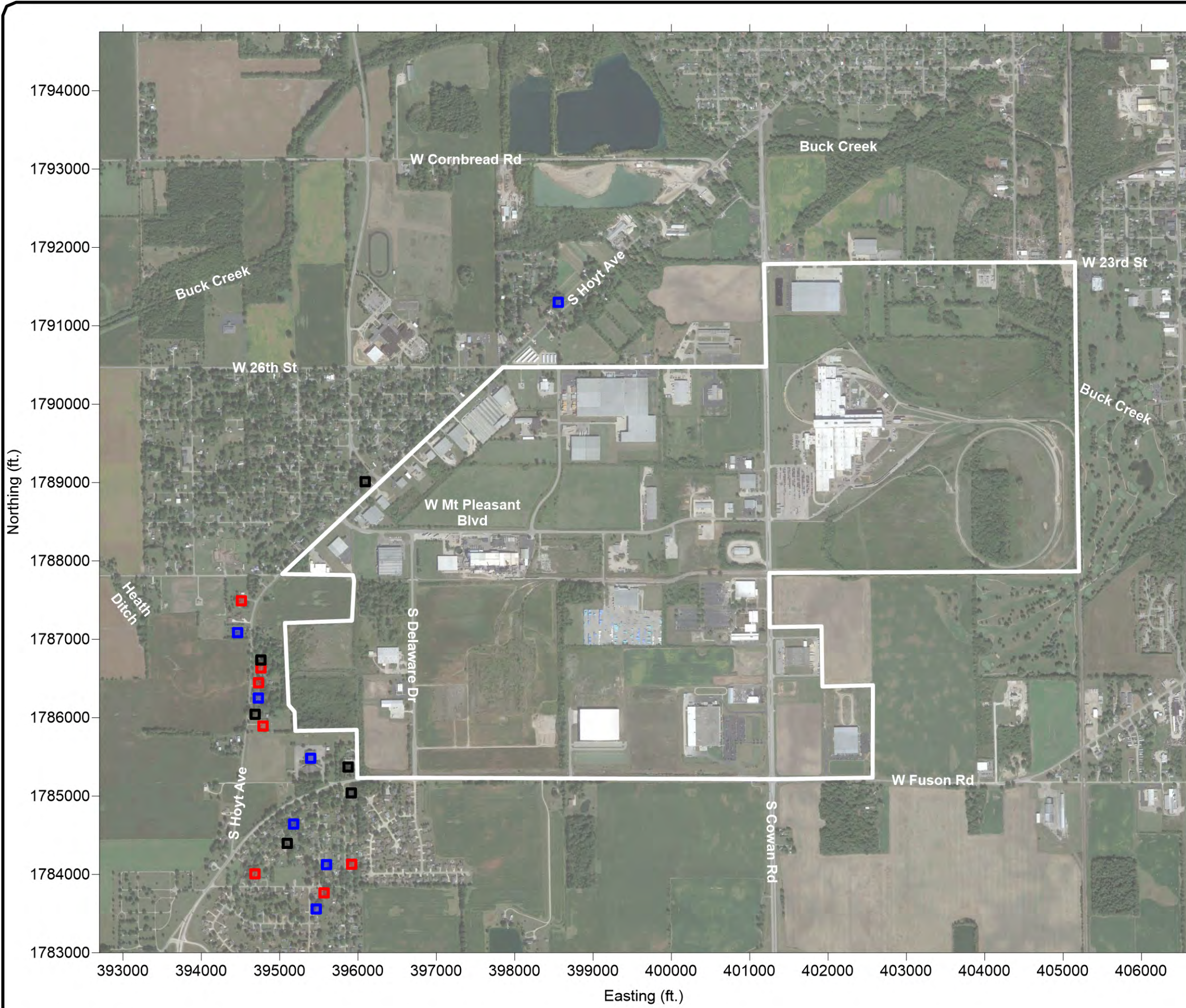
**Southwest Drainage Basin  
Sediment Sampling**

South Muncie Industria Center  
Phase II Investigation  
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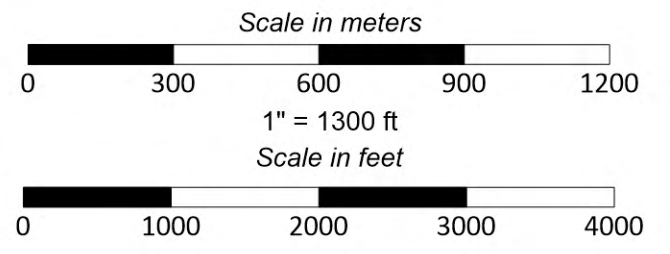


**LEGEND**

-  South Muncie Industria Center
-  Private Well Groundwater Sampling Location

**Laboratory Lead Results**

ug/L	Description
 <math>< 1.0</math>	<b>Less than</b> Laboratory Detection Limit ("Non-Detect")
 <math>< 15.0</math>	<b>Less than</b> 2022 IDEM Residential Groundwater Tap Screening Level
 <math>\ge 15.0</math>	<b>Greater than</b> 2022 IDEM Residential Groundwater Tap Screening Level



**NOTES:**

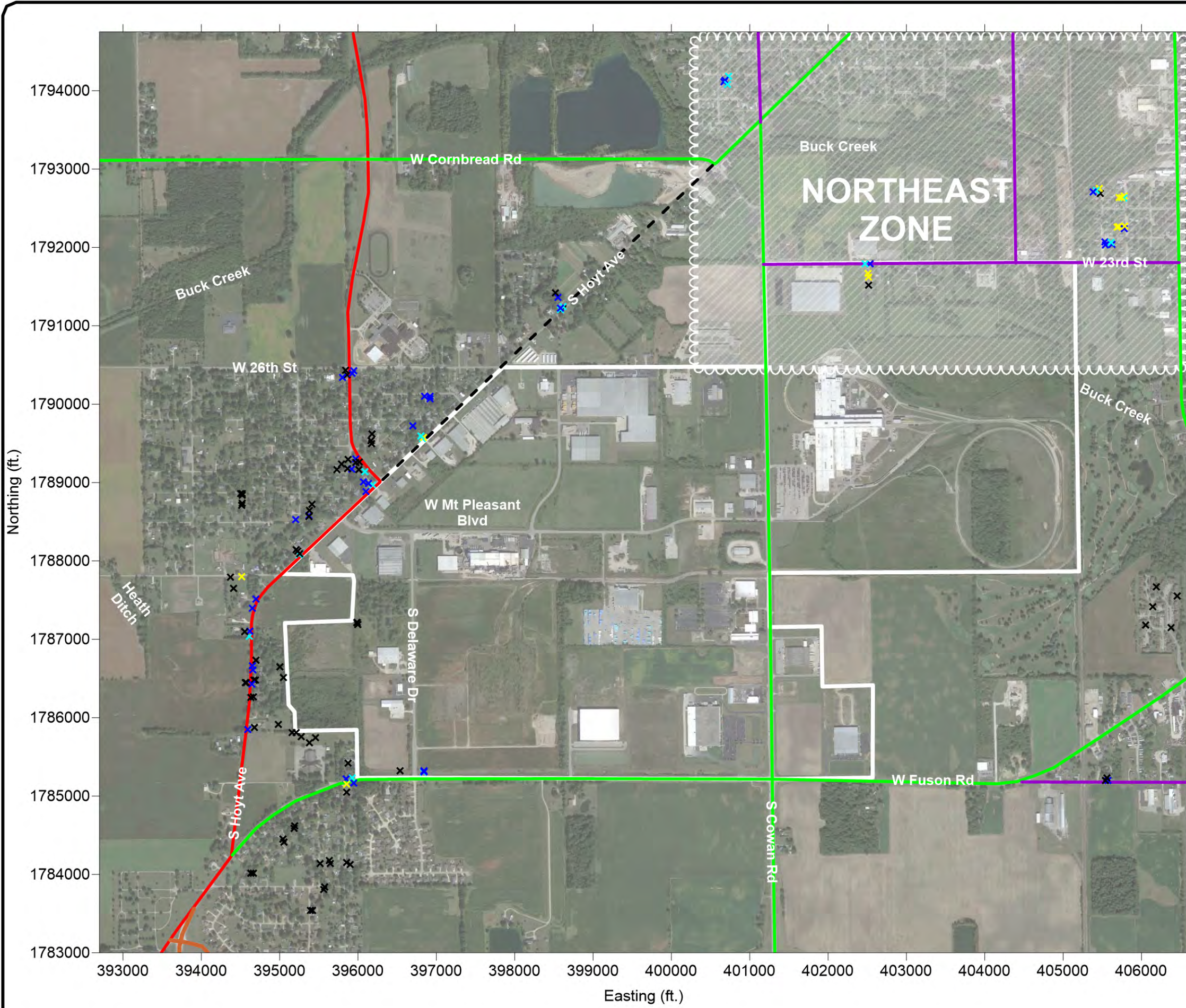
1. September 2019 aerial photograph courtesy of Google Earth Imagery and is provided for reference only. No claim is made as to the accuracy or completeness of this information.
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**Private Well Groundwater Sampling**  
 South Muncie Industria Center  
 Phase II Investigation  
 Muncie, Delaware County, IN  
 MUNDELL Project No. M20032

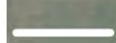
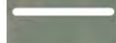
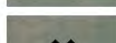
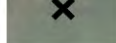



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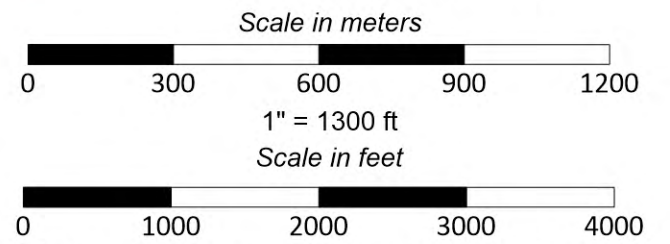


**LEGEND**

-  South Muncie Industria Center
-  Principal Arterial - Other
-  Minor Arterial
-  Major Collector
-  Northeast of Industria Center
-  XRF Sampling Locations (12/2021)
-  MUNDELL Considered Major Road Based on Industrial Locations and Assumed Traffic Flow (INDOT Classified as Local Road)

**XRF Soil Lead Results**

mg/kg	Count	%	Description
≤ 28.7	73	53	<b>Less than</b> Background Rural Indiana (includes "Non-Detect")
≤ 62.5	36	26	<b>Less than</b> Background Urban Indiana (Indianapolis/Terre Haute)
≤ 92	17	12	<b>Less than</b> Average XRF Results to Northeast of Industria Center
≤ 270	12	9	<b>Less than</b> 2022 IDEM Residential Migration to Groundwater
≤ 400	0	0	<b>Less than</b> 2022 IDEM Residential Direct Contact
≤ 800	0	0	<b>Less than</b> 2022 IDEM Industrial Direct Contact
≥ 800	0	0	<b>Above the</b> 2022 IDEM Industrial Direct Contact



**NOTES:**

1. September 2019 aerial photograph courtesy of Google Earth Imagery and is provided for reference only. No claim is made as to the accuracy or completeness of this information.
2. Coordinates are referenced according to Indiana East (Feet) State Plane 1983 Datum.
3. Roadway classification per the Indiana Department of Transportation (INDOT) Roadway Functional Class Viewer and <https://www.in.gov/indot/resources/maps/functional-classification-and-urban-area-boundary/>.

**Comparison XRF Directional & Roadway**

South Muncie Industria Center  
Phase II Investigation  
Muncie, Delaware County, IN  
MUNDELL Project No. M20032

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## TABLES

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Table 8b.	Surficial Soil Sampling Lead Summary – Southwest Drainage Basin



**Table 1**  
**Surficial Soil Analytical Results**  
**October 2021**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	Sample ID	Sample Date	Chemical Constituent Concentration								
			Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Lithium mg/kg	Selenium mg/kg	Silver mg/kg	Mercury mg/kg
4408 S Hoyt Ave	A1	10/20/2021	2.7	68.5	<0.62	11.9	23.8	7.6	<1.2	<0.62	<0.26
	A2	10/20/2021	3.7	76.6	<0.63	15.5	46.1	9.4	<1.3	<0.63	<0.26
4300/4400 S Hoyt Ave	A3	10/20/2021	3.6	75.7	<0.61	14.9	38.6	9.6	<1.2	<0.61	<0.27
	A4	10/20/2021	4.2	125	<0.59	15.5	27.7	10.3	<1.2	<0.59	<0.26
4500 S Hoyt Ave	A5	10/20/2021	<b>8.8</b>	110	<0.52	15.9	17.0	11.0	<1.0	<0.52	<0.24
	A6	10/20/2021	4.2	53.4	<0.61	11.5	41.4	10.2	<1.2	<0.61	<0.26
	A7	10/20/2021	4.2	94.9	<0.62	15.4	16.4	10	<1.2	<0.62	<0.27
4512 S Hoyt Ave	A8	10/20/2021	5.0	72.9	<0.57	16.5	76.1	9.3	<1.1	<0.57	<0.27
4300/4400 Blk S Hoyt Ave	A9	10/20/2021	4.8	114	<0.78	16.3	217	15.3	<1.6	<0.78	<0.35
	A10	10/20/2021	5.0	84.9	<0.58	15.0	24.6	10.6	<1.2	<0.58	<0.25
3500 W Fuson Rd	A11	10/20/2021	5.2	163	<0.55	17.8	21.3	11.9	<1.1	<0.55	<0.26
4849 Blk S Delaware Dr	A12	10/20/2021	<b>8.8</b>	202	<0.94	20.5	<b>310</b>	17.4	<1.9	<0.94	<0.43
	A12 (DUP)	10/20/2021	<b>8.0</b>	207	<0.97	22.0	<b>281</b>	18.3	<1.9	<0.97	<0.47
	A13	10/20/2021	<b>7.5</b>	63.4	<0.59	11.9	32.9	14.8	<1.2	<0.59	<0.24
<b>2022 IDEM Residential MTG (mg/kg)</b>			<b>5.9</b>	<b>1,700</b>	<b>7.5</b>	<b>1,000,000</b>	<b>270</b>	<b>240</b>	<b>5.3</b>	<b>16</b>	<b>2.1</b>
<b>2022 IDEM Residential Direct Contact (mg/kg)</b>			<b>9.5</b>	<b>21,000</b>	<b>9.9</b>	<b>--</b>	<b>400</b>	<b>220</b>	<b>550</b>	<b>550</b>	<b>3.1</b>
<b>2022 IDEM Industrial Direct Contact (mg/kg)</b>			<b>30</b>	<b>100,000</b>	<b>100</b>	<b>--</b>	<b>800</b>	<b>2,300</b>	<b>5,800</b>	<b>5,800</b>	<b>3.1</b>

**Notes:**

- 1) mg/kg = milligrams per kilogram (parts per million).
- 2) < = compound not detected at a concentration above the reporting limit.
- 3) DUP = Field duplicate sample (for Quality Assurance / Quality Control purposes).
- 4) IDEM Residential MTG = IDEM Remediation Closure Guide (RCG) residential soil migration to groundwater screening levels.
- 5) Concentrations in **Bold** are reported in exceedance of the associated IDEM RCG Residential MTG screening levels.
- 6) Concentrations in **Bold & Orange** exceed IDEM RCG Residential Direct Contact Soil Exposure screening levels.
- 7) Concentrations in **Bold & Purple** exceed IDEM RCG Commercial/Industrial Direct Contact Soil Exposure screening levels.
- 8) Testing performed according to U.S. EPA Method 6010 (Heavy Metals) and Method 7471 (Mercury).

**Table 2**  
**Surficial Soil XRF Screening**  
**December 2021**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	XRF Sample ID	Sample Date	Chemical Constituent Concentration								Notes
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
3701 W 31st St	E1	12/2/21 8:02	ND	53	ND	ND	ND	10	ND	ND	
	E2	12/2/21 8:09	ND	40	ND	ND	ND	ND	ND	ND	
	E3	12/2/21 8:14	ND	43	ND	ND	ND	ND	ND	ND	
	E4	12/2/21 8:22	ND	56	ND	ND	ND	18	ND	ND	
	E5	12/2/21 8:28	14	173	ND	ND	13	ND	ND	ND	
4001 S Hoyt Ave	E6	12/2/21 8:43	ND	27	ND	ND	90	17	ND	ND	
	E7	12/2/21 8:49	ND	213	ND	ND	75	ND	ND	ND	
	E8	12/2/21 8:54	ND	35	ND	ND	ND	19	ND	ND	
	E9	12/2/21 9:00	ND	50	ND	ND	20	ND	ND	ND	
	E10	12/2/21 9:07	ND	48	ND	ND	ND	14	ND	ND	
3421 W Armitage Dr	E11	12/2/21 10:03	ND	21	ND	ND	36	ND	ND	ND	
	E11 (DUP2)	12/2/21 10:09	ND	73	ND	ND	48	ND	ND	ND	
	E11 (DUP3)	12/2/21 10:12	ND	76	ND	ND	51	ND	ND	ND	
	E11 (DUP4)	12/2/21 10:15	ND	81	ND	ND	43	ND	ND	ND	
	E11 (DUP5)	12/2/21 10:18	ND	70	ND	ND	44	ND	ND	ND	
	E11 (DUP6)	12/2/21 10:23	ND	76	ND	ND	28	ND	ND	ND	
	E11 (DUP7)	12/2/21 10:25	ND	82	ND	ND	53	ND	ND	ND	
	E12	12/2/21 10:33	10	210	ND	ND	24	ND	ND	ND	
3418 W Armitage Dr	E13	12/2/21 10:39	ND	36	ND	ND	30	ND	ND	ND	
	E14	12/2/21 10:46	ND	34	ND	ND	ND	ND	ND	ND	
	E14 (DUP8)	12/2/21 10:50	ND	88	ND	ND	20	ND	ND	ND	
3701 S Hoyt Ave	E15	12/2/21 11:00	ND	77	ND	ND	21	ND	ND	ND	
	E16	12/2/21 12:02	ND	51	ND	ND	48	ND	ND	ND	
	E17	12/2/21 12:08	13	158	ND	ND	65	ND	ND	ND	
	E18	12/2/21 12:12	ND	33	ND	ND	48	ND	ND	ND	
	E19	12/2/21 12:23	ND	41	ND	ND	30	ND	ND	ND	
3620 S Park Ave	E20	12/2/21 12:30	ND	39	ND	ND	78	ND	ND	ND	
	E21	12/2/21 12:44	ND	59	ND	ND	43	ND	ND	ND	
	E22	12/2/21 12:51	ND	34	ND	ND	ND	ND	ND	ND	
	E23	12/2/21 12:57	ND	62	ND	ND	22	ND	ND	ND	
	E24	12/2/21 13:04	ND	58	ND	ND	23	11	ND	ND	
3308 W 30th St	E25	12/2/21 13:11	ND	79	ND	ND	33	ND	ND	ND	
	E26	12/2/21 13:25	ND	52	ND	ND	ND	ND	ND	ND	Measurement time: 41.8 sec
	E27	12/2/21 13:32	ND	112	ND	ND	26	7	ND	ND	
	E28	12/2/21 13:42	ND	124	ND	ND	21	7	ND	ND	
	E29	12/2/21 13:49	ND	83	ND	ND	17	ND	ND	ND	

**Table 2**  
**Surficial Soil XRF Screening**  
**December 2021**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	XRF Sample ID	Sample Date	Chemical Constituent Concentration								Notes
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
3200 W 29th St	E30	12/2/21 14:07	ND	115	ND	ND	17	5	ND	ND	
	E31	12/2/21 14:13	ND	78	ND	ND	23	ND	ND	ND	
	E32	12/2/21 14:19	6	280	ND	ND	21	ND	ND	ND	
3509 S Hoyt Ave	E33	12/2/21 14:35	ND	80	ND	ND	90	ND	ND	ND	
	E34	12/2/21 14:40	ND	71	ND	ND	206	ND	ND	ND	
	E35	12/2/21 14:47	ND	170	ND	ND	30	ND	ND	ND	
	E36	12/2/21 14:53	ND	75	ND	ND	74	ND	ND	ND	
	E36 (DUP9)	12/2/21 14:57	ND	123	ND	ND	61	5	ND	ND	
3301 W 26th St	E37	12/2/21 15:18	ND	66	ND	ND	21	ND	ND	ND	
	E38	12/2/21 15:24	ND	120	ND	ND	22	ND	ND	ND	
	E41	12/2/21 15:43	ND	142	ND	ND	51	ND	ND	ND	
3223 W 26th St	E39	12/2/21 15:31	ND	94	ND	ND	31	ND	ND	ND	
	E40	12/2/21 15:38	ND	101	ND	ND	31	ND	ND	ND	
3001 W 27th St	E42	12/2/21 15:56	ND	131	ND	ND	50	ND	ND	ND	
	E43	12/2/21 16:01	ND	69	ND	ND	29	ND	ND	ND	
	E44	12/2/21 16:07	ND	60	ND	ND	31	ND	ND	ND	
3109 S Hoyt Ave	E45	12/3/21 7:47	ND	36	ND	ND	89	ND	ND	ND	
	E46	12/3/21 7:55	ND	164	ND	ND	65	ND	ND	ND	
	E47	12/3/21 8:06	ND	116	ND	ND	40	ND	ND	ND	Analyzed at 2-3 inch depth
	E47S	12/3/21 8:10	ND	49	ND	ND	28	ND	ND	ND	Analyzed at 1-2 inch depth. Used for sensitivity instrument evaluation, but not in overall evaluation.
	E48	12/3/21 8:17	ND	38	ND	ND	31	ND	ND	ND	
	E49	12/3/21 8:23	8	165	ND	ND	16	ND	ND	ND	
ANON1 W 17th St	E50	12/3/21 8:37	ND	115	ND	ND	67	ND	ND	ND	
	E51	12/3/21 8:43	ND	144	ND	ND	38	ND	ND	ND	Analyzed exposed surface, no vegetation present (no excavation)
	E52	12/3/21 8:47	ND	108	ND	ND	52	ND	ND	ND	
	E53	12/3/21 8:53	ND	53	ND	ND	90	ND	ND	ND	

**Table 2**  
**Surficial Soil XRF Screening**  
**December 2021**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	XRF Sample ID	Sample Date	Chemical Constituent Concentration								Notes
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
1213 W 23rd St	E54	12/3/21 9:21	ND	57	ND	ND	59	ND	3	ND	
	E55	12/3/21 9:28	ND	70	ND	ND	90	ND	ND	ND	
	E56	12/3/21 9:35	ND	112	ND	ND	114	ND	3	ND	
	E56 DUP10	12/3/21 9:39	ND	80	ND	ND	123	ND	ND	ND	
	E56 DUP11	12/3/21 9:41	ND	83	ND	ND	128	ND	4	ND	
	E56 DUP12	12/3/21 9:44	ND	86	ND	ND	116	ND	ND	ND	
	E56 DUP13	12/3/21 9:46	ND	99	ND	ND	127	ND	ND	ND	
	E56 DUP14	12/3/21 9:50	ND	158	ND	ND	131	ND	ND	ND	
	E56 DUP15	12/3/21 9:52	15	161	ND	ND	140	ND	ND	ND	
	E57	12/3/21 10:00	ND	172	ND	ND	115	ND	ND	ND	
E58	12/3/21 10:06	ND	162	ND	ND	24	ND	ND	ND		
2900 S Liberty St	E59	12/3/21 10:21	ND	58	ND	ND	36	10	ND	ND	
	E60	12/3/21 10:27	ND	156	ND	ND	55	ND	ND	ND	
	E61	12/3/21 10:33	ND	85	ND	ND	41	ND	ND	ND	
	E62	12/3/21 10:39	ND	256	ND	ND	73	ND	ND	ND	
2815 S Franklin St	E63	12/3/21 10:50	ND	146	ND	ND	61	5	ND	ND	
	E64	12/3/21 10:56	ND	59	ND	ND	208	ND	ND	ND	
	E65	12/3/21 11:03	ND	128	ND	ND	131	ND	ND	ND	
	E66	12/3/21 11:08	ND	105	ND	ND	183	ND	3	ND	
2719 S Franklin St	E67	12/3/21 11:24	39	86	ND	ND	227	ND	ND	ND	
	E68	12/3/21 11:32	ND	57	ND	ND	88	ND	ND	ND	
	E69	12/3/21 11:38	ND	62	ND	ND	110	ND	ND	ND	
	E70	12/3/21 11:42	32	199	ND	ND	145	ND	ND	ND	
2707 S Liberty St	E71	12/3/21 12:27	ND	64	ND	ND	27	ND	ND	ND	
	E72S	12/3/21 12:34	ND	210	ND	ND	85	ND	ND	ND	Equipment blank. Analyzed exposed surface, no vegetation present (no excavation).
	E72	12/3/21 12:39	ND	167	ND	ND	111	ND	ND	ND	Same location as E72S, excavated to typical depth
	E73	12/3/21 12:44	18	59	ND	ND	92	ND	ND	ND	
	E74	12/3/21 12:49	ND	83	ND	ND	52	ND	ND	ND	
4117 S Madison St	E75	12/3/21 13:13	ND	70	ND	ND	16	ND	ND	ND	
	E76	12/3/21 13:20	ND	248	ND	ND	14	ND	7	ND	
	E77	12/3/21 13:50	11	132	ND	ND	20	ND	ND	ND	
	E78	12/3/21 13:57	ND	67	ND	ND	ND	ND	ND	ND	
	E79	12/3/21 14:04	ND	61	ND	ND	ND	ND	ND	ND	



**Table 2**  
**Surficial Soil XRF Screening**  
**December 2021**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	XRF Sample ID	Sample Date	Chemical Constituent Concentration								Notes
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
400 W Fuson Rd	E80	12/3/21 14:22	ND	185	ND	ND	40	ND	ND	ND	
	E80 (DUP16)	12/3/21 14:26	ND	127	ND	ND	37	ND	ND	ND	
	E81	12/3/21 14:30	ND	99	ND	ND	28	ND	ND	ND	
	E82	12/3/21 14:35	ND	83	ND	ND	23	ND	ND	ND	
Northeast of S Delaware and Fuson Intersection (Ditch)	A14X	12/3/21 15:00	ND	47	ND	ND	80	ND	ND	ND	
	A15X	12/3/21 15:06	ND	137	ND	ND	59	ND	ND	ND	
	A16	12/3/21 15:11	ND	55	ND	ND	30	<b>8</b>	ND	ND	
4849 Blk S Delaware Dr	A17	12/3/21 15:21	ND	44	ND	ND	19	ND	ND	ND	
4400 Blk S Delaware Dr	A18	12/3/21 15:49	ND	46	ND	ND	ND	ND	ND	ND	
	A19	12/3/21 15:53	ND	33	ND	ND	ND	ND	ND	ND	
	A20	12/3/21 15:58	ND	44	ND	ND	ND	ND	ND	ND	
3500 W Fuson Rd	A21	12/6/21 7:44	ND	77	ND	ND	ND	ND	ND	ND	
	A22	12/6/21 7:50	<b>9</b>	162	ND	ND	10	ND	ND	ND	
	A23sur	12/6/21 8:01	ND	111	ND	ND	10	ND	ND	ND	Analyzed exposed surface, no vegetation present (no excavation)
	A24	12/6/21 8:07	ND	116	ND	ND	ND	ND	ND	ND	
	A25	12/6/21 8:14	ND	88	ND	ND	11	ND	ND	ND	
4201 S Hoyt Ave	E83	12/6/21 8:31	ND	72	ND	ND	46	ND	ND	ND	
	E84	12/6/21 8:37	<b>8</b>	144	ND	ND	29	ND	ND	ND	
	E85	12/6/21 8:44	ND	57	ND	ND	ND	ND	ND	ND	
	E86	12/6/21 8:48	ND	109	ND	ND	185	ND	ND	ND	
	E87	12/6/21 8:54	ND	32	ND	ND	ND	ND	ND	ND	
4301 S Hoyt Ave	E88	12/6/21 9:07	ND	52	ND	ND	84	ND	ND	ND	
	E89	12/6/21 9:11	ND	73	ND	ND	58	ND	ND	ND	
	E90	12/6/21 9:16	ND	48	ND	ND	24	ND	ND	ND	
4400 S Hoyt Ave	A26	12/6/21 9:34	ND	48	ND	ND	22	<b>9</b>	ND	ND	
4408 S Hoyt Ave	A27	12/6/21 9:39	ND	40	ND	ND	30	ND	ND	ND	
	A28	12/6/21 9:43	<b>6</b>	230	<b>38</b>	ND	32	3	ND	ND	
	A29	12/6/21 9:56	ND	151	ND	ND	18	ND	ND	ND	

**Table 2**  
**Surficial Soil XRF Screening**  
**December 2021**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	XRF Sample ID	Sample Date	Chemical Constituent Concentration								Notes
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
4500 S Hoyt Ave	A30	12/6/21 10:19	17	34	ND	ND	ND	12	ND	ND	
	A31	12/6/21 10:21	11	93	ND	ND	ND	ND	ND	ND	
	A32	12/6/21 10:23	ND	52	ND	ND	40	ND	ND	ND	
	A32 (DUP1)	12/6/21 10:26	ND	44	ND	ND	37	8	ND	ND	
	A32 (DUP2)	12/6/21 10:27	ND	61	ND	ND	43	ND	ND	ND	
	A32 (DUP3)	12/6/21 10:28	ND	38	ND	ND	27	ND	ND	ND	
	A32 (DUP4)	12/6/21 10:29	19	50	ND	ND	25	9	ND	ND	
	A32 (DUP5)	12/6/21 10:31	ND	63	ND	ND	37	ND	ND	ND	
A32 (DUP6)	12/6/21 10:33	ND	63	ND	ND	35	6	ND	ND		
4300/4400 Blk S Hoyt Ave	A35	12/6/21 10:57	ND	63	ND	ND	ND	ND	ND	ND	
4300 BLK S Hoyt Ave (West of S Hoyt Ave)	A33	12/6/21 10:36	ND	50	ND	ND	ND	ND	ND	ND	Moist soil
	A34SUR	12/6/21 10:38	ND	259	ND	ND	ND	ND	ND	ND	Analyzed exposed surface, no vegetation present (no excavation). Moist soil.
4512 S Hoyt Ave	A36	12/6/21 11:05	ND	26	ND	ND	21	ND	ND	ND	
	A37	12/6/21 11:08	ND	75	ND	ND	ND	ND	ND	ND	
4612 S Hoyt Ave	A38SUR	12/6/21 12:33	ND	218	ND	ND	27	ND	ND	ND	Equipment blank. Analyzed exposed surface, no vegetation present (no excavation).
	A38	12/6/21 12:36	ND	85	ND	ND	30	ND	ND	ND	
	A39	12/6/21 12:41	ND	166	ND	ND	14	ND	ND	ND	
	A40	12/6/21 12:53	10	273	ND	ND	15	ND	ND	ND	
3300 W Fuson Rd	A41	12/6/21 13:05	ND	44	ND	ND	84	ND	ND	ND	
	A42	12/6/21 13:12	ND	92	ND	ND	44	ND	ND	ND	
	A43	12/6/21 13:19	ND	59	ND	ND	ND	ND	ND	ND	
4900 S Edgewood Dr	A44	12/6/21 13:29	ND	34	ND	ND	112	ND	ND	ND	
	A45	12/6/21 13:34	ND	27	ND	ND	33	ND	ND	ND	
	A46	12/6/21 13:41	ND	47	ND	ND	ND	ND	ND	ND	
5200 S Edgewood Dr	E91	12/6/21 13:55	ND	41	ND	ND	ND	ND	ND	ND	
	E92	12/6/21 14:00	ND	53	ND	ND	15	ND	ND	ND	

**Table 2**  
**Surficial Soil XRF Screening**  
**December 2021**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	XRF Sample ID	Sample Date	Chemical Constituent Concentration								Notes
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
ANON2 (Southwest of Industria Center)	E93	12/6/21 14:10	ND	33	ND	ND	ND	ND	ND	ND	
	E94	12/6/21 14:13	ND	56	ND	ND	19	<b>6</b>	ND	ND	
	E94 (Dup)	12/6/21 14:16	ND	30	ND	ND	30	ND	ND	ND	
	E95SUR	12/6/21 14:18	ND	136	ND	ND	13	ND	ND	ND	Analyzed exposed surface, no vegetation present (no excavation)
ANON3 S Eldorado Ln	E96	12/6/21 14:31	ND	66	ND	ND	ND	ND	ND	ND	
	E97	12/6/21 14:36	ND	109	ND	ND	ND	ND	ND	ND	
3408 W Fleetwood Dr	E98	12/6/21 14:47	<b>10</b>	83	ND	ND	14	<b>7</b>	ND	ND	
	E98 (Dup)	12/6/21 14:49	ND	72	ND	ND	ND	ND	ND	ND	
	E98 (Dup 2)	12/6/21 14:51	ND	65	ND	ND	19	ND	ND	ND	
	E99	12/6/21 14:54	ND	100	ND	ND	23	<b>8</b>	ND	ND	
3605 W Fleetwood Dr	E100	12/6/21 15:04	ND	50	ND	ND	19	ND	ND	ND	
	E101	12/6/21 15:09	ND	104	ND	ND	ND	ND	ND	ND	
3305 W CR 325 S	E102	12/6/21 15:20	ND	35	ND	ND	ND	ND	ND	ND	
	E103	12/6/21 15:24	ND	39	ND	ND	ND	ND	ND	ND	
5304 S Breezewood Dr	E104	12/6/21 15:32	ND	86	ND	ND	24	ND	ND	ND	
	E105	12/6/21 15:36	ND	44	ND	ND	14	<b>9</b>	ND	ND	
<b>2022 IDEM Residential MTG (mg/kg)</b>			<b>5.9</b>	<b>1,700</b>	<b>7.5</b>	<b>1,000,000</b>	<b>270</b>	<b>5.3</b>	<b>16</b>	<b>2.1</b>	
<b>2022 IDEM Residential Direct Contact (mg/kg)</b>			<b>9.5</b>	<b>21,000</b>	<b>9.9</b>	<b>--</b>	<b>400</b>	<b>550</b>	<b>550</b>	<b>3.1</b>	
<b>2022 IDEM Industrial Direct Contact (mg/kg)</b>			<b>30</b>	<b>100,000</b>	<b>100</b>	<b>--</b>	<b>800</b>	<b>5,800</b>	<b>5,800</b>	<b>3.1</b>	

- Notes:**
- 1) mg/kg = milligrams per kilogram (parts per million).
  - 2) ND = "Non-Detect," constituent was not detected in the sample.
  - 3) DUP = Field duplicate sample (for Quality Assurance / Quality Control purposes).
  - 4) IDEM Residential MTG = IDEM Remediation Closure Guide (RCG) residential soil migration to groundwater screening levels.
  - 5) Concentrations in **Bold** are reported in exceedance of the associated IDEM RCG Residential MTG screening levels.
  - 6) Concentrations in **Bold & Orange** exceed IDEM RCG Residential Direct Contact Soil Exposure screening levels.
  - 7) Concentrations in **Bold & Purple** exceed IDEM RCG Commercial/Industrial Direct Contact Soil Exposure screening levels.
  - 8) In situ soil screening performed using a field portable X-Ray Fluorescence (XRF) device via U.S. EPA SW-846 Test Method 6200 at 50 second intervals per sampling location unless otherwise noted.
  - 9) "ANON" indicates addresses which have been "anonymized" at the request of the private property owner.

**Table 3**  
**Surficial Soil Confirmatory Analytical Results**  
**January 2022**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	Sample ID	Sample Date	Chemical Constituent Concentration								
			Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Lithium mg/kg	Selenium mg/kg	Silver mg/kg	Mercury mg/kg
3500 W Fuson Rd	A22-s	1/6/2022	7.3	90.8	<0.63	16.2	19.7	9.8	<1.3	<0.63	<0.26
4500 S Hoyt Ave	A30S	1/7/2022	8.4	197	<0.65	15.9	16.4	11.4	<1.3	<0.65	<0.25
4900 S Edgewood Dr	A44S	1/6/2022	7.9	69.6	<0.60	17.8	163	11.4	<1.2	<0.60	<0.26
4849 Blk S Delaware Dr	A49S	1/6/2022	7.2	115	<0.83	18.5	116	15.4	<1.7	<0.83	<0.33
	A49S (DUP)	1/6/2022	7.9	107	<0.71	18.3	111	15.7	<1.4	<0.71	<0.33
3421 W Armitage Dr	E12S	1/7/2022	7.9	88.5	<0.60	14.6	40.1	10.8	<1.2	<0.60	<0.28
3701 S Hoyt Ave	E17S	1/7/2022	6.1	95.3	<0.60	26.4	92.7	11.6	<1.2	<0.60	<0.29
3509 S Hoyt Ave	E34S	1/7/2022	6.5	70.1	<0.60	17.5	229	9.9	<1.2	<0.60	<0.28
3301 W 26th St	E41S	1/7/2022	6.6	78.3	<0.59	13.8	57.3	8.3	<1.2	<0.59	<0.26
3109 S Hoyt Ave	E49S	1/7/2022	6.7	80.4	<0.78	14.6	37.3	9.6	<1.6	<0.78	<0.37
ANON1 W 17th St	E53S	1/7/2022	7.7	164	2.0	18.8	157	10.1	<1.2	<0.62	<0.28
1213 W 23rd St	E56S	1/7/2022	9.8	387	1.2	20.9	183	15.0	<1.4	<0.68	<0.27
	E57S	1/7/2022	9.2	190	1.7	17.3	130	11.1	<1.3	<0.65	<0.27
2815 S Franklin St	E64S	1/7/2022	8.2	180	0.98	18.4	454	10.1	<1.1	<0.56	0.30
	E65S	1/7/2022	9.0	179	0.82	18.0	177	10.2	<1.4	<0.72	<0.31
	E65S (DUP4)	1/7/2022	8.3	174	0.74	18.6	161	9.4	<1.3	<0.64	<0.24
	E66S	1/7/2022	7.9	179	1.3	15.4	224	8.9	<1.1	<0.57	<0.25
2719 S Franklin St	E67S	1/7/2022	29.7	157	1.5	18.2	376	10	<1.2	<0.62	<0.29
	E69S	1/7/2022	23.3	171	1.1	16.9	135	8.4	<1.2	<0.62	0.32
	E70S	1/7/2022	40.9	205	1.5	17.7	163	7.0	<1.2	<0.58	<0.27
2707 S Liberty St	E72S	1/7/2022	7.6	111	1.3	19.2	141	10	<1.1	<0.56	<0.26
	E73S	1/7/2022	15.7	104	0.84	18.4	290	8.1	<1.1	<0.54	<0.24
4117 S Madison St	E77S	1/7/2022	8.1	66.2	<0.57	11.7	31.5	9.0	<1.1	<0.57	<0.24
4201 S Hoyt Ave	E84S	1/7/2022	6.6	72.1	<0.55	13.7	41.6	9.4	<1.1	<0.55	<0.26
	E86S	1/7/2022	5.3	56.2	1.2	23.3	240	8.6	<1.1	<0.56	<0.26
<b>2022 IDEM Residential MTG (mg/kg)</b>			<b>5.9</b>	<b>1,700</b>	<b>7.5</b>	<b>1,000,000</b>	<b>270</b>	<b>240</b>	<b>5.3</b>	<b>16</b>	<b>2.1</b>
<b>2022 IDEM Residential Direct Contact (mg/kg)</b>			<b>9.5</b>	<b>21,000</b>	<b>9.9</b>	<b>--</b>	<b>400</b>	<b>220</b>	<b>550</b>	<b>550</b>	<b>3.1</b>
<b>2022 IDEM Industrial Direct Contact (mg/kg)</b>			<b>30</b>	<b>100,000</b>	<b>100</b>	<b>--</b>	<b>800</b>	<b>2,300</b>	<b>5,800</b>	<b>5,800</b>	<b>3.1</b>

**Notes:**

- 1) mg/kg = milligrams per kilogram (parts per million).
- 2) < = compound not detected at a concentration above the reporting limit.
- 3) DUP = Field duplicate sample (for Quality Assurance / Quality Control purposes).
- 4) IDEM Residential MTG = IDEM Remediation Closure Guide (RCG) residential soil migration to groundwater screening levels.
- 5) Concentrations in **Bold** are reported in exceedance of the associated IDEM RCG Residential MTG screening levels.
- 6) Concentrations in **Bold & Orange** exceed IDEM RCG Residential Direct Contact Soil Exposure screening levels.
- 7) Concentrations in **Bold & Purple** exceed IDEM RCG Commercial/Industrial Direct Contact Soil Exposure screening levels.
- 8) Testing performed according to U.S. EPA Method 6010 (Heavy Metals) and Method 7471 (Mercury).
- 9) "ANON" indicates addresses which have been "anonymized" at the request of the private property owner.

**Table 4**  
**Surface Water Analytical Results**  
**January 2022**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	Sample ID	Sample Date	Chemical Constituent Concentration									
			Arsenic	Barium	Cadmium	Chromium	Lead	Lithium	Selenium	Silver	Mercury	VOCs
			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
4849 BLK S Delaware Dr	SW-1	1/6/2022	<10.0	155	<2.0	<10.0	<10.0	<20.0	<10.0	<10.0	<2.0	ND
4300/4400 BLK S Hoyt Ave	SW-2	1/6/2022	<10.0	120	<2.0	<10.0	<10.0	<20.0	<10.0	<10.0	<2.0	ND
	SW-2 (DUP3)	1/6/2022	<10.0	116	<2.0	<10.0	<10.0	<20.0	<10.0	<10.0	<2.0	ND
Heath Ditch	SW-3	1/6/2022	<10.0	144	<2.0	<10.0	<10.0	<20.0	<10.0	<10.0	<2.0	ND
<b>U.S. EPA Drinking Water Secondary MCL (ug/L)</b>			--	--	--	--	--	--	--	<b>100</b>	--	--
<b>U.S. EPA Drinking Water Primary MCL or Treatment Technique (ug/L)</b>			<b>10</b>	<b>2,000</b>	<b>5</b>	<b>100</b>	<b>15</b>	--	<b>50</b>	--	<b>2</b>	--
<b>2022 IDEM RCG Residential Groundwater Tap Screening Level</b>			<b>10</b>	<b>2,000</b>	<b>5</b>	<b>100</b>	<b>15</b>	<b>40</b>	<b>50</b>	<b>94</b>	<b>2</b>	--

**Notes:**

- 1) ug/L = micrograms per liter (parts per billion).
- 2) < = compound not detected at a concentration above the reporting limit.
- 3) DUP = Field duplicate sample (for Quality Assurance / Quality Control purposes).
- 4) ND = Not Detected at a concentration above the reporting limit.
- 5) VOC = Volatile Organic Compounds.
- 6) Concentrations in **Bold** are reported in exceedance of the associated United States Environmental Protection Agency (U.S. EPA) Drinking Water Secondary Maximum Contaminant Level (MCL).
- 7) Concentrations in **Bold & Orange** exceed U.S. EPA Drinking Water Primary Maximum Contaminant Level (MCL) or Treatment Technique (TT).
- 8) Concentrations in **Bold & Purple** exceed IDEM Remediation Closure Guide (RCG) Residential Groundwater Tap screening levels.
- 9) Testing performed according to U.S. EPA Method 6010 (Heavy Metals), Method 7470 (Mercury), and Method 5030/8260 (VOCs).

**Table 5**  
**Sediment Analytical Results**  
**January 2022**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	Sample ID	Sample Date	Chemical Constituent Concentration									
			Arsenic	Barium	Cadmium	Chromium	Lead	Lithium	Selenium	Silver	Mercury	VOCs
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg
NE Fuson & Delaware Intersection	A47-sed	1/6/2022	3.4	85.4	<0.75	9.3	40.8	9.0	<1.5	<0.75	N/A	ND
4849 Blk S Delaware Dr	A48-sed	1/6/2022	<b>7.8</b>	93.9	<0.87	13.6	78.3	11.6	<1.7	<0.87	<0.40	ND
4300/4400 BLK S Hoyt Ave	A50sed	1/6/2022	4.4	71.7	<0.62	12.9	83.8	11.6	<1.2	<0.62	<0.29	ND
	A51sed	1/6/2022	5.0	91.8	<0.73	14.6	53.8	9.3	<1.5	<0.73	<0.35	ND
	A51sed (DUP2)	1/6/2022	5.4	121	<0.94	18.0	61.8	12.1	<1.9	<0.94	<0.43	ND
	A52sed	1/6/2022	5.4	109	<0.93	18.0	50.6	14.3	<1.9	<0.93	<0.45	ND
Heath Ditch	A53sed	1/6/2022	4.4	58.1	<0.75	8.6	18.9	8.7	<1.5	<0.75	<0.34	ND
<b>2022 IDEM Residential MTG (mg/kg)</b>			<b>5.9</b>	<b>1,700</b>	<b>7.5</b>	<b>1,000,000</b>	<b>270</b>	<b>240</b>	<b>5.3</b>	<b>16</b>	<b>2.1</b>	--
<b>2022 IDEM Residential Direct Contact (mg/kg)</b>			<b>9.5</b>	<b>21,000</b>	<b>9.9</b>	--	<b>400</b>	<b>220</b>	<b>550</b>	<b>550</b>	<b>3.1</b>	--
<b>2022 IDEM RCG Industrial Direct Contact (mg/kg)</b>			<b>30</b>	<b>100,000</b>	<b>100</b>	--	<b>800</b>	<b>2,300</b>	<b>5,800</b>	<b>5,800</b>	<b>3.1</b>	--

**Notes:**

- 1) mg/kg = milligrams per kilogram (parts per million).
- 2) ug/kg = micrograms per kilogram (parts per billion).
- 3) < = compound not detected at a concentration above the reporting limit.
- 4) DUP = Field duplicate sample (for Quality Assurance / Quality Control purposes).
- 5) ND = Not Detected at a concentration above the reporting limit.
- 6) N/A = Not Analyzed.
- 7) VOC = Volatile Organic Compounds.
- 8) IDEM Residential MTG = IDEM Remediation Closure Guide (RCG) residential soil migration to groundwater screening levels.
- 9) Concentrations in **Bold** are reported in exceedance of the associated IDEM RCG Residential MTG screening levels.
- 10) Concentrations in **Bold & Orange** exceed IDEM RCG Residential Direct Contact Soil Exposure screening levels.
- 11) Concentrations in **Bold & Purple** exceed IDEM RCG Commercial/Industrial Direct Contact Soil Exposure screening levels.
- 12) Testing performed according to U.S. EPA Method 6010 (Heavy Metals), Method 7471 (Mercury) and Method 8260 (VOCs).
- 13) Extensive evaluation of potential effects of sediment chemical concentrations on ecological and/or associated human food chain threats was beyond the scope of this investigation.

**Table 6**  
**Private Well Groundwater Analytical Results**  
**April 2022**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Property Address	Sample ID	Sample Location*	Purge Time (min)	Sample Date	Chemical Constituent Concentration											PCBs	PFAS
					Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury	Other VOC Constituents				
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	Constituent	ug/L	ug/L		
ANON2 (SW of Industria Center)	DW-1	Garage, direct from well	20	4/6/2022	<1.0	164	<0.20	<2.0	5.0	<2.0	<0.50	<0.20	ND	NA	NA		
5200 S Edgewood Dr	DW-2	Outdoor House Spigot	20	4/6/2022	<1.0	185	0.51	<2.0	<b>19.9</b>	<2.0	<0.50	<0.20	ND	NA	NA		
4900 S Edgewood Dr	DW-3	Outdoor House Spigot	15	4/6/2022	2.0	314	<0.20	<2.0	<1.0	<2.0	<0.50	<0.20	ND	NA	NA		
3305 W CR 325 S	DW-4	Outdoor House Spigot	15	4/6/2022	3.2	144	<0.20	<2.0	<b>29.4</b>	<2.0	<0.50	<0.20	ND	NA	NA		
5304 S Breezewood Dr	DW-5	Outdoor House Spigot (through water softener)	15	4/6/2022	4.0	<1.0	<0.20	<2.0	4.1	<2.0	<0.50	<0.20	ND	NA	NA		
3605 W Fleetwood Dr	DW-6	Outdoor House Spigot (through water softener)	15	4/6/2022	<1.0	1.5	<0.20	<2.0	<b>27.9</b>	<2.0	<0.50	<0.20	ND	NA	NA		
ANON3 S Eldorado Ln	DW-7	Outdoor House Spigot	15	4/6/2022	<1.0	532	<0.20	<2.0	<1.0	<2.0	<0.50	<0.20	ND	NA	NA		
3408 W Fleetwood Dr	DW-8	Outdoor House Spigot	15	4/6/2022	<1.0	503	<0.20	<2.0	9.2	<2.0	<0.50	<0.20	ND	NA	NA		
3300 W Fuson Rd	DW-9	Front Yard Well Connection	20	4/6/2022	<1.0	519	<0.20	<2.0	<1.0	<2.0	<0.50	<0.20	ND	ND	NA		
3500 W Fuson Rd	DW-10	Outdoor Spigot (not known if goes through water softener)	15	4/6/2022	<1.0	9.3	<0.20	<2.0	1.8	<2.0	<0.50	<0.20	ND	ND	NA		
4500 S Hoyt Ave	DW-11	Garage (not through water softener or filter)	15	4/6/2022	2.7	250	0.22	<2.0	<b>24.4</b>	<2.0	<0.50	<0.20	ND	ND	NA		
	DW-11 (DUP)			4/6/2022	2.7	243	<0.20	<2.0	3.4	<2.0	<0.50	<0.20	ND	ND	NA		
4512 S Hoyt Ave	DW-12	Outdoor House Spigot	15	4/6/2022	<1.0	279	<0.20	<2.0	1.8	<2.0	<0.50	<0.20	ND	ND	NA		
3109 S Hoyt Ave	DW-13	Outdoor House Spigot (direct to well connection)	15	4/6/2022	4.2	114	<0.20	<2.0	2.2	<2.0	<0.50	<0.20	ND	ND	NA		
4612 S Hoyt Ave	DW-14	Outdoor House Spigot	15	4/7/2022	2.8	303	<0.20	<2.0	<b>25.0</b>	<2.0	<0.50	<0.20	ND	ND	NA		
4608 S Hoyt Ave	DW-15	Outdoor House Spigot	15	4/7/2022	2.7	290	<0.20	<2.0	<1.0	<2.0	<0.50	<0.20	ND	ND	NA		
4400 S Hoyt Ave	DW-16	Outdoor House Spigot	15	4/7/2022	1.2	131	<0.20	<2.0	<1.0	<2.0	<0.50	<0.20	ND	ND	NA		
4408 S Hoyt Ave	DW-17	Outdoor House Spigot (through water softener)	15	4/7/2022	1.5	2.6	0.33	<2.0	<b>188</b>	<2.0	<0.50	<0.20	ND	ND	NA		
4301 S Hoyt Ave	DW-18	Outdoor House Spigot (water softener bypassed)	15	4/7/2022	5.4	<1.0	<0.20	<2.0	10.6	<2.0	<0.50	<0.20	ND	ND	NA		
4201 S Hoyt Ave	DW-19	Outdoor House Spigot	15	4/7/2022	1.1	229	<0.20	<2.0	<b>32.0</b>	<2.0	0.64	<0.20	ND	ND	NA		
3701 S Hoyt Ave	DW-20	Front Yard Spigot	15	4/7/2022	<1.0	93.8	<0.20	<2.0	<1.0	<2.0	<0.50	<0.20	Bromodichloromethane	< R-GTap	NA	ND	
													Chloroform	< R-GTap			
													Dibromochloromethane	< R-GTap			
													All other VOC's Analyzed	ND			
<b>2022 IDEM Residential Groundwater Tap Screening Level (ug/L)</b>					<b>10</b>	<b>2,000</b>	<b>5</b>	<b>100</b>	<b>15</b>	<b>50</b>	<b>94</b>	<b>2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	

- Notes:**
- 1) ug/L = micrograms per liter (parts per billion).
  - 2) < = compound not detected at a concentration above the reporting limit.
  - 3) DUP = Field duplicate sample (for Quality Assurance / Quality Control purposes).
  - 4) ND = Not Detected at a concentration above the reporting limit.
  - 5) NA = Not Analyzed.
  - 6) VOC = Volatile Organic Compounds; PCBs = Polychlorinated Biphenyls; PFAS = Per- and Polyfluoroalkyl compounds.
  - 7) R-GTap = 2022 IDEM Remediation Closure Guide (RCG) Residential Groundwater Tap screening levels.
  - 8) Concentrations in Bold & Orange exceed IDEM RCG Residential Groundwater Tap screening levels.**
  - 9) Testing performed according to U.S. EPA Method 200.8 (Heavy Metals), Method 245.1 (Mercury), Method 524.2 (VOCs), Method 505 (PCBs) and Method 537.1 (PFAS).
  - 10) \*All sample locations taken from 'untreated' outdoor spigots unless otherwise noted, where 'untreated' indicates the homeowner either knew or had reasonable certainty that either filtration or water softener system did not precede the sampling location.
  - 11) "ANON" indicates addresses which have been "anonymized" at the request of the private property owner.

**Table 7**  
**Surficial Soil Sampling**  
**Overall Summary**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Sampling Event	Statistical Information	Chemical Constituent Concentration								
		Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Lithium mg/kg	Selenium mg/kg	Silver mg/kg	Mercury mg/kg
October 2021 Soil Sampling**	Sample Quantity*	13								
	Samples Above Detection Limit	13	13	0	13	13	13	0	0	0
	Percent Above Detection	100%	100%	0%	100%	100%	100%	0%	0%	0%
	Minimum	2.7	53.4	ND	11.5	16.4	7.6	ND	ND	ND
	Maximum	<b>8.8</b>	202	ND	20.5	<b>310</b>	17.4	ND	ND	ND
	Average	5.2	100	ND	15.3	68.7	11.5	ND	ND	ND
	Median	4.2	84.9	ND	15.5	32.9	10.3	ND	ND	ND
December 2021 XRF Soil Analysis***	Sample Quantity*	138								
	Samples Above Detection Limit	16	138	1	0	105	N/A	19	4	0
	Percent Above Detection	12%	100%	1%	0%	76%	N/A	14%	3%	0%
	Minimum	<b>6</b>	21	<b>38</b>	ND	10	N/A	3	3	ND
	Maximum	<b>39</b>	280	<b>38</b>	ND	227	N/A	<b>19</b>	7	ND
	Average	<b>14</b>	91	<b>38</b>	ND	52	N/A	<b>10</b>	4	ND
	Median	<b>10.5</b>	72	<b>38</b>	ND	32	N/A	<b>9</b>	3	ND
<b>2022 IDEM Residential MTG (mg/kg)</b>		<b>5.9</b>	<b>1,700</b>	<b>7.5</b>	<b>1,000,000</b>	<b>270</b>	<b>240</b>	<b>5.3</b>	<b>16</b>	<b>2.1</b>
<b>2022 IDEM Residential Direct Contact (mg/kg)</b>		<b>9.5</b>	<b>21,000</b>	<b>9.9</b>	<b>--</b>	<b>400</b>	<b>220</b>	<b>550</b>	<b>550</b>	<b>3.1</b>
<b>2022 IDEM Industrial Direct Contact (mg/kg)</b>		<b>30</b>	<b>100,000</b>	<b>100</b>	<b>--</b>	<b>800</b>	<b>2,300</b>	<b>5,800</b>	<b>5,800</b>	<b>3.1</b>

**Notes:**

- 1) mg/kg = milligrams per kilogram (parts per million).
- 2) ND = compound not detected at a concentration above the reporting limit.
- 3) N/A = not analyzed.
- 4) IDEM Residential MTG = IDEM Remediation Closure Guide (RCG) residential soil migration to groundwater screening levels.
- 5) Concentrations in **Bold** are reported in exceedance of the associated IDEM RCG Residential MTG screening levels.
- 6) Concentrations in **Bold & Orange** exceed IDEM RCG Residential Direct Contact Soil Exposure screening levels.
- 7) Concentrations in **Bold & Purple** exceed IDEM RCG Commercial/Industrial Direct Contact Soil Exposure screening levels.
- 8) \*Sample quantity does not include Quality Assurance/Quality Control samples.
- 9) \*\*Testing performed according to U.S. EPA Method 6010 (Heavy Metals) and Method 7471 (Mercury).
- 10) \*\*\*In situ soil screening performed using a field portable X-Ray Fluorescence (XRF) device via U.S. EPA SW-846 Test Method 6200 at 50 second intervals per sampling location unless otherwise noted in **Table 2**.



**Table 8a**  
**Surficial Soil Sampling**  
**Lead Summary - Directional/Roadway**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Sampling Event	Sample Location		Lead (mg/kg)						
	Direction	Roadway Classification	Sample Quantity*	Samples Above Detection Limit	Percent Above Detection	Minimum	Maximum	Average	Median
October 2021 Soil Sampling**	Northwest Southwest Southeast (Not Northeast)	Local Road or In Yard Away From Major Road	4	4	100%	21.3	27.7	24.4	24.2
		Major Road	4	4	100%	38.6	76.1	50.6	43.8
	Northeast		-	-	-	-	-	-	-
December 2021 XRF Soil Analysis***	Northwest Southwest Southeast (Not Northeast)	Local Road or In Yard Away From Major Road	75	50	67%	10	185	29	22
		Major Road	27	26	96%	21	206	59	45
	Northeast		25	25	100%	24	227	92	88
Background Concentration	Rural Indiana (Smith et al., 2014, as cited in IDEM, 2017a)		56	-	-	8.10	259	28.7	21.8
	Indianapolis Parks (IDEM, 2017a)		56	-	-	12.0	260	57.3	32.5
	Terre Haute (IDEM, 2014)		18	-	-	20	<b>370</b>	68	35
<b>2022 IDEM Residential MTG (mg/kg)</b>						<b>270</b>			
<b>2022 IDEM Residential Direct Contact (mg/kg)</b>						<b>400</b>			
<b>2022 IDEM Industrial Direct Contact (mg/kg)</b>						<b>800</b>			

- Notes:**
- 1) mg/kg = milligrams per kilogram (parts per million).
  - 2) IDEM Residential MTG = IDEM Remediation Closure Guide (RCG) residential soil migration to groundwater screening levels.
  - 3) Concentrations in **Bold** are reported in exceedance of the associated IDEM RCG Residential MTG screening levels.
  - 4) Concentrations in **Bold & Orange** exceed IDEM RCG Residential Direct Contact Soil Exposure screening levels.
  - 5) Concentrations in **Bold & Purple** exceed IDEM RCG Commercial/Industrial Direct Contact Soil Exposure screening levels.
  - 6) \*Sample quantity does not include Quality Assurance/Quality Control samples.
  - 7) \*\*Testing performed according to U.S. EPA Method 6010 (Heavy Metals).
  - 8) \*\*\*In situ soil screening performed using a field portable X-Ray Fluorescence (XRF) device via U.S. EPA SW-846 Test Method 6200 at 50 second intervals per sampling location unless otherwise noted in **Table 2**.

**Table 8b**  
**Surficial Soil Sampling**  
**Lead Summary - Southwest Drainage Basin**  
 South Muncie Industria Center  
 Muncie, Delaware County, IN  
 MUNDELL Project Number: M20032

Sampling Event	Sample Location		Lead (mg/kg)						
	Channel or Retention Pond	Specific Location (Relative to Retention Pond)	Sample Quantity*	Samples Above Detection Limit	Percent Above Detection	Minimum	Maximum	Average	Median
October 2021 Soil Sampling**	Channel	Downstream	2	2	100%	16.4	17	16.7	16.7
	Channel	Upstream (South - Upper Banks)	1	1	100%	32.9	32.9	32.9	32.9
	Retention Pond	Banks	2	2	100%	217	<b>310</b>	264	264
	Channel	Upstream (South - Lower Banks)							
December 2021 XRF Soil Analysis***	Channel	Downstream	4	0	0%	-	-	-	-
	Channel	Upstream (North)	3	0	0%	-	-	-	-
	Channel	Upstream (South - Upper Banks)	3	3	100%	19	59	36	30
	Retention Pond	Banks	1	1	100%	80	80	80	80
	Channel	Upstream (South - Lower Banks)							
Background Concentration	Rural Indiana (Smith et al., 2014, as cited in IDEM, 2017a)		56	-	-	8.10	259	28.7	21.8
	Indianapolis Parks (IDEM, 2017a)		56	-	-	12.0	260	57.3	32.5
	Terre Haute (IDEM, 2014)		18	-	-	20	<b>370</b>	68	35
<b>2022 IDEM Residential MTG (mg/kg)</b>						<b>270</b>			
<b>2022 IDEM Residential Direct Contact (mg/kg)</b>						<b>400</b>			
<b>2022 IDEM Industrial Direct Contact (mg/kg)</b>						<b>800</b>			

- Notes:**
- 1) mg/kg = milligrams per kilogram (parts per million).
  - 2) IDEM Residential MTG = IDEM Remediation Closure Guide (RCG) residential soil migration to groundwater screening levels.
  - 3) Concentrations in **Bold** are reported in exceedance of the associated IDEM RCG Residential MTG screening levels.
  - 4) Concentrations in **Bold & Orange** exceed IDEM RCG Residential Direct Contact Soil Exposure screening levels.
  - 5) Concentrations in **Bold & Purple** exceed IDEM RCG Commercial/Industrial Direct Contact Soil Exposure screening levels.
  - 6) \*Sample quantity does not include Quality Assurance/Quality Control samples.
  - 7) \*\*Testing performed according to U.S. EPA Method 6010 (Heavy Metals).
  - 8) \*\*\*In situ soil screening performed using a field portable X-Ray Fluorescence (XRF) device via U.S. EPA SW-846 Test Method 6200 at 50 second intervals per sampling location unless otherwise noted in **Table 2**.

## **APPENDIX A**

### **LABORATORY CERTIFICATES OF ANALYSIS AND CHAINS OF CUSTODY**

- Appendix A1.           October 2021 Laboratory Certificates of Analysis and Chains of Custody
- Appendix A2.           January 2022 Laboratory Certificates of Analysis and Chains of Custody
- Appendix A3.           April 2022 Laboratory Certificates of Analysis and Chains of Custody



## **APPENDIX A1**

### **OCTOBER 2021 CERTIFICATES OF ANALYSIS AND CHAINS OF CUSTODY**



November 01, 2021

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50300949

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50300949001	A1	Solid	10/20/21 11:40	10/22/21 13:05
50300949002	A2	Solid	10/20/21 12:05	10/22/21 13:05

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50300949001	A1	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50300949002	A2	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50300949001</b>	<b>A1</b>					
EPA 6010	Arsenic	2.7	mg/kg	1.2	10/30/21 03:28	
EPA 6010	Barium	68.5	mg/kg	1.2	10/30/21 03:28	
EPA 6010	Chromium	11.9	mg/kg	1.2	10/30/21 03:28	
EPA 6010	Lead	23.8	mg/kg	1.2	10/30/21 03:28	
EPA 6010	Lithium	7.6	mg/kg	6.2	10/30/21 03:28	N2
SM 2540G	Percent Moisture	20.7	%	0.10	10/25/21 11:50	N2
<b>50300949002</b>	<b>A2</b>					
EPA 6010	Arsenic	3.7	mg/kg	1.3	10/30/21 03:30	
EPA 6010	Barium	76.6	mg/kg	1.3	10/30/21 03:30	
EPA 6010	Chromium	15.5	mg/kg	1.3	10/30/21 03:30	
EPA 6010	Lead	46.1	mg/kg	1.3	10/30/21 03:30	
EPA 6010	Lithium	9.4	mg/kg	6.3	10/30/21 03:30	N2
SM 2540G	Percent Moisture	24.8	%	0.10	10/25/21 11:50	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

**Sample: A1**      **Lab ID: 50300949001**      Collected: 10/20/21 11:40      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	2.7	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:28	7440-38-2	
Barium	68.5	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:28	7440-39-3	
Cadmium	ND	mg/kg	0.62	1	10/29/21 07:51	10/30/21 03:28	7440-43-9	
Chromium	11.9	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:28	7440-47-3	
Lead	23.8	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:28	7439-92-1	
Lithium	7.6	mg/kg	6.2	1	10/29/21 07:51	10/30/21 03:28	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:28	7782-49-2	
Silver	ND	mg/kg	0.62	1	10/29/21 07:51	10/30/21 03:28	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	10/28/21 09:09	10/28/21 17:40	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	20.7	%	0.10	1		10/25/21 11:50		N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

**Sample: A2**      **Lab ID: 50300949002**      Collected: 10/20/21 12:05      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	3.7	mg/kg	1.3	1	10/29/21 07:51	10/30/21 03:30	7440-38-2	
Barium	76.6	mg/kg	1.3	1	10/29/21 07:51	10/30/21 03:30	7440-39-3	
Cadmium	ND	mg/kg	0.63	1	10/29/21 07:51	10/30/21 03:30	7440-43-9	
Chromium	15.5	mg/kg	1.3	1	10/29/21 07:51	10/30/21 03:30	7440-47-3	
Lead	46.1	mg/kg	1.3	1	10/29/21 07:51	10/30/21 03:30	7439-92-1	
Lithium	9.4	mg/kg	6.3	1	10/29/21 07:51	10/30/21 03:30	7439-93-2	N2
Selenium	ND	mg/kg	1.3	1	10/29/21 07:51	10/30/21 03:30	7782-49-2	
Silver	ND	mg/kg	0.63	1	10/29/21 07:51	10/30/21 03:30	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	10/28/21 09:09	10/28/21 17:42	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	24.8	%	0.10	1		10/25/21 11:50		N2

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

QC Batch: 647192	Analysis Method: EPA 7471
QC Batch Method: EPA 7471	Analysis Description: 7471 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300949001, 50300949002

METHOD BLANK: 2981840 Matrix: Solid

Associated Lab Samples: 50300949001, 50300949002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	10/28/21 17:11	

LABORATORY CONTROL SAMPLE: 2981841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.5	0.52	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2981842 2981843

Parameter	Units	2981842		2981843		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50300947002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Mercury	mg/kg	ND	0.65	0.66	0.68	0.71	104	105	75-125	3	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

QC Batch: 646596

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300949001, 50300949002

METHOD BLANK: 2979588

Matrix: Solid

Associated Lab Samples: 50300949001, 50300949002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.97	10/30/21 02:44	
Barium	mg/kg	ND	0.97	10/30/21 02:44	
Cadmium	mg/kg	ND	0.49	10/30/21 02:44	
Chromium	mg/kg	ND	0.97	10/30/21 02:44	
Lead	mg/kg	ND	0.97	10/30/21 02:44	
Lithium	mg/kg	ND	4.9	10/30/21 02:44	N2
Selenium	mg/kg	ND	0.97	10/30/21 02:44	
Silver	mg/kg	ND	0.49	10/30/21 02:44	

LABORATORY CONTROL SAMPLE: 2979589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	48.7	51.1	105	80-120	
Barium	mg/kg	48.7	51.2	105	80-120	
Cadmium	mg/kg	48.7	47.4	97	80-120	
Chromium	mg/kg	48.7	49.8	102	80-120	
Lead	mg/kg	48.7	47.1	97	80-120	
Lithium	mg/kg	48.7	48.8	100	80-120	N2
Selenium	mg/kg	48.7	47.4	97	80-120	
Silver	mg/kg	24.4	23.7	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979590 2979591

Parameter	Units	50300947002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	mg/kg	7.5	61.7	52.9	69.3	61.1	100	101	75-125	12	20		
Barium	mg/kg	63.4	61.7	52.9	123	119	96	105	75-125	3	20		
Cadmium	mg/kg	ND	61.7	52.9	58.4	50.1	94	94	75-125	15	20		
Chromium	mg/kg	11.9	61.7	52.9	68.8	62.2	92	95	75-125	10	20		
Lead	mg/kg	32.9	61.7	52.9	80.0	72.9	76	76	75-125	9	20		
Lithium	mg/kg	14.8	61.7	52.9	78.0	69.5	102	103	75-125	11	20	N2	
Selenium	mg/kg	ND	61.7	52.9	56.3	48.4	91	91	75-125	15	20		
Silver	mg/kg	ND	30.9	26.5	29.3	25.1	95	95	75-125	16	20		

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

QC Batch: 646639

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300949001, 50300949002

SAMPLE DUPLICATE: 2979704

Parameter	Units	50300947003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	54.6	54.9	1	5	N2

SAMPLE DUPLICATE: 2979705

Parameter	Units	50300913001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.7	11.9	2	5	N2

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50300949

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

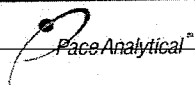
Pace Project No.: 50300949

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50300949001	A1	EPA 3050	646596	EPA 6010	647796
50300949002	A2	EPA 3050	646596	EPA 6010	647796
50300949001	A1	EPA 7471	647192	EPA 7471	647468
50300949002	A2	EPA 7471	647192	EPA 7471	647468
50300949001	A1	SM 2540G	646639		
50300949002	A2	SM 2540G	646639		

### REPORT OF LABORATORY ANALYSIS

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**CHAIN-OF-CUSTODY Analytical Request Document**Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

**50300949****ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Company: Mundell and Associates, Inc.		Billing Information:	
Address: 110 S Downey Ave, Indianapolis, IN 46219		110 S Downey Ave, Indianapolis, IN 46219	
Report To: Luke Johnstone		Email To: ljohnstone@mundellassociates.com	
Copy To:		Site Collection Info/Address: 4408 S Hoyt Ave          Muncie, Indiana	
Customer Project Name/Number: M20032 Muncie Phase II		State:    County/City:    Time Zone Collected: IN   /   Muncie          [ ]PT [ ]MT [ ]CT [X]ET	

Container Preservative Type **		Lab Project Manager:	
U			
** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other			

Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring?
Email: ljohnstone@mundellassociates.com		[ ] Yes [ ] No
Collected By (print): Luke Johnstone	Purchase Order #:    Quote #:	DW PWS ID #:    DW Location Code:
Collected By (signature): <i>Luke Johnstone</i>	Turnaround Date Required:	Immediately Packed on Ice:
Sample Disposal:	Rush: (Expedite Charges Apply)	Field Filtered (if applicable):
<input checked="" type="checkbox"/> Dispose as appropriate	[ ] Same Day [ ] Next Day	[ ] Yes [ ] No
[ ] Return	[ ] 2 Day [ ] 3 Day	Analysis: _____
[ ] Archive: _____	[ ] 4 Day [ ] 5 Day	
[ ] Hold:		

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals + Lithium via EPA 6010B
			Date	Time	Date	Time				
A1	SL	Grab	10/20	11:40				1	G	X
A2	SL	Grab	10/20	12:05				1	G	X

Analyses						Lab Profile/Line:	
LAB USE ONLY: Lab Sample # / Comments: <b>SEE SUR</b>	Lab Sample Receipt Checklist:	Custody Seals Present/Intact	Y	N	NA		
	Custody Signatures Present	Y	N	NA			
	Collector Signatures Present	Y	N	NA			
	Bottles Intact	Y	N	NA			
	Correct Bottles	Y	N	NA			
	Sufficient Volume	Y	N	NA			
	Samples Received on Ice	Y	N	NA			
	VOA - Headspace Acceptable	Y	N	NA			
	USDA Regulated Soils	Y	N	NA			
	Samples in Holding Time	Y	N	NA			
	Residual Chlorine Present	Y	N	NA			
	Cl Strips:						
	Sample pH Acceptable	Y	N	NA			
pH Strips:							
Sulfide Present	Y	N	NA				
Lead Acetate Strips:							

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium	Type of Ice Used:    Wet   Blue   Dry   None	SHORT HOLDS PRESENT (<72 hours):    Y   N   N/A
	Packing Material Used:	Lab Tracking #:
	Radchem sample(s) screened (<500 cpm):    Y   N   NA	Samples received via: FEDEX   UPS   Client   Courier   Pace Courier

Relinquished by/Company: (Signature) <i>Luke Johnstone / Mundell</i>	Date/Time: 10/22/21 1211
Relinquished by/Company: (Signature) <i>Luca Pace</i>	Date/Time: 10/22/21 1305
Relinquished by/Company: (Signature)	Date/Time:

Received by/Company: (Signature) <i>Luca Pace</i>	Date/Time: 10/22/21 1211
Received by/Company: (Signature) <i>Luca Pace</i>	Date/Time: 10/22/21 1305
Received by/Company: (Signature)	Date/Time:

LAB USE ONLY	
Table #:	
Acctnum:	
Template:	
Prelogin:	
PV:	
PB:	

LAB Sample Temperature Info:	
Temp Blank Received:	Y   N   NA
Therm ID#:	00
Cooler 1 Temp Upon Receipt:	6.7 °C
Cooler 1 Therm Corr. Factor:	6.0 °C
Cooler 1 Corrected Temp:	0.7 °C
Comments:	
Trip Blank Received:	Y   N   NA
HCL   MeOH   TSP   Other	
Non Conformance(s):	Page: <u>1</u>
YES / NO	of: <u>1</u>



**SAMPLE CONDITION UPON RECEIPT FORM**

16/2/21 1400 SMLC

Date/Time and Initials of person examining contents:

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER

2. Custody Seal on Cooler/Box Present:  Yes  No

(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 0.7/0.7  
Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		/	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		/	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			/
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A
Rush TAT Requested (4 days or less):		/	Residual Chlorine Check (Total/Amenable/Free Cyanide)			/
Custody Signatures Present?	/		Headspace Wisconsin Sulfide?			/
Containers Intact?:	/		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	/		Trip Blank Present?		/	
Extra labels on Terracore Vials? (soils only)		/	Trip Blank Custody Seals?:			/

COMMENTS:

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SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1	↓																										SL			
2	↓																										↓			
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

**Glass**

DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass
WGPU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass
GN	General	AG3C	250mL NaOH amber glass

**Plastic / Misc.**

BP4U	125mL unpreserved plastic		
BP4N	125mL HNO3 plastic		
BP4S	125mL H2SO4 plastic		
Syringe Kit	LL Cr+6 sampling kit		
AF	Air Filter		
C	Air Cassettes		
R	Terracore kit		
SP5T	120mL Coliform Na Thiosulfate		
U	Summa Can		
ZPLC	Ziploc Bag		
WT	Water		
SL	Solid		
NAL	OL	Non-aqueous liquid	Oil
WP	Wipe		

November 01, 2021

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50300935

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50300935001	A3	Solid	10/20/21 12:20	10/22/21 13:05
50300935002	A4	Solid	10/20/21 12:35	10/22/21 13:05

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50300935001	A3	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50300935002	A4	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50300935001</b>	<b>A3</b>					
EPA 6010	Arsenic	3.6	mg/kg	1.2	10/30/21 02:48	
EPA 6010	Barium	75.7	mg/kg	1.2	10/30/21 02:48	
EPA 6010	Chromium	14.9	mg/kg	1.2	10/30/21 02:48	
EPA 6010	Lead	38.6	mg/kg	1.2	10/30/21 02:48	
EPA 6010	Lithium	9.6	mg/kg	6.1	10/30/21 02:48	N2
SM 2540G	Percent Moisture	24.8	%	0.10	10/25/21 12:05	N2
<b>50300935002</b>	<b>A4</b>					
EPA 6010	Arsenic	4.2	mg/kg	1.2	10/30/21 02:50	
EPA 6010	Barium	125	mg/kg	1.2	10/30/21 02:50	
EPA 6010	Chromium	15.5	mg/kg	1.2	10/30/21 02:50	
EPA 6010	Lead	27.7	mg/kg	1.2	10/30/21 02:50	
EPA 6010	Lithium	10.3	mg/kg	5.9	10/30/21 02:50	N2
SM 2540G	Percent Moisture	23.3	%	0.10	10/25/21 12:05	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

**Sample: A3**      **Lab ID: 50300935001**      Collected: 10/20/21 12:20      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	3.6	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:48	7440-38-2	
Barium	75.7	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:48	7440-39-3	
Cadmium	ND	mg/kg	0.61	1	10/29/21 07:51	10/30/21 02:48	7440-43-9	
Chromium	14.9	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:48	7440-47-3	
Lead	38.6	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:48	7439-92-1	
Lithium	9.6	mg/kg	6.1	1	10/29/21 07:51	10/30/21 02:48	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:48	7782-49-2	
Silver	ND	mg/kg	0.61	1	10/29/21 07:51	10/30/21 02:48	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.27	1	10/28/21 09:02	10/28/21 16:56	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	24.8	%	0.10	1		10/25/21 12:05		N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

**Sample: A4**      **Lab ID: 50300935002**      Collected: 10/20/21 12:35      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>4.2</b>	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:50	7440-38-2	
Barium	<b>125</b>	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:50	7440-39-3	
Cadmium	ND	mg/kg	0.59	1	10/29/21 07:51	10/30/21 02:50	7440-43-9	
Chromium	<b>15.5</b>	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:50	7440-47-3	
Lead	<b>27.7</b>	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:50	7439-92-1	
Lithium	<b>10.3</b>	mg/kg	5.9	1	10/29/21 07:51	10/30/21 02:50	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:50	7782-49-2	
Silver	ND	mg/kg	0.59	1	10/29/21 07:51	10/30/21 02:50	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	10/28/21 09:02	10/28/21 16:58	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>23.3</b>	%	0.10	1		10/25/21 12:05		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

QC Batch: 646645

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300935001, 50300935002

METHOD BLANK: 2979716

Matrix: Solid

Associated Lab Samples: 50300935001, 50300935002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	10/28/21 16:02	

LABORATORY CONTROL SAMPLE: 2979717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.47	0.45	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979718 2979719

Parameter	Units	50300485002		2979718		2979719		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Mercury	mg/kg	ND	0.47	0.48	0.58	0.61	113	116	75-125	4	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50300935

QC Batch: 646596 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300935001, 50300935002

METHOD BLANK: 2979588 Matrix: Solid

Associated Lab Samples: 50300935001, 50300935002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.97	10/30/21 02:44	
Barium	mg/kg	ND	0.97	10/30/21 02:44	
Cadmium	mg/kg	ND	0.49	10/30/21 02:44	
Chromium	mg/kg	ND	0.97	10/30/21 02:44	
Lead	mg/kg	ND	0.97	10/30/21 02:44	
Lithium	mg/kg	ND	4.9	10/30/21 02:44	N2
Selenium	mg/kg	ND	0.97	10/30/21 02:44	
Silver	mg/kg	ND	0.49	10/30/21 02:44	

LABORATORY CONTROL SAMPLE: 2979589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	48.7	51.1	105	80-120	
Barium	mg/kg	48.7	51.2	105	80-120	
Cadmium	mg/kg	48.7	47.4	97	80-120	
Chromium	mg/kg	48.7	49.8	102	80-120	
Lead	mg/kg	48.7	47.1	97	80-120	
Lithium	mg/kg	48.7	48.8	100	80-120	N2
Selenium	mg/kg	48.7	47.4	97	80-120	
Silver	mg/kg	24.4	23.7	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979590 2979591

Parameter	Units	50300947002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	mg/kg	7.5	61.7	52.9	69.3	61.1	100	101	75-125	12	20		
Barium	mg/kg	63.4	61.7	52.9	123	119	96	105	75-125	3	20		
Cadmium	mg/kg	ND	61.7	52.9	58.4	50.1	94	94	75-125	15	20		
Chromium	mg/kg	11.9	61.7	52.9	68.8	62.2	92	95	75-125	10	20		
Lead	mg/kg	32.9	61.7	52.9	80.0	72.9	76	76	75-125	9	20		
Lithium	mg/kg	14.8	61.7	52.9	78.0	69.5	102	103	75-125	11	20	N2	
Selenium	mg/kg	ND	61.7	52.9	56.3	48.4	91	91	75-125	15	20		
Silver	mg/kg	ND	30.9	26.5	29.3	25.1	95	95	75-125	16	20		

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

QC Batch: 646637

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300935001, 50300935002

SAMPLE DUPLICATE: 2979698

Parameter	Units	50300872009 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.7	15.0	4	5	N2

SAMPLE DUPLICATE: 2979699

Parameter	Units	50300947002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.7	17.3	13	5	N2,R1

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**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: M20032 Muncie Phase II

Pace Project No.: 50300935

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50300935001	A3	EPA 3050	646596	EPA 6010	647796
50300935002	A4	EPA 3050	646596	EPA 6010	647796
50300935001	A3	EPA 7471	646645	EPA 7471	647464
50300935002	A4	EPA 7471	646645	EPA 7471	647464
50300935001	A3	SM 2540G	646637		
50300935002	A4	SM 2540G	646637		

**REPORT OF LABORATORY ANALYSIS**

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**CHAIN-OF-CUSTODY Analytical Request Document**

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Mundell and Associates, Inc.	Billing Information: 110 S Downey Ave, Indianapolis, IN 46219
Address: 110 S Downey Ave, Indianapolis, IN 46219	
Report To: Luke Johnstone	Email To: ljohnstone@mundellassociates.com
Copy To:	Site Collection Info/Address: 4400 S Hoyt Ave Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II	State: IN / Muncie	County/City: Muncie	Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET
Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring? [ ] Yes [ ] No	
Email: ljohnstone@mundellassociates.com	Purchase Order #:	DW PWS ID #:	
Collected By (print): Luke Johnstone	Quote #:	DW Location Code:	
Collected By (signature): <i>Luke Johnstone</i>	Turnaround Date Required:	Immediately Packed on Ice: [X] Yes [ ] No	
Sample Disposal: <input checked="" type="checkbox"/> Dispose as appropriate <input type="checkbox"/> Return <input type="checkbox"/> Archive: <input type="checkbox"/> Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [ ] No	
Analysis: _____			

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
A3	SL	Grab	10/20	12:20				1	G
A4	SL	Grab	10/20	12:35				1	G

**LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here**  
**50300925**  
**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Container Preservative Type **	Lab Project Manager:
U	

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Lab Profile/Line:	
		Lab Sample Receipt Checklist:
	Custody Seals Present/Intact	Y N NA
	Custody Signatures Present	Y N NA
	Collector Signature Present	Y N NA
	Bottles Intact	Y N NA
	Correct Bottles	Y N NA
	Sufficient Volume	Y N NA
	Samples Received on Ice	Y N NA
	VOA - Headspace Acceptable	Y N NA
	USDA Regulated Soils	Y N NA
	Samples in Holding Time	Y N NA
	Residual Chlorine Present	Y N NA
	Cl Strips:	
	Sample pH Acceptable	Y N NA
	pH Strips:	
	Sulfide Present	Y N NA
	Lead Acetate Strips:	
	LAB USE ONLY:	
	Lab Sample # / Comments:	
	<i>SEE SCOR</i>	
	<i>001</i>	
	<i>002</i>	

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info:
	Packing Material Used:	Lab Tracking #:	Temp Blank Received: N NA
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	Therm ID#: <i>07</i>
			Cooler 1 Temp Upon Receipt: <i>07</i> °C
			Cooler 1 Therm Corr. Factor: <i>0.0</i>
			Cooler 1 Corrected Temp: <i>07</i> °C
			Comments:

Relinquished by/Company: (Signature) <i>Luke Johnstone / Mundell</i>	Date/Time: 10/22/21 12:11	Received by/Company: (Signature) <i>Luke Johnstone</i>	Date/Time: 10/22/21 12:11	MTJL LAB USE ONLY
Relinquished by/Company: (Signature) <i>Kate Pace</i>	Date/Time: 10/22/21 13:05	Received by/Company: (Signature) <i>JM</i>	Date/Time: 10/22/21 13:05	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	

Table #:	Trip Blank Received: Y N NA
Acctnum:	HCL MeOH TSP Other
Template:	
Prelogin:	
PM:	Non Conformance(s):
PB:	YES / NO
	Page: <u>1</u>
	of: <u>1</u>





**SAMPLE CONDITION UPON RECEIPT FORM**

*1/22/11 1400 SMC*

Date/Time and Initials of person examining contents:

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No

(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: **1 2 3 4 5 6 A B C D E F**

4. Cooler Temperature: 0.7 / 0.7  
Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags

None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		/	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		/	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			/
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		/	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			/
Custody Signatures Present?	/		Residual Chlorine Check (Total/Amenable/Free Cyanide)			/
Containers Intact?:	/		Headspace Wisconsin Sulfide?			/
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	/		Headspace in VOA Vials (>6mm): See Containter-Count form for details	Present	Absent	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)		/	Trip Blank Present?		/	
			Trip-Blank Custody Seals?:			/

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VGA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/ H2SO4 pH <2	NaOH/ ZNAc pH >9	NaOH pH>10	
1	↓																														
2	↓																														
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL OL	Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

November 01, 2021

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50300938

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50300938001	A5	Solid	10/20/21 13:00	10/22/21 13:05
50300938002	A6	Solid	10/20/21 13:15	10/22/21 13:05
50300938003	A7	Solid	10/20/21 13:30	10/22/21 13:05

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50300938001	A5	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50300938002	A6	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50300938003	A7	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50300938001</b>	<b>A5</b>					
EPA 6010	Arsenic	8.8	mg/kg	1.0	10/30/21 02:53	
EPA 6010	Barium	110	mg/kg	1.0	10/30/21 02:53	
EPA 6010	Chromium	15.9	mg/kg	1.0	10/30/21 02:53	
EPA 6010	Lead	17.0	mg/kg	1.0	10/30/21 02:53	
EPA 6010	Lithium	11.0	mg/kg	5.2	10/30/21 02:53	N2
SM 2540G	Percent Moisture	17.6	%	0.10	10/25/21 12:05	N2
<b>50300938002</b>	<b>A6</b>					
EPA 6010	Arsenic	4.2	mg/kg	1.2	10/30/21 02:55	
EPA 6010	Barium	53.4	mg/kg	1.2	10/30/21 02:55	
EPA 6010	Chromium	11.5	mg/kg	1.2	10/30/21 02:55	
EPA 6010	Lead	41.4	mg/kg	1.2	10/30/21 02:55	
EPA 6010	Lithium	10.2	mg/kg	6.1	10/30/21 02:55	N2
SM 2540G	Percent Moisture	22.2	%	0.10	10/25/21 12:06	N2
<b>50300938003</b>	<b>A7</b>					
EPA 6010	Arsenic	4.2	mg/kg	1.2	10/30/21 02:57	
EPA 6010	Barium	94.9	mg/kg	1.2	10/30/21 02:57	
EPA 6010	Chromium	15.4	mg/kg	1.2	10/30/21 02:57	
EPA 6010	Lead	16.4	mg/kg	1.2	10/30/21 02:57	
EPA 6010	Lithium	10	mg/kg	6.2	10/30/21 02:57	N2
SM 2540G	Percent Moisture	25.6	%	0.10	10/25/21 12:06	N2

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

**Sample: A5**      **Lab ID: 50300938001**      Collected: 10/20/21 13:00      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>8.8</b>	mg/kg	1.0	1	10/29/21 07:51	10/30/21 02:53	7440-38-2	
Barium	<b>110</b>	mg/kg	1.0	1	10/29/21 07:51	10/30/21 02:53	7440-39-3	
Cadmium	ND	mg/kg	0.52	1	10/29/21 07:51	10/30/21 02:53	7440-43-9	
Chromium	<b>15.9</b>	mg/kg	1.0	1	10/29/21 07:51	10/30/21 02:53	7440-47-3	
Lead	<b>17.0</b>	mg/kg	1.0	1	10/29/21 07:51	10/30/21 02:53	7439-92-1	
Lithium	<b>11.0</b>	mg/kg	5.2	1	10/29/21 07:51	10/30/21 02:53	7439-93-2	N2
Selenium	ND	mg/kg	1.0	1	10/29/21 07:51	10/30/21 02:53	7782-49-2	
Silver	ND	mg/kg	0.52	1	10/29/21 07:51	10/30/21 02:53	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.24	1	10/28/21 09:02	10/28/21 17:01	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>17.6</b>	%	0.10	1		10/25/21 12:05		N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

**Sample: A6**      **Lab ID: 50300938002**      Collected: 10/20/21 13:15      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	4.2	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:55	7440-38-2	
Barium	53.4	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:55	7440-39-3	
Cadmium	ND	mg/kg	0.61	1	10/29/21 07:51	10/30/21 02:55	7440-43-9	
Chromium	11.5	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:55	7440-47-3	
Lead	41.4	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:55	7439-92-1	
Lithium	10.2	mg/kg	6.1	1	10/29/21 07:51	10/30/21 02:55	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:55	7782-49-2	
Silver	ND	mg/kg	0.61	1	10/29/21 07:51	10/30/21 02:55	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	10/28/21 09:02	10/28/21 17:03	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	22.2	%	0.10	1		10/25/21 12:06		N2

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

**Sample: A7**      **Lab ID: 50300938003**      Collected: 10/20/21 13:30      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>4.2</b>	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:57	7440-38-2	
Barium	<b>94.9</b>	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:57	7440-39-3	
Cadmium	ND	mg/kg	0.62	1	10/29/21 07:51	10/30/21 02:57	7440-43-9	
Chromium	<b>15.4</b>	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:57	7440-47-3	
Lead	<b>16.4</b>	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:57	7439-92-1	
Lithium	<b>10</b>	mg/kg	6.2	1	10/29/21 07:51	10/30/21 02:57	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	10/29/21 07:51	10/30/21 02:57	7782-49-2	
Silver	ND	mg/kg	0.62	1	10/29/21 07:51	10/30/21 02:57	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.27	1	10/28/21 09:02	10/28/21 17:06	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>25.6</b>	%	0.10	1		10/25/21 12:06		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

QC Batch: 646645

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300938001, 50300938002, 50300938003

METHOD BLANK: 2979716

Matrix: Solid

Associated Lab Samples: 50300938001, 50300938002, 50300938003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	10/28/21 16:02	

LABORATORY CONTROL SAMPLE: 2979717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.47	0.45	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979718 2979719

Parameter	Units	50300485002		MS		MSD		% Rec		Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Mercury	mg/kg	ND	0.47	0.47	0.48	0.58	0.61	113	116	75-125	4	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50300938

QC Batch: 646596 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300938001, 50300938002, 50300938003

METHOD BLANK: 2979588 Matrix: Solid

Associated Lab Samples: 50300938001, 50300938002, 50300938003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.97	10/30/21 02:44	
Barium	mg/kg	ND	0.97	10/30/21 02:44	
Cadmium	mg/kg	ND	0.49	10/30/21 02:44	
Chromium	mg/kg	ND	0.97	10/30/21 02:44	
Lead	mg/kg	ND	0.97	10/30/21 02:44	
Lithium	mg/kg	ND	4.9	10/30/21 02:44	N2
Selenium	mg/kg	ND	0.97	10/30/21 02:44	
Silver	mg/kg	ND	0.49	10/30/21 02:44	

LABORATORY CONTROL SAMPLE: 2979589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	48.7	51.1	105	80-120	
Barium	mg/kg	48.7	51.2	105	80-120	
Cadmium	mg/kg	48.7	47.4	97	80-120	
Chromium	mg/kg	48.7	49.8	102	80-120	
Lead	mg/kg	48.7	47.1	97	80-120	
Lithium	mg/kg	48.7	48.8	100	80-120	N2
Selenium	mg/kg	48.7	47.4	97	80-120	
Silver	mg/kg	24.4	23.7	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979590 2979591

Parameter	Units	50300947002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	mg/kg	7.5	61.7	52.9	69.3	61.1	100	101	75-125	12	20		
Barium	mg/kg	63.4	61.7	52.9	123	119	96	105	75-125	3	20		
Cadmium	mg/kg	ND	61.7	52.9	58.4	50.1	94	94	75-125	15	20		
Chromium	mg/kg	11.9	61.7	52.9	68.8	62.2	92	95	75-125	10	20		
Lead	mg/kg	32.9	61.7	52.9	80.0	72.9	76	76	75-125	9	20		
Lithium	mg/kg	14.8	61.7	52.9	78.0	69.5	102	103	75-125	11	20	N2	
Selenium	mg/kg	ND	61.7	52.9	56.3	48.4	91	91	75-125	15	20		
Silver	mg/kg	ND	30.9	26.5	29.3	25.1	95	95	75-125	16	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

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QC Batch:	646637	Analysis Method:	SM 2540G
QC Batch Method:	SM 2540G	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300938001, 50300938002, 50300938003

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SAMPLE DUPLICATE: 2979698

Parameter	Units	50300872009 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.7	15.0	4	5	N2

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SAMPLE DUPLICATE: 2979699

Parameter	Units	50300947002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.7	17.3	13	5	N2,R1

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50300938

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50300938001	A5	EPA 3050	646596	EPA 6010	647796
50300938002	A6	EPA 3050	646596	EPA 6010	647796
50300938003	A7	EPA 3050	646596	EPA 6010	647796
50300938001	A5	EPA 7471	646645	EPA 7471	647464
50300938002	A6	EPA 7471	646645	EPA 7471	647464
50300938003	A7	EPA 7471	646645	EPA 7471	647464
50300938001	A5	SM 2540G	646637		
50300938002	A6	SM 2540G	646637		
50300938003	A7	SM 2540G	646637		

### REPORT OF LABORATORY ANALYSIS

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: 10/21 1400 SMK

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 6.7 / 0.7  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container-Count form for details	Present	Absent	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)		<input checked="" type="checkbox"/>	Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1	↓																										SL			
2	↓																													
3	↓																													
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL OL	Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

November 01, 2021

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50300940

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50300940

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50300940

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50300940001	A8	Solid	10/20/21 13:55	10/22/21 13:05

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50300940

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50300940001	A8	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50300940

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50300940001</b>	<b>A8</b>					
EPA 6010	Arsenic	5.0	mg/kg	1.1	10/30/21 02:59	
EPA 6010	Barium	72.9	mg/kg	1.1	10/30/21 02:59	
EPA 6010	Chromium	16.5	mg/kg	1.1	10/30/21 02:59	
EPA 6010	Lead	76.1	mg/kg	1.1	10/30/21 02:59	
EPA 6010	Lithium	9.3	mg/kg	5.7	10/30/21 02:59	N2
SM 2540G	Percent Moisture	24.7	%	0.10	10/25/21 12:06	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300940

**Sample: A8**      **Lab ID: 50300940001**      Collected: 10/20/21 13:55      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>5.0</b>	mg/kg	1.1	1	10/29/21 07:51	10/30/21 02:59	7440-38-2	
Barium	<b>72.9</b>	mg/kg	1.1	1	10/29/21 07:51	10/30/21 02:59	7440-39-3	
Cadmium	ND	mg/kg	0.57	1	10/29/21 07:51	10/30/21 02:59	7440-43-9	
Chromium	<b>16.5</b>	mg/kg	1.1	1	10/29/21 07:51	10/30/21 02:59	7440-47-3	
Lead	<b>76.1</b>	mg/kg	1.1	1	10/29/21 07:51	10/30/21 02:59	7439-92-1	
Lithium	<b>9.3</b>	mg/kg	5.7	1	10/29/21 07:51	10/30/21 02:59	7439-93-2	N2
Selenium	ND	mg/kg	1.1	1	10/29/21 07:51	10/30/21 02:59	7782-49-2	
Silver	ND	mg/kg	0.57	1	10/29/21 07:51	10/30/21 02:59	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.27	1	10/28/21 09:02	10/28/21 17:08	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>24.7</b>	%	0.10	1		10/25/21 12:06		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300940

QC Batch: 646645

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300940001

METHOD BLANK: 2979716

Matrix: Solid

Associated Lab Samples: 50300940001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	10/28/21 16:02	

LABORATORY CONTROL SAMPLE: 2979717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.47	0.45	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979718 2979719

Parameter	Units	50300485002		MS		MSD		% Rec Limits	RPD	Max RPD	Qual	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result					% Rec
Mercury	mg/kg	ND	0.47	0.47	0.48	0.58	0.61	113	116	75-125	4	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50300940

QC Batch: 646596 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300940001

METHOD BLANK: 2979588 Matrix: Solid  
Associated Lab Samples: 50300940001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.97	10/30/21 02:44	
Barium	mg/kg	ND	0.97	10/30/21 02:44	
Cadmium	mg/kg	ND	0.49	10/30/21 02:44	
Chromium	mg/kg	ND	0.97	10/30/21 02:44	
Lead	mg/kg	ND	0.97	10/30/21 02:44	
Lithium	mg/kg	ND	4.9	10/30/21 02:44	N2
Selenium	mg/kg	ND	0.97	10/30/21 02:44	
Silver	mg/kg	ND	0.49	10/30/21 02:44	

LABORATORY CONTROL SAMPLE: 2979589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	48.7	51.1	105	80-120	
Barium	mg/kg	48.7	51.2	105	80-120	
Cadmium	mg/kg	48.7	47.4	97	80-120	
Chromium	mg/kg	48.7	49.8	102	80-120	
Lead	mg/kg	48.7	47.1	97	80-120	
Lithium	mg/kg	48.7	48.8	100	80-120	N2
Selenium	mg/kg	48.7	47.4	97	80-120	
Silver	mg/kg	24.4	23.7	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979590 2979591

Parameter	Units	50300947002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	mg/kg	7.5	61.7	52.9	69.3	61.1	100	101	75-125	12	20		
Barium	mg/kg	63.4	61.7	52.9	123	119	96	105	75-125	3	20		
Cadmium	mg/kg	ND	61.7	52.9	58.4	50.1	94	94	75-125	15	20		
Chromium	mg/kg	11.9	61.7	52.9	68.8	62.2	92	95	75-125	10	20		
Lead	mg/kg	32.9	61.7	52.9	80.0	72.9	76	76	75-125	9	20		
Lithium	mg/kg	14.8	61.7	52.9	78.0	69.5	102	103	75-125	11	20	N2	
Selenium	mg/kg	ND	61.7	52.9	56.3	48.4	91	91	75-125	15	20		
Silver	mg/kg	ND	30.9	26.5	29.3	25.1	95	95	75-125	16	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300940

QC Batch: 646637

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300940001

SAMPLE DUPLICATE: 2979698

Parameter	Units	50300872009 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.7	15.0	4	5	N2

SAMPLE DUPLICATE: 2979699

Parameter	Units	50300947002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.7	17.3	13	5	N2,R1

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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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50300940

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

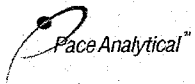
Project: M20032 Muncie Phase II

Pace Project No.: 50300940

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50300940001	A8	EPA 3050	646596	EPA 6010	647796
50300940001	A8	EPA 7471	646645	EPA 7471	647464
50300940001	A8	SM 2540G	646637		

### REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or
MTJL Log-in Number Here

50300940

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Mundell and Associates, Inc. Billing Information:

Address: 110 S Downey Ave, Indianapolis, IN 46219 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: Ljohnstone@mundellassociates.com

Copy To: Site Collection Info/Address: 4512 S Hoyt Ave Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II State: County/City: Time Zone Collected: IN / Muncie [ ]PT [ ]MT [ ]CT [X]ET

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No

Collected By (print): Luke Johnstone Purchase Order #: DW PWS ID #: Quote #: DW Location Code:

Collected By (signature): [Signature] Turnaround Date Required: Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold: Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Table with columns: Customer Sample ID, Matrix \*, Comp / Grab, Collected (or Composite Start) Date, Time, Composite End Date, Time, Res Cl, # of Ctns. Row 1: A8, SL, Grab, 10/20, 13:55, 1

Table with columns: Analyses (Total RCRA 8 Metals + Lithium via EPA 6010B) and Lab Profile/Line. Includes checkboxes for various analytical methods.

Lab Profile/Line: Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA, Custody Signatures Present Y N NA, Collector Signature Present Y N NA, Bottles Intact Y N NA, Correct Bottles Y N NA, Sufficient Volume Y N NA, Samples Received on Ice Y N NA, VOA - Headspace Acceptable Y N NA, USDA Regulated Soils Y N NA, Samples in Holding Time Y N NA, Residual Chlorine Present Y N NA, Cl Strips: Sample pH Acceptable Y N NA, pH Strips: Sulfide Present Y N NA, Lead Acetate Strips:

LAB USE ONLY: Lab Sample # / Comments: COI SEE SUR

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium Type of Ice Used: Wet Blue Dry None Packing Material Used: Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A Lab Tracking #: Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: Cooler 1 Temp Upon Receipt: 0.7 oC Cooler 1 Therm Corr. Factor: 0.0 Cooler 1 Corrected Temp: 0.7 oC Comments:

Relinquished by/Company: (Signature) Luke Johnstone/Mundell Relinquished by/Company: (Signature) [Signature] Pace

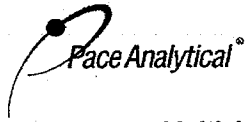
Date/Time: 10/22/21 12:11 Date/Time: 10/22/21 1305

Received by/Company: (Signature) [Signature] Received by/Company: (Signature) [Signature]

Date/Time: 10/22/21 12:11 Date/Time: 10/22/21 1315

MTJL LAB USE ONLY: Table #: Acctnum: Template: Prelogin: PM: PB:

Trip/Blank Received: Y N NA HCL MeOH TSP Other Non Conformance(s): YES / NO Page: 1 of 1



**SAMPLE CONDITION UPON RECEIPT FORM**

*1405 SMK*

Date/Time and Initials of person examining contents:

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No

(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: **1 2 3 4 5 6 A B C D E F**

4. Cooler Temperature: 0.7/0.7  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

			Yes	No				Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)				<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.					
Short Hold Time Analysis (48 hours or less)? Analysis:				<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form					<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:				Residual Chlorine Check (SVOC 625 Pest/PCB 608)	<u>Present</u>	<u>Absent</u>			<u>N/A</u>
Rush TAT Requested (4 days or less):				<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)					<input checked="" type="checkbox"/>
Custody Signatures Present?				<input checked="" type="checkbox"/>	Headspace Wisconsin Sulfide?					<input checked="" type="checkbox"/>
Containers Intact?:				<input checked="" type="checkbox"/>	Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<u>Absent</u>			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID				<input checked="" type="checkbox"/>	Trip Blank Present?					<input checked="" type="checkbox"/>
Extra labels on Terracore Vials? (soils only)				<input checked="" type="checkbox"/>	Trip Blank Custody Seals?:					<input checked="" type="checkbox"/>

COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Sample Container Count

SBS  
 DI  
 MeOH  
 (only)  
 BK  
 Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1																														
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass			Plastic / Misc.		
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic
VG9T	40mL Na Thio, clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic
BP4U	125mL unpreserved plastic				
BP4N	125mL HNO3 plastic				
BP4S	125mL H2SO4 plastic				
Syringe Kit	LL Cr+6 sampling kit				
AF	Air Filter				
C	Air Cassettes				
R	Terracore kit				
SP5T	120mL Coliform Na Thiosulfate				
U	Summa Can				
ZPLC	Ziploc Bag				
WT	Water				
SL	Solid				
NAL	OL	Non-aqueous liquid			Oil
WP	Wipe				



November 01, 2021

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50300942

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50300942

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50300942

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50300942001	A9	Solid	10/20/21 14:45	10/22/21 13:05
50300942002	A10	Solid	10/20/21 14:55	10/22/21 13:05

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50300942

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50300942001	A9	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50300942002	A10	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50300942

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50300942001</b>	<b>A9</b>					
EPA 6010	Arsenic	4.8	mg/kg	1.6	10/30/21 03:02	
EPA 6010	Barium	114	mg/kg	1.6	10/30/21 03:02	
EPA 6010	Chromium	16.3	mg/kg	1.6	10/30/21 03:02	
EPA 6010	Lead	217	mg/kg	1.6	10/30/21 03:02	
EPA 6010	Lithium	15.3	mg/kg	7.8	10/30/21 03:02	N2
SM 2540G	Percent Moisture	40.3	%	0.10	10/25/21 12:06	N2
<b>50300942002</b>	<b>A10</b>					
EPA 6010	Arsenic	5.0	mg/kg	1.2	10/30/21 03:04	
EPA 6010	Barium	84.9	mg/kg	1.2	10/30/21 03:04	
EPA 6010	Chromium	15.0	mg/kg	1.2	10/30/21 03:04	
EPA 6010	Lead	24.6	mg/kg	1.2	10/30/21 03:04	
EPA 6010	Lithium	10.6	mg/kg	5.8	10/30/21 03:04	N2
SM 2540G	Percent Moisture	20.5	%	0.10	10/25/21 12:06	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300942

**Sample: A9**      **Lab ID: 50300942001**      Collected: 10/20/21 14:45      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>4.8</b>	mg/kg	1.6	1	10/29/21 07:51	10/30/21 03:02	7440-38-2	
Barium	<b>114</b>	mg/kg	1.6	1	10/29/21 07:51	10/30/21 03:02	7440-39-3	
Cadmium	ND	mg/kg	0.78	1	10/29/21 07:51	10/30/21 03:02	7440-43-9	
Chromium	<b>16.3</b>	mg/kg	1.6	1	10/29/21 07:51	10/30/21 03:02	7440-47-3	
Lead	<b>217</b>	mg/kg	1.6	1	10/29/21 07:51	10/30/21 03:02	7439-92-1	
Lithium	<b>15.3</b>	mg/kg	7.8	1	10/29/21 07:51	10/30/21 03:02	7439-93-2	N2
Selenium	ND	mg/kg	1.6	1	10/29/21 07:51	10/30/21 03:02	7782-49-2	
Silver	ND	mg/kg	0.78	1	10/29/21 07:51	10/30/21 03:02	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.35	1	10/28/21 09:09	10/28/21 17:16	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>40.3</b>	%	0.10	1		10/25/21 12:06		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300942

**Sample: A10**      **Lab ID: 50300942002**      Collected: 10/20/21 14:55      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	5.0	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:04	7440-38-2	
Barium	84.9	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:04	7440-39-3	
Cadmium	ND	mg/kg	0.58	1	10/29/21 07:51	10/30/21 03:04	7440-43-9	
Chromium	15.0	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:04	7440-47-3	
Lead	24.6	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:04	7439-92-1	
Lithium	10.6	mg/kg	5.8	1	10/29/21 07:51	10/30/21 03:04	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:04	7782-49-2	
Silver	ND	mg/kg	0.58	1	10/29/21 07:51	10/30/21 03:04	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.25	1	10/28/21 09:09	10/28/21 17:18	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	20.5	%	0.10	1		10/25/21 12:06		N2

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300942

QC Batch: 647192	Analysis Method: EPA 7471
QC Batch Method: EPA 7471	Analysis Description: 7471 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300942001, 50300942002

METHOD BLANK: 2981840 Matrix: Solid

Associated Lab Samples: 50300942001, 50300942002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	10/28/21 17:11	

LABORATORY CONTROL SAMPLE: 2981841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.5	0.52	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2981842 2981843

Parameter	Units	2981842		2981843		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50300947002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/kg	ND	0.65	0.66	0.68	0.71	104	105	75-125	3	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50300942

QC Batch: 646596 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300942001, 50300942002

METHOD BLANK: 2979588 Matrix: Solid

Associated Lab Samples: 50300942001, 50300942002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.97	10/30/21 02:44	
Barium	mg/kg	ND	0.97	10/30/21 02:44	
Cadmium	mg/kg	ND	0.49	10/30/21 02:44	
Chromium	mg/kg	ND	0.97	10/30/21 02:44	
Lead	mg/kg	ND	0.97	10/30/21 02:44	
Lithium	mg/kg	ND	4.9	10/30/21 02:44	N2
Selenium	mg/kg	ND	0.97	10/30/21 02:44	
Silver	mg/kg	ND	0.49	10/30/21 02:44	

LABORATORY CONTROL SAMPLE: 2979589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	48.7	51.1	105	80-120	
Barium	mg/kg	48.7	51.2	105	80-120	
Cadmium	mg/kg	48.7	47.4	97	80-120	
Chromium	mg/kg	48.7	49.8	102	80-120	
Lead	mg/kg	48.7	47.1	97	80-120	
Lithium	mg/kg	48.7	48.8	100	80-120	N2
Selenium	mg/kg	48.7	47.4	97	80-120	
Silver	mg/kg	24.4	23.7	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979590 2979591

Parameter	Units	50300947002		2979590		2979591		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	mg/kg	7.5	61.7	52.9	69.3	61.1	100	101	75-125	12	20		
Barium	mg/kg	63.4	61.7	52.9	123	119	96	105	75-125	3	20		
Cadmium	mg/kg	ND	61.7	52.9	58.4	50.1	94	94	75-125	15	20		
Chromium	mg/kg	11.9	61.7	52.9	68.8	62.2	92	95	75-125	10	20		
Lead	mg/kg	32.9	61.7	52.9	80.0	72.9	76	76	75-125	9	20		
Lithium	mg/kg	14.8	61.7	52.9	78.0	69.5	102	103	75-125	11	20	N2	
Selenium	mg/kg	ND	61.7	52.9	56.3	48.4	91	91	75-125	15	20		
Silver	mg/kg	ND	30.9	26.5	29.3	25.1	95	95	75-125	16	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300942

QC Batch: 646637

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300942001, 50300942002

SAMPLE DUPLICATE: 2979698

Parameter	Units	50300872009 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.7	15.0	4	5	N2

SAMPLE DUPLICATE: 2979699

Parameter	Units	50300947002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.7	17.3	13	5	N2,R1

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50300942

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

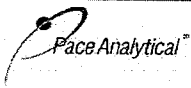
Project: M20032 Muncie Phase II

Pace Project No.: 50300942

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50300942001	A9	EPA 3050	646596	EPA 6010	647796
50300942002	A10	EPA 3050	646596	EPA 6010	647796
50300942001	A9	EPA 7471	647192	EPA 7471	647468
50300942002	A10	EPA 7471	647192	EPA 7471	647468
50300942001	A9	SM 2540G	646637		
50300942002	A10	SM 2540G	646637		

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# CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or  
MTJL Log-in Number Here

*50300942*

**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Company: Mundell and Associates, Inc.	Billing Information: 110 S Downey Ave, Indianapolis, IN 46219
Address: 110 S Downey Ave, Indianapolis, IN 46219	
Report To: Luke Johnstone	Email To: <a href="mailto:ljohnstone@mundellassociates.com">ljohnstone@mundellassociates.com</a>
Copy To:	Site Collection Info/Address: 4300/4400 BLK S Hoyt Ave Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II	State: IN / County/City: Muncie / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 317-630-9060 Email: <a href="mailto:ljohnstone@mundellassociates.com">ljohnstone@mundellassociates.com</a>	Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Luke Johnstone	Purchase Order #: _____ Quote #: _____ DW PWS ID #: _____ DW Location Code: _____
Collected By (signature): <i>Luke Johnstone</i>	Turnaround Date Required: _____ Immediately Packed on Ice: [x] Yes [ ] No
Sample Disposal: <input checked="" type="checkbox"/> Dispose as appropriate <input type="checkbox"/> Return <input type="checkbox"/> Archive: _____ <input type="checkbox"/> Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)								
Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
A9	SL	Grab	10/20	14:45			G	X
A10	SL	Grab	10/20	14:55			G	X

Container Preservative Type ** U _____								Lab Project Manager: _____	
** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____								Lab Profile/Line: Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: _____ Sample pH Acceptable Y N NA pH Strips: _____ Sulfide Present Y N NA Lead Acetate Strips: _____	
Analyses								LAB USE ONLY: Lab Sample # / Comments: <i>SEE SCOR</i> <i>001</i> <i>002</i>	
Total RCRA 8 Metals + Lithium via EPA 60.10B									

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A
	Packing Material Used:	Lab Tracking #:
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature) <i>Luke Johnstone / Mundell</i>	Date/Time: 10/22/21 1211	Received by/Company: (Signature) <i>Kurt Pace</i>	Date/Time: 10/22/21 1211
Relinquished by/Company: (Signature) <i>Kurt Pace</i>	Date/Time: 10/22/21 1305	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 10/22/21 1305
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

LAB Sample Temperature Info: Temp Blank Received: 0 N NA Therm ID#: D Cooler 1 Temp Upon Receipt: 07°C Cooler 1 Therm Corr. Factor: 0.0°C Cooler 1 Corrected Temp: 07°C Comments:	Table #: Acctnum: Template: Prelogin: PM: PB:	Trip Blank Received: Y N NA HCL MeOH TSP Other	Non Conformance(s): YES / NO	Page: 1 of: 1
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**SAMPLE CONDITION UPON RECEIPT FORM**

*1/22/21* *1405* *SMK*

Date/Time and Initials of person examining contents:

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No

(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: **1 2 3 4 5 6 A B C D E F**

4. Cooler Temperature: 0.7/0.7  
Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags

None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		/	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		/	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			/
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		/	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			/
Custody Signatures Present?	/		Residual Chlorine Check (Total/Amenable/Free Cyanide)			/
Containers Intact?:	/		Headspace Wisconsin Sulfide?			/
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	/		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)	/		Trip Blank Present?		/	
		/	Trip Blank Custody Seals?:			/

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1	↓																													
2	↓																													
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit   LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL OL	Non-aqueous liquid   Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

November 01, 2021

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50300944

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50300944

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50300944

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50300944001	A11	Solid	10/20/21 15:25	10/22/21 13:05

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II  
Pace Project No.: 50300944

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50300944001	A11	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50300944

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50300944001</b>	<b>A11</b>					
EPA 6010	Arsenic	5.2	mg/kg	1.1	10/30/21 03:10	
EPA 6010	Barium	163	mg/kg	1.1	10/30/21 03:10	
EPA 6010	Chromium	17.8	mg/kg	1.1	10/30/21 03:10	
EPA 6010	Lead	21.3	mg/kg	1.1	10/30/21 03:10	
EPA 6010	Lithium	11.9	mg/kg	5.5	10/30/21 03:10	N2
SM 2540G	Percent Moisture	21.8	%	0.10	10/25/21 12:07	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300944

**Sample: A11**      **Lab ID: 50300944001**      Collected: 10/20/21 15:25      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>5.2</b>	mg/kg	1.1	1	10/29/21 07:51	10/30/21 03:10	7440-38-2	
Barium	<b>163</b>	mg/kg	1.1	1	10/29/21 07:51	10/30/21 03:10	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	10/29/21 07:51	10/30/21 03:10	7440-43-9	
Chromium	<b>17.8</b>	mg/kg	1.1	1	10/29/21 07:51	10/30/21 03:10	7440-47-3	
Lead	<b>21.3</b>	mg/kg	1.1	1	10/29/21 07:51	10/30/21 03:10	7439-92-1	
Lithium	<b>11.9</b>	mg/kg	5.5	1	10/29/21 07:51	10/30/21 03:10	7439-93-2	N2
Selenium	ND	mg/kg	1.1	1	10/29/21 07:51	10/30/21 03:10	7782-49-2	
Silver	ND	mg/kg	0.55	1	10/29/21 07:51	10/30/21 03:10	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	10/28/21 09:09	10/28/21 17:25	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>21.8</b>	%	0.10	1		10/25/21 12:07		N2

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50300944

QC Batch: 647192

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300944001

METHOD BLANK: 2981840

Matrix: Solid

Associated Lab Samples: 50300944001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	10/28/21 17:11	

LABORATORY CONTROL SAMPLE: 2981841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.5	0.52	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2981842 2981843

Parameter	Units	2981842		2981843		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50300947002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/kg	ND	0.65	0.66	0.68	0.71	104	105	75-125	3	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.

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50300944

QC Batch: 646596	Analysis Method: EPA 6010
QC Batch Method: EPA 3050	Analysis Description: 6010 MET
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300944001

METHOD BLANK: 2979588 Matrix: Solid  
Associated Lab Samples: 50300944001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.97	10/30/21 02:44	
Barium	mg/kg	ND	0.97	10/30/21 02:44	
Cadmium	mg/kg	ND	0.49	10/30/21 02:44	
Chromium	mg/kg	ND	0.97	10/30/21 02:44	
Lead	mg/kg	ND	0.97	10/30/21 02:44	
Lithium	mg/kg	ND	4.9	10/30/21 02:44	N2
Selenium	mg/kg	ND	0.97	10/30/21 02:44	
Silver	mg/kg	ND	0.49	10/30/21 02:44	

LABORATORY CONTROL SAMPLE: 2979589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	48.7	51.1	105	80-120	
Barium	mg/kg	48.7	51.2	105	80-120	
Cadmium	mg/kg	48.7	47.4	97	80-120	
Chromium	mg/kg	48.7	49.8	102	80-120	
Lead	mg/kg	48.7	47.1	97	80-120	
Lithium	mg/kg	48.7	48.8	100	80-120	N2
Selenium	mg/kg	48.7	47.4	97	80-120	
Silver	mg/kg	24.4	23.7	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979590 2979591

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50300947002	Spike Conc.	Spike Conc.	Result								
Arsenic	mg/kg	7.5	61.7	52.9	69.3	61.1	100	101	75-125	12	20		
Barium	mg/kg	63.4	61.7	52.9	123	119	96	105	75-125	3	20		
Cadmium	mg/kg	ND	61.7	52.9	58.4	50.1	94	94	75-125	15	20		
Chromium	mg/kg	11.9	61.7	52.9	68.8	62.2	92	95	75-125	10	20		
Lead	mg/kg	32.9	61.7	52.9	80.0	72.9	76	76	75-125	9	20		
Lithium	mg/kg	14.8	61.7	52.9	78.0	69.5	102	103	75-125	11	20	N2	
Selenium	mg/kg	ND	61.7	52.9	56.3	48.4	91	91	75-125	15	20		
Silver	mg/kg	ND	30.9	26.5	29.3	25.1	95	95	75-125	16	20		

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50300944

QC Batch: 646637

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300944001

SAMPLE DUPLICATE: 2979698

Parameter	Units	50300872009 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.7	15.0	4	5	N2

SAMPLE DUPLICATE: 2979699

Parameter	Units	50300947002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.7	17.3	13	5	N2,R1

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50300944

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50300944

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
50300944001	A11	EPA 3050	646596	EPA 6010	647796
50300944001	A11	EPA 7471	647192	EPA 7471	647468
50300944001	A11	SM 2540G	646637		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

50300944

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Mundell and Associates, Inc.

Address: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone

Copy To:

Customer Project Name/Number: M20032 Muncie Phase II

Billing Information:  
110 S Downey Ave, Indianapolis, IN 46219

Email To: Ljohnstone@mundellassociates.com

Site Collection Info/Address:  
3500 W Fuson Rd Muncie, Indiana

State: IN / County/City: Muncie / Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: 317-630-9060  
Email: Ljohnstone@mundellassociates.com

Site/Facility ID #:  
Purchase Order #:  
Quote #:

Compliance Monitoring?  
[ ] Yes [ ] No  
DW PWS ID #:  
DW Location Code:

Collected By (print): Luke Johnstone

Turnaround Date Required:

Immediately Packed on Ice:  
[X] Yes [ ] No

Collected By (signature): *Luke Johnstone*

Rush: (Expedite Charges Apply)  
[ ] Same Day [ ] Next Day  
[ ] 2 Day [ ] 3 Day  
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable):  
[ ] Yes [ ] No  
Analysis:

Sample Disposal:  
 Dispose as appropriate  
 Return  
 Archive:  
 Hold:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analysis:

Container Type: Plastic (P) or Glass (G)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
A11	SL	Grab	10/20	15:25				1	G

Analyses

Total RCRA 8 Metals + Lithium via EPA 601.0B														
X														

Lab Project Manager:  
\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Profile/Line:  
Lab Sample Receipt Checklist:  
Custody Seals Present/Intact Y N NA  
Custody Signatures Present Y N NA  
Collector Signature Present Y N NA  
Bottles Intact Y N NA  
Correct Bottles Y N NA  
Sufficient Volume Y N NA  
Samples Received on Ice Y N NA  
VOA - Headspace Acceptable Y N NA  
USDA Regulated Soils Y N NA  
Samples in Holding Time Y N NA  
Residual Chlorine Present Y N NA  
Cl Strips: Y N NA  
Sample pH Acceptable Y N NA  
pH Strips: Y N NA  
Sulfide Present Y N NA  
Lead Acetate Strips: Y N NA

LAB USE ONLY:  
Lab Sample # / Comments:  
*SEE EUR COI*

Customer Remarks / Special Conditions / Possible Hazards:  
Total RCRA 8 Metals + Lithium

Type of Ice Used: Wet Blue Dry None  
Packing Material Used:  
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
Lab Tracking #:  
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
Temp Blank Received: Y N NA  
Therm ID#: *D*  
Cooler 1 Temp Upon Receipt: *0.7* °C  
Cooler 1 Therm Corr. Factor: *0.0* °C  
Cooler 1 Corrected Temp: *0.7* °C  
Comments:

Relinquished by/Company: (Signature) *Luke Johnstone / Mundell*  
Date/Time: *10/22/21 1311*  
Relinquished by/Company: (Signature) *Luke Johnstone / Pace*  
Date/Time: *10/22/21 1305*

Received by/Company: (Signature) *[Signature]*  
Date/Time: *10/22/21 1301*  
Received by/Company: (Signature) *[Signature]*  
Date/Time: *10/22/21 1305*

MTJL LAB USE ONLY:  
Table #:  
Accnum:  
Template:  
Prelogin:  
PM:  
PB:

Trip Blank Received: Y N NA  
HCL MeOH TSP Other  
Non Conformance(s): Page: *1*  
YES / NO of: *1*



**SAMPLE CONDITION UPON RECEIPT FORM**

1/22/21 1405 SMC

Date/Time and Initials of person examining contents:

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER

2. Custody Seal on Cooler/Box Present:  Yes  No

(If yes) Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 0.7/0.7  
Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags

None  Other

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		/	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		/	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			/
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		/	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			/
Custody Signatures Present?	/		Residual Chlorine Check (Total/Amenable/Free Cyanide)			/
Containers Intact?:	/		Headspace Wisconsin Sulfide?			/
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	/		Headspace in VOA Vials (>6mm): See Containter-Count form for details	Present	Absent	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)		/	Trip Blank Present?		/	
			Trip Blank Custody Seals?:			/

COMMENTS:

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Sample Container Count

SBS  
DI  
MaOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VOA, VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1																											SL			
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit   LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	Non-aqueous liquid
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		Oil
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

November 01, 2021

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50300947

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50300947001	A12	Solid	10/20/21 16:10	10/22/21 13:05
50300947002	A13	Solid	10/20/21 16:25	10/22/21 13:05
50300947003	DUP	Solid	10/20/21 08:00	10/22/21 13:05
50300947004	A14	Water	10/20/21 16:50	10/22/21 13:05

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50300947001	A12	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50300947002	A13	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50300947003	DUP	EPA 6010	JPK	8	PASI-I
		EPA 7471	DDA	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50300947004	A14	EPA 6010	JDG	8	PASI-I
		EPA 7470	DDA	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50300947001</b>	<b>A12</b>					
EPA 6010	Arsenic	8.8	mg/kg	1.9	10/30/21 03:12	
EPA 6010	Barium	202	mg/kg	1.9	10/30/21 03:12	
EPA 6010	Chromium	20.5	mg/kg	1.9	10/30/21 03:12	
EPA 6010	Lead	310	mg/kg	1.9	10/30/21 03:12	
EPA 6010	Lithium	17.4	mg/kg	9.4	10/30/21 03:12	N2
SM 2540G	Percent Moisture	53.8	%	0.10	10/25/21 12:07	N2
<b>50300947002</b>	<b>A13</b>					
EPA 6010	Arsenic	7.5	mg/kg	1.2	10/30/21 03:14	
EPA 6010	Barium	63.4	mg/kg	1.2	10/30/21 03:14	
EPA 6010	Chromium	11.9	mg/kg	1.2	10/30/21 03:14	
EPA 6010	Lead	32.9	mg/kg	1.2	10/30/21 03:14	
EPA 6010	Lithium	14.8	mg/kg	5.9	10/30/21 03:14	N2
SM 2540G	Percent Moisture	19.7	%	0.10	10/25/21 12:07	N2
<b>50300947003</b>	<b>DUP</b>					
EPA 6010	Arsenic	8.0	mg/kg	1.9	10/30/21 03:25	
EPA 6010	Barium	207	mg/kg	1.9	10/30/21 03:25	
EPA 6010	Chromium	22.0	mg/kg	1.9	10/30/21 03:25	
EPA 6010	Lead	281	mg/kg	1.9	10/30/21 03:25	
EPA 6010	Lithium	18.3	mg/kg	9.7	10/30/21 03:25	N2
SM 2540G	Percent Moisture	54.6	%	0.10	10/25/21 11:50	N2

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

**Sample: A12**      **Lab ID: 50300947001**      Collected: 10/20/21 16:10      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	8.8	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:12	7440-38-2	
Barium	202	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:12	7440-39-3	
Cadmium	ND	mg/kg	0.94	1	10/29/21 07:51	10/30/21 03:12	7440-43-9	
Chromium	20.5	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:12	7440-47-3	
Lead	310	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:12	7439-92-1	
Lithium	17.4	mg/kg	9.4	1	10/29/21 07:51	10/30/21 03:12	7439-93-2	N2
Selenium	ND	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:12	7782-49-2	
Silver	ND	mg/kg	0.94	1	10/29/21 07:51	10/30/21 03:12	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.43	1	10/28/21 09:09	10/28/21 17:28	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	53.8	%	0.10	1		10/25/21 12:07		N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

**Sample: A13**      **Lab ID: 50300947002**      Collected: 10/20/21 16:25      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.5	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:14	7440-38-2	
Barium	63.4	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:14	7440-39-3	
Cadmium	ND	mg/kg	0.59	1	10/29/21 07:51	10/30/21 03:14	7440-43-9	
Chromium	11.9	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:14	7440-47-3	
Lead	32.9	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:14	7439-92-1	
Lithium	14.8	mg/kg	5.9	1	10/29/21 07:51	10/30/21 03:14	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	10/29/21 07:51	10/30/21 03:14	7782-49-2	
Silver	ND	mg/kg	0.59	1	10/29/21 07:51	10/30/21 03:14	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.24	1	10/28/21 09:09	10/28/21 17:30	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	19.7	%	0.10	1		10/25/21 12:07		N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

**Sample: DUP**      **Lab ID: 50300947003**      Collected: 10/20/21 08:00      Received: 10/22/21 13:05      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>8.0</b>	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:25	7440-38-2	
Barium	<b>207</b>	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:25	7440-39-3	
Cadmium	ND	mg/kg	0.97	1	10/29/21 07:51	10/30/21 03:25	7440-43-9	
Chromium	<b>22.0</b>	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:25	7440-47-3	
Lead	<b>281</b>	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:25	7439-92-1	
Lithium	<b>18.3</b>	mg/kg	9.7	1	10/29/21 07:51	10/30/21 03:25	7439-93-2	N2
Selenium	ND	mg/kg	1.9	1	10/29/21 07:51	10/30/21 03:25	7782-49-2	
Silver	ND	mg/kg	0.97	1	10/29/21 07:51	10/30/21 03:25	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.47	1	10/28/21 09:09	10/28/21 17:37	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>54.6</b>	%	0.10	1		10/25/21 11:50		N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

Sample: A14	Lab ID: 50300947004	Collected: 10/20/21 16:50		Received: 10/22/21 13:05		Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	10.0	1	10/26/21 13:46	11/01/21 12:44	7440-38-2	
Barium	ND	ug/L	10.0	1	10/26/21 13:46	11/01/21 12:44	7440-39-3	
Cadmium	ND	ug/L	2.0	1	10/26/21 13:46	11/01/21 12:44	7440-43-9	
Chromium	ND	ug/L	10.0	1	10/26/21 13:46	11/01/21 12:44	7440-47-3	
Lead	ND	ug/L	10.0	1	10/26/21 13:46	11/01/21 12:44	7439-92-1	
Lithium	ND	ug/L	20.0	1	10/26/21 13:46	11/01/21 12:44	7439-93-2	
Selenium	ND	ug/L	10.0	1	10/26/21 13:46	11/01/21 12:44	7782-49-2	
Silver	ND	ug/L	10.0	1	10/26/21 13:46	11/01/21 12:44	7440-22-4	
<b>7470 Mercury</b>								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	10/29/21 17:10	10/31/21 15:29	7439-97-6	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

QC Batch: 647428	Analysis Method: EPA 7470
QC Batch Method: EPA 7470	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300947004

METHOD BLANK: 2982749 Matrix: Water

Associated Lab Samples: 50300947004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	2.0	10/31/21 14:15	

LABORATORY CONTROL SAMPLE: 2982750

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982751 2982752

Parameter	Units	50300608002		2982751		2982752		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	4.9	4.8	98	96	75-125	2	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982753 2982754

Parameter	Units	50300608009		2982753		2982754		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	4.9	4.9	97	98	75-125	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.

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

QC Batch: 647192

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300947001, 50300947002, 50300947003

METHOD BLANK: 2981840

Matrix: Solid

Associated Lab Samples: 50300947001, 50300947002, 50300947003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	10/28/21 17:11	

LABORATORY CONTROL SAMPLE: 2981841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.5	0.52	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2981842 2981843

Parameter	Units	2981842		2981843		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50300947002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/kg	ND	0.65	0.66	0.68	0.71	104	105	75-125	3	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: M20032 Muncie Phase II  
Pace Project No.: 50300947

QC Batch: 646596 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300947001, 50300947002, 50300947003

METHOD BLANK: 2979588 Matrix: Solid

Associated Lab Samples: 50300947001, 50300947002, 50300947003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.97	10/30/21 02:44	
Barium	mg/kg	ND	0.97	10/30/21 02:44	
Cadmium	mg/kg	ND	0.49	10/30/21 02:44	
Chromium	mg/kg	ND	0.97	10/30/21 02:44	
Lead	mg/kg	ND	0.97	10/30/21 02:44	
Lithium	mg/kg	ND	4.9	10/30/21 02:44	N2
Selenium	mg/kg	ND	0.97	10/30/21 02:44	
Silver	mg/kg	ND	0.49	10/30/21 02:44	

LABORATORY CONTROL SAMPLE: 2979589

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	48.7	51.1	105	80-120	
Barium	mg/kg	48.7	51.2	105	80-120	
Cadmium	mg/kg	48.7	47.4	97	80-120	
Chromium	mg/kg	48.7	49.8	102	80-120	
Lead	mg/kg	48.7	47.1	97	80-120	
Lithium	mg/kg	48.7	48.8	100	80-120	N2
Selenium	mg/kg	48.7	47.4	97	80-120	
Silver	mg/kg	24.4	23.7	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979590 2979591

Parameter	Units	50300947002		50300947001		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/kg	7.5	61.7	52.9	69.3	61.1	100	101	75-125	12	20		
Barium	mg/kg	63.4	61.7	52.9	123	119	96	105	75-125	3	20		
Cadmium	mg/kg	ND	61.7	52.9	58.4	50.1	94	94	75-125	15	20		
Chromium	mg/kg	11.9	61.7	52.9	68.8	62.2	92	95	75-125	10	20		
Lead	mg/kg	32.9	61.7	52.9	80.0	72.9	76	76	75-125	9	20		
Lithium	mg/kg	14.8	61.7	52.9	78.0	69.5	102	103	75-125	11	20	N2	
Selenium	mg/kg	ND	61.7	52.9	56.3	48.4	91	91	75-125	15	20		
Silver	mg/kg	ND	30.9	26.5	29.3	25.1	95	95	75-125	16	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50300947

QC Batch: 646603	Analysis Method: EPA 6010
QC Batch Method: EPA 3010	Analysis Description: 6010 MET
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300947004

METHOD BLANK: 2979602 Matrix: Water

Associated Lab Samples: 50300947004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	11/01/21 12:37	
Barium	ug/L	ND	10.0	11/01/21 12:37	
Cadmium	ug/L	ND	2.0	11/01/21 12:37	
Chromium	ug/L	ND	10.0	11/01/21 12:37	
Lead	ug/L	ND	10.0	11/01/21 12:37	
Lithium	ug/L	ND	20.0	11/01/21 12:37	
Selenium	ug/L	ND	10.0	11/01/21 12:37	
Silver	ug/L	ND	10.0	11/01/21 12:37	

LABORATORY CONTROL SAMPLE: 2979603

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	942	94	80-120	
Barium	ug/L	1000	935	93	80-120	
Cadmium	ug/L	1000	918	92	80-120	
Chromium	ug/L	1000	911	91	80-120	
Lead	ug/L	1000	870	87	80-120	
Lithium	ug/L	1000	929	93	80-120	
Selenium	ug/L	1000	939	94	80-120	
Silver	ug/L	500	443	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2979604 2979605

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50300959003 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Arsenic	ug/L	254	1000	1000	1180	1210	93	95	75-125	2	20	
Barium	ug/L	639	1000	1000	1520	1570	88	93	75-125	3	20	
Cadmium	ug/L	9.2	1000	1000	895	906	89	90	75-125	1	20	
Chromium	ug/L	420	1000	1000	1220	1250	80	83	75-125	3	20	
Lead	ug/L	265	1000	1000	965	967	70	70	75-125	0	20	M3
Lithium	ug/L	277	1000	1000	1210	1230	94	96	75-125	2	20	
Selenium	ug/L	13.8	1000	1000	891	915	88	90	75-125	3	20	
Silver	ug/L	ND	500	500	444	456	89	91	75-125	3	20	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

QC Batch: 646637

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300947001, 50300947002

SAMPLE DUPLICATE: 2979698

Parameter	Units	50300872009 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.7	15.0	4	5	N2

SAMPLE DUPLICATE: 2979699

Parameter	Units	50300947002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.7	17.3	13	5	N2,R1

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

QC Batch: 646639

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50300947003

SAMPLE DUPLICATE: 2979704

Parameter	Units	50300947003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	54.6	54.9	1	5	N2

SAMPLE DUPLICATE: 2979705

Parameter	Units	50300913001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.7	11.9	2	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M3 Matrix spike recovery was outside laboratory control limits due to matrix interferences.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50300947

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50300947001	A12	EPA 3050	646596	EPA 6010	647796
50300947002	A13	EPA 3050	646596	EPA 6010	647796
50300947003	DUP	EPA 3050	646596	EPA 6010	647796
50300947004	A14	EPA 3010	646603	EPA 6010	647914
50300947004	A14	EPA 7470	647428	EPA 7470	647829
50300947001	A12	EPA 7471	647192	EPA 7471	647468
50300947002	A13	EPA 7471	647192	EPA 7471	647468
50300947003	DUP	EPA 7471	647192	EPA 7471	647468
50300947001	A12	SM 2540G	646637		
50300947002	A13	SM 2540G	646637		
50300947003	DUP	SM 2540G	646639		

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# CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or  
MTJL Log-in Number Here

50300947

**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Company: Mundell and Associates, Inc. Billing Information: 110 S Downey Ave, Indianapolis, IN 46219

Address: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: Ljohnstone@mundellassociates.com

Copy To: Site Collection Info/Address: 4849 BLK S Delaware Dr Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II State: IN County/City: Muncie Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Container Preservative Type \*\*

U	1										
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Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No

Email: Ljohnstone@mundellassociates.com

Collected By (print): Luke Johnstone Purchase Order #: DW PWS ID #: DW Location Code:

Collected By (signature): *Luke Johnstone* Turnaround Date Required: Immediately Packed on Ice: [x] Yes [ ] No

Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold: Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

Analyses										Lab Profile/Line:		
Total RCRA 8 Metals + Lithium via EPA 601.0B	Total RCRA 8 Metals + Lithium										Lab Sample Receipt Checklist:	
											Custody Seals Present/Intact Y N NA	
											Custody Signatures Present Y N NA	
											Collector Signature Present Y N NA	
											Bottles Intact Y N NA	
											Correct Bottles Y N NA	
											Sufficient Volume Y N NA	
											Samples Received on Ice Y N NA	
											VOA - Headspace Acceptable Y N NA	
											USDA Regulated Soils Y N NA	
									Samples in Holding Time Y N NA			
									Residual Chlorine Present Y N NA			
									Cl Strips:			
									Sample pH Acceptable Y N NA			
									pH Strips:			
									Sulfide Present Y N NA			
									Lead Acetate Strips:			

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
A12	SL	Grab	10/20	16:10				1	G
A13 (MS/MSD)	SL	Grab	10/20	16:25				3	G
DUP	SL	Grab	10/20					1	G
A14	W		10/20	16:50				1	P

LAB USE ONLY:

Lab Sample # / Comments: *SEE SW*

*OS1  
OS2  
OS3  
OS4*

LAB Sample Temperature Info:

Temp Blank Received: *8* Y N NA

Therm ID#:

Cooler 1 Temp Upon Receipt: *07* °C

Cooler 1 Therm Corr. Factor: *0.6* °C

Cooler 1 Corrected Temp: *07* °C

Comments:

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium

Type of Ice Used: Wet Blue Dry None

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Packing Material Used:

Lab Tracking #:

Radchem sample(s) screened (<500 cpm): Y N NA

Samples received via: FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature) <i>Luke Johnstone / Mundell</i>	Date/Time: <i>10/22/21 1211</i>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>10/22/21 1211</i>
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>10/22/21 1305</i>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>10/22/21 1305</i>
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s):

Page: *1*

of: *1*



**SAMPLE CONDITION UPON RECEIPT FORM**

*1/27/11* *1410 SML*

Date/Time and Initials of person examining contents:

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER

2. Custody Seal on Cooler/Box Present:  Yes  No

(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: **1 2 3 4 5 6 A B C D E F**

4. Cooler Temperature: 0.7/0.7

Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags

None  Other

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		/	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		/	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non conformance to pH recommendations will be noted on the container count form	/		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			/
Rush TAT Requested (4 days or less):		/	Residual Chlorine Check (Total/Amenable/Free Cyanide)			/
Custody Signatures Present?	/		Headspace Wisconsin Sulfide?			/
Containers Intact?:	/		Headspace in VOA Vials (>6mm): See Containter-Count form for details	Present	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	/		Trip Blank Present?		/	
Extra labels on Terracore Vials? (soils only)		/	Trip Blank Custody Seals?:			/

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFL	R	DG9H	VG9H	VOA WIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1	1																										SL			
2	3																													
3	1																													
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFL	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFL	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL OL	Non-aqueous liquid   Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

## **APPENDIX A2**

### **JANUARY 2022 LABORATORY CERTIFICATES OF ANALYSIS AND CHAINS OF CUSTODY**



January 17, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306619

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306619001	A22-s (MS/MSD)	Solid	01/06/22 11:05	01/07/22 12:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306619001	A22-s (MS/MSD)	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306619001</b>	<b>A22-s (MS/MSD)</b>					
EPA 6010	Arsenic	7.3	mg/kg	1.3	01/13/22 11:09	
EPA 6010	Barium	90.8	mg/kg	1.3	01/13/22 11:09	
EPA 6010	Chromium	16.2	mg/kg	1.3	01/13/22 11:09	
EPA 6010	Lead	19.7	mg/kg	1.3	01/13/22 11:09	
EPA 6010	Lithium	9.8	mg/kg	6.3	01/13/22 11:09	N2
SM 2540G	Percent Moisture	22.5	%	0.10	01/08/22 08:55	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

**Sample: A22-s (MS/MSD)**      **Lab ID: 50306619001**      Collected: 01/06/22 11:05      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.3	mg/kg	1.3	1	01/11/22 10:22	01/13/22 11:09	7440-38-2	
Barium	90.8	mg/kg	1.3	1	01/11/22 10:22	01/13/22 11:09	7440-39-3	
Cadmium	ND	mg/kg	0.63	1	01/11/22 10:22	01/13/22 11:09	7440-43-9	
Chromium	16.2	mg/kg	1.3	1	01/11/22 10:22	01/13/22 11:09	7440-47-3	
Lead	19.7	mg/kg	1.3	1	01/11/22 10:22	01/13/22 11:09	7439-92-1	
Lithium	9.8	mg/kg	6.3	1	01/11/22 10:22	01/13/22 11:09	7439-93-2	N2
Selenium	ND	mg/kg	1.3	1	01/11/22 10:22	01/13/22 11:09	7782-49-2	
Silver	ND	mg/kg	0.63	1	01/11/22 10:22	01/13/22 11:09	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	01/11/22 11:25	01/13/22 09:06	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	22.5	%	0.10	1		01/08/22 08:55		N2

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

QC Batch: 658134

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306619001

METHOD BLANK: 3032522

Matrix: Solid

Associated Lab Samples: 50306619001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/13/22 08:58	

LABORATORY CONTROL SAMPLE: 3032523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.52	0.54	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032524 3032525

Parameter	Units	50306619001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	0.66	0.66	0.72	0.74	103	106	75-125	2	20	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

QC Batch: 658130

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306619001

METHOD BLANK: 3032509

Matrix: Solid

Associated Lab Samples: 50306619001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.92	01/13/22 10:40	
Barium	mg/kg	ND	0.92	01/13/22 10:40	
Cadmium	mg/kg	ND	0.46	01/13/22 10:40	
Chromium	mg/kg	ND	0.92	01/13/22 10:40	
Lead	mg/kg	ND	0.92	01/13/22 10:40	
Lithium	mg/kg	ND	4.6	01/13/22 10:40	N2
Selenium	mg/kg	ND	0.92	01/13/22 10:40	
Silver	mg/kg	ND	0.46	01/13/22 10:40	

LABORATORY CONTROL SAMPLE: 3032510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	45.2	44.7	99	80-120	
Barium	mg/kg	45.2	44.0	97	80-120	
Cadmium	mg/kg	45.2	43.1	95	80-120	
Chromium	mg/kg	45.2	46.4	103	80-120	
Lead	mg/kg	45.2	42.2	93	80-120	
Lithium	mg/kg	45.2	44.9	99	80-120	N2
Selenium	mg/kg	45.2	43.4	96	80-120	
Silver	mg/kg	22.6	21.3	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032511 3032512

Parameter	Units	50306616001		3032511		3032512		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	mg/kg	3.4	74.7	74.9	74.9	74.9	73.6	96	94	75-125	2	20	
Barium	mg/kg	85.4	74.7	74.9	74.9	160	166	100	107	75-125	3	20	
Cadmium	mg/kg	ND	74.7	74.9	74.9	67.9	67.1	91	89	75-125	1	20	
Chromium	mg/kg	9.3	74.7	74.9	74.9	77.5	78.3	91	92	75-125	1	20	
Lead	mg/kg	40.8	74.7	74.9	74.9	96.3	99.1	74	78	75-125	3	20	M0
Lithium	mg/kg	9.0	74.7	74.9	74.9	80.5	80.1	96	95	75-125	0	20	N2
Selenium	mg/kg	ND	74.7	74.9	74.9	67.4	66.1	90	88	75-125	2	20	
Silver	mg/kg	ND	37.3	37.5	37.5	34.0	33.5	91	90	75-125	1	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032513 3032514														
Parameter	Units	50306619001		3032513		3032514		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/kg	7.3	61.9	56.4	63.6	53.9	91	83	75-125	16	20			
Barium	mg/kg	90.8	61.9	56.4	165	154	120	112	75-125	7	20			
Cadmium	mg/kg	ND	61.9	56.4	54.9	45.9	88	81	75-125	18	20			
Chromium	mg/kg	16.2	61.9	56.4	77.1	64.3	98	85	75-125	18	20			
Lead	mg/kg	19.7	61.9	56.4	69.7	60.0	81	72	75-125	15	20	M0		
Lithium	mg/kg	9.8	61.9	56.4	70.3	58.9	98	87	75-125	18	20	N2		
Selenium	mg/kg	ND	61.9	56.4	54.5	45.3	88	80	75-125	18	20			
Silver	mg/kg	ND	31	28.1	26.7	22.6	86	80	75-125	17	20			

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

QC Batch: 657974

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306619001

SAMPLE DUPLICATE: 3031995

Parameter	Units	50306616001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	42.7	47.6	11	5	N2,R1

SAMPLE DUPLICATE: 3031996

Parameter	Units	50306619001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.5	22.8	2	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306619

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306619001	A22-s (MS/MSD)	EPA 3050	658130	EPA 6010	658450
50306619001	A22-s (MS/MSD)	EPA 7471	658134	EPA 7471	658401
50306619001	A22-s (MS/MSD)	SM 2540G	657974		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

# WO# : 50306619



Order Number or

E ONLY

Company: Mundell and Associates, Inc. Billing Information:  
Address: 110 S Downey Ave, Indianapolis, IN 46219 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com

Copy To: Site Collection Info/Address:  
3500 W Fuson Rd Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II State: County/City: Time Zone Collected:  
IN / Muncie [ ]PT [ ]MT [ ]CT [X]ET

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring?  
Email: ljohnstone@mundellassociates.com [ ] Yes [ ] No

Collected By (print): Luke Johnstone Purchase Order #: DW PWS ID #:  
Quote #: DW Location Code:

Collected By (signature): Turnaround Date Required: Immediately Packed on Ice:  
[x] Yes [ ] No

Sample Disposal: Rush: (Expedite Charges Apply) Field Filtered (if applicable):  
[x] Dispose as appropriate [ ] Same Day [ ] Next Day [ ] Yes [ ] No  
[ ] Return [ ] 2 Day [ ] 3 Day  
[ ] Archive: [ ] 4 Day [ ] 5 Day Analysis: \_\_\_\_\_  
[ ] Hold:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
A22-s (MS/MSD)	SL	Grab	1/6	11:05				3	G X

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_\_\_\_

Analyses	Lab Profile/Line:
	Lab Sample Receipt Checklist:
	Custody Seals Present/Intact Y N NA
	Custody Signatures Present Y N NA
	Collector Signature Present Y N NA
	Bottles Intact Y N NA
	Correct Bottles Y N NA
	Sufficient Volume Y N NA
	Samples Received on Ice Y N NA
	VOA - Headspace Acceptable Y N NA
	USDA Regulated Soils Y N NA
	Samples in Holding Time Y N NA
	Residual Chlorine Present Y N NA
	Cl Strips: _____
	Sample pH Acceptable Y N NA
	pH Strips: _____
	Sulfide Present Y N NA
	Lead Acetate Strips: _____
	LAB USE ONLY:
	Lab Sample # / Comments:
	SEE EAR

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium  
Type of Ice Used: Wet Blue Dry None SHORT HOLDS PRESENT (<72 hours): Y N N/A  
Packing Material Used: Lab Tracking #:  
Radchem sample(s) screened (<500 cpm): Y N NA Samples received via: FEDEX UPS Client Courier Pace Courier

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time: MTJL LAB USE ONLY  
Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time: Table #:  
Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time: Acctnum:  
Template:  
Prelogin:  
PM:  
PB:

LAB Sample Temperature Info:  
Temp Blank Received: Y N NA  
Therm ID#: 4  
Cooler 1 Temp Upon Receipt: 4.4°C  
Cooler 1 Therm Corr. Factor: 0.2°C  
Cooler 1 Corrected Temp: 4.2°C  
Comments:  
Trip Blank Received: Y N NA  
HCL MeOH TSP Other  
Non Conformance(s): Page: \_\_\_\_\_  
YES / NO of: \_\_\_\_\_



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC F722 15:21

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 4.4 / 4.2  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		✓	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Custody Signatures Present?	✓		Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Containers Intact?:	✓		Headspace Wisconsin Sulfide?			✓
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<u>Absent</u>	No VOA Vials Sent ✓
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		✓	
			Trip Blank Custody Seals?:			✓

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZNAc pH >9	NaOH pH >10	
1	3																										SL				
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 19, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306800

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306800001	A30S	Solid	01/07/22 15:00	01/11/22 13:10
50306800002	E106	Water	01/07/22 15:06	01/11/22 13:10

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306800001	A30S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306800002	E106	EPA 6010	JDG	8	PASI-I
		EPA 7470	ILP	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306800001</b>	<b>A30S</b>					
EPA 6010	Arsenic	8.4	mg/kg	1.3	01/14/22 04:02	
EPA 6010	Barium	197	mg/kg	1.3	01/14/22 04:02	
EPA 6010	Chromium	15.9	mg/kg	1.3	01/14/22 04:02	
EPA 6010	Lead	16.4	mg/kg	1.3	01/14/22 04:02	
EPA 6010	Lithium	11.4	mg/kg	6.5	01/14/22 04:02	N2
SM 2540G	Percent Moisture	25.7	%	0.10	01/13/22 09:49	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

**Sample: A30S**      **Lab ID: 50306800001**      Collected: 01/07/22 15:00      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>8.4</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 04:02	7440-38-2	
Barium	<b>197</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 04:02	7440-39-3	
Cadmium	ND	mg/kg	0.65	1	01/12/22 14:28	01/14/22 04:02	7440-43-9	
Chromium	<b>15.9</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 04:02	7440-47-3	
Lead	<b>16.4</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 04:02	7439-92-1	
Lithium	<b>11.4</b>	mg/kg	6.5	1	01/12/22 14:28	01/14/22 04:02	7439-93-2	N2
Selenium	ND	mg/kg	1.3	1	01/12/22 14:28	01/14/22 04:02	7782-49-2	
Silver	ND	mg/kg	0.65	1	01/12/22 14:28	01/14/22 04:02	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.25	1	01/17/22 12:28	01/18/22 09:11	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>25.7</b>	%	0.10	1		01/13/22 09:49		N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

<b>Sample: E106</b>		<b>Lab ID: 50306800002</b>		Collected: 01/07/22 15:06	Received: 01/11/22 13:10	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis						
Arsenic	ND	ug/L	10.0	1	01/17/22 08:25	01/18/22 10:03	7440-38-2	
Barium	ND	ug/L	10.0	1	01/17/22 08:25	01/18/22 10:03	7440-39-3	
Cadmium	ND	ug/L	2.0	1	01/17/22 08:25	01/18/22 10:03	7440-43-9	
Chromium	ND	ug/L	10.0	1	01/17/22 08:25	01/18/22 10:03	7440-47-3	
Lead	ND	ug/L	10.0	1	01/17/22 08:25	01/18/22 10:03	7439-92-1	
Lithium	ND	ug/L	20.0	1	01/17/22 08:25	01/18/22 10:03	7439-93-2	
Selenium	ND	ug/L	10.0	1	01/17/22 08:25	01/18/22 10:03	7782-49-2	
Silver	ND	ug/L	10.0	1	01/17/22 08:25	01/18/22 10:03	7440-22-4	
<b>7470 Mercury</b>		Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis						
Mercury	ND	ug/L	2.0	1	01/14/22 06:55	01/14/22 12:48	7439-97-6	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

QC Batch: 658512

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306800002

METHOD BLANK: 3034138

Matrix: Water

Associated Lab Samples: 50306800002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	2.0	01/14/22 12:11	

LABORATORY CONTROL SAMPLE: 3034139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034140 3034141

Parameter	Units	3034140		3034141		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306625001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	ug/L	ND	5	5	5.0	5.0	99	98	75-125	0	20

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

QC Batch: 658622

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306800001

METHOD BLANK: 3034664

Matrix: Solid

Associated Lab Samples: 50306800001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/18/22 08:37	

LABORATORY CONTROL SAMPLE: 3034665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.23	48	80-120	L5

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034666 3034667

Parameter	Units	50306793001		3034667		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/kg	ND	0.72	0.69	0.94	0.92	105	107	75-125	2	20

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306800

QC Batch: 658262 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306800001

METHOD BLANK: 3033074 Matrix: Solid  
Associated Lab Samples: 50306800001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	MS Result							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

QC Batch: 658404

Analysis Method: EPA 6010

QC Batch Method: EPA 3010

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306800002

METHOD BLANK: 3033717

Matrix: Water

Associated Lab Samples: 50306800002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	01/19/22 07:58	
Barium	ug/L	ND	10.0	01/18/22 09:55	
Cadmium	ug/L	ND	2.0	01/18/22 09:55	
Chromium	ug/L	ND	10.0	01/18/22 09:55	
Lead	ug/L	ND	10.0	01/18/22 09:55	
Lithium	ug/L	ND	20.0	01/18/22 09:55	
Selenium	ug/L	ND	10.0	01/18/22 09:55	
Silver	ug/L	ND	10.0	01/18/22 09:55	

LABORATORY CONTROL SAMPLE: 3033718

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	987	99	80-120	
Barium	ug/L	1000	977	98	80-120	
Cadmium	ug/L	1000	967	97	80-120	
Chromium	ug/L	1000	986	99	80-120	
Lead	ug/L	1000	927	93	80-120	
Lithium	ug/L	1000	989	99	80-120	
Selenium	ug/L	1000	974	97	80-120	
Silver	ug/L	500	461	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033719 3033720

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306939002 Result	Spike Conc.	Spike Conc.	MS Result								
Arsenic	ug/L	28.1	1000	1000	1120	1130	109	110	75-125	1	20		
Barium	ug/L	462	1000	1000	1510	1540	105	108	75-125	2	20		
Cadmium	ug/L	5.6	1000	1000	1040	1050	103	104	75-125	1	20		
Chromium	ug/L	<10.0	1000	1000	1020	1020	101	102	75-125	1	20		
Lead	ug/L	154	1000	1000	1040	1060	89	90	75-125	1	20		
Lithium	ug/L	28.4	1000	1000	1060	1060	103	103	75-125	1	20		
Selenium	ug/L	<10.0	1000	1000	1070	1090	107	109	75-125	2	20		
Silver	ug/L	<10.0	500	500	495	501	99	100	75-125	1	20		

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

QC Batch: 658420

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306800001

SAMPLE DUPLICATE: 3033111

Parameter	Units	50306805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.5	19.9	3	5	N2

SAMPLE DUPLICATE: 3033112

Parameter	Units	50306805002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.2	24.5	14	5	N2,R1

SAMPLE DUPLICATE: 3033767

Parameter	Units	50306793001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.8	26.7	4	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306800

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
50306800001	A30S	EPA 3050	658262	EPA 6010	658576
50306800002	E106	EPA 3010	658404	EPA 6010	658923
50306800002	E106	EPA 7470	658512	EPA 7470	658586
50306800001	A30S	EPA 7471	658622	EPA 7471	658891
50306800001	A30S	SM 2540G	658420		

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## CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

WO#: 50306800

ALL BOLD OUTLINE



50306800

Company: Mundell and Associates, Inc. Billing Information:  
Address: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com  
Copy To: Site Collection Info/Address:  
4500 S Hoyt St. Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II  
State: IN County/City: Muncie Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring?  
Email: ljohnstone@mundellassociates.com [ ] Yes [ ] No

Collected By (print): Luke Johnstone / Andy Miller Purchase Order #: DW PWS ID #:  
Quote #: DW Location Code:

Collected By (signature): [Signature] Turnaround Date Required: Immediately Packed on Ice:  
[x] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:  
Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day  
Field Filtered (if applicable): [ ] Yes [ ] No  
Analysis: \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW),  
Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
A30S	SL	Grab	1/7	15:00				1	G
E106	W	Grab	1/7	15:06				1	P

Container Preservative Type  
U 1  
\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) phosphoric acid, (5) ascorbic acid, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_\_\_\_

Analyses		Total RCRA 8 Metals + Lithium via EPA 6010B	Total RCRA 8 Metals + Lithium via EPA 6010B

Lab Profile/Line:  
Lab Sample Receipt Checklist:  
Custody Seals Present/Intact Y N NA  
Custody Signatures Present Y N NA  
Collector Signature Present Y N NA  
Bottles Intact Y N NA  
Correct Bottles Y N NA  
Sufficient Volume Y N NA  
Samples Received on Ice Y N NA  
VOA - Headspace Acceptable Y N NA  
USDA Regulated Soils Y N NA  
Samples in Holding Time Y N NA  
Residual Chlorine Present Y N NA  
Cl Strips: \_\_\_\_\_  
Sample pH Acceptable Y N NA  
pH Strips: \_\_\_\_\_  
Sulfide Present Y N NA  
Lead Acetate Strips: \_\_\_\_\_

LAB USE ONLY:  
Lab Sample # / Comments:  
  
*See SUR*  
*001*  
*002*

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium  
Type of Ice Used: Wet Blue Dry None  
SHORT HOLDS PRESENT (<72 hours): Y N N/A  
Packing Material Used: Lab Tracking #:  
Radchem sample(s) screened (<500 cpm): Y N NA  
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
Temp Blank Received: Y N NA  
Therm ID#: D  
Cooler 1 Temp Upon Receipt: 0.6  
Cooler 1 Therm Corr. Factor: 0.6  
Cooler 1 Corrected Temp: 0.6  
Comments:

Relinquished by/Company: (Signature) [Signature]	Date/Time: 1/11/22 12:20	Received by/Company: (Signature) [Signature]	Date/Time: 1/11/22 12:20	MTJL LAB USE ONLY
Relinquished by/Company: (Signature) [Signature]	Date/Time: 1/11/22 13:10	Received by/Company: (Signature) [Signature]	Date/Time: 1-11-22 13:10	Table #:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Acctnum:
				Template:
				Prelogin:
				PM:
				PB:

Trip Blank Received: Y N NA  
HCL MeOH TSP Other  
Non Conformance(s): YES / NO Page: \_\_\_\_\_ of: \_\_\_\_\_





**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 1-11-22 16:18

- 1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No  
(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
- 4. Cooler Temperature: 0.6/0.6  
Temp should be above freezing to 6°C (Initial/Corrected)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form <u>RC 1/11/22</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?		<input checked="" type="checkbox"/>	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1																											SL				
2																												WT	✓		
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 17, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306620

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306620

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306620

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306620001	A44s	Solid	01/06/22 11:40	01/07/22 12:35

## REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: M20032 Muncie Phase II  
Pace Project No.: 50306620

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306620001	A44s	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306620

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306620001</b>	<b>A44s</b>					
EPA 6010	Arsenic	7.9	mg/kg	1.2	01/13/22 12:15	
EPA 6010	Barium	69.6	mg/kg	1.2	01/13/22 12:15	
EPA 6010	Chromium	17.8	mg/kg	1.2	01/13/22 12:15	
EPA 6010	Lead	163	mg/kg	1.2	01/13/22 12:15	
EPA 6010	Lithium	11.4	mg/kg	6.0	01/13/22 12:15	N2
SM 2540G	Percent Moisture	25.5	%	0.10	01/08/22 08:55	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306620

**Sample: A44s**      **Lab ID: 50306620001**      Collected: 01/06/22 11:40      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.9	mg/kg	1.2	1	01/11/22 10:22	01/13/22 12:15	7440-38-2	
Barium	69.6	mg/kg	1.2	1	01/11/22 10:22	01/13/22 12:15	7440-39-3	
Cadmium	ND	mg/kg	0.60	1	01/11/22 10:22	01/13/22 12:15	7440-43-9	
Chromium	17.8	mg/kg	1.2	1	01/11/22 10:22	01/13/22 12:15	7440-47-3	
Lead	163	mg/kg	1.2	1	01/11/22 10:22	01/13/22 12:15	7439-92-1	
Lithium	11.4	mg/kg	6.0	1	01/11/22 10:22	01/13/22 12:15	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/11/22 10:22	01/13/22 12:15	7782-49-2	
Silver	ND	mg/kg	0.60	1	01/11/22 10:22	01/13/22 12:15	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	01/11/22 11:25	01/13/22 09:18	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	25.5	%	0.10	1		01/08/22 08:55		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306620

QC Batch: 658134

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306620001

METHOD BLANK: 3032522

Matrix: Solid

Associated Lab Samples: 50306620001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/13/22 08:58	

LABORATORY CONTROL SAMPLE: 3032523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.52	0.54	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032524 3032525

Parameter	Units	50306619001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	0.66	0.66	0.72	0.74	103	106	75-125	2	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: M20032 Muncie Phase II  
Pace Project No.: 50306620

QC Batch: 658130 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306620001

METHOD BLANK: 3032509 Matrix: Solid  
Associated Lab Samples: 50306620001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.92	01/13/22 10:40	
Barium	mg/kg	ND	0.92	01/13/22 10:40	
Cadmium	mg/kg	ND	0.46	01/13/22 10:40	
Chromium	mg/kg	ND	0.92	01/13/22 10:40	
Lead	mg/kg	ND	0.92	01/13/22 10:40	
Lithium	mg/kg	ND	4.6	01/13/22 10:40	N2
Selenium	mg/kg	ND	0.92	01/13/22 10:40	
Silver	mg/kg	ND	0.46	01/13/22 10:40	

LABORATORY CONTROL SAMPLE: 3032510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	45.2	44.7	99	80-120	
Barium	mg/kg	45.2	44.0	97	80-120	
Cadmium	mg/kg	45.2	43.1	95	80-120	
Chromium	mg/kg	45.2	46.4	103	80-120	
Lead	mg/kg	45.2	42.2	93	80-120	
Lithium	mg/kg	45.2	44.9	99	80-120	N2
Selenium	mg/kg	45.2	43.4	96	80-120	
Silver	mg/kg	22.6	21.3	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032511 3032512

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	Spike Conc.	Spike Conc.	Conc.								
Arsenic	mg/kg	3.4	74.7	74.9	74.9	74.9	73.6	96	94	75-125	2	20	
Barium	mg/kg	85.4	74.7	74.9	74.9	160	166	100	107	75-125	3	20	
Cadmium	mg/kg	ND	74.7	74.9	74.9	67.9	67.1	91	89	75-125	1	20	
Chromium	mg/kg	9.3	74.7	74.9	74.9	77.5	78.3	91	92	75-125	1	20	
Lead	mg/kg	40.8	74.7	74.9	74.9	96.3	99.1	74	78	75-125	3	20 M0	
Lithium	mg/kg	9.0	74.7	74.9	74.9	80.5	80.1	96	95	75-125	0	20 N2	
Selenium	mg/kg	ND	74.7	74.9	74.9	67.4	66.1	90	88	75-125	2	20	
Silver	mg/kg	ND	37.3	37.5	37.5	34.0	33.5	91	90	75-125	1	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306620

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032513 3032514														
Parameter	Units	50306619001		3032513		3032514		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/kg	7.3	61.9	56.4	63.6	53.9	91	83	75-125	16	20			
Barium	mg/kg	90.8	61.9	56.4	165	154	120	112	75-125	7	20			
Cadmium	mg/kg	ND	61.9	56.4	54.9	45.9	88	81	75-125	18	20			
Chromium	mg/kg	16.2	61.9	56.4	77.1	64.3	98	85	75-125	18	20			
Lead	mg/kg	19.7	61.9	56.4	69.7	60.0	81	72	75-125	15	20	M0		
Lithium	mg/kg	9.8	61.9	56.4	70.3	58.9	98	87	75-125	18	20	N2		
Selenium	mg/kg	ND	61.9	56.4	54.5	45.3	88	80	75-125	18	20			
Silver	mg/kg	ND	31	28.1	26.7	22.6	86	80	75-125	17	20			

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306620

QC Batch: 657974

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306620001

SAMPLE DUPLICATE: 3031995

Parameter	Units	50306616001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	42.7	47.6	11	5	N2,R1

SAMPLE DUPLICATE: 3031996

Parameter	Units	50306619001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.5	22.8	2	5	N2

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**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306620

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306620

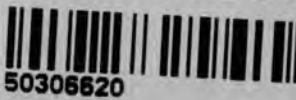
Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306620001	A44s	EPA 3050	658130	EPA 6010	658450
50306620001	A44s	EPA 7471	658134	EPA 7471	658401
50306620001	A44s	SM 2540G	657974		

### REPORT OF LABORATORY ANALYSIS

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**Pace Analytical**  
**CHAIN-OF-CUSTODY Analytical Request Document**  
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf  
 Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

**WO# : 50306620**



Number or

ONLY

Company: Mundell and Associates, Inc.		Billing Information:	
Address: 110 S Downey Ave, Indianapolis, IN 46219		110 S Downey Ave, Indianapolis, IN 46219	
Report To: Luke Johnstone		Email To: ljohnstone@mundellassociates.com	
Copy To:		Site Collection Info/Address: 4900 Edgewood Muncie, Indiana	
Customer Project Name/Number: M20032 Muncie Phase II		State: <u>IN</u> / County/City: <u>Muncie</u> Time Zone Collected: <u>[ ]PT [ ]MT [ ]CT [X]ET</u>	

Container Preservative Type									
U									

**\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other**

Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring?
Email: ljohnstone@mundellassociates.com		[ ] Yes [ ] No
Collected By (print): Luke Johnstone	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature): <i>[Signature]</i>	Turnaround Date Required:	Immediately Packed on Ice: [x] Yes [ ] No
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

Container Type: Plastic (P) or Glass (G) Total RCRA 8 Metals + Lithium via EPA 601.0B										

**Lab Profile/Line:**

Lab Sample Receipt Checklist:	
Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

**LAB USE ONLY:**  
 Lab Sample # / Comments:  
*See SCUR*

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
A44s	SL	Grab	1/6	11:40				1

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium	Type of Ice Used: Wet Blue Dry None
	Packing Material Used:
	Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

**LAB Sample Temperature Info:**

Temp Blank Received: Y N NA  
 Therm ID#:     
 Cooler 1 Temp Upon Receipt: 44 °C  
 Cooler 1 Therm Corr. Factor: 0.0 °C  
 Cooler 1 Corrected Temp: 4.2 °C  
 Comments:

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: <u>11.0</u> <u>1/7/22</u>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <u>11.0</u> <u>1/7/22</u>
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: <u>1235</u> <u>1/7/22</u>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <u>1-7-22</u> <u>12:35</u>
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY	
Table #:	
Acctnum:	
Template:	
Prelogin:	
PM:	
PB:	
Trip Blank Received: Y N NA HCL MeOH TSP Other	
Non Conformance(s): YES / NO	Page: <u>  </u> of: <u>  </u>



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC F722 15:21

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 4.4 / 4.2  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Rush TAT Requested (4 days or less):			Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent	No VOA Vials Sent <input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?		<input checked="" type="checkbox"/>	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZNAc pH >9	NaOH pH >10
1																											SL			
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unreserved plastic	U	Summa Can
WGKU	8oz unreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306782

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306782

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306782

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306782001	E12S	Solid	01/07/22 14:05	01/11/22 13:10

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306782

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306782001	E12S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306782

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306782001</b>	<b>E12S</b>					
EPA 6010	Arsenic	7.9	mg/kg	1.2	01/14/22 03:35	
EPA 6010	Barium	88.5	mg/kg	1.2	01/14/22 03:35	
EPA 6010	Chromium	14.6	mg/kg	1.2	01/14/22 03:35	
EPA 6010	Lead	40.1	mg/kg	1.2	01/14/22 03:35	
EPA 6010	Lithium	10.8	mg/kg	6.0	01/14/22 03:35	N2
SM 2540G	Percent Moisture	25.5	%	0.10	01/13/22 09:05	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306782

**Sample: E12S**      **Lab ID: 50306782001**      Collected: 01/07/22 14:05      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.9	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:35	7440-38-2	
Barium	88.5	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:35	7440-39-3	
Cadmium	ND	mg/kg	0.60	1	01/12/22 14:28	01/14/22 03:35	7440-43-9	
Chromium	14.6	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:35	7440-47-3	
Lead	40.1	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:35	7439-92-1	
Lithium	10.8	mg/kg	6.0	1	01/12/22 14:28	01/14/22 03:35	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:35	7782-49-2	
Silver	ND	mg/kg	0.60	1	01/12/22 14:28	01/14/22 03:35	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.28	1	01/17/22 12:26	01/18/22 08:05	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	25.5	%	0.10	1		01/13/22 09:05		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306782

QC Batch: 658620

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306782001

METHOD BLANK: 3034655

Matrix: Solid

Associated Lab Samples: 50306782001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	01/18/22 07:26	

LABORATORY CONTROL SAMPLE: 3034656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.54	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034657 3034658

Parameter	Units	3034657		3034658		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306781001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/kg	ND	0.62	0.59	0.71	0.70	110	116	75-125	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306782

QC Batch: 658262      Analysis Method: EPA 6010  
QC Batch Method: EPA 3050      Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306782001

METHOD BLANK: 3033074      Matrix: Solid  
Associated Lab Samples: 50306782001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076      3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	MS Result							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	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.

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306782

QC Batch: 658416

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306782001

SAMPLE DUPLICATE: 3033756

Parameter	Units	50306781001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	16.6	1	5	N2

SAMPLE DUPLICATE: 3033791

Parameter	Units	50306879005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.0	4.8	3	5	N2

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.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306782

---

### 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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: M20032 Muncie Phase II  
Pace Project No.: 50306782

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306782001	E12S	EPA 3050	658262	EPA 6010	658576
50306782001	E12S	EPA 7471	658620	EPA 7471	658890
50306782001	E12S	SM 2540G	658416		

**REPORT OF LABORATORY ANALYSIS**

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CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Mundell and Associates, Inc.
Address: 110 S Downey Ave, Indianapolis, IN 46219

Billing Information: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone

Email To: ljohnstone@mundellassociates.com

Copy To:

Site Collection Info/Address: 3421 W Armitage Dr. Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II

State: IN / Muncie County/City: Muncie Time Zone Collected: [ ] PT [ ] MT [ ] CT [ X ] ET

Phone: 317-630-9060 Site/Facility ID #:
Email: ljohnstone@mundellassociates.com

Compliance Monitoring? [ ] Yes [ ] No

Collected By (print): Luke Johnstone/ Andy Miller
Purchase Order #: Quote #:

DW PWS ID #: DW Location Code:

Collected By (signature): [Signature]
Turnaround Date Required:

Immediately Packed on Ice: [x] Yes [ ] No

Sample Disposal: [x] Dispose as appropriate
[ ] Return [ ] Archive: [ ] Hold:
[ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Table with columns: Customer Sample ID, Matrix, Comp / Grab, Collected (or Composite Start) Date, Time, Composite End Date, Time, Res Cl, # of Ctns. Row 1: E12S, SL, Grab, 1/7, 14:05, 1, G, X

LAB USE ONLY- Affix Workorder/Origin Label Here or List Base Workorder Number or
W0#: 50306782
ALL BC
Container Pr:
U
50306782

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Table with columns: Analyses

Table with columns: Lab Profile/Line: Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA, Collector Signatures Present Y N NA, etc.

Container Type: Plastic (P) or Glass (G)
Total RCRA 8 Metals + Lithium via EPA 6010B

LAB USE ONLY: Lab Sample # / Comments: see SCUR

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info: Temp Blank Received: 0 N NA, Therm ID#: D, Cooler 1 Temp Upon Receipt: 0.6 C, Cooler 1 Therm Corr. Factor: 0.8 C, Cooler 1 Corrected Temp: 0.6 C

Relinquished by/Company: (Signature) [Signature] Date/Time: 1/11/22 12:20
Relinquished by/Company: (Signature) [Signature] Date/Time: 1/11/22 13:10

Received by/Company: (Signature) [Signature] Date/Time: 1/11/22 12:20
Received by/Company: (Signature) [Signature] Date/Time: 1/11/22 13:10

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other
Non Conformance(s): Page: YES / NO Page 12 of 14



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 1-11-22 16:18

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.6/0.6  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent <input checked="" type="checkbox"/>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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### Sample Container Count

SBS  
 DI  
 MeOH  
 (only)  
 BK  
 Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VQA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZNAc pH >9	NaOH pH >10	
1	1																										SL				
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass			Plastic / Misc.		
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic
BP4U	125mL unpreserved plastic				
BP4N	125mL HNO3 plastic				
BP4S	125mL H2SO4 plastic				
Syringe Kit	LL Cr+6 sampling kit				
AF	Air Filter				
C	Air Cassettes				
R	Terracore kit				
SP5T	120mL Coliform Na Thiosulfate				
U	Summa Can				
ZPLC	Ziploc Bag				
WT	Water				
SL	Solid				
NAL	OL	Non-aqueous liquid			Oil
WP	Wipe				

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306797

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306797

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306797

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306797001	E17S	Solid	01/07/22 13:55	01/11/22 13:10

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306797

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306797001	E17S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306797

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306797001</b>	<b>E17S</b>					
EPA 6010	Arsenic	6.1	mg/kg	1.2	01/14/22 03:57	
EPA 6010	Barium	95.3	mg/kg	1.2	01/14/22 03:57	
EPA 6010	Chromium	26.4	mg/kg	1.2	01/14/22 03:57	
EPA 6010	Lead	92.7	mg/kg	1.2	01/14/22 03:57	
EPA 6010	Lithium	11.6	mg/kg	6.0	01/14/22 03:57	N2
SM 2540G	Percent Moisture	26.8	%	0.10	01/13/22 09:49	N2

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306797

**Sample: E17S**      **Lab ID: 50306797001**      Collected: 01/07/22 13:55      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	6.1	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:57	7440-38-2	
Barium	95.3	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:57	7440-39-3	
Cadmium	ND	mg/kg	0.60	1	01/12/22 14:28	01/14/22 03:57	7440-43-9	
Chromium	26.4	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:57	7440-47-3	
Lead	92.7	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:57	7439-92-1	
Lithium	11.6	mg/kg	6.0	1	01/12/22 14:28	01/14/22 03:57	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:57	7782-49-2	
Silver	ND	mg/kg	0.60	1	01/12/22 14:28	01/14/22 03:57	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.29	1	01/17/22 12:28	01/18/22 09:06	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	26.8	%	0.10	1		01/13/22 09:49		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306797

QC Batch: 658622	Analysis Method: EPA 7471
QC Batch Method: EPA 7471	Analysis Description: 7471 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306797001

METHOD BLANK: 3034664 Matrix: Solid

Associated Lab Samples: 50306797001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/18/22 08:37	

LABORATORY CONTROL SAMPLE: 3034665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.23	48	80-120	L5

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034666 3034667

Parameter	Units	3034666		3034667		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306793001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/kg	ND	0.72	0.69	0.94	0.92	105	107	75-125	2	20

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306797

QC Batch: 658262

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306797001

METHOD BLANK: 3033074

Matrix: Solid

Associated Lab Samples: 50306797001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	Result							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	20	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306797

QC Batch: 658420

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306797001

SAMPLE DUPLICATE: 3033111

Parameter	Units	50306805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.5	19.9	3	5	N2

SAMPLE DUPLICATE: 3033112

Parameter	Units	50306805002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.2	24.5	14	5	N2,R1

SAMPLE DUPLICATE: 3033767

Parameter	Units	50306793001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.8	26.7	4	5	N2

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**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306797

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306797

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306797001	E17S	EPA 3050	658262	EPA 6010	658576
50306797001	E17S	EPA 7471	658622	EPA 7471	658891
50306797001	E17S	SM 2540G	658420		

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 1-11-22 16:18

- 1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No  
(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
- 4. Cooler Temperature: 0.6/0.6  
Temp should be above freezing to 6°C (Initial/Corrected)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?		<input checked="" type="checkbox"/>	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA VIAL HS (>=6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1																															
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	AF	Air Filter
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	C	Air Cassettes
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	R	Terracore kit
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	SP5T	120mL Coliform Na Thiosulfate
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	ZPLC	Ziploc Bag
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic		
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306784

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306784

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306784

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306784001	E34S	Solid	01/07/22 13:45	01/11/22 13:10

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306784

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306784001	E34S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306784

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306784001</b>	<b>E34S</b>					
EPA 6010	Arsenic	6.5	mg/kg	1.2	01/14/22 03:37	
EPA 6010	Barium	70.1	mg/kg	1.2	01/14/22 03:37	
EPA 6010	Chromium	17.5	mg/kg	1.2	01/14/22 03:37	
EPA 6010	Lead	229	mg/kg	1.2	01/14/22 03:37	
EPA 6010	Lithium	9.9	mg/kg	6.0	01/14/22 03:37	N2
SM 2540G	Percent Moisture	28.9	%	0.10	01/13/22 09:05	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306784

**Sample: E34S**      **Lab ID: 50306784001**      Collected: 01/07/22 13:45      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	6.5	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:37	7440-38-2	
Barium	70.1	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:37	7440-39-3	
Cadmium	ND	mg/kg	0.60	1	01/12/22 14:28	01/14/22 03:37	7440-43-9	
Chromium	17.5	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:37	7440-47-3	
Lead	229	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:37	7439-92-1	
Lithium	9.9	mg/kg	6.0	1	01/12/22 14:28	01/14/22 03:37	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:37	7782-49-2	
Silver	ND	mg/kg	0.60	1	01/12/22 14:28	01/14/22 03:37	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.28	1	01/17/22 12:26	01/18/22 08:08	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	28.9	%	0.10	1		01/13/22 09:05		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306784

QC Batch: 658620	Analysis Method: EPA 7471
QC Batch Method: EPA 7471	Analysis Description: 7471 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306784001

METHOD BLANK: 3034655 Matrix: Solid

Associated Lab Samples: 50306784001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	01/18/22 07:26	

LABORATORY CONTROL SAMPLE: 3034656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.54	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034657 3034658

Parameter	Units	3034657		3034658		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50306781001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Mercury	mg/kg	ND	0.62	0.59	0.71	0.70	110	116	75-125	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306784

QC Batch: 658262	Analysis Method: EPA 6010
QC Batch Method: EPA 3050	Analysis Description: 6010 MET
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306784001

METHOD BLANK: 3033074 Matrix: Solid

Associated Lab Samples: 50306784001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	Conc.							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	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.

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306784

QC Batch: 658416

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306784001

SAMPLE DUPLICATE: 3033756

Parameter	Units	50306781001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	16.6	1	5	N2

SAMPLE DUPLICATE: 3033791

Parameter	Units	50306879005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.0	4.8	3	5	N2

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**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306784

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306784

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306784001	E34S	EPA 3050	658262	EPA 6010	658576
50306784001	E34S	EPA 7471	658620	EPA 7471	658890
50306784001	E34S	SM 2540G	658416		

### REPORT OF LABORATORY ANALYSIS

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## SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: BC 11-22 16:18

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No

(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 0.6/0.6  
Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base pres. Have been CHECKED? exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		✓	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):	✓	✓	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Custody Signatures Present?	✓		Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Containers Intact?:	✓		Headspace Wisconsin Sulfide?			✓
Sample Label (IDs/Dates/Times) Match COC? Except TCs, which only require sample ID	✓		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent	No VOA Vials Sent ✓
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		✓	
			Trip Blank Custody Seals?:			✓

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1	—																										SL			
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1 liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306786

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306786

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306786

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306786001	E41S	Solid	01/07/22 13:35	01/11/22 13:10

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306786

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306786001	E41S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306786

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306786001</b>	<b>E41S</b>					
EPA 6010	Arsenic	6.6	mg/kg	1.2	01/14/22 03:39	
EPA 6010	Barium	78.3	mg/kg	1.2	01/14/22 03:39	
EPA 6010	Chromium	13.8	mg/kg	1.2	01/14/22 03:39	
EPA 6010	Lead	57.3	mg/kg	1.2	01/14/22 03:39	
EPA 6010	Lithium	8.3	mg/kg	5.9	01/14/22 03:39	N2
SM 2540G	Percent Moisture	27.1	%	0.10	01/13/22 09:05	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306786

**Sample: E41S**      **Lab ID: 50306786001**      Collected: 01/07/22 13:35      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>6.6</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:39	7440-38-2	
Barium	<b>78.3</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:39	7440-39-3	
Cadmium	ND	mg/kg	0.59	1	01/12/22 14:28	01/14/22 03:39	7440-43-9	
Chromium	<b>13.8</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:39	7440-47-3	
Lead	<b>57.3</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:39	7439-92-1	
Lithium	<b>8.3</b>	mg/kg	5.9	1	01/12/22 14:28	01/14/22 03:39	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:39	7782-49-2	
Silver	ND	mg/kg	0.59	1	01/12/22 14:28	01/14/22 03:39	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	01/17/22 12:26	01/18/22 08:10	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>27.1</b>	%	0.10	1		01/13/22 09:05		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306786

QC Batch: 658620

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306786001

METHOD BLANK: 3034655

Matrix: Solid

Associated Lab Samples: 50306786001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	01/18/22 07:26	

LABORATORY CONTROL SAMPLE: 3034656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.54	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034657 3034658

Parameter	Units	3034657		3034658		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50306781001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Mercury	mg/kg	ND	0.62	0.59	0.71	0.70	110	116	75-125	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306786

QC Batch: 658262      Analysis Method: EPA 6010  
QC Batch Method: EPA 3050      Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306786001

METHOD BLANK: 3033074      Matrix: Solid  
Associated Lab Samples: 50306786001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076      3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	Result							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306786

QC Batch: 658416

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306786001

SAMPLE DUPLICATE: 3033756

Parameter	Units	50306781001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	16.6	1	5	N2

SAMPLE DUPLICATE: 3033791

Parameter	Units	50306879005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.0	4.8	3	5	N2

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.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306786

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: M20032 Muncie Phase II  
Pace Project No.: 50306786

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306786001	E41S	EPA 3050	658262	EPA 6010	658576
50306786001	E41S	EPA 7471	658620	EPA 7471	658890
50306786001	E41S	SM 2540G	658416		

**REPORT OF LABORATORY ANALYSIS**

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 1-11-22 16:18

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.6/0.6  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1																											SL				
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306798

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306798

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306798

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306798001	E49S	Solid	01/07/22 13:25	01/11/22 13:10

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II  
Pace Project No.: 50306798

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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306798001	E49S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

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PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306798

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306798001</b>	<b>E49S</b>					
EPA 6010	Arsenic	6.7	mg/kg	1.6	01/14/22 03:59	
EPA 6010	Barium	80.4	mg/kg	1.6	01/14/22 03:59	
EPA 6010	Chromium	14.6	mg/kg	1.6	01/14/22 03:59	
EPA 6010	Lead	37.3	mg/kg	1.6	01/14/22 03:59	
EPA 6010	Lithium	9.6	mg/kg	7.8	01/14/22 03:59	N2
SM 2540G	Percent Moisture	44.1	%	0.10	01/13/22 09:49	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306798

**Sample: E49S**      **Lab ID: 50306798001**      Collected: 01/07/22 13:25      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>6.7</b>	mg/kg	1.6	1	01/12/22 14:28	01/14/22 03:59	7440-38-2	
Barium	<b>80.4</b>	mg/kg	1.6	1	01/12/22 14:28	01/14/22 03:59	7440-39-3	
Cadmium	ND	mg/kg	0.78	1	01/12/22 14:28	01/14/22 03:59	7440-43-9	
Chromium	<b>14.6</b>	mg/kg	1.6	1	01/12/22 14:28	01/14/22 03:59	7440-47-3	
Lead	<b>37.3</b>	mg/kg	1.6	1	01/12/22 14:28	01/14/22 03:59	7439-92-1	
Lithium	<b>9.6</b>	mg/kg	7.8	1	01/12/22 14:28	01/14/22 03:59	7439-93-2	N2
Selenium	ND	mg/kg	1.6	1	01/12/22 14:28	01/14/22 03:59	7782-49-2	
Silver	ND	mg/kg	0.78	1	01/12/22 14:28	01/14/22 03:59	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.37	1	01/17/22 12:28	01/18/22 09:08	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>44.1</b>	%	0.10	1		01/13/22 09:49		N2

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306798

QC Batch: 658622

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306798001

METHOD BLANK: 3034664

Matrix: Solid

Associated Lab Samples: 50306798001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/18/22 08:37	

LABORATORY CONTROL SAMPLE: 3034665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.23	48	80-120	L5

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034666 3034667

Parameter	Units	50306793001		3034667		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/kg	ND	0.72	0.69	0.94	0.92	105	107	75-125	2	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306798

QC Batch: 658262

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306798001

METHOD BLANK: 3033074

Matrix: Solid

Associated Lab Samples: 50306798001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	Result							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	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.

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306798

QC Batch: 658420

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306798001

SAMPLE DUPLICATE: 3033111

Parameter	Units	50306805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.5	19.9	3	5	N2

SAMPLE DUPLICATE: 3033112

Parameter	Units	50306805002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.2	24.5	14	5	N2,R1

SAMPLE DUPLICATE: 3033767

Parameter	Units	50306793001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.8	26.7	4	5	N2

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.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306798

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: M20032 Muncie Phase II  
Pace Project No.: 50306798

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306798001	E49S	EPA 3050	658262	EPA 6010	658576
50306798001	E49S	EPA 7471	658622	EPA 7471	658891
50306798001	E49S	SM 2540G	658420		

**REPORT OF LABORATORY ANALYSIS**

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: BC 11-22 16:18

- 1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No  
(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
- 4. Cooler Temperature: 0.6/0.6  
Temp should be above freezing to 6°C (Initial/Corrected)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1																														
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unreserved plastic	U	Summa Can
WGKU	8oz unreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306802

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306802

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306802

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306802001	E53S	Solid	01/07/22 13:05	01/11/22 13:10

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306802

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306802001	E53S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306802

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306802001</b>	<b>E53S</b>					
EPA 6010	Arsenic	7.7	mg/kg	1.2	01/14/22 04:04	
EPA 6010	Barium	164	mg/kg	1.2	01/14/22 04:04	
EPA 6010	Cadmium	2.0	mg/kg	0.62	01/14/22 04:04	
EPA 6010	Chromium	18.8	mg/kg	1.2	01/14/22 04:04	
EPA 6010	Lead	157	mg/kg	1.2	01/14/22 04:04	
EPA 6010	Lithium	10.1	mg/kg	6.2	01/14/22 04:04	N2
SM 2540G	Percent Moisture	29.4	%	0.10	01/13/22 09:49	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306802

**Sample: E53S**      **Lab ID: 50306802001**      Collected: 01/07/22 13:05      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.7	mg/kg	1.2	1	01/12/22 14:28	01/14/22 04:04	7440-38-2	
Barium	164	mg/kg	1.2	1	01/12/22 14:28	01/14/22 04:04	7440-39-3	
Cadmium	2.0	mg/kg	0.62	1	01/12/22 14:28	01/14/22 04:04	7440-43-9	
Chromium	18.8	mg/kg	1.2	1	01/12/22 14:28	01/14/22 04:04	7440-47-3	
Lead	157	mg/kg	1.2	1	01/12/22 14:28	01/14/22 04:04	7439-92-1	
Lithium	10.1	mg/kg	6.2	1	01/12/22 14:28	01/14/22 04:04	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/12/22 14:28	01/14/22 04:04	7782-49-2	
Silver	ND	mg/kg	0.62	1	01/12/22 14:28	01/14/22 04:04	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.28	1	01/17/22 12:28	01/18/22 09:13	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	29.4	%	0.10	1		01/13/22 09:49		N2

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306802

QC Batch: 658622

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306802001

METHOD BLANK: 3034664

Matrix: Solid

Associated Lab Samples: 50306802001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/18/22 08:37	

LABORATORY CONTROL SAMPLE: 3034665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.23	48	80-120	L5

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034666 3034667

Parameter	Units	50306793001		3034667		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/kg	ND	0.72	0.69	0.94	0.92	105	107	75-125	2	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.

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II  
Pace Project No.: 50306802

QC Batch: 658262 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306802001

METHOD BLANK: 3033074 Matrix: Solid  
Associated Lab Samples: 50306802001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	Conc.							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	20	

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306802

QC Batch: 658420

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306802001

SAMPLE DUPLICATE: 3033111

Parameter	Units	50306805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.5	19.9	3	5	N2

SAMPLE DUPLICATE: 3033112

Parameter	Units	50306805002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.2	24.5	14	5	N2,R1

SAMPLE DUPLICATE: 3033767

Parameter	Units	50306793001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.8	26.7	4	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306802

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306802

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306802001	E53S	EPA 3050	658262	EPA 6010	658576
50306802001	E53S	EPA 7471	658622	EPA 7471	658891
50306802001	E53S	SM 2540G	658420		

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 1-11-22 16:18

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 0.6/0.6  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent <input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?		<input checked="" type="checkbox"/>	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VQA VIAL HS (<6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1																											SL			
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306780

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306780001	E56S	Solid	01/07/22 12:30	01/11/22 13:10
50306780002	E57S	Solid	01/07/22 12:35	01/11/22 13:10

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306780001	E56S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306780002	E57S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306780001</b>	<b>E56S</b>					
EPA 6010	Arsenic	9.8	mg/kg	1.4	01/14/22 03:16	
EPA 6010	Barium	387	mg/kg	1.4	01/14/22 03:16	
EPA 6010	Cadmium	1.2	mg/kg	0.68	01/14/22 03:16	
EPA 6010	Chromium	20.9	mg/kg	1.4	01/14/22 03:16	
EPA 6010	Lead	183	mg/kg	1.4	01/14/22 03:16	
EPA 6010	Lithium	15.0	mg/kg	6.8	01/14/22 03:16	N2
SM 2540G	Percent Moisture	29.6	%	0.10	01/13/22 09:03	N2
<b>50306780002</b>	<b>E57S</b>					
EPA 6010	Arsenic	9.2	mg/kg	1.3	01/14/22 03:18	
EPA 6010	Barium	190	mg/kg	1.3	01/14/22 03:18	
EPA 6010	Cadmium	1.7	mg/kg	0.65	01/14/22 03:18	
EPA 6010	Chromium	17.3	mg/kg	1.3	01/14/22 03:18	
EPA 6010	Lead	130	mg/kg	1.3	01/14/22 03:18	
EPA 6010	Lithium	11.1	mg/kg	6.5	01/14/22 03:18	N2
SM 2540G	Percent Moisture	30.9	%	0.10	01/13/22 09:03	N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

**Sample: E56S**      **Lab ID: 50306780001**      Collected: 01/07/22 12:30      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>9.8</b>	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:16	7440-38-2	
Barium	<b>387</b>	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:16	7440-39-3	
Cadmium	<b>1.2</b>	mg/kg	0.68	1	01/12/22 14:28	01/14/22 03:16	7440-43-9	
Chromium	<b>20.9</b>	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:16	7440-47-3	
Lead	<b>183</b>	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:16	7439-92-1	
Lithium	<b>15.0</b>	mg/kg	6.8	1	01/12/22 14:28	01/14/22 03:16	7439-93-2	N2
Selenium	ND	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:16	7782-49-2	
Silver	ND	mg/kg	0.68	1	01/12/22 14:28	01/14/22 03:16	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.27	1	01/17/22 12:26	01/18/22 07:48	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>29.6</b>	%	0.10	1		01/13/22 09:03		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

**Sample: E57S**      **Lab ID: 50306780002**      Collected: 01/07/22 12:35      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>9.2</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:18	7440-38-2	
Barium	<b>190</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:18	7440-39-3	
Cadmium	<b>1.7</b>	mg/kg	0.65	1	01/12/22 14:28	01/14/22 03:18	7440-43-9	
Chromium	<b>17.3</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:18	7440-47-3	
Lead	<b>130</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:18	7439-92-1	
Lithium	<b>11.1</b>	mg/kg	6.5	1	01/12/22 14:28	01/14/22 03:18	7439-93-2	N2
Selenium	ND	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:18	7782-49-2	
Silver	ND	mg/kg	0.65	1	01/12/22 14:28	01/14/22 03:18	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.27	1	01/17/22 12:26	01/18/22 07:56	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>30.9</b>	%	0.10	1		01/13/22 09:03		N2

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

QC Batch: 658620	Analysis Method: EPA 7471
QC Batch Method: EPA 7471	Analysis Description: 7471 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306780001, 50306780002

METHOD BLANK: 3034655 Matrix: Solid

Associated Lab Samples: 50306780001, 50306780002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	01/18/22 07:26	

LABORATORY CONTROL SAMPLE: 3034656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.54	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034657 3034658

Parameter	Units	3034657		3034658		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306781001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/kg	ND	0.62	0.59	0.71	0.70	110	116	75-125	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

QC Batch: 658262

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306780001, 50306780002

METHOD BLANK: 3033074

Matrix: Solid

Associated Lab Samples: 50306780001, 50306780002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	MS Result							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	20	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

QC Batch: 658416

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306780001, 50306780002

SAMPLE DUPLICATE: 3033756

Parameter	Units	50306781001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	16.6	1	5	N2

SAMPLE DUPLICATE: 3033791

Parameter	Units	50306879005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.0	4.8	3	5	N2

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.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306780

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306780001	E56S	EPA 3050	658262	EPA 6010	658576
50306780002	E57S	EPA 3050	658262	EPA 6010	658576
50306780001	E56S	EPA 7471	658620	EPA 7471	658890
50306780002	E57S	EPA 7471	658620	EPA 7471	658890
50306780001	E56S	SM 2540G	658416		
50306780002	E57S	SM 2540G	658416		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or  
MTJL Log-in Number Here

ALL BOLD OUTLINE

**WO# : 50306780**

Company: Mundell and Associates, Inc.		Billing Information: 110 S Downey Ave, Indianapolis, IN 46219	
Address: 110 S Downey Ave, Indianapolis, IN 46219		Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com	
Copy To:		Site Collection Info/Address: 1213 W 23rd St. Muncie, Indiana	
Customer Project Name/Number: M20032 Muncie Phase II		State: _____ County/City: _____ Time Zone Collected: _____ IN / Muncie [ ]PT [ ]MT [ ]CT [X]ET	
Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring? [ ] Yes [ ] No	
Email: ljohnstone@mundellassociates.com	Purchase Order #:	DW PWS ID #:	
Collected By (print): Luke Johnstone / Andy Miller	Quote #:	DW Location Code:	
Collected By (signature): <i>[Signature]</i>	Turnaround Date Required:	Immediately Packed on Ice: [X] Yes [ ] No	
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive [ ] Hold	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [ ] No	
Analysis: _____			

Container Preservative Type:  
U [ ] [ ] [ ] [ ] [ ] [ ]  
\*\* Preservative Types: (1) nitric acid, (2) sulfuric  
(6) methanol, (7) sodium bisulfate, (8) sodium th  
(C) ammonium hydroxide, (D) TSP, (U) Unpreserv



50306780

Analyses	
Total RCRA 8 Metals + Lithium via EPA 6010B	

Lab Profile/Line:  
Lab Sample Receipt Checklist:  
Custody Seals Present/Intact Y N NA  
Custody Signatures Present Y N NA  
Collector Signature Present Y N NA  
Bottles Intact Y N NA  
Correct Bottles Y N NA  
Sufficient Volume Y N NA  
Samples Received on Ice Y N NA  
VOA - Headspace Acceptable Y N NA  
USDA Regulated Soils Y N NA  
Samples in Holding Time Y N NA  
Residual Chlorine Present Y N NA  
Cl Strips: \_\_\_\_\_  
Sample pH Acceptable Y N NA  
pH Strips: \_\_\_\_\_  
Sulfide Present Y N NA  
Lead Acetate Strips: \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
ES6S	SL	Grab	1/7	12:30				1	G X
ES7S	SL	Grab	1/7	12:35				1	G x

LAB USE ONLY:  
Lab Sample # / Comments:  
*see SCUP*  
*001*  
*002*

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info: Temp Blank Received: <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA Therm ID#: <i>0</i> Cooler 1 Temp Upon Receipt: <i>0.6</i> °C Cooler 1 Therm Corr. Factor: <i>0.0</i> °C Cooler 1 Corrected Temp: <i>0.6</i> °C Comments:
	Packing Material Used:	Lab Tracking #:	
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>12:20 1/11/22</i>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>12:20 1/11</i>
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>1/11/22 13:10</i>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>1-11-22 13:10</i>
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY Table #:		Trip Blank Received: Y N NA HCL MeOH TSP Other
Acctnum:	PM:	
Template:	PB:	
Prelogin:	Non Conformance (Page 18 of 15) YES / NO of: _____	



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC H-11-22 16:18

- 1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No  
(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
- 4. Cooler Temperature: 0.6/0.6  
Temp should be above freezing to 6°C (Initial/Corrected)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED? exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC? Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MoOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1	I																										SL				
2	L																											SL			
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306779

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306779001	E64S	Solid	01/07/22 11:10	01/11/22 13:10
50306779002	E65S	Solid	01/07/22 11:15	01/11/22 13:10
50306779003	E66S	Solid	01/07/22 11:20	01/11/22 13:10
50306779004	DUP4	Solid	01/07/22 08:00	01/11/22 13:10

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306779001	E64S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306779002	E65S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306779003	E66S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306779004	DUP4	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306779001</b>	<b>E64S</b>					
EPA 6010	Arsenic	8.2	mg/kg	1.1	01/14/22 03:07	
EPA 6010	Barium	180	mg/kg	1.1	01/14/22 03:07	
EPA 6010	Cadmium	0.98	mg/kg	0.56	01/14/22 03:07	
EPA 6010	Chromium	18.4	mg/kg	1.1	01/14/22 03:07	
EPA 6010	Lead	454	mg/kg	1.1	01/14/22 03:07	
EPA 6010	Lithium	10.1	mg/kg	5.6	01/14/22 03:07	N2
EPA 7471	Mercury	0.30	mg/kg	0.25	01/18/22 07:38	
SM 2540G	Percent Moisture	21.9	%	0.10	01/13/22 09:03	N2
<b>50306779002</b>	<b>E65S</b>					
EPA 6010	Arsenic	9.0	mg/kg	1.4	01/14/22 03:09	
EPA 6010	Barium	179	mg/kg	1.4	01/14/22 03:09	
EPA 6010	Cadmium	0.82	mg/kg	0.72	01/14/22 03:09	
EPA 6010	Chromium	18.0	mg/kg	1.4	01/14/22 03:09	
EPA 6010	Lead	177	mg/kg	1.4	01/14/22 03:09	
EPA 6010	Lithium	10.2	mg/kg	7.2	01/14/22 03:09	N2
SM 2540G	Percent Moisture	36.8	%	0.10	01/13/22 09:03	N2
<b>50306779003</b>	<b>E66S</b>					
EPA 6010	Arsenic	7.9	mg/kg	1.1	01/14/22 03:11	
EPA 6010	Barium	179	mg/kg	1.1	01/14/22 03:11	
EPA 6010	Cadmium	1.3	mg/kg	0.57	01/14/22 03:11	
EPA 6010	Chromium	15.4	mg/kg	1.1	01/14/22 03:11	
EPA 6010	Lead	224	mg/kg	1.1	01/14/22 03:11	
EPA 6010	Lithium	8.9	mg/kg	5.7	01/14/22 03:11	N2
SM 2540G	Percent Moisture	21.3	%	0.10	01/13/22 09:03	N2
<b>50306779004</b>	<b>DUP4</b>					
EPA 6010	Arsenic	8.3	mg/kg	1.3	01/14/22 03:14	
EPA 6010	Barium	174	mg/kg	1.3	01/14/22 03:14	
EPA 6010	Cadmium	0.74	mg/kg	0.64	01/14/22 03:14	
EPA 6010	Chromium	18.6	mg/kg	1.3	01/14/22 03:14	
EPA 6010	Lead	161	mg/kg	1.3	01/14/22 03:14	
EPA 6010	Lithium	9.4	mg/kg	6.4	01/14/22 03:14	N2
SM 2540G	Percent Moisture	21.5	%	0.10	01/13/22 09:03	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

**Sample: E64S**      **Lab ID: 50306779001**      Collected: 01/07/22 11:10      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>8.2</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:07	7440-38-2	
Barium	<b>180</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:07	7440-39-3	
Cadmium	<b>0.98</b>	mg/kg	0.56	1	01/12/22 14:28	01/14/22 03:07	7440-43-9	
Chromium	<b>18.4</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:07	7440-47-3	
Lead	<b>454</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:07	7439-92-1	
Lithium	<b>10.1</b>	mg/kg	5.6	1	01/12/22 14:28	01/14/22 03:07	7439-93-2	N2
Selenium	ND	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:07	7782-49-2	
Silver	ND	mg/kg	0.56	1	01/12/22 14:28	01/14/22 03:07	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	<b>0.30</b>	mg/kg	0.25	1	01/17/22 12:26	01/18/22 07:38	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>21.9</b>	%	0.10	1		01/13/22 09:03		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

**Sample: E65S**      **Lab ID: 50306779002**      Collected: 01/07/22 11:15      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>9.0</b>	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:09	7440-38-2	
Barium	<b>179</b>	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:09	7440-39-3	
Cadmium	<b>0.82</b>	mg/kg	0.72	1	01/12/22 14:28	01/14/22 03:09	7440-43-9	
Chromium	<b>18.0</b>	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:09	7440-47-3	
Lead	<b>177</b>	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:09	7439-92-1	
Lithium	<b>10.2</b>	mg/kg	7.2	1	01/12/22 14:28	01/14/22 03:09	7439-93-2	N2
Selenium	ND	mg/kg	1.4	1	01/12/22 14:28	01/14/22 03:09	7782-49-2	
Silver	ND	mg/kg	0.72	1	01/12/22 14:28	01/14/22 03:09	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.31	1	01/17/22 12:26	01/18/22 07:41	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>36.8</b>	%	0.10	1		01/13/22 09:03		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

**Sample: E66S**      **Lab ID: 50306779003**      Collected: 01/07/22 11:20      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>7.9</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:11	7440-38-2	
Barium	<b>179</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:11	7440-39-3	
Cadmium	<b>1.3</b>	mg/kg	0.57	1	01/12/22 14:28	01/14/22 03:11	7440-43-9	
Chromium	<b>15.4</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:11	7440-47-3	
Lead	<b>224</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:11	7439-92-1	
Lithium	<b>8.9</b>	mg/kg	5.7	1	01/12/22 14:28	01/14/22 03:11	7439-93-2	N2
Selenium	ND	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:11	7782-49-2	
Silver	ND	mg/kg	0.57	1	01/12/22 14:28	01/14/22 03:11	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.25	1	01/17/22 12:26	01/18/22 07:43	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>21.3</b>	%	0.10	1		01/13/22 09:03		N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

**Sample: DUP4**      **Lab ID: 50306779004**      Collected: 01/07/22 08:00      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>8.3</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:14	7440-38-2	
Barium	<b>174</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:14	7440-39-3	
Cadmium	<b>0.74</b>	mg/kg	0.64	1	01/12/22 14:28	01/14/22 03:14	7440-43-9	
Chromium	<b>18.6</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:14	7440-47-3	
Lead	<b>161</b>	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:14	7439-92-1	
Lithium	<b>9.4</b>	mg/kg	6.4	1	01/12/22 14:28	01/14/22 03:14	7439-93-2	N2
Selenium	ND	mg/kg	1.3	1	01/12/22 14:28	01/14/22 03:14	7782-49-2	
Silver	ND	mg/kg	0.64	1	01/12/22 14:28	01/14/22 03:14	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.24	1	01/17/22 12:26	01/18/22 07:46	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>21.5</b>	%	0.10	1		01/13/22 09:03		N2

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

QC Batch: 658620

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306779001, 50306779002, 50306779003, 50306779004

METHOD BLANK: 3034655

Matrix: Solid

Associated Lab Samples: 50306779001, 50306779002, 50306779003, 50306779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	01/18/22 07:26	

LABORATORY CONTROL SAMPLE: 3034656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.54	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034657 3034658

Parameter	Units	50306781001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	0.62	0.59	0.71	0.70	110	116	75-125	1	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

QC Batch: 658262	Analysis Method: EPA 6010
QC Batch Method: EPA 3050	Analysis Description: 6010 MET
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306779001, 50306779002, 50306779003, 50306779004

METHOD BLANK: 3033074 Matrix: Solid

Associated Lab Samples: 50306779001, 50306779002, 50306779003, 50306779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	Conc.							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

QC Batch: 658416

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306779001, 50306779002, 50306779003, 50306779004

SAMPLE DUPLICATE: 3033756

Parameter	Units	50306781001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	16.6	1	5	N2

SAMPLE DUPLICATE: 3033791

Parameter	Units	50306879005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.0	4.8	3	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306779

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

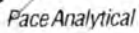
Project: M20032 Muncie Phase II

Pace Project No.: 50306779

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306779001	E64S	EPA 3050	658262	EPA 6010	658576
50306779002	E65S	EPA 3050	658262	EPA 6010	658576
50306779003	E66S	EPA 3050	658262	EPA 6010	658576
50306779004	DUP4	EPA 3050	658262	EPA 6010	658576
50306779001	E64S	EPA 7471	658620	EPA 7471	658890
50306779002	E65S	EPA 7471	658620	EPA 7471	658890
50306779003	E66S	EPA 7471	658620	EPA 7471	658890
50306779004	DUP4	EPA 7471	658620	EPA 7471	658890
50306779001	E64S	SM 2540G	658416		
50306779002	E65S	SM 2540G	658416		
50306779003	E66S	SM 2540G	658416		
50306779004	DUP4	SM 2540G	658416		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or

# WO#: 50306779



**LAB USE ONLY**  
Project Manager:

Company: Mundell and Associates, Inc.	Billing Information: 110 S Downey Ave, Indianapolis, IN 46219
Address: 110 S Downey Ave, Indianapolis, IN 46219	
Report To: Luke Johnstone	Email To: Ljohnstone@mundellassociates.com
Copy To:	Site Collection Info/Address: 2815 S Franklin St. Muncie, Indiana

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Customer Project Name/Number: M20032 Muncie Phase II	State: IN / County/City: Muncie	Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET
Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring? [ ] Yes [ ] No
Email: Ljohnstone@mundellassociates.com		
Collected By (print): Luke Johnstone / Andy Miller	Purchase Order #: Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature): 	Turnaround Date Required:	Immediately Packed on Ice: [x] Yes [ ] No
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive [ ] Hold	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

Container Type: Plastic (P) or Glass (G)  
Total RCRA 8 Metals + Lithium via EPA 6010B

#### Analyses

#### Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY:  
Lab Sample # / Comments:

*see SLUR*  
001  
002  
003  
004

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals + Lithium via EPA 6010B
			Date	Time	Date	Time				
E64S	SL	Grab	1/7	11:10				1	G	X
E65S	SL	Grab	1/7	11:15				1	G	x
E66S	SL	Grab	1/7	11:20				1	G	X
DUP4	SL	Grab						1	G	X

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A
	Packing Material Used:	Lab Tracking #:
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info: Temp Blank Received: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA Therm ID#: <i>V</i> Cooler 1 Temp Upon Receipt: <i>0.6</i> Cooler 1 Therm Corr. Factor: <i>0.6</i> Cooler 1 Corrected Temp: <i>0.6</i> Comments:
---

Relinquished by/Company: (Signature) <i>my</i>	Date/Time: 1/11/22 1220	Received by/Company: (Signature) <i>Ljohnstone</i>	Date/Time: 1/11/22 1220
Relinquished by/Company: (Signature) <i>Ljohnstone</i>	Date/Time: 1/11/22 1310	Received by/Company: (Signature) <i>R. [unclear]</i>	Date/Time: 1-11-22 13:10
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY	
Table #:	
Acctnum:	
Template:	
Prelogin:	
PM:	
PB:	

Trip Blank Received: Y N NA HCL MeOH TSP Other
Non Conformance(s): Page: YES / NO Page 15 of 17



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: BC 1-11-22 16:18

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.6/0.6  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED? exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZNAc pH >9	NaOH pH >10	
1																												SL			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306793

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306793001	E67S	Solid	01/07/22 11:45	01/11/22 13:10
50306793002	E69S	Solid	01/07/22 11:35	01/11/22 13:10
50306793003	E70S	Solid	01/07/22 11:40	01/11/22 13:10

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306793001	E67S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306793002	E69S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306793003	E70S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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## SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306793001</b>	<b>E67S</b>					
EPA 6010	Arsenic	29.7	mg/kg	1.2	01/14/22 03:42	
EPA 6010	Barium	157	mg/kg	1.2	01/14/22 03:42	
EPA 6010	Cadmium	1.5	mg/kg	0.62	01/14/22 03:42	
EPA 6010	Chromium	18.2	mg/kg	1.2	01/14/22 03:42	
EPA 6010	Lead	376	mg/kg	1.2	01/14/22 03:42	
EPA 6010	Lithium	10	mg/kg	6.2	01/14/22 03:42	N2
SM 2540G	Percent Moisture	27.8	%	0.10	01/13/22 09:47	N2
<b>50306793002</b>	<b>E69S</b>					
EPA 6010	Arsenic	23.3	mg/kg	1.2	01/14/22 03:44	
EPA 6010	Barium	171	mg/kg	1.2	01/14/22 03:44	
EPA 6010	Cadmium	1.1	mg/kg	0.62	01/14/22 03:44	
EPA 6010	Chromium	16.9	mg/kg	1.2	01/14/22 03:44	
EPA 6010	Lead	135	mg/kg	1.2	01/14/22 03:44	
EPA 6010	Lithium	8.4	mg/kg	6.2	01/14/22 03:44	N2
EPA 7471	Mercury	0.32	mg/kg	0.29	01/18/22 08:49	
SM 2540G	Percent Moisture	31.1	%	0.10	01/13/22 09:48	N2
<b>50306793003</b>	<b>E70S</b>					
EPA 6010	Arsenic	40.9	mg/kg	1.2	01/14/22 03:46	
EPA 6010	Barium	205	mg/kg	1.2	01/14/22 03:46	
EPA 6010	Cadmium	1.5	mg/kg	0.58	01/14/22 03:46	
EPA 6010	Chromium	17.7	mg/kg	1.2	01/14/22 03:46	
EPA 6010	Lead	163	mg/kg	1.2	01/14/22 03:46	
EPA 6010	Lithium	7.0	mg/kg	5.8	01/14/22 03:46	N2
SM 2540G	Percent Moisture	26.0	%	0.10	01/13/22 09:48	N2

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

**Sample: E67S**      **Lab ID: 50306793001**      Collected: 01/07/22 11:45      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>29.7</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:42	7440-38-2	
Barium	<b>157</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:42	7440-39-3	
Cadmium	<b>1.5</b>	mg/kg	0.62	1	01/12/22 14:28	01/14/22 03:42	7440-43-9	
Chromium	<b>18.2</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:42	7440-47-3	
Lead	<b>376</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:42	7439-92-1	
Lithium	<b>10</b>	mg/kg	6.2	1	01/12/22 14:28	01/14/22 03:42	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:42	7782-49-2	
Silver	ND	mg/kg	0.62	1	01/12/22 14:28	01/14/22 03:42	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.29	1	01/17/22 12:28	01/18/22 08:42	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>27.8</b>	%	0.10	1		01/13/22 09:47		N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

**Sample: E69S**      **Lab ID: 50306793002**      Collected: 01/07/22 11:35      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>23.3</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:44	7440-38-2	
Barium	<b>171</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:44	7440-39-3	
Cadmium	<b>1.1</b>	mg/kg	0.62	1	01/12/22 14:28	01/14/22 03:44	7440-43-9	
Chromium	<b>16.9</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:44	7440-47-3	
Lead	<b>135</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:44	7439-92-1	
Lithium	<b>8.4</b>	mg/kg	6.2	1	01/12/22 14:28	01/14/22 03:44	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:44	7782-49-2	
Silver	ND	mg/kg	0.62	1	01/12/22 14:28	01/14/22 03:44	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	<b>0.32</b>	mg/kg	0.29	1	01/17/22 12:28	01/18/22 08:49	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>31.1</b>	%	0.10	1		01/13/22 09:48		N2

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

**Sample: E70S**      **Lab ID: 50306793003**      Collected: 01/07/22 11:40      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>40.9</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:46	7440-38-2	
Barium	<b>205</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:46	7440-39-3	
Cadmium	<b>1.5</b>	mg/kg	0.58	1	01/12/22 14:28	01/14/22 03:46	7440-43-9	
Chromium	<b>17.7</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:46	7440-47-3	
Lead	<b>163</b>	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:46	7439-92-1	
Lithium	<b>7.0</b>	mg/kg	5.8	1	01/12/22 14:28	01/14/22 03:46	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/12/22 14:28	01/14/22 03:46	7782-49-2	
Silver	ND	mg/kg	0.58	1	01/12/22 14:28	01/14/22 03:46	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.27	1	01/17/22 12:28	01/18/22 08:59	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>26.0</b>	%	0.10	1		01/13/22 09:48		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

QC Batch: 658622	Analysis Method: EPA 7471
QC Batch Method: EPA 7471	Analysis Description: 7471 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306793001, 50306793002, 50306793003

METHOD BLANK: 3034664 Matrix: Solid

Associated Lab Samples: 50306793001, 50306793002, 50306793003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/18/22 08:37	

LABORATORY CONTROL SAMPLE: 3034665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.23	48	80-120	L5

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034666 3034667

Parameter	Units	3034666		3034667		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306793001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/kg	ND	0.72	0.69	0.94	0.92	105	107	75-125	2	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

QC Batch:	658262	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306793001, 50306793002, 50306793003

METHOD BLANK: 3033074 Matrix: Solid

Associated Lab Samples: 50306793001, 50306793002, 50306793003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	MS Result							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	20	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

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QC Batch: 658420	Analysis Method: SM 2540G
QC Batch Method: SM 2540G	Analysis Description: Dry Weight/Percent Moisture
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306793001, 50306793002, 50306793003

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SAMPLE DUPLICATE: 3033111

Parameter	Units	50306805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.5	19.9	3	5	N2

---

SAMPLE DUPLICATE: 3033112

Parameter	Units	50306805002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.2	24.5	14	5	N2,R1

---

SAMPLE DUPLICATE: 3033767

Parameter	Units	50306793001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.8	26.7	4	5	N2

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.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

---

### 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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306793

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306793001	E67S	EPA 3050	658262	EPA 6010	658576
50306793002	E69S	EPA 3050	658262	EPA 6010	658576
50306793003	E70S	EPA 3050	658262	EPA 6010	658576
50306793001	E67S	EPA 7471	658622	EPA 7471	658891
50306793002	E69S	EPA 7471	658622	EPA 7471	658891
50306793003	E70S	EPA 7471	658622	EPA 7471	658891
50306793001	E67S	SM 2540G	658420		
50306793002	E69S	SM 2540G	658420		
50306793003	E70S	SM 2540G	658420		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Mundell and Associates, Inc.      Billing Information: 110 S Downey Ave, Indianapolis, IN 46219  
 Address: 110 S Downey Ave, Indianapolis, IN 46219  
 Report To: Luke Johnstone      Email To: ljohnstone@mundellassociates.com  
 Copy To:      Site Collection Info/Address: 2719 S Franklin St. Muncie, Indiana  
 Customer Project Name/Number: M20032 Muncie Phase II      State: IN / County/City: Muncie / Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET  
 Phone: 317-630-9060      Site/Facility ID #:      Compliance Monitoring? [ ] Yes [ ] No  
 Email: ljohnstone@mundellassociates.com  
 Collected By (print): Luke Johnstone / Andy Miller      Purchase Order #:      DW PWS ID #:      DW Location Code:  
 Collected By (signature): *[Signature]*      Turnaround Date Required:      Immediately Packed on Ice: [x] Yes [ ] No  
 Sample Disposal: [ x ] Dispose as appropriate [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day      Field Filtered (if applicable): [ ] Yes [ ] No  
 [ ] Return [ ] Archive:      Analysis: \_\_\_\_\_  
 [ ] Hold:

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Container Preservative Type \*\*      Lab Project Manager: \_\_\_\_\_

U      \*\* Preservative Types: (1) nitric (2) hydrochloric, (3) sulfuric, (4) phosphoric, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium hydroxide, (9) sulfuric acid, (10) nitric acid, (11) hydrochloric acid, (12) phosphoric acid, (13) sodium hydroxide, (14) sodium acetate, (15) sodium chloride, (16) sodium sulfate, (17) sodium phosphate, (18) sodium nitrate, (19) sodium carbonate, (20) sodium bicarbonate, (21) sodium sulfide, (22) sodium selenide, (23) sodium telluride, (24) sodium borohydride, (25) sodium cyanide, (26) sodium cyanate, (27) sodium thiocyanate, (28) sodium azide, (29) sodium hydride, (30) sodium metal, (31) sodium peroxide, (32) sodium superoxide, (33) sodium peroxide, (34) sodium superoxide, (35) sodium peroxide, (36) sodium superoxide, (37) sodium peroxide, (38) sodium superoxide, (39) sodium peroxide, (40) sodium superoxide, (41) sodium peroxide, (42) sodium superoxide, (43) sodium peroxide, (44) sodium superoxide, (45) sodium peroxide, (46) sodium superoxide, (47) sodium peroxide, (48) sodium superoxide, (49) sodium peroxide, (50) sodium superoxide, (51) sodium peroxide, (52) sodium superoxide, (53) sodium peroxide, (54) sodium superoxide, (55) sodium peroxide, (56) sodium superoxide, (57) sodium peroxide, (58) sodium superoxide, (59) sodium peroxide, (60) sodium superoxide, (61) sodium peroxide, (62) sodium superoxide, (63) sodium peroxide, (64) sodium superoxide, (65) sodium peroxide, (66) sodium superoxide, (67) sodium peroxide, (68) sodium superoxide, (69) sodium peroxide, (70) sodium superoxide, (71) sodium peroxide, (72) sodium superoxide, (73) sodium peroxide, (74) sodium superoxide, (75) sodium peroxide, (76) sodium superoxide, (77) sodium peroxide, (78) sodium superoxide, (79) sodium peroxide, (80) sodium superoxide, (81) sodium peroxide, (82) sodium superoxide, (83) sodium peroxide, (84) sodium superoxide, (85) sodium peroxide, (86) sodium superoxide, (87) sodium peroxide, (88) sodium superoxide, (89) sodium peroxide, (90) sodium superoxide, (91) sodium peroxide, (92) sodium superoxide, (93) sodium peroxide, (94) sodium superoxide, (95) sodium peroxide, (96) sodium superoxide, (97) sodium peroxide, (98) sodium superoxide, (99) sodium peroxide, (100) sodium superoxide.

WO#: **50306793**  
  
 50306793

Correct	Y	N	NA
Correct	Y	N	NA
Correct	Y	N	NA
Bottle	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY:  
 Lab Sample # / Comments: *See SCUR 001, 002, 003*

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals + Lithium via EPA 6010B
			Date	Time	Date	Time				
E67S	SL	Grab	1/7	11:45				1	G	X
E69S	SL	Grab	1/7	11:35				1	G	x
E70S	SL	Grab	1/7	11:40				1	G	X

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium

Type of Ice Used: Wet Blue Dry None      SHORT HOLDS PRESENT (<72 hours): Y N N/A

Packing Material Used:      Lab Tracking #: \_\_\_\_\_

Radchem sample(s) screened (<500 cpm): Y N NA      Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
 Temp Blank Received: 0 N NA  
 Therm ID#: 0  
 Cooler 1 Temp Upon Receipt: 0.6 C  
 Cooler 1 Therm Corr. Factor: 0.0 C  
 Cooler 1 Corrected Temp: 0.6 C  
 Comments: \_\_\_\_\_

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 1/11/22 1220	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 1/11/22 1220
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 1/11/22 1310	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 1-11-22 13:10
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #: \_\_\_\_\_

Acctnum: \_\_\_\_\_

Template: \_\_\_\_\_

Prelogin: \_\_\_\_\_

PM: \_\_\_\_\_

PB: \_\_\_\_\_

Trip Blank Received: Y N NA  
 HCL MeOH TSP Other

Non Conformance(s): YES / NO      Page: \_\_\_\_\_



Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFL	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1																											SL			
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1 liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFL	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFL	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306805

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306805001	E72S	Solid	01/07/22 12:00	01/11/22 13:10
50306805002	E73S	Solid	01/07/22 12:05	01/11/22 13:10

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306805001	E72S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306805002	E73S	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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## SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306805001</b>	<b>E72S</b>					
EPA 6010	Arsenic	7.6	mg/kg	1.1	01/14/22 04:06	
EPA 6010	Barium	111	mg/kg	1.1	01/14/22 04:06	
EPA 6010	Cadmium	1.3	mg/kg	0.56	01/14/22 04:06	
EPA 6010	Chromium	19.2	mg/kg	1.1	01/14/22 04:06	
EPA 6010	Lead	141	mg/kg	1.1	01/14/22 04:06	
EPA 6010	Lithium	10	mg/kg	5.6	01/14/22 04:06	N2
SM 2540G	Percent Moisture	20.5	%	0.10	01/13/22 09:50	N2
<b>50306805002</b>	<b>E73S</b>					
EPA 6010	Arsenic	15.7	mg/kg	1.1	01/13/22 13:35	
EPA 6010	Barium	104	mg/kg	1.1	01/13/22 13:35	
EPA 6010	Cadmium	0.84	mg/kg	0.54	01/13/22 13:35	
EPA 6010	Chromium	18.4	mg/kg	1.1	01/13/22 13:35	
EPA 6010	Lead	290	mg/kg	1.1	01/13/22 13:35	
EPA 6010	Lithium	8.1	mg/kg	5.4	01/13/22 13:35	N2
SM 2540G	Percent Moisture	21.2	%	0.10	01/13/22 09:50	N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

**Sample: E72S**      **Lab ID: 50306805001**      Collected: 01/07/22 12:00      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>7.6</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 04:06	7440-38-2	
Barium	<b>111</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 04:06	7440-39-3	
Cadmium	<b>1.3</b>	mg/kg	0.56	1	01/12/22 14:28	01/14/22 04:06	7440-43-9	
Chromium	<b>19.2</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 04:06	7440-47-3	
Lead	<b>141</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 04:06	7439-92-1	
Lithium	<b>10</b>	mg/kg	5.6	1	01/12/22 14:28	01/14/22 04:06	7439-93-2	N2
Selenium	ND	mg/kg	1.1	1	01/12/22 14:28	01/14/22 04:06	7782-49-2	
Silver	ND	mg/kg	0.56	1	01/12/22 14:28	01/14/22 04:06	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	01/17/22 12:28	01/18/22 09:16	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>20.5</b>	%	0.10	1		01/13/22 09:50		N2

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

**Sample: E73S**      **Lab ID: 50306805002**      Collected: 01/07/22 12:05      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	15.7	mg/kg	1.1	1	01/12/22 14:28	01/13/22 13:35	7440-38-2	
Barium	104	mg/kg	1.1	1	01/12/22 14:28	01/13/22 13:35	7440-39-3	
Cadmium	0.84	mg/kg	0.54	1	01/12/22 14:28	01/13/22 13:35	7440-43-9	
Chromium	18.4	mg/kg	1.1	1	01/12/22 14:28	01/13/22 13:35	7440-47-3	
Lead	290	mg/kg	1.1	1	01/12/22 14:28	01/13/22 13:35	7439-92-1	
Lithium	8.1	mg/kg	5.4	1	01/12/22 14:28	01/13/22 13:35	7439-93-2	N2
Selenium	ND	mg/kg	1.1	1	01/12/22 14:28	01/13/22 13:35	7782-49-2	
Silver	ND	mg/kg	0.54	1	01/12/22 14:28	01/13/22 13:35	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.24	1	01/17/22 12:28	01/18/22 09:18	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	21.2	%	0.10	1		01/13/22 09:50		N2

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

QC Batch: 658622

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306805001, 50306805002

METHOD BLANK: 3034664

Matrix: Solid

Associated Lab Samples: 50306805001, 50306805002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/18/22 08:37	

LABORATORY CONTROL SAMPLE: 3034665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.23	48	80-120	L5

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034666 3034667

Parameter	Units	50306793001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	0.72	0.69	0.94	0.92	105	107	75-125	2	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: M20032 Muncie Phase II

Pace Project No.: 50306805

QC Batch: 658262

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306805001

METHOD BLANK: 3033074

Matrix: Solid

Associated Lab Samples: 50306805001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	Result							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306805

QC Batch: 658263      Analysis Method: EPA 6010  
QC Batch Method: EPA 3050      Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306805002

METHOD BLANK: 3033078      Matrix: Solid  
Associated Lab Samples: 50306805002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.94	01/13/22 13:24	
Barium	mg/kg	ND	0.94	01/13/22 13:24	
Cadmium	mg/kg	ND	0.47	01/13/22 13:24	
Chromium	mg/kg	ND	0.94	01/13/22 13:24	
Lead	mg/kg	ND	0.94	01/13/22 13:24	
Lithium	mg/kg	ND	4.7	01/13/22 13:24	N2
Selenium	mg/kg	ND	0.94	01/13/22 13:24	
Silver	mg/kg	ND	0.47	01/13/22 13:24	

LABORATORY CONTROL SAMPLE: 3033079

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	49.5	51.3	104	80-120	
Barium	mg/kg	49.5	52.1	105	80-120	
Cadmium	mg/kg	49.5	49.2	99	80-120	
Chromium	mg/kg	49.5	53.9	109	80-120	
Lead	mg/kg	49.5	48.4	98	80-120	
Lithium	mg/kg	49.5	51.5	104	80-120	N2
Selenium	mg/kg	49.5	49.6	100	80-120	
Silver	mg/kg	24.8	24.2	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033080      3033081

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306774002 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic	mg/kg	4.4	42.2	44.2	43.8	44.5	93	91	75-125	2	20
Barium	mg/kg	50.4	42.2	44.2	102	98.1	123	108	75-125	4	20
Cadmium	mg/kg	0.17J	42.2	44.2	37.5	39.0	88	88	75-125	4	20
Chromium	mg/kg	12.3	42.2	44.2	50.5	52.4	91	91	75-125	4	20
Lead	mg/kg	7.4	42.2	44.2	38.4	40.7	73	75	75-125	6	20 M0
Lithium	mg/kg	14.1	42.2	44.2	53.8	54.1	94	90	75-125	0	20 N2
Selenium	mg/kg	0.84 U	42.2	44.2	37.1	38.1	88	86	75-125	3	20
Silver	mg/kg	0.42 U	21.1	22.1	18.7	19.3	88	87	75-125	3	20

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

QC Batch: 658420

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306805001, 50306805002

SAMPLE DUPLICATE: 3033111

Parameter	Units	50306805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.5	19.9	3	5	N2

SAMPLE DUPLICATE: 3033112

Parameter	Units	50306805002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.2	24.5	14	5	N2,R1

SAMPLE DUPLICATE: 3033767

Parameter	Units	50306793001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.8	26.7	4	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306805

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306805001	E72S	EPA 3050	658262	EPA 6010	658576
50306805002	E73S	EPA 3050	658263	EPA 6010	658467
50306805001	E72S	EPA 7471	658622	EPA 7471	658891
50306805002	E73S	EPA 7471	658622	EPA 7471	658891
50306805001	E72S	SM 2540G	658420		
50306805002	E73S	SM 2540G	658420		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

# WO# : 50306805



Company: Mundell and Associates, Inc.

Billing Information:

Address: 110 S Downey Ave, Indianapolis, IN 46219

110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone

Email To: ljohnstone@mundellassociates.com

Copy To:

Site Collection Info/Address:  
2707 S Liberty St. Muncie, Indiana

Customer Project Name/Number:  
M20032 Muncie Phase II

State: County/City: Time Zone Collected:  
IN / Muncie [ ]PT [ ]MT [ ]CT [X]ET

Phone: 317-630-9060  
Email: ljohnstone@mundellassociates.com

Site/Facility ID #:  
Purchase Order #:  
Quote #:

Compliance Monitoring?  
[ ] Yes [ ] No  
DW PWS ID #:  
DW Location Code:

Collected By (print):  
Luke Johnstone / Andy Miller

Turnaround Date Required:

Immediately Packed on Ice:  
[x] Yes [ ] No

Collected By (signature):  
*[Signature]*

Rush: (Expedite Charges Apply)  
[ ] Same Day [ ] Next Day  
[ ] 2 Day [ ] 3 Day  
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable):  
[ ] Yes [ ] No  
Analysis:

Sample Disposal:  
[x] Dispose as appropriate  
[ ] Return  
[ ] Archive:  
[ ] Hold:

Analysis:

Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
E72S	SL	Grab	1/7	12:00				1	G X
E73S	SL	Grab	1/7	12:05				1	G x

ALL BO...  
Container Pres...  
U...  
\*\* Preservative Types: (1) nitric acid, (2) ascorbic acid, (3) sodium bisulfate, (4) sodium metabisulfate, (5) sodium sulfite, (6) methanol, (7) sodium bisulfate, (8) sodium metabisulfate, (9) sodium sulfite, (10) ammonium hydroxide, (D) TSP, (E) Other

Analyses									

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY:  
Lab Sample # / Comments:  
*See SCUR*  
*001*  
*002*

Customer Remarks / Special Conditions / Possible Hazards:  
Total RCRA 8 Metals + Lithium

Type of Ice Used: Wet Blue Dry None  
Packing Material Used:  
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
Lab Tracking #:  
Samples received via:  
FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
Temp Blank Received: 0 N NA  
Therm ID#: D  
Cooler 1 Temp Upon Receipt: 0.6 oC  
Cooler 1 Therm Corr. Factor: 0.0 oC  
Cooler 1 Corrected Temp: 0.6 oC  
Comments:

Relinquished by/Company: (Signature) *[Signature]* Date/Time: 1/11/22 12:20

Relinquished by/Company: (Signature) *[Signature]* Date/Time: 1/11/22 13:00

Relinquished by/Company: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received by/Company: (Signature) *[Signature]* Date/Time: 1/11/22 12:20

Received by/Company: (Signature) *[Signature]* Date/Time: 1-11-22 13:10

Received by/Company: (Signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA  
HCL MeOH TSP Other

Non Conformance(s): YES / NO  
Page: \_\_\_\_\_ of: \_\_\_\_\_



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: BC 1-11-22 16:18

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.6/0.6  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VGA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZNAc pH >9	NaOH pH >10	
1	I																										SL				
2	I																											I			
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1 liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306781

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306781

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306781

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50306781001	E77S	Solid	01/07/22 10:30	01/11/22 13:10

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306781

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306781001	E77S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306781

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306781001</b>	<b>E77S</b>					
EPA 6010	Arsenic	8.1	mg/kg	1.1	01/14/22 03:20	
EPA 6010	Barium	66.2	mg/kg	1.1	01/14/22 03:20	
EPA 6010	Chromium	11.7	mg/kg	1.1	01/14/22 03:20	
EPA 6010	Lead	31.5	mg/kg	1.1	01/14/22 03:20	
EPA 6010	Lithium	9.0	mg/kg	5.7	01/14/22 03:20	N2
SM 2540G	Percent Moisture	16.4	%	0.10	01/13/22 09:04	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306781

**Sample: E77S**      **Lab ID: 50306781001**      Collected: 01/07/22 10:30      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	8.1	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:20	7440-38-2	
Barium	66.2	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:20	7440-39-3	
Cadmium	ND	mg/kg	0.57	1	01/12/22 14:28	01/14/22 03:20	7440-43-9	
Chromium	11.7	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:20	7440-47-3	
Lead	31.5	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:20	7439-92-1	
Lithium	9.0	mg/kg	5.7	1	01/12/22 14:28	01/14/22 03:20	7439-93-2	N2
Selenium	ND	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:20	7782-49-2	
Silver	ND	mg/kg	0.57	1	01/12/22 14:28	01/14/22 03:20	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.24	1	01/17/22 12:26	01/18/22 07:58	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	16.4	%	0.10	1		01/13/22 09:04		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306781

QC Batch: 658620

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306781001

METHOD BLANK: 3034655

Matrix: Solid

Associated Lab Samples: 50306781001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	01/18/22 07:26	

LABORATORY CONTROL SAMPLE: 3034656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.54	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034657 3034658

Parameter	Units	3034657		3034658		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50306781001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Mercury	mg/kg	ND	0.62	0.59	0.71	0.70	110	116	75-125	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306781

QC Batch: 658262      Analysis Method: EPA 6010  
QC Batch Method: EPA 3050      Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306781001

METHOD BLANK: 3033074      Matrix: Solid

Associated Lab Samples: 50306781001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076      3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	Conc.							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	20	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306781

QC Batch: 658416

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306781001

SAMPLE DUPLICATE: 3033756

Parameter	Units	50306781001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	16.6	1	5	N2

SAMPLE DUPLICATE: 3033791

Parameter	Units	50306879005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.0	4.8	3	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306781

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306781

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306781001	E77S	EPA 3050	658262	EPA 6010	658576
50306781001	E77S	EPA 7471	658620	EPA 7471	658890
50306781001	E77S	SM 2540G	658416		

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# CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or  
MTJL Log-in Number Here

Company: Mundell and Associates, Inc.  
Address: 110 S Downey Ave, Indianapolis, IN 46219

Billing Information:  
110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone

Email To: Ljohnstone@mundellassociates.com

Copy To:

Site Collection Info/Address:  
4117 S Madison St. Muncie, Indiana

Customer Project Name/Number:  
M20032 Muncie Phase II

State: IN County/City: Muncie Time Zone Collected:  
[ ] PT [ ] MT [ ] CT [X] ET

Phone: 317-630-9060  
Email: Ljohnstone@mundellassociates.com

Site/Facility ID #:  
Quote #:

Compliance Monitoring?  
[ ] Yes [ ] No

Collected By (print):  
Luke Johnstone /Andy Miller

Purchase Order #:  
Turnaround Date Required:

DW PWS ID #:  
DW Location Code:

Collected By (Signature):  
*[Signature]*

Rush: (Expedite Charges Apply)  
[ ] Same Day [ ] Next Day

Immediately Packed on Ice:  
[x] Yes [ ] No

Sample Disposal:  
[x] Dispose as appropriate  
[ ] Return  
[ ] Archive:  
[ ] Hold:

[ ] 2 Day [ ] 3 Day  
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable):  
[ ] Yes [ ] No  
Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals + Lithium via EPA 6010B
			Date	Time	Date	Time				
E77S MS/MSD	SL	Grab	1/7	10:30				3	G	X

**ALL BOLD OUT** **WO# : 50306781**

Container Preservative Type:  
U

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) acetic acid, (4) hydrochloric acid, (5) phosphoric acid, (6) methanol, (7) sodium bisulfate, (8) sodium hydroxide, (9) ammonium hydroxide, (D) TSP, (U) Unpres.

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY:  
Lab Sample # / Comments:  
**See SCUR**

Customer Remarks / Special Conditions / Possible Hazards:  
Total RCRA 8 Metals + Lithium

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via:  
FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:

Temp Blank Received:  Y  N  NA

Therm ID#: **0**

Cooler 1 Temp Upon Receipt: **0.6** °C

Cooler 1 Therm Corr. Factor: **0.0** °C

Cooler 1 Corrected Temp: **0.6** °C

Comments:

Relinquished by/Company: (Signature) *[Signature]*  
Date/Time: 1/11/22 1220

Relinquished by/Company: (Signature) *[Signature]*  
Date/Time: 1/11/22 1310

Relinquished by/Company: (Signature) *[Signature]*  
Date/Time:

Received by/Company: (Signature) *[Signature]*  
Date/Time: 1/11/22 1220

Received by/Company: (Signature) *[Signature]*  
Date/Time: 1/11/22 13:10

Received by/Company: (Signature) *[Signature]*  
Date/Time:

**MTJL LAB USE ONLY**

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA  
HCL MeOH TSP Other

Non Conformance(s):  
YES / NO

Page: 12 of 14  
of: \_\_\_\_\_



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: BC 1-11-22 16:18

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.6/0.6  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent <input checked="" type="checkbox"/>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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### Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA VIAL HS (>8mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZNAc pH >9	NaOH pH >10	
1	3																										SL				
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid    Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 18, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306796

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306796001	E84S	Solid	01/07/22 14:50	01/11/22 13:10
50306796002	E86S	Solid	01/07/22 14:45	01/11/22 13:10

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306796001	E84S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306796002	E86S	EPA 6010	JPK	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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## SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306796001</b>	<b>E84S</b>					
EPA 6010	Arsenic	6.6	mg/kg	1.1	01/14/22 03:49	
EPA 6010	Barium	72.1	mg/kg	1.1	01/14/22 03:49	
EPA 6010	Chromium	13.7	mg/kg	1.1	01/14/22 03:49	
EPA 6010	Lead	41.6	mg/kg	1.1	01/14/22 03:49	
EPA 6010	Lithium	9.4	mg/kg	5.5	01/14/22 03:49	N2
SM 2540G	Percent Moisture	21.9	%	0.10	01/13/22 09:49	N2
<b>50306796002</b>	<b>E86S</b>					
EPA 6010	Arsenic	5.3	mg/kg	1.1	01/14/22 03:55	
EPA 6010	Barium	56.2	mg/kg	1.1	01/14/22 03:55	
EPA 6010	Cadmium	1.2	mg/kg	0.56	01/14/22 03:55	
EPA 6010	Chromium	23.3	mg/kg	1.1	01/14/22 03:55	
EPA 6010	Lead	240	mg/kg	1.1	01/14/22 03:55	
EPA 6010	Lithium	8.6	mg/kg	5.6	01/14/22 03:55	N2
SM 2540G	Percent Moisture	24.2	%	0.10	01/13/22 09:49	N2

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

**Sample: E84S**      **Lab ID: 50306796001**      Collected: 01/07/22 14:50      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>6.6</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:49	7440-38-2	
Barium	<b>72.1</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:49	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	01/12/22 14:28	01/14/22 03:49	7440-43-9	
Chromium	<b>13.7</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:49	7440-47-3	
Lead	<b>41.6</b>	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:49	7439-92-1	
Lithium	<b>9.4</b>	mg/kg	5.5	1	01/12/22 14:28	01/14/22 03:49	7439-93-2	N2
Selenium	ND	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:49	7782-49-2	
Silver	ND	mg/kg	0.55	1	01/12/22 14:28	01/14/22 03:49	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	01/17/22 12:28	01/18/22 09:01	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>21.9</b>	%	0.10	1		01/13/22 09:49		N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

**Sample: E86S**      **Lab ID: 50306796002**      Collected: 01/07/22 14:45      Received: 01/11/22 13:10      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	5.3	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:55	7440-38-2	
Barium	56.2	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:55	7440-39-3	
Cadmium	1.2	mg/kg	0.56	1	01/12/22 14:28	01/14/22 03:55	7440-43-9	
Chromium	23.3	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:55	7440-47-3	
Lead	240	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:55	7439-92-1	
Lithium	8.6	mg/kg	5.6	1	01/12/22 14:28	01/14/22 03:55	7439-93-2	N2
Selenium	ND	mg/kg	1.1	1	01/12/22 14:28	01/14/22 03:55	7782-49-2	
Silver	ND	mg/kg	0.56	1	01/12/22 14:28	01/14/22 03:55	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.26	1	01/17/22 12:28	01/18/22 09:04	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	24.2	%	0.10	1		01/13/22 09:49		N2

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

QC Batch: 658622

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306796001, 50306796002

METHOD BLANK: 3034664

Matrix: Solid

Associated Lab Samples: 50306796001, 50306796002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/18/22 08:37	

LABORATORY CONTROL SAMPLE: 3034665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.48	0.23	48	80-120	L5

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034666 3034667

Parameter	Units	50306793001		3034667		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/kg	ND	0.72	0.69	0.94	0.92	105	107	75-125	2	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

QC Batch: 658262

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306796001, 50306796002

METHOD BLANK: 3033074

Matrix: Solid

Associated Lab Samples: 50306796001, 50306796002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/14/22 03:03	
Barium	mg/kg	ND	0.93	01/14/22 03:03	
Cadmium	mg/kg	ND	0.46	01/14/22 03:03	
Chromium	mg/kg	ND	0.93	01/14/22 03:03	
Lead	mg/kg	ND	0.93	01/14/22 03:03	
Lithium	mg/kg	ND	4.6	01/14/22 03:03	N2
Selenium	mg/kg	ND	0.93	01/14/22 03:03	
Silver	mg/kg	ND	0.46	01/14/22 03:03	

LABORATORY CONTROL SAMPLE: 3033075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	47.3	49.4	104	80-120	
Barium	mg/kg	47.3	49.0	104	80-120	
Cadmium	mg/kg	47.3	47.7	101	80-120	
Chromium	mg/kg	47.3	49.5	105	80-120	
Lead	mg/kg	47.3	46.2	97	80-120	
Lithium	mg/kg	47.3	50.4	106	80-120	N2
Selenium	mg/kg	47.3	48.2	102	80-120	
Silver	mg/kg	23.7	23.0	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033076 3033077

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306781001 Result	Spike Conc.	Spike Conc.	MS Result							
Arsenic	mg/kg	8.1	53.7	56.7	58.0	63.9	93	98	75-125	10	20	
Barium	mg/kg	66.2	53.7	56.7	144	132	145	116	75-125	9	20	M0
Cadmium	mg/kg	ND	53.7	56.7	49.7	54.1	92	95	75-125	8	20	
Chromium	mg/kg	11.7	53.7	56.7	64.3	64.3	98	93	75-125	0	20	
Lead	mg/kg	31.5	53.7	56.7	73.5	75.7	78	78	75-125	3	20	
Lithium	mg/kg	9.0	53.7	56.7	62.6	66.2	100	101	75-125	5	20	N2
Selenium	mg/kg	ND	53.7	56.7	48.8	53.3	90	93	75-125	9	20	
Silver	mg/kg	ND	26.8	28.3	23.7	25.9	88	91	75-125	9	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

QC Batch: 658420

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306796001, 50306796002

SAMPLE DUPLICATE: 3033111

Parameter	Units	50306805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.5	19.9	3	5	N2

SAMPLE DUPLICATE: 3033112

Parameter	Units	50306805002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.2	24.5	14	5	N2,R1

SAMPLE DUPLICATE: 3033767

Parameter	Units	50306793001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.8	26.7	4	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306796

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306796001	E84S	EPA 3050	658262	EPA 6010	658576
50306796002	E86S	EPA 3050	658262	EPA 6010	658576
50306796001	E84S	EPA 7471	658622	EPA 7471	658891
50306796002	E86S	EPA 7471	658622	EPA 7471	658891
50306796001	E84S	SM 2540G	658420		
50306796002	E86S	SM 2540G	658420		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here **WO#: 50306796**

ALL BO



50306796

Company: Mundell and Associates, Inc.  
Address: 110 S Downey Ave, Indianapolis, IN 46219

Billing Information:  
110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone  
Copy To:

Email To: ljohnstone@mundellassociates.com  
Site Collection Info/Address:  
4201 S Hoyt St. Muncie, Indiana

Customer Project Name/Number:  
M20032 Muncie Phase II

State: IN / County/City: Muncie / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: 317-630-9060 Email: ljohnstone@mundellassociates.com	Site/Facility ID #:	Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Luke Johnstone / Andy Miller	Purchase Order #: Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature): <i>[Signature]</i>	Turnaround Date Required:	Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [ X ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [ ] No Analysis: _____

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
E84S	SL	Grab	1/7	14:50				1	G
E86S	SL	Grab	1/7	14:45				1	G

Total RCRA 8 Metals + Lithium via EPA 6010B

\*\* Preservative Types: (1) nitric acid, (2) hydrochloric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Lab Profile/Line:
	Lab Sample Receipt Checklist:
	Custody Seals Present/Intact Y N NA
	Custody Signatures Present Y N NA
	Collector Signature Present Y N NA
	Bottles Intact Y N NA
	Correct Bottles Y N NA
	Sufficient Volume Y N NA
	Samples Received on Ice Y N NA
	VOA - Headspace Acceptable Y N NA
	USDA Regulated Soils Y N NA
	Samples in Holding Time Y N NA
	Residual Chlorine Present Y N NA
	Cl Strips:
	Sample pH Acceptable Y N NA
	pH Strips:
	Sulfide Present Y N NA
	Lead Acetate Strips:
	LAB USE ONLY:
	Lab Sample # / Comments:
	<i>see scrub</i>
	<i>001</i>
	<i>002</i>

Customer Remarks / Special Conditions / Possible Hazards:  
Total RCRA 8 Metals + Lithium

Type of Ice Used: Wet Blue Dry None  
Packing Material Used:  
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
Lab Tracking #:  
Samples received via:  
FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
Temp Blank Received: 0 N NA  
Therm ID#: *10*  
Cooler 1 Temp Upon Receipt: *0.6* C  
Cooler 1 Therm Corr. Factor: *0.2*  
Cooler 1 Corrected Temp: *0.6* C  
Comments:

Relinquished by/Company: (Signature)  
*[Signature]*  
Date/Time: 1/11/22 12:20

Date/Time: 1/11/22 12:20

Received by/Company: (Signature)  
*[Signature]*  
Date/Time: 1/11/22 13:10

Date/Time: 1/11/22 13:10

MTJL LAB USE ONLY  
Table #:  
Acctnum:  
Template:  
Prelogin:  
PM:  
PB:

Trip Blank Received: Y N NA  
HCL MeOH TSP Other  
Non Conformance(s): YES / NO  
Page: 13 of 15





**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: BC 11-22 16:18

- 1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No  
(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
- 4. Cooler Temperature: 0.6/0.6  
Temp should be above freezing to 6°C (Initial/Corrected)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VIA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10		
1	I																											I				
2	I																												I			
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL OL	Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 17, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306616

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306616001	A47-sed	Solid	01/06/22 12:25	01/07/22 12:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306616001	A47-sed	EPA 6010	JDG	8	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306616001</b>	<b>A47-sed</b>					
EPA 6010	Arsenic	3.4	mg/kg	1.5	01/13/22 10:44	
EPA 6010	Barium	85.4	mg/kg	1.5	01/13/22 10:44	
EPA 6010	Chromium	9.3	mg/kg	1.5	01/13/22 10:44	
EPA 6010	Lead	40.8	mg/kg	1.5	01/13/22 10:44	
EPA 6010	Lithium	9.0	mg/kg	7.5	01/13/22 10:44	N2
SM 2540G	Percent Moisture	42.7	%	0.10	01/08/22 08:53	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

**Sample: A47-sed**      **Lab ID: 50306616001**      Collected: 01/06/22 12:25      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	3.4	mg/kg	1.5	1	01/11/22 10:22	01/13/22 10:44	7440-38-2	
Barium	85.4	mg/kg	1.5	1	01/11/22 10:22	01/13/22 10:44	7440-39-3	
Cadmium	ND	mg/kg	0.75	1	01/11/22 10:22	01/13/22 10:44	7440-43-9	
Chromium	9.3	mg/kg	1.5	1	01/11/22 10:22	01/13/22 10:44	7440-47-3	
Lead	40.8	mg/kg	1.5	1	01/11/22 10:22	01/13/22 10:44	7439-92-1	
Selenium	ND	mg/kg	1.5	1	01/11/22 10:22	01/13/22 10:44	7782-49-2	
Silver	ND	mg/kg	0.75	1	01/11/22 10:22	01/13/22 10:44	7440-22-4	
Lithium	9.0	mg/kg	7.5	1	01/11/22 10:22	01/13/22 10:44	7439-93-2	N2
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	ug/kg	195	1	01/10/22 22:36	67-64-1		
Acrolein	ND	ug/kg	195	1	01/10/22 22:36	107-02-8		
Acrylonitrile	ND	ug/kg	195	1	01/10/22 22:36	107-13-1		
Benzene	ND	ug/kg	9.8	1	01/10/22 22:36	71-43-2		R1
Bromobenzene	ND	ug/kg	9.8	1	01/10/22 22:36	108-86-1		
Bromochloromethane	ND	ug/kg	9.8	1	01/10/22 22:36	74-97-5		
Bromodichloromethane	ND	ug/kg	9.8	1	01/10/22 22:36	75-27-4		
Bromoform	ND	ug/kg	9.8	1	01/10/22 22:36	75-25-2		
Bromomethane	ND	ug/kg	9.8	1	01/10/22 22:36	74-83-9		
2-Butanone (MEK)	ND	ug/kg	48.8	1	01/10/22 22:36	78-93-3		
n-Butylbenzene	ND	ug/kg	9.8	1	01/10/22 22:36	104-51-8		
sec-Butylbenzene	ND	ug/kg	9.8	1	01/10/22 22:36	135-98-8		
tert-Butylbenzene	ND	ug/kg	9.8	1	01/10/22 22:36	98-06-6		
Carbon disulfide	ND	ug/kg	19.5	1	01/10/22 22:36	75-15-0		
Carbon tetrachloride	ND	ug/kg	9.8	1	01/10/22 22:36	56-23-5		
Chlorobenzene	ND	ug/kg	9.8	1	01/10/22 22:36	108-90-7		R1
Chloroethane	ND	ug/kg	9.8	1	01/10/22 22:36	75-00-3		
Chloroform	ND	ug/kg	9.8	1	01/10/22 22:36	67-66-3		R1
Chloromethane	ND	ug/kg	9.8	1	01/10/22 22:36	74-87-3		
2-Chlorotoluene	ND	ug/kg	9.8	1	01/10/22 22:36	95-49-8		
4-Chlorotoluene	ND	ug/kg	9.8	1	01/10/22 22:36	106-43-4		
Dibromochloromethane	ND	ug/kg	9.8	1	01/10/22 22:36	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	9.8	1	01/10/22 22:36	106-93-4		R1
Dibromomethane	ND	ug/kg	9.8	1	01/10/22 22:36	74-95-3		
1,2-Dichlorobenzene	ND	ug/kg	9.8	1	01/10/22 22:36	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	9.8	1	01/10/22 22:36	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	9.8	1	01/10/22 22:36	106-46-7		
trans-1,4-Dichloro-2-butene	ND	ug/kg	195	1	01/10/22 22:36	110-57-6		
Dichlorodifluoromethane	ND	ug/kg	9.8	1	01/10/22 22:36	75-71-8		
1,1-Dichloroethane	ND	ug/kg	9.8	1	01/10/22 22:36	75-34-3		
1,2-Dichloroethane	ND	ug/kg	9.8	1	01/10/22 22:36	107-06-2		R1
1,1-Dichloroethene	ND	ug/kg	9.8	1	01/10/22 22:36	75-35-4		R1
cis-1,2-Dichloroethene	ND	ug/kg	9.8	1	01/10/22 22:36	156-59-2		R1
trans-1,2-Dichloroethene	ND	ug/kg	9.8	1	01/10/22 22:36	156-60-5		R1

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

**Sample: A47-sed**      **Lab ID: 50306616001**      Collected: 01/06/22 12:25      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
1,2-Dichloropropane	ND	ug/kg	9.8	1		01/10/22 22:36	78-87-5	R1
1,3-Dichloropropane	ND	ug/kg	9.8	1		01/10/22 22:36	142-28-9	
2,2-Dichloropropane	ND	ug/kg	9.8	1		01/10/22 22:36	594-20-7	
1,1-Dichloropropene	ND	ug/kg	9.8	1		01/10/22 22:36	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	9.8	1		01/10/22 22:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	9.8	1		01/10/22 22:36	10061-02-6	
Ethylbenzene	ND	ug/kg	9.8	1		01/10/22 22:36	100-41-4	R1
Ethyl methacrylate	ND	ug/kg	195	1		01/10/22 22:36	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/kg	9.8	1		01/10/22 22:36	87-68-3	
n-Hexane	ND	ug/kg	9.8	1		01/10/22 22:36	110-54-3	
2-Hexanone	ND	ug/kg	195	1		01/10/22 22:36	591-78-6	
Iodomethane	ND	ug/kg	195	1		01/10/22 22:36	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	9.8	1		01/10/22 22:36	98-82-8	R1
p-Isopropyltoluene	ND	ug/kg	9.8	1		01/10/22 22:36	99-87-6	
Methylene Chloride	ND	ug/kg	39.1	1		01/10/22 22:36	75-09-2	
1-Methylnaphthalene	ND	ug/kg	19.5	1		01/10/22 22:36	90-12-0	
2-Methylnaphthalene	ND	ug/kg	19.5	1		01/10/22 22:36	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	48.8	1		01/10/22 22:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	9.8	1		01/10/22 22:36	1634-04-4	R1
Naphthalene	ND	ug/kg	9.8	1		01/10/22 22:36	91-20-3	R1
n-Propylbenzene	ND	ug/kg	9.8	1		01/10/22 22:36	103-65-1	
Styrene	ND	ug/kg	9.8	1		01/10/22 22:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	9.8	1		01/10/22 22:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	9.8	1		01/10/22 22:36	79-34-5	R1
Tetrachloroethene	ND	ug/kg	9.8	1		01/10/22 22:36	127-18-4	R1
Toluene	ND	ug/kg	9.8	1		01/10/22 22:36	108-88-3	R1
1,2,3-Trichlorobenzene	ND	ug/kg	9.8	1		01/10/22 22:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	9.8	1		01/10/22 22:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	9.8	1		01/10/22 22:36	71-55-6	R1
1,1,2-Trichloroethane	ND	ug/kg	9.8	1		01/10/22 22:36	79-00-5	
Trichloroethene	ND	ug/kg	9.8	1		01/10/22 22:36	79-01-6	R1
Trichlorofluoromethane	ND	ug/kg	9.8	1		01/10/22 22:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	9.8	1		01/10/22 22:36	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	9.8	1		01/10/22 22:36	95-63-6	R1
1,3,5-Trimethylbenzene	ND	ug/kg	9.8	1		01/10/22 22:36	108-67-8	
Vinyl acetate	ND	ug/kg	195	1		01/10/22 22:36	108-05-4	
Vinyl chloride	ND	ug/kg	9.8	1		01/10/22 22:36	75-01-4	R1
Xylene (Total)	ND	ug/kg	19.5	1		01/10/22 22:36	1330-20-7	RS
<b>Surrogates</b>								
Dibromofluoromethane (S)	101	%	73-132	1		01/10/22 22:36	1868-53-7	
Toluene-d8 (S)	100	%	66-148	1		01/10/22 22:36	2037-26-5	
4-Bromofluorobenzene (S)	81	%	40-149	1		01/10/22 22:36	460-00-4	

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

**Sample: A47-sed**      **Lab ID: 50306616001**      Collected: 01/06/22 12:25      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>Percent Moisture</b>	Analytical Method: SM 2540G Pace Analytical Services - Indianapolis							
Percent Moisture	<b>42.7</b>	%	0.10	1		01/08/22 08:53		N2

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306616

QC Batch: 658130      Analysis Method: EPA 6010  
QC Batch Method: EPA 3050      Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306616001

METHOD BLANK: 3032509      Matrix: Solid  
Associated Lab Samples: 50306616001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.92	01/13/22 10:40	
Barium	mg/kg	ND	0.92	01/13/22 10:40	
Cadmium	mg/kg	ND	0.46	01/13/22 10:40	
Chromium	mg/kg	ND	0.92	01/13/22 10:40	
Lead	mg/kg	ND	0.92	01/13/22 10:40	
Lithium	mg/kg	ND	4.6	01/13/22 10:40	N2
Selenium	mg/kg	ND	0.92	01/13/22 10:40	
Silver	mg/kg	ND	0.46	01/13/22 10:40	

LABORATORY CONTROL SAMPLE: 3032510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	45.2	44.7	99	80-120	
Barium	mg/kg	45.2	44.0	97	80-120	
Cadmium	mg/kg	45.2	43.1	95	80-120	
Chromium	mg/kg	45.2	46.4	103	80-120	
Lead	mg/kg	45.2	42.2	93	80-120	
Lithium	mg/kg	45.2	44.9	99	80-120	N2
Selenium	mg/kg	45.2	43.4	96	80-120	
Silver	mg/kg	22.6	21.3	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032511      3032512

Parameter	Units	50306616001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	mg/kg	3.4	74.7	74.9	74.9	73.6	96	94	75-125	2	20		
Barium	mg/kg	85.4	74.7	74.9	160	166	100	107	75-125	3	20		
Cadmium	mg/kg	ND	74.7	74.9	67.9	67.1	91	89	75-125	1	20		
Chromium	mg/kg	9.3	74.7	74.9	77.5	78.3	91	92	75-125	1	20		
Lead	mg/kg	40.8	74.7	74.9	96.3	99.1	74	78	75-125	3	20	M0	
Lithium	mg/kg	9.0	74.7	74.9	80.5	80.1	96	95	75-125	0	20	N2	
Selenium	mg/kg	ND	74.7	74.9	67.4	66.1	90	88	75-125	2	20		
Silver	mg/kg	ND	37.3	37.5	34.0	33.5	91	90	75-125	1	20		

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032513 3032514											
Parameter	Units	50306619001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Arsenic	mg/kg	7.3	61.9	56.4	63.6	53.9	91	83	75-125	16	20
Barium	mg/kg	90.8	61.9	56.4	165	154	120	112	75-125	7	20
Cadmium	mg/kg	ND	61.9	56.4	54.9	45.9	88	81	75-125	18	20
Chromium	mg/kg	16.2	61.9	56.4	77.1	64.3	98	85	75-125	18	20
Lead	mg/kg	19.7	61.9	56.4	69.7	60.0	81	72	75-125	15	20 M0
Lithium	mg/kg	9.8	61.9	56.4	70.3	58.9	98	87	75-125	18	20 N2
Selenium	mg/kg	ND	61.9	56.4	54.5	45.3	88	80	75-125	18	20
Silver	mg/kg	ND	31	28.1	26.7	22.6	86	80	75-125	17	20

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306616

QC Batch: 658080	Analysis Method: EPA 8260
QC Batch Method: EPA 8260	Analysis Description: 8260 MSV 5035A Volatile Organics
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306616001

METHOD BLANK: 3032291 Matrix: Solid

Associated Lab Samples: 50306616001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,1-Trichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,2-Trichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,3-Trichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,3-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,3-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,4-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1-Methylnaphthalene	ug/kg	ND	10.0	01/10/22 19:46	
2,2-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
2-Butanone (MEK)	ug/kg	ND	25.0	01/10/22 19:46	
2-Chlorotoluene	ug/kg	ND	5.0	01/10/22 19:46	
2-Hexanone	ug/kg	ND	100	01/10/22 19:46	
2-Methylnaphthalene	ug/kg	ND	10.0	01/10/22 19:46	
4-Chlorotoluene	ug/kg	ND	5.0	01/10/22 19:46	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	25.0	01/10/22 19:46	
Acetone	ug/kg	ND	100	01/10/22 19:46	
Acrolein	ug/kg	ND	100	01/10/22 19:46	
Acrylonitrile	ug/kg	ND	100	01/10/22 19:46	
Benzene	ug/kg	ND	5.0	01/10/22 19:46	
Bromobenzene	ug/kg	ND	5.0	01/10/22 19:46	
Bromochloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Bromodichloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Bromoform	ug/kg	ND	5.0	01/10/22 19:46	
Bromomethane	ug/kg	ND	5.0	01/10/22 19:46	
Carbon disulfide	ug/kg	ND	10.0	01/10/22 19:46	
Carbon tetrachloride	ug/kg	ND	5.0	01/10/22 19:46	
Chlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
Chloroethane	ug/kg	ND	5.0	01/10/22 19:46	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

METHOD BLANK: 3032291

Matrix: Solid

Associated Lab Samples: 50306616001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/kg	ND	5.0	01/10/22 19:46	
Chloromethane	ug/kg	ND	5.0	01/10/22 19:46	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
Dibromochloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Dibromomethane	ug/kg	ND	5.0	01/10/22 19:46	
Dichlorodifluoromethane	ug/kg	ND	5.0	01/10/22 19:46	
Ethyl methacrylate	ug/kg	ND	100	01/10/22 19:46	
Ethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	01/10/22 19:46	
Iodomethane	ug/kg	ND	100	01/10/22 19:46	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	01/10/22 19:46	
Methyl-tert-butyl ether	ug/kg	ND	5.0	01/10/22 19:46	
Methylene Chloride	ug/kg	ND	20.0	01/10/22 19:46	
n-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
n-Hexane	ug/kg	ND	5.0	01/10/22 19:46	
n-Propylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Naphthalene	ug/kg	ND	5.0	01/10/22 19:46	
p-Isopropyltoluene	ug/kg	ND	5.0	01/10/22 19:46	
sec-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Styrene	ug/kg	ND	5.0	01/10/22 19:46	
tert-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Tetrachloroethene	ug/kg	ND	5.0	01/10/22 19:46	
Toluene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,4-Dichloro-2-butene	ug/kg	ND	100	01/10/22 19:46	
Trichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
Trichlorofluoromethane	ug/kg	ND	5.0	01/10/22 19:46	
Vinyl acetate	ug/kg	ND	100	01/10/22 19:46	
Vinyl chloride	ug/kg	ND	5.0	01/10/22 19:46	
Xylene (Total)	ug/kg	ND	10.0	01/10/22 19:46	
4-Bromofluorobenzene (S)	%	97	40-149	01/10/22 19:46	
Dibromofluoromethane (S)	%	101	73-132	01/10/22 19:46	
Toluene-d8 (S)	%	96	66-148	01/10/22 19:46	

LABORATORY CONTROL SAMPLE: 3032292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	50	43.6	87	68-129	
1,1,2,2-Tetrachloroethane	ug/kg	50	44.1	88	67-137	
1,1-Dichloroethene	ug/kg	50	46.8	94	53-135	
1,2,4-Trimethylbenzene	ug/kg	50	44.1	88	61-125	
1,2-Dibromoethane (EDB)	ug/kg	50	48.7	97	68-125	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

LABORATORY CONTROL SAMPLE: 3032292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/kg	50	45.9	92	69-128	
1,2-Dichloropropane	ug/kg	50	45.7	91	70-130	
Benzene	ug/kg	50	45.9	92	69-125	
Chlorobenzene	ug/kg	50	44.6	89	66-121	
Chloroform	ug/kg	50	44.2	88	66-123	
cis-1,2-Dichloroethene	ug/kg	50	44.5	89	67-122	
Ethylbenzene	ug/kg	50	46.0	92	57-126	
Isopropylbenzene (Cumene)	ug/kg	50	46.8	94	62-132	
Methyl-tert-butyl ether	ug/kg	50	47.0	94	66-136	
Naphthalene	ug/kg	50	44.4	89	59-131	
Tetrachloroethene	ug/kg	50	44.9	90	61-123	
Toluene	ug/kg	50	45.8	92	67-128	
trans-1,2-Dichloroethene	ug/kg	50	42.6	85	61-127	
Trichloroethene	ug/kg	50	44.6	89	64-122	
Vinyl chloride	ug/kg	50	41.4	83	42-148	
Xylene (Total)	ug/kg	150	149	100	62-126	
4-Bromofluorobenzene (S)	%			102	40-149	
Dibromofluoromethane (S)	%			99	73-132	
Toluene-d8 (S)	%			98	66-148	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032293 3032294

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1-Trichloroethane	ug/kg	ND	133	100	133	103	99	103	38-149	25	20	R1	
1,1,2,2-Tetrachloroethane	ug/kg	ND	133	100	147	111	110	111	19-169	28	20	R1	
1,1-Dichloroethene	ug/kg	ND	133	100	153	121	115	121	24-162	23	20	R1	
1,2,4-Trimethylbenzene	ug/kg	ND	133	100	137	97.3	103	97	10-169	34	20	R1	
1,2-Dibromoethane (EDB)	ug/kg	ND	133	100	130	89.7	98	90	19-153	37	20	R1	
1,2-Dichloroethane	ug/kg	ND	133	100	134	98.6	100	99	32-146	30	20	R1	
1,2-Dichloropropane	ug/kg	ND	133	100	129	99.1	97	99	39-141	26	20	R1	
Benzene	ug/kg	ND	133	100	136	102	102	102	35-140	28	20	R1	
Chlorobenzene	ug/kg	ND	133	100	120	80.5	90	80	16-142	40	20	R1	
Chloroform	ug/kg	ND	133	100	133	102	100	102	30-146	27	20	R1	
cis-1,2-Dichloroethene	ug/kg	ND	133	100	133	101	100	101	30-145	28	20	R1	
Ethylbenzene	ug/kg	ND	133	100	131	88.5	98	88	10-150	38	20	R1	
Isopropylbenzene (Cumene)	ug/kg	ND	133	100	131	91.6	99	92	10-153	36	20	R1	
Methyl-tert-butyl ether	ug/kg	ND	133	100	138	106	104	106	45-153	26	20	R1	
Naphthalene	ug/kg	ND	133	100	87.0	53.3	65	53	10-130	48	20	R1	
Tetrachloroethene	ug/kg	ND	133	100	138	105	104	105	10-179	28	20	R1	
Toluene	ug/kg	ND	133	100	139	98.1	104	98	20-158	34	20	R1	
trans-1,2-Dichloroethene	ug/kg	ND	133	100	128	100	96	100	24-149	25	20	R1	
Trichloroethene	ug/kg	ND	133	100	122	93.2	91	93	10-168	26	20	R1	
Vinyl chloride	ug/kg	ND	133	100	136	105	102	105	10-165	26	20	R1	

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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

Parameter	Units	3032293		3032294		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Xylene (Total)	ug/kg	ND	400	300	415	284	104	95	10-152	38	20	RS	
4-Bromofluorobenzene (S)	%						96	89	40-149				
Dibromofluoromethane (S)	%						97	96	73-132				
Toluene-d8 (S)	%						107	108	66-148				

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

QC Batch: 657974

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306616001

SAMPLE DUPLICATE: 3031995

Parameter	Units	50306616001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	42.7	47.6	11	5	N2,R1

SAMPLE DUPLICATE: 3031996

Parameter	Units	50306619001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.5	22.8	2	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

RS The RPD value in one of the constituent analytes was outside the control limits.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306616

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306616001	A47-sed	EPA 3050	658130	EPA 6010	658450
50306616001	A47-sed	EPA 8260	658080		
50306616001	A47-sed	SM 2540G	657974		

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 17-22 15:25

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 4.4/4.2  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			<input checked="" type="checkbox"/>
Short Hold Time Analysis (48 hours or less)? Analysis: <u>TC</u>	<input checked="" type="checkbox"/>		Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab			Time: <u>15:32</u>	<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)	<input checked="" type="checkbox"/>		Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
 (DI)  
 MeOH  
 (only)  
 (BK)  
 Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VQA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1	3	12																									SL				
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 17, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306625

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306625001	SW-1 (MS/MSD)	Water	01/06/22 12:00	01/07/22 12:35
50306625002	A48-sed	Solid	01/06/22 12:35	01/07/22 12:35
50306625003	A49s	Solid	01/06/22 12:45	01/07/22 12:35
50306625004	DUP	Solid	01/06/22 08:00	01/07/22 12:35

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306625001	SW-1 (MS/MSD)	EPA 6010	JDG	8	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 5030/8260	SLB	75	PASI-I
50306625002	A48-sed	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	ADT	1	PASI-I
50306625003	A49s	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I
50306625004	DUP	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		SM 2540G	ADT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306625001</b>	<b>SW-1 (MS/MSD)</b>					
EPA 6010	Barium	155	ug/L	10.0	01/11/22 11:38	
<b>50306625002</b>	<b>A48-sed</b>					
EPA 6010	Arsenic	7.8	mg/kg	1.7	01/13/22 11:21	
EPA 6010	Barium	93.9	mg/kg	1.7	01/13/22 11:21	
EPA 6010	Chromium	13.6	mg/kg	1.7	01/13/22 11:21	
EPA 6010	Lead	78.3	mg/kg	1.7	01/13/22 11:21	
EPA 6010	Lithium	11.6	mg/kg	8.7	01/13/22 11:21	N2
SM 2540G	Percent Moisture	49.2	%	0.10	01/08/22 08:55	N2
<b>50306625003</b>	<b>A49s</b>					
EPA 6010	Arsenic	7.2	mg/kg	1.7	01/13/22 11:24	
EPA 6010	Barium	115	mg/kg	1.7	01/13/22 11:24	
EPA 6010	Chromium	18.5	mg/kg	1.7	01/13/22 11:24	
EPA 6010	Lead	116	mg/kg	1.7	01/13/22 11:24	
EPA 6010	Lithium	15.4	mg/kg	8.3	01/13/22 11:24	N2
SM 2540G	Percent Moisture	40.7	%	0.10	01/08/22 08:55	N2
<b>50306625004</b>	<b>DUP</b>					
EPA 6010	Arsenic	7.9	mg/kg	1.4	01/13/22 11:26	
EPA 6010	Barium	107	mg/kg	1.4	01/13/22 11:26	
EPA 6010	Chromium	18.3	mg/kg	1.4	01/13/22 11:26	
EPA 6010	Lead	111	mg/kg	1.4	01/13/22 11:26	
EPA 6010	Lithium	15.7	mg/kg	7.1	01/13/22 11:26	N2
SM 2540G	Percent Moisture	38.6	%	0.10	01/08/22 08:55	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

Sample: SW-1 (MS/MSD)	Lab ID: 50306625001	Collected: 01/06/22 12:00	Received: 01/07/22 12:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:38	7440-38-2	
Barium	155	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:38	7440-39-3	
Cadmium	ND	ug/L	2.0	1	01/10/22 10:22	01/11/22 11:38	7440-43-9	
Chromium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:38	7440-47-3	
Lead	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:38	7439-92-1	
Lithium	ND	ug/L	20.0	1	01/10/22 10:22	01/11/22 11:38	7439-93-2	
Selenium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:38	7782-49-2	
Silver	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:38	7440-22-4	
<b>7470 Mercury</b>								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	01/14/22 06:55	01/14/22 12:20	7439-97-6	
<b>8260 MSV Indiana</b>								
Analytical Method: EPA 5030/8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		01/11/22 14:33	67-64-1	L1
Acrolein	ND	ug/L	50.0	1		01/11/22 14:33	107-02-8	
Acrylonitrile	ND	ug/L	100	1		01/11/22 14:33	107-13-1	
Benzene	ND	ug/L	5.0	1		01/11/22 14:33	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		01/11/22 14:33	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		01/11/22 14:33	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		01/11/22 14:33	75-27-4	
Bromoform	ND	ug/L	5.0	1		01/11/22 14:33	75-25-2	
Bromomethane	ND	ug/L	5.0	1		01/11/22 14:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		01/11/22 14:33	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		01/11/22 14:33	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		01/11/22 14:33	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		01/11/22 14:33	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		01/11/22 14:33	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		01/11/22 14:33	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/11/22 14:33	108-90-7	
Chloroethane	ND	ug/L	5.0	1		01/11/22 14:33	75-00-3	
Chloroform	ND	ug/L	5.0	1		01/11/22 14:33	67-66-3	
Chloromethane	ND	ug/L	5.0	1		01/11/22 14:33	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		01/11/22 14:33	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		01/11/22 14:33	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		01/11/22 14:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		01/11/22 14:33	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		01/11/22 14:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		01/11/22 14:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		01/11/22 14:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/11/22 14:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		01/11/22 14:33	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		01/11/22 14:33	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		01/11/22 14:33	75-34-3	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

Sample: SW-1 (MS/MSD)	Lab ID: 50306625001	Collected: 01/06/22 12:00	Received: 01/07/22 12:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Indiana</b>		Analytical Method: EPA 5030/8260 Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	5.0	1		01/11/22 14:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		01/11/22 14:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		01/11/22 14:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		01/11/22 14:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		01/11/22 14:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		01/11/22 14:33	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		01/11/22 14:33	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		01/11/22 14:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		01/11/22 14:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		01/11/22 14:33	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		01/11/22 14:33	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		01/11/22 14:33	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		01/11/22 14:33	87-68-3	
n-Hexane	ND	ug/L	5.0	1		01/11/22 14:33	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		01/11/22 14:33	591-78-6	
Iodomethane	ND	ug/L	10.0	1		01/11/22 14:33	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		01/11/22 14:33	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		01/11/22 14:33	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		01/11/22 14:33	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		01/11/22 14:33	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		01/11/22 14:33	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		01/11/22 14:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		01/11/22 14:33	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		01/11/22 14:33	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		01/11/22 14:33	103-65-1	
Styrene	ND	ug/L	5.0	1		01/11/22 14:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		01/11/22 14:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		01/11/22 14:33	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		01/11/22 14:33	127-18-4	
Toluene	ND	ug/L	5.0	1		01/11/22 14:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		01/11/22 14:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		01/11/22 14:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		01/11/22 14:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		01/11/22 14:33	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		01/11/22 14:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		01/11/22 14:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		01/11/22 14:33	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		01/11/22 14:33	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		01/11/22 14:33	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		01/11/22 14:33	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		01/11/22 14:33	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		01/11/22 14:33	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102	%.	78-120	1		01/11/22 14:33	1868-53-7	
4-Bromofluorobenzene (S)	104	%.	78-117	1		01/11/22 14:33	460-00-4	
Toluene-d8 (S)	101	%.	77-118	1		01/11/22 14:33	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

**Sample: A48-sed**      **Lab ID: 50306625002**      Collected: 01/06/22 12:35      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.8	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:21	7440-38-2	
Barium	93.9	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:21	7440-39-3	
Cadmium	ND	mg/kg	0.87	1	01/11/22 10:22	01/13/22 11:21	7440-43-9	
Chromium	13.6	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:21	7440-47-3	
Lead	78.3	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:21	7439-92-1	
Lithium	11.6	mg/kg	8.7	1	01/11/22 10:22	01/13/22 11:21	7439-93-2	N2
Selenium	ND	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:21	7782-49-2	
Silver	ND	mg/kg	0.87	1	01/11/22 10:22	01/13/22 11:21	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.40	1	01/11/22 11:25	01/13/22 09:20	7439-97-6	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	ug/kg	231	1		01/11/22 01:26	67-64-1	
Acrolein	ND	ug/kg	231	1		01/11/22 01:26	107-02-8	
Acrylonitrile	ND	ug/kg	231	1		01/11/22 01:26	107-13-1	
Benzene	ND	ug/kg	11.5	1		01/11/22 01:26	71-43-2	
Bromobenzene	ND	ug/kg	11.5	1		01/11/22 01:26	108-86-1	
Bromochloromethane	ND	ug/kg	11.5	1		01/11/22 01:26	74-97-5	
Bromodichloromethane	ND	ug/kg	11.5	1		01/11/22 01:26	75-27-4	
Bromoform	ND	ug/kg	11.5	1		01/11/22 01:26	75-25-2	
Bromomethane	ND	ug/kg	11.5	1		01/11/22 01:26	74-83-9	
2-Butanone (MEK)	ND	ug/kg	57.7	1		01/11/22 01:26	78-93-3	
n-Butylbenzene	ND	ug/kg	11.5	1		01/11/22 01:26	104-51-8	
sec-Butylbenzene	ND	ug/kg	11.5	1		01/11/22 01:26	135-98-8	
tert-Butylbenzene	ND	ug/kg	11.5	1		01/11/22 01:26	98-06-6	
Carbon disulfide	ND	ug/kg	23.1	1		01/11/22 01:26	75-15-0	
Carbon tetrachloride	ND	ug/kg	11.5	1		01/11/22 01:26	56-23-5	
Chlorobenzene	ND	ug/kg	11.5	1		01/11/22 01:26	108-90-7	
Chloroethane	ND	ug/kg	11.5	1		01/11/22 01:26	75-00-3	
Chloroform	ND	ug/kg	11.5	1		01/11/22 01:26	67-66-3	
Chloromethane	ND	ug/kg	11.5	1		01/11/22 01:26	74-87-3	
2-Chlorotoluene	ND	ug/kg	11.5	1		01/11/22 01:26	95-49-8	
4-Chlorotoluene	ND	ug/kg	11.5	1		01/11/22 01:26	106-43-4	
Dibromochloromethane	ND	ug/kg	11.5	1		01/11/22 01:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	11.5	1		01/11/22 01:26	106-93-4	
Dibromomethane	ND	ug/kg	11.5	1		01/11/22 01:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	11.5	1		01/11/22 01:26	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	11.5	1		01/11/22 01:26	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	11.5	1		01/11/22 01:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	231	1		01/11/22 01:26	110-57-6	
Dichlorodifluoromethane	ND	ug/kg	11.5	1		01/11/22 01:26	75-71-8	
1,1-Dichloroethane	ND	ug/kg	11.5	1		01/11/22 01:26	75-34-3	

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

Sample: A48-sed Lab ID: 50306625002 Collected: 01/06/22 12:35 Received: 01/07/22 12:35 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/kg	11.5	1		01/11/22 01:26	107-06-2	
1,1-Dichloroethene	ND	ug/kg	11.5	1		01/11/22 01:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	11.5	1		01/11/22 01:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	11.5	1		01/11/22 01:26	156-60-5	
1,2-Dichloropropane	ND	ug/kg	11.5	1		01/11/22 01:26	78-87-5	
1,3-Dichloropropane	ND	ug/kg	11.5	1		01/11/22 01:26	142-28-9	
2,2-Dichloropropane	ND	ug/kg	11.5	1		01/11/22 01:26	594-20-7	
1,1-Dichloropropene	ND	ug/kg	11.5	1		01/11/22 01:26	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	11.5	1		01/11/22 01:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	11.5	1		01/11/22 01:26	10061-02-6	
Ethylbenzene	ND	ug/kg	11.5	1		01/11/22 01:26	100-41-4	
Ethyl methacrylate	ND	ug/kg	231	1		01/11/22 01:26	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/kg	11.5	1		01/11/22 01:26	87-68-3	
n-Hexane	ND	ug/kg	11.5	1		01/11/22 01:26	110-54-3	
2-Hexanone	ND	ug/kg	231	1		01/11/22 01:26	591-78-6	
Iodomethane	ND	ug/kg	231	1		01/11/22 01:26	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	11.5	1		01/11/22 01:26	98-82-8	
p-Isopropyltoluene	ND	ug/kg	11.5	1		01/11/22 01:26	99-87-6	
Methylene Chloride	ND	ug/kg	46.2	1		01/11/22 01:26	75-09-2	
1-Methylnaphthalene	ND	ug/kg	23.1	1		01/11/22 01:26	90-12-0	
2-Methylnaphthalene	ND	ug/kg	23.1	1		01/11/22 01:26	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	57.7	1		01/11/22 01:26	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	11.5	1		01/11/22 01:26	1634-04-4	
Naphthalene	ND	ug/kg	11.5	1		01/11/22 01:26	91-20-3	
n-Propylbenzene	ND	ug/kg	11.5	1		01/11/22 01:26	103-65-1	
Styrene	ND	ug/kg	11.5	1		01/11/22 01:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	11.5	1		01/11/22 01:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	11.5	1		01/11/22 01:26	79-34-5	
Tetrachloroethene	ND	ug/kg	11.5	1		01/11/22 01:26	127-18-4	
Toluene	ND	ug/kg	11.5	1		01/11/22 01:26	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	11.5	1		01/11/22 01:26	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	11.5	1		01/11/22 01:26	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	11.5	1		01/11/22 01:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	11.5	1		01/11/22 01:26	79-00-5	
Trichloroethene	ND	ug/kg	11.5	1		01/11/22 01:26	79-01-6	
Trichlorofluoromethane	ND	ug/kg	11.5	1		01/11/22 01:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	11.5	1		01/11/22 01:26	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	11.5	1		01/11/22 01:26	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	11.5	1		01/11/22 01:26	108-67-8	
Vinyl acetate	ND	ug/kg	231	1		01/11/22 01:26	108-05-4	
Vinyl chloride	ND	ug/kg	11.5	1		01/11/22 01:26	75-01-4	
Xylene (Total)	ND	ug/kg	23.1	1		01/11/22 01:26	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	98	%	73-132	1		01/11/22 01:26	1868-53-7	
Toluene-d8 (S)	103	%	66-148	1		01/11/22 01:26	2037-26-5	

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

**Sample: A48-sed**      **Lab ID: 50306625002**      Collected: 01/06/22 12:35      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	85	%	40-149	1		01/11/22 01:26	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>49.2</b>	%	0.10	1		01/08/22 08:55		N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

**Sample: A49s**      **Lab ID: 50306625003**      Collected: 01/06/22 12:45      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>7.2</b>	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:24	7440-38-2	
Barium	<b>115</b>	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:24	7440-39-3	
Cadmium	ND	mg/kg	0.83	1	01/11/22 10:22	01/13/22 11:24	7440-43-9	
Chromium	<b>18.5</b>	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:24	7440-47-3	
Lead	<b>116</b>	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:24	7439-92-1	
Lithium	<b>15.4</b>	mg/kg	8.3	1	01/11/22 10:22	01/13/22 11:24	7439-93-2	N2
Selenium	ND	mg/kg	1.7	1	01/11/22 10:22	01/13/22 11:24	7782-49-2	
Silver	ND	mg/kg	0.83	1	01/11/22 10:22	01/13/22 11:24	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.33	1	01/11/22 11:25	01/13/22 09:23	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>40.7</b>	%	0.10	1		01/08/22 08:55		N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

**Sample: DUP**      **Lab ID: 50306625004**      Collected: 01/06/22 08:00      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	<b>7.9</b>	mg/kg	1.4	1	01/11/22 10:22	01/13/22 11:26	7440-38-2	
Barium	<b>107</b>	mg/kg	1.4	1	01/11/22 10:22	01/13/22 11:26	7440-39-3	
Cadmium	ND	mg/kg	0.71	1	01/11/22 10:22	01/13/22 11:26	7440-43-9	
Chromium	<b>18.3</b>	mg/kg	1.4	1	01/11/22 10:22	01/13/22 11:26	7440-47-3	
Lead	<b>111</b>	mg/kg	1.4	1	01/11/22 10:22	01/13/22 11:26	7439-92-1	
Lithium	<b>15.7</b>	mg/kg	7.1	1	01/11/22 10:22	01/13/22 11:26	7439-93-2	N2
Selenium	ND	mg/kg	1.4	1	01/11/22 10:22	01/13/22 11:26	7782-49-2	
Silver	ND	mg/kg	0.71	1	01/11/22 10:22	01/13/22 11:26	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.33	1	01/11/22 11:25	01/13/22 09:25	7439-97-6	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>38.6</b>	%	0.10	1		01/08/22 08:55		N2

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306625

QC Batch: 658512	Analysis Method: EPA 7470
QC Batch Method: EPA 7470	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306625001

METHOD BLANK: 3034138 Matrix: Water

Associated Lab Samples: 50306625001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	2.0	01/14/22 12:11	

LABORATORY CONTROL SAMPLE: 3034139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034140 3034141

Parameter	Units	3034140		3034141		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306625001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	ug/L	ND	5	5	5.0	5.0	99	98	75-125	0	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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

QC Batch: 658134

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306625002, 50306625003, 50306625004

METHOD BLANK: 3032522

Matrix: Solid

Associated Lab Samples: 50306625002, 50306625003, 50306625004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/13/22 08:58	

LABORATORY CONTROL SAMPLE: 3032523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.52	0.54	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032524 3032525

Parameter	Units	50306619001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	0.66	0.66	0.72	0.74	103	106	75-125	2	20	

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II  
Pace Project No.: 50306625

QC Batch: 658130 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis  
Associated Lab Samples: 50306625002, 50306625003, 50306625004

METHOD BLANK: 3032509 Matrix: Solid  
Associated Lab Samples: 50306625002, 50306625003, 50306625004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.92	01/13/22 10:40	
Barium	mg/kg	ND	0.92	01/13/22 10:40	
Cadmium	mg/kg	ND	0.46	01/13/22 10:40	
Chromium	mg/kg	ND	0.92	01/13/22 10:40	
Lead	mg/kg	ND	0.92	01/13/22 10:40	
Lithium	mg/kg	ND	4.6	01/13/22 10:40	N2
Selenium	mg/kg	ND	0.92	01/13/22 10:40	
Silver	mg/kg	ND	0.46	01/13/22 10:40	

LABORATORY CONTROL SAMPLE: 3032510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	45.2	44.7	99	80-120	
Barium	mg/kg	45.2	44.0	97	80-120	
Cadmium	mg/kg	45.2	43.1	95	80-120	
Chromium	mg/kg	45.2	46.4	103	80-120	
Lead	mg/kg	45.2	42.2	93	80-120	
Lithium	mg/kg	45.2	44.9	99	80-120	N2
Selenium	mg/kg	45.2	43.4	96	80-120	
Silver	mg/kg	22.6	21.3	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032511 3032512

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	Spike Conc.	Spike Conc.	Conc.								
Arsenic	mg/kg	3.4	74.7	74.9	74.9	74.9	73.6	96	94	75-125	2	20	
Barium	mg/kg	85.4	74.7	74.9	74.9	160	166	100	107	75-125	3	20	
Cadmium	mg/kg	ND	74.7	74.9	74.9	67.9	67.1	91	89	75-125	1	20	
Chromium	mg/kg	9.3	74.7	74.9	74.9	77.5	78.3	91	92	75-125	1	20	
Lead	mg/kg	40.8	74.7	74.9	74.9	96.3	99.1	74	78	75-125	3	20	M0
Lithium	mg/kg	9.0	74.7	74.9	74.9	80.5	80.1	96	95	75-125	0	20	N2
Selenium	mg/kg	ND	74.7	74.9	74.9	67.4	66.1	90	88	75-125	2	20	
Silver	mg/kg	ND	37.3	37.5	37.5	34.0	33.5	91	90	75-125	1	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032513 3032514														
Parameter	Units	50306619001		3032513		3032514		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/kg	7.3	61.9	56.4	63.6	53.9	91	83	75-125	16	20			
Barium	mg/kg	90.8	61.9	56.4	165	154	120	112	75-125	7	20			
Cadmium	mg/kg	ND	61.9	56.4	54.9	45.9	88	81	75-125	18	20			
Chromium	mg/kg	16.2	61.9	56.4	77.1	64.3	98	85	75-125	18	20			
Lead	mg/kg	19.7	61.9	56.4	69.7	60.0	81	72	75-125	15	20	M0		
Lithium	mg/kg	9.8	61.9	56.4	70.3	58.9	98	87	75-125	18	20	N2		
Selenium	mg/kg	ND	61.9	56.4	54.5	45.3	88	80	75-125	18	20			
Silver	mg/kg	ND	31	28.1	26.7	22.6	86	80	75-125	17	20			

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306625

QC Batch: 658009      Analysis Method: EPA 6010  
QC Batch Method: EPA 3010      Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306625001

METHOD BLANK: 3032099      Matrix: Water  
Associated Lab Samples: 50306625001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	01/11/22 11:26	
Barium	ug/L	ND	10.0	01/11/22 11:26	
Cadmium	ug/L	ND	2.0	01/11/22 11:26	
Chromium	ug/L	ND	10.0	01/11/22 11:26	
Lead	ug/L	ND	10.0	01/11/22 11:26	
Lithium	ug/L	ND	20.0	01/11/22 11:26	
Selenium	ug/L	ND	10.0	01/11/22 11:26	
Silver	ug/L	ND	10.0	01/11/22 11:26	

LABORATORY CONTROL SAMPLE: 3032100

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	1040	104	80-120	
Barium	ug/L	1000	1040	104	80-120	
Cadmium	ug/L	1000	998	100	80-120	
Chromium	ug/L	1000	1030	103	80-120	
Lead	ug/L	1000	970	97	80-120	
Lithium	ug/L	1000	1040	104	80-120	
Selenium	ug/L	1000	1010	101	80-120	
Silver	ug/L	500	483	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032101      3032102

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306625001	Result	Spike Conc.	Spike Conc.								
Arsenic	ug/L	ND	1000	1000	1110	1100	111	110	75-125	0	20		
Barium	ug/L	155	1000	1000	1260	1260	110	110	75-125	0	20		
Cadmium	ug/L	ND	1000	1000	1040	1040	104	104	75-125	0	20		
Chromium	ug/L	ND	1000	1000	1060	1060	106	105	75-125	1	20		
Lead	ug/L	ND	1000	1000	979	982	98	98	75-125	0	20		
Lithium	ug/L	ND	1000	1000	1080	1090	107	108	75-125	1	20		
Selenium	ug/L	ND	1000	1000	1060	1060	105	106	75-125	0	20		
Silver	ug/L	ND	500	500	508	504	102	101	75-125	1	20		

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

QC Batch: 658149

Analysis Method: EPA 5030/8260

QC Batch Method: EPA 5030/8260

Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306625001

METHOD BLANK: 3032569

Matrix: Water

Associated Lab Samples: 50306625001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1,1-Trichloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1,2-Trichloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1-Dichloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1-Dichloroethene	ug/L	ND	5.0	01/11/22 09:26	
1,1-Dichloropropene	ug/L	ND	5.0	01/11/22 09:26	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1,2,3-Trichloropropane	ug/L	ND	5.0	01/11/22 09:26	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	01/11/22 09:26	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	01/11/22 09:26	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1,2-Dichloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,2-Dichloropropane	ug/L	ND	5.0	01/11/22 09:26	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	01/11/22 09:26	
1,3-Dichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1,3-Dichloropropane	ug/L	ND	5.0	01/11/22 09:26	
1,4-Dichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1-Methylnaphthalene	ug/L	ND	10.0	01/11/22 09:26	
2,2-Dichloropropane	ug/L	ND	5.0	01/11/22 09:26	
2-Butanone (MEK)	ug/L	ND	25.0	01/11/22 09:26	
2-Chlorotoluene	ug/L	ND	5.0	01/11/22 09:26	
2-Hexanone	ug/L	ND	25.0	01/11/22 09:26	
2-Methylnaphthalene	ug/L	ND	10.0	01/11/22 09:26	
4-Chlorotoluene	ug/L	ND	5.0	01/11/22 09:26	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	01/11/22 09:26	
Acetone	ug/L	ND	100	01/11/22 09:26	
Acrolein	ug/L	ND	50.0	01/11/22 09:26	
Acrylonitrile	ug/L	ND	100	01/11/22 09:26	
Benzene	ug/L	ND	5.0	01/11/22 09:26	
Bromobenzene	ug/L	ND	5.0	01/11/22 09:26	
Bromochloromethane	ug/L	ND	5.0	01/11/22 09:26	
Bromodichloromethane	ug/L	ND	5.0	01/11/22 09:26	
Bromoform	ug/L	ND	5.0	01/11/22 09:26	
Bromomethane	ug/L	ND	5.0	01/11/22 09:26	
Carbon disulfide	ug/L	ND	10.0	01/11/22 09:26	
Carbon tetrachloride	ug/L	ND	5.0	01/11/22 09:26	
Chlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
Chloroethane	ug/L	ND	5.0	01/11/22 09:26	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

METHOD BLANK: 3032569

Matrix: Water

Associated Lab Samples: 50306625001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	01/11/22 09:26	
Chloromethane	ug/L	ND	5.0	01/11/22 09:26	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/11/22 09:26	
cis-1,3-Dichloropropene	ug/L	ND	5.0	01/11/22 09:26	
Dibromochloromethane	ug/L	ND	5.0	01/11/22 09:26	
Dibromomethane	ug/L	ND	5.0	01/11/22 09:26	
Dichlorodifluoromethane	ug/L	ND	5.0	01/11/22 09:26	
Ethyl methacrylate	ug/L	ND	100	01/11/22 09:26	
Ethylbenzene	ug/L	ND	5.0	01/11/22 09:26	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	01/11/22 09:26	
Iodomethane	ug/L	ND	10.0	01/11/22 09:26	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	01/11/22 09:26	
Methyl-tert-butyl ether	ug/L	ND	4.0	01/11/22 09:26	
Methylene Chloride	ug/L	ND	5.0	01/11/22 09:26	
n-Butylbenzene	ug/L	ND	5.0	01/11/22 09:26	
n-Hexane	ug/L	ND	5.0	01/11/22 09:26	
n-Propylbenzene	ug/L	ND	5.0	01/11/22 09:26	
Naphthalene	ug/L	ND	1.2	01/11/22 09:26	
p-Isopropyltoluene	ug/L	ND	5.0	01/11/22 09:26	
sec-Butylbenzene	ug/L	ND	5.0	01/11/22 09:26	
Styrene	ug/L	ND	5.0	01/11/22 09:26	
tert-Butylbenzene	ug/L	ND	5.0	01/11/22 09:26	
Tetrachloroethene	ug/L	ND	5.0	01/11/22 09:26	
Toluene	ug/L	ND	5.0	01/11/22 09:26	
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/11/22 09:26	
trans-1,3-Dichloropropene	ug/L	ND	5.0	01/11/22 09:26	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	01/11/22 09:26	
Trichloroethene	ug/L	ND	5.0	01/11/22 09:26	
Trichlorofluoromethane	ug/L	ND	5.0	01/11/22 09:26	
Vinyl acetate	ug/L	ND	50.0	01/11/22 09:26	
Vinyl chloride	ug/L	ND	2.0	01/11/22 09:26	
Xylene (Total)	ug/L	ND	10.0	01/11/22 09:26	
4-Bromofluorobenzene (S)	%	105	78-117	01/11/22 09:26	
Dibromofluoromethane (S)	%	101	78-120	01/11/22 09:26	
Toluene-d8 (S)	%	102	77-118	01/11/22 09:26	

LABORATORY CONTROL SAMPLE: 3032570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.3	101	76-125	
1,1,1-Trichloroethane	ug/L	50	52.9	106	73-132	
1,1,2,2-Tetrachloroethane	ug/L	50	56.3	113	65-131	
1,1,2-Trichloroethane	ug/L	50	53.3	107	74-127	
1,1-Dichloroethane	ug/L	50	54.7	109	73-133	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

LABORATORY CONTROL SAMPLE: 3032570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	58.7	117	67-136	
1,1-Dichloropropene	ug/L	50	60.7	121	72-128	
1,2,3-Trichlorobenzene	ug/L	50	45.4	91	58-136	
1,2,3-Trichloropropane	ug/L	50	49.9	100	69-126	
1,2,4-Trichlorobenzene	ug/L	50	46.5	93	48-149	
1,2,4-Trimethylbenzene	ug/L	50	52.0	104	68-122	
1,2-Dibromoethane (EDB)	ug/L	50	50.4	101	76-126	
1,2-Dichlorobenzene	ug/L	50	50.4	101	75-114	
1,2-Dichloroethane	ug/L	50	54.8	110	69-135	
1,2-Dichloropropane	ug/L	50	54.8	110	78-134	
1,3,5-Trimethylbenzene	ug/L	50	51.6	103	68-120	
1,3-Dichlorobenzene	ug/L	50	49.6	99	70-119	
1,3-Dichloropropane	ug/L	50	53.1	106	74-131	
1,4-Dichlorobenzene	ug/L	50	49.2	98	69-117	
1-Methylnaphthalene	ug/L	50	49.4	99	68-139	
2,2-Dichloropropane	ug/L	50	54.5	109	61-127	
2-Butanone (MEK)	ug/L	250	315	126	56-164	
2-Chlorotoluene	ug/L	50	51.5	103	74-115	
2-Hexanone	ug/L	250	315	126	63-137	
2-Methylnaphthalene	ug/L	50	51.6	103	62-129	
4-Chlorotoluene	ug/L	50	51.1	102	74-115	
4-Methyl-2-pentanone (MIBK)	ug/L	250	310	124	64-134	
Acetone	ug/L	250	361	145	46-140	L1
Acrolein	ug/L	1000	984	98	53-126	
Acrylonitrile	ug/L	250	287	115	68-132	
Benzene	ug/L	50	52.4	105	77-128	
Bromobenzene	ug/L	50	54.5	109	62-133	
Bromochloromethane	ug/L	50	58.3	117	71-124	
Bromodichloromethane	ug/L	50	53.9	108	70-124	
Bromoform	ug/L	50	45.7	91	65-116	
Bromomethane	ug/L	50	56.5	113	10-200	
Carbon disulfide	ug/L	50	52.0	104	70-131	
Carbon tetrachloride	ug/L	50	54.4	109	61-139	
Chlorobenzene	ug/L	50	49.8	100	76-124	
Chloroethane	ug/L	50	59.2	118	56-142	
Chloroform	ug/L	50	53.0	106	77-120	
Chloromethane	ug/L	50	52.7	105	29-141	
cis-1,2-Dichloroethene	ug/L	50	52.1	104	72-127	
cis-1,3-Dichloropropene	ug/L	50	53.9	108	71-131	
Dibromochloromethane	ug/L	50	49.6	99	69-132	
Dibromomethane	ug/L	50	52.4	105	76-130	
Dichlorodifluoromethane	ug/L	50	43.3	87	23-139	
Ethyl methacrylate	ug/L	50	56J	112	66-128	
Ethylbenzene	ug/L	50	50.7	101	76-119	
Hexachloro-1,3-butadiene	ug/L	50	47.9	96	58-140	
Iodomethane	ug/L	50	48.7	97	10-200	
Isopropylbenzene (Cumene)	ug/L	50	52.2	104	77-128	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

LABORATORY CONTROL SAMPLE: 3032570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methyl-tert-butyl ether	ug/L	50	56.0	112	75-129	
Methylene Chloride	ug/L	50	55.3	111	72-129	
n-Butylbenzene	ug/L	50	54.5	109	59-128	
n-Hexane	ug/L	50	57.1	114	75-141	
n-Propylbenzene	ug/L	50	52.7	105	71-116	
Naphthalene	ug/L	50	48.9	98	67-136	
p-Isopropyltoluene	ug/L	50	51.5	103	67-123	
sec-Butylbenzene	ug/L	50	53.8	108	70-119	
Styrene	ug/L	50	51.9	104	66-123	
tert-Butylbenzene	ug/L	50	51.6	103	54-133	
Tetrachloroethene	ug/L	50	47.3	95	70-124	
Toluene	ug/L	50	50.0	100	72-117	
trans-1,2-Dichloroethene	ug/L	50	52.2	104	75-133	
trans-1,3-Dichloropropene	ug/L	50	53.4	107	75-111	
trans-1,4-Dichloro-2-butene	ug/L	50	63.4J	127	39-147	
Trichloroethene	ug/L	50	51.4	103	75-130	
Trichlorofluoromethane	ug/L	50	52.7	105	63-162	
Vinyl acetate	ug/L	200	187	93	42-139	
Vinyl chloride	ug/L	50	55.0	110	51-140	
Xylene (Total)	ug/L	150	148	99	73-117	
4-Bromofluorobenzene (S)	%			103	78-117	
Dibromofluoromethane (S)	%			100	78-120	
Toluene-d8 (S)	%			100	77-118	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032571 3032572

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306625001 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	51.8	50.6	104	101	40-147	2	20		
1,1,1-Trichloroethane	ug/L	ND	50	50	53.5	53.5	107	107	53-161	0	20		
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	55.0	54.0	110	108	58-134	2	20		
1,1,2-Trichloroethane	ug/L	ND	50	50	53.9	54.0	108	108	60-141	0	20		
1,1-Dichloroethane	ug/L	ND	50	50	57.7	57.3	115	115	67-140	1	20		
1,1-Dichloroethene	ug/L	ND	50	50	62.1	59.7	124	119	59-154	4	20		
1,1-Dichloropropene	ug/L	ND	50	50	60.6	61.0	121	122	31-153	1	20		
1,2,3-Trichlorobenzene	ug/L	ND	50	50	42.8	41.5	86	83	10-151	3	20		
1,2,3-Trichloropropane	ug/L	ND	50	50	50.8	49.8	102	100	63-140	2	20		
1,2,4-Trichlorobenzene	ug/L	ND	50	50	42.0	39.5	84	79	10-156	6	20		
1,2,4-Trimethylbenzene	ug/L	ND	50	50	50.6	49.9	101	100	11-145	1	20		
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	52.1	51.0	104	102	54-144	2	20		
1,2-Dichlorobenzene	ug/L	ND	50	50	49.7	48.4	99	97	17-145	3	20		
1,2-Dichloroethane	ug/L	ND	50	50	57.0	56.7	114	113	66-130	1	20		
1,2-Dichloropropane	ug/L	ND	50	50	56.6	56.4	113	113	65-136	0	20		
1,3,5-Trimethylbenzene	ug/L	ND	50	50	51.3	50.0	103	100	11-143	2	20		
1,3-Dichlorobenzene	ug/L	ND	50	50	47.1	45.7	94	91	10-146	3	20		

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032571 3032572												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306625001 Result	Spike Conc.	Spike Conc.	MS Result							
1,3-Dichloropropane	ug/L	ND	50	50	55.3	54.5	111	109	53-145	1	20	
1,4-Dichlorobenzene	ug/L	ND	50	50	47.0	45.3	94	91	17-141	4	20	
1-Methylnaphthalene	ug/L	ND	50	50	46.7	45.1	93	90	28-147	3	20	
2,2-Dichloropropane	ug/L	ND	50	50	53.6	53.7	107	107	35-142	0	20	
2-Butanone (MEK)	ug/L	ND	250	250	314	309	126	124	49-173	2	20	
2-Chlorotoluene	ug/L	ND	50	50	51.2	49.9	102	100	10-148	3	20	
2-Hexanone	ug/L	ND	250	250	311	308	124	123	57-142	1	20	
2-Methylnaphthalene	ug/L	ND	50	50	47.5	45.4	95	91	15-141	5	20	
4-Chlorotoluene	ug/L	ND	50	50	50.2	48.8	100	98	11-142	3	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	310	306	124	123	59-139	1	20	
Acetone	ug/L	ND	250	250	394	379	157	152	44-171	4	20	
Acrolein	ug/L	ND	1000	1000	980	958	98	96	25-131	2	20	
Acrylonitrile	ug/L	ND	250	250	286	286	114	114	60-145	0	20	
Benzene	ug/L	ND	50	50	53.5	53.8	107	108	69-128	1	20	
Bromobenzene	ug/L	ND	50	50	55.7	53.3	111	107	10-157	5	20	
Bromochloromethane	ug/L	ND	50	50	63.3	63.2	127	126	58-138	0	20	
Bromodichloromethane	ug/L	ND	50	50	54.8	55.1	110	110	51-138	0	20	
Bromoform	ug/L	ND	50	50	45.5	44.1	91	88	43-130	3	20	
Bromomethane	ug/L	ND	50	50	62.0	59.5	124	119	10-195	4	20	
Carbon disulfide	ug/L	ND	50	50	55.7	54.4	111	109	37-149	2	20	
Carbon tetrachloride	ug/L	ND	50	50	54.7	55.4	109	111	39-155	1	20	
Chlorobenzene	ug/L	ND	50	50	50.4	50.0	101	100	28-147	1	20	
Chloroethane	ug/L	ND	50	50	66.4	65.4	133	131	58-158	2	20	
Chloroform	ug/L	ND	50	50	54.3	54.0	109	108	54-141	1	20	
Chloromethane	ug/L	ND	50	50	57.0	57.2	114	114	41-145	0	20	
cis-1,2-Dichloroethene	ug/L	ND	50	50	52.7	53.2	105	106	45-150	1	20	
cis-1,3-Dichloropropene	ug/L	ND	50	50	54.1	53.9	108	108	42-139	0	20	
Dibromochloromethane	ug/L	ND	50	50	51.1	50.1	102	100	48-139	2	20	
Dibromomethane	ug/L	ND	50	50	52.9	52.8	106	106	58-140	0	20	
Dichlorodifluoromethane	ug/L	ND	50	50	43.2	43.3	86	87	45-161	0	20	
Ethyl methacrylate	ug/L	ND	50	50	56.2J	55.2J	112	110	63-149		20	
Ethylbenzene	ug/L	ND	50	50	50.5	49.7	101	99	36-144	2	20	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	43.7	41.8	87	84	10-164	4	20	
Iodomethane	ug/L	ND	50	50	51.7	52.5	103	105	10-196	2	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	52.8	51.7	106	103	21-148	2	20	
Methyl-tert-butyl ether	ug/L	ND	50	50	57.2	56.8	114	114	72-135	1	20	
Methylene Chloride	ug/L	ND	50	50	54.4	53.4	109	107	58-136	2	20	
n-Butylbenzene	ug/L	ND	50	50	51.5	49.5	103	99	10-147	4	20	
n-Hexane	ug/L	ND	50	50	57.2	58.1	114	116	52-157	2	20	
n-Propylbenzene	ug/L	ND	50	50	52.2	50.3	104	101	11-141	4	20	
Naphthalene	ug/L	ND	50	50	46.8	44.8	94	90	45-134	4	20	
p-Isopropyltoluene	ug/L	ND	50	50	50.5	48.6	101	97	10-149	4	20	
sec-Butylbenzene	ug/L	ND	50	50	53.2	51.7	106	103	10-148	3	20	
Styrene	ug/L	ND	50	50	53.3	51.6	107	103	19-143	3	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

Parameter	Units	3032571		3032572		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306625001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
tert-Butylbenzene	ug/L	ND	50	50	50.2	49.9	100	100	14-123	0	20		
Tetrachloroethene	ug/L	ND	50	50	46.9	46.7	94	93	26-148	1	20		
Toluene	ug/L	ND	50	50	50.9	50.9	101	101	46-134	0	20		
trans-1,2-Dichloroethene	ug/L	ND	50	50	52.5	52.0	105	104	43-155	1	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	54.8	53.0	110	106	39-132	3	20		
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	61.5J	60.6J	123	121	18-143		20		
Trichloroethene	ug/L	ND	50	50	51.0	51.7	102	103	35-151	1	20		
Trichlorofluoromethane	ug/L	ND	50	50	55.0	54.3	110	109	55-170	1	20		
Vinyl acetate	ug/L	ND	200	200	176	173	88	87	24-134	2	20		
Vinyl chloride	ug/L	ND	50	50	57.6	57.2	115	114	59-146	1	20		
Xylene (Total)	ug/L	ND	150	150	151	148	101	99	32-140	2	20		
4-Bromofluorobenzene (S)	%						106	104	78-117				
Dibromofluoromethane (S)	%						101	102	78-120				
Toluene-d8 (S)	%						101	99	77-118				

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306625

QC Batch: 658080	Analysis Method: EPA 8260
QC Batch Method: EPA 8260	Analysis Description: 8260 MSV 5035A Volatile Organics
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306625002

METHOD BLANK: 3032291 Matrix: Solid

Associated Lab Samples: 50306625002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,1-Trichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,2-Trichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,3-Trichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,3-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,3-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,4-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1-Methylnaphthalene	ug/kg	ND	10.0	01/10/22 19:46	
2,2-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
2-Butanone (MEK)	ug/kg	ND	25.0	01/10/22 19:46	
2-Chlorotoluene	ug/kg	ND	5.0	01/10/22 19:46	
2-Hexanone	ug/kg	ND	100	01/10/22 19:46	
2-Methylnaphthalene	ug/kg	ND	10.0	01/10/22 19:46	
4-Chlorotoluene	ug/kg	ND	5.0	01/10/22 19:46	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	25.0	01/10/22 19:46	
Acetone	ug/kg	ND	100	01/10/22 19:46	
Acrolein	ug/kg	ND	100	01/10/22 19:46	
Acrylonitrile	ug/kg	ND	100	01/10/22 19:46	
Benzene	ug/kg	ND	5.0	01/10/22 19:46	
Bromobenzene	ug/kg	ND	5.0	01/10/22 19:46	
Bromochloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Bromodichloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Bromoform	ug/kg	ND	5.0	01/10/22 19:46	
Bromomethane	ug/kg	ND	5.0	01/10/22 19:46	
Carbon disulfide	ug/kg	ND	10.0	01/10/22 19:46	
Carbon tetrachloride	ug/kg	ND	5.0	01/10/22 19:46	
Chlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
Chloroethane	ug/kg	ND	5.0	01/10/22 19:46	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

METHOD BLANK: 3032291

Matrix: Solid

Associated Lab Samples: 50306625002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/kg	ND	5.0	01/10/22 19:46	
Chloromethane	ug/kg	ND	5.0	01/10/22 19:46	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
Dibromochloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Dibromomethane	ug/kg	ND	5.0	01/10/22 19:46	
Dichlorodifluoromethane	ug/kg	ND	5.0	01/10/22 19:46	
Ethyl methacrylate	ug/kg	ND	100	01/10/22 19:46	
Ethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	01/10/22 19:46	
Iodomethane	ug/kg	ND	100	01/10/22 19:46	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	01/10/22 19:46	
Methyl-tert-butyl ether	ug/kg	ND	5.0	01/10/22 19:46	
Methylene Chloride	ug/kg	ND	20.0	01/10/22 19:46	
n-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
n-Hexane	ug/kg	ND	5.0	01/10/22 19:46	
n-Propylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Naphthalene	ug/kg	ND	5.0	01/10/22 19:46	
p-Isopropyltoluene	ug/kg	ND	5.0	01/10/22 19:46	
sec-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Styrene	ug/kg	ND	5.0	01/10/22 19:46	
tert-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Tetrachloroethene	ug/kg	ND	5.0	01/10/22 19:46	
Toluene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,4-Dichloro-2-butene	ug/kg	ND	100	01/10/22 19:46	
Trichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
Trichlorofluoromethane	ug/kg	ND	5.0	01/10/22 19:46	
Vinyl acetate	ug/kg	ND	100	01/10/22 19:46	
Vinyl chloride	ug/kg	ND	5.0	01/10/22 19:46	
Xylene (Total)	ug/kg	ND	10.0	01/10/22 19:46	
4-Bromofluorobenzene (S)	%	97	40-149	01/10/22 19:46	
Dibromofluoromethane (S)	%	101	73-132	01/10/22 19:46	
Toluene-d8 (S)	%	96	66-148	01/10/22 19:46	

LABORATORY CONTROL SAMPLE: 3032292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	50	43.6	87	68-129	
1,1,2,2-Tetrachloroethane	ug/kg	50	44.1	88	67-137	
1,1-Dichloroethene	ug/kg	50	46.8	94	53-135	
1,2,4-Trimethylbenzene	ug/kg	50	44.1	88	61-125	
1,2-Dibromoethane (EDB)	ug/kg	50	48.7	97	68-125	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

LABORATORY CONTROL SAMPLE: 3032292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/kg	50	45.9	92	69-128	
1,2-Dichloropropane	ug/kg	50	45.7	91	70-130	
Benzene	ug/kg	50	45.9	92	69-125	
Chlorobenzene	ug/kg	50	44.6	89	66-121	
Chloroform	ug/kg	50	44.2	88	66-123	
cis-1,2-Dichloroethene	ug/kg	50	44.5	89	67-122	
Ethylbenzene	ug/kg	50	46.0	92	57-126	
Isopropylbenzene (Cumene)	ug/kg	50	46.8	94	62-132	
Methyl-tert-butyl ether	ug/kg	50	47.0	94	66-136	
Naphthalene	ug/kg	50	44.4	89	59-131	
Tetrachloroethene	ug/kg	50	44.9	90	61-123	
Toluene	ug/kg	50	45.8	92	67-128	
trans-1,2-Dichloroethene	ug/kg	50	42.6	85	61-127	
Trichloroethene	ug/kg	50	44.6	89	64-122	
Vinyl chloride	ug/kg	50	41.4	83	42-148	
Xylene (Total)	ug/kg	150	149	100	62-126	
4-Bromofluorobenzene (S)	%			102	40-149	
Dibromofluoromethane (S)	%			99	73-132	
Toluene-d8 (S)	%			98	66-148	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032293 3032294

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1-Trichloroethane	ug/kg	ND	133	100	133	103	99	103	38-149	25	20	R1	
1,1,2,2-Tetrachloroethane	ug/kg	ND	133	100	147	111	110	111	19-169	28	20	R1	
1,1-Dichloroethene	ug/kg	ND	133	100	153	121	115	121	24-162	23	20	R1	
1,2,4-Trimethylbenzene	ug/kg	ND	133	100	137	97.3	103	97	10-169	34	20	R1	
1,2-Dibromoethane (EDB)	ug/kg	ND	133	100	130	89.7	98	90	19-153	37	20	R1	
1,2-Dichloroethane	ug/kg	ND	133	100	134	98.6	100	99	32-146	30	20	R1	
1,2-Dichloropropane	ug/kg	ND	133	100	129	99.1	97	99	39-141	26	20	R1	
Benzene	ug/kg	ND	133	100	136	102	102	102	35-140	28	20	R1	
Chlorobenzene	ug/kg	ND	133	100	120	80.5	90	80	16-142	40	20	R1	
Chloroform	ug/kg	ND	133	100	133	102	100	102	30-146	27	20	R1	
cis-1,2-Dichloroethene	ug/kg	ND	133	100	133	101	100	101	30-145	28	20	R1	
Ethylbenzene	ug/kg	ND	133	100	131	88.5	98	88	10-150	38	20	R1	
Isopropylbenzene (Cumene)	ug/kg	ND	133	100	131	91.6	99	92	10-153	36	20	R1	
Methyl-tert-butyl ether	ug/kg	ND	133	100	138	106	104	106	45-153	26	20	R1	
Naphthalene	ug/kg	ND	133	100	87.0	53.3	65	53	10-130	48	20	R1	
Tetrachloroethene	ug/kg	ND	133	100	138	105	104	105	10-179	28	20	R1	
Toluene	ug/kg	ND	133	100	139	98.1	104	98	20-158	34	20	R1	
trans-1,2-Dichloroethene	ug/kg	ND	133	100	128	100	96	100	24-149	25	20	R1	
Trichloroethene	ug/kg	ND	133	100	122	93.2	91	93	10-168	26	20	R1	
Vinyl chloride	ug/kg	ND	133	100	136	105	102	105	10-165	26	20	R1	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

Parameter	Units	3032293		3032294		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Xylene (Total)	ug/kg	ND	400	300	415	284	104	95	10-152	38	20	RS	
4-Bromofluorobenzene (S)	%						96	89	40-149				
Dibromofluoromethane (S)	%						97	96	73-132				
Toluene-d8 (S)	%						107	108	66-148				

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

QC Batch: 657974

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306625002, 50306625003, 50306625004

SAMPLE DUPLICATE: 3031995

Parameter	Units	50306616001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	42.7	47.6	11	5	N2,R1

SAMPLE DUPLICATE: 3031996

Parameter	Units	50306619001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.5	22.8	2	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

RS The RPD value in one of the constituent analytes was outside the control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306625

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306625002	A48-sed	EPA 3050	658130	EPA 6010	658450
50306625003	A49s	EPA 3050	658130	EPA 6010	658450
50306625004	DUP	EPA 3050	658130	EPA 6010	658450
50306625001	SW-1 (MS/MSD)	EPA 3010	658009	EPA 6010	658163
50306625001	SW-1 (MS/MSD)	EPA 7470	658512	EPA 7470	658586
50306625002	A48-sed	EPA 7471	658134	EPA 7471	658401
50306625003	A49s	EPA 7471	658134	EPA 7471	658401
50306625004	DUP	EPA 7471	658134	EPA 7471	658401
50306625001	SW-1 (MS/MSD)	EPA 5030/8260	658149		
50306625002	A48-sed	EPA 8260	658080		
50306625002	A48-sed	SM 2540G	657974		
50306625003	A49s	SM 2540G	657974		
50306625004	DUP	SM 2540G	657974		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

# WO# : 50306625



Order Number or

SE ONLY

Company: Mundell and Associates, Inc. Billing Information:  
Address: 110 S Downey Ave, Indianapolis, IN 46219 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com

Copy To: Site Collection Info/Address:  
4849 BLK S Delaware Dr Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II State: County/City: Time Zone Collected:  
IN / Muncie [ ]PT [ ]MT [ ]CT [X]ET

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring?  
Email: ljohnstone@mundellassociates.com [ ] Yes [ ] No

Collected By (print): Luke Johnstone Purchase Order #: DW PWS ID #:  
Quote #: DW Location Code:

Collected By (signature): Turnaround Date Required: Immediately Packed on Ice:  
[X] Yes [ ] No

Sample Disposal: Rush: (Expedite Charges Apply) Field Filtered (if applicable):  
[X] Disposal appropriate [ ] Same Day [ ] Next Day [ ] Yes [ ] No  
[ ] Return [ ] 2 Day [ ] 3 Day  
[ ] Archive: [ ] 4 Day [ ] 5 Day  
[ ] Hold: Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals + Lithium via EPA 6010B	Total RCRA 8 Metals + Lithium	VOC's full list EPA 8260	VOC's full list EPA8260
			Date	Time	Date	Time							
SW-1 (MS/MSD)	W	Grab	1/6	12:00				12	G/P	X	X		
A48-sed	SL	Grab	1/6	12:35				5	G	X		X	
A49s	SL	Grab	1/6	12:45				1	G	X			
DUP	SL	Grab	1/6					1	G	X			

U 1 3 6/U/O  
\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water

Analyses										Lab Profile/Line:			
										Lab Sample Receipt Checklist:			
										Custody Seals Present/Intact	Y	N	NA
										Custody Signatures Present	Y	N	NA
										Collector Signature Present	Y	N	NA
										Bottles Intact	Y	N	NA
										Correct Bottles	Y	N	NA
										Sufficient Volume	Y	N	NA
										Samples Received on Ice	Y	N	NA
										VOA - Headspace Acceptable	Y	N	NA
										USDA Regulated Soils	Y	N	NA
										Samples in Holding Time	Y	N	NA
										Residual Chlorine Present	Y	N	NA
										Cl Strips:			
										Sample pH Acceptable	Y	N	NA
										pH Strips:			
										Sulfide Present	Y	N	NA
										Lead Acetate Strips:			
										LAB USE ONLY: Lab Sample # / Comments: <i>see sur</i> <i>001</i> <i>002</i> <i>003</i> <i>004</i>			

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium VOC full list	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: 4 Cooler 1 Temp Upon Receipt: 4.4 °C Cooler 1 Therm Corr. Factor: 0.2 °C Cooler 1 Corrected Temp: 4.2 °C Comments:
	Packing Material Used:	Lab Tracking #:	
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	

Relinquished by/Company: (Signature) <i>Mundell</i>	Date/Time: 1/7/22 11:00	Received by/Company: (Signature) <i>Phu</i>	Date/Time: 1/7/22 11:00	MTJL LAB USE ONLY	
Relinquished by/Company: (Signature) <i>Johnstone</i>	Date/Time: 1/7/22 12:35	Received by/Company: (Signature) <i>R. Lemus</i>	Date/Time: 1-7-22 12:35	Table #:	Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Acctnum:	Non Conformance(s): Page: _____
				Template:	YES / NO of: _____
				Prelogin:	
				PM:	
				PB:	



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC F722 15:21

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 4.4 / 4.2  
 Temp should be above freezing to 8°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, collform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis: <u>TC</u>	<input checked="" type="checkbox"/>		Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab			Time: <u>16:01</u>	<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details		<input checked="" type="checkbox"/>	
Extra labels on Terracore Vials? (soils only)	<input checked="" type="checkbox"/>		Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS

OT

MeOH  
(only)

BK

Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZNAc pH >9	NaOH pH >10	
1			9																3							WT	✓			
2																											SL			
3	1	4																												
4	1																													
5	1																													
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 17, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50306617

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306617001	A50sed	Solid	01/06/22 14:00	01/07/22 12:35
50306617002	A51sed	Solid	01/06/22 14:15	01/07/22 12:35
50306617003	DUP2	Solid	01/06/22 08:00	01/07/22 12:35
50306617004	A52sed	Solid	01/06/22 14:30	01/07/22 12:35
50306617005	SW-2	Water	01/06/22 14:45	01/07/22 12:35
50306617006	DUP3	Water	01/06/22 08:00	01/07/22 12:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306617001	A50sed	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	ADT	1	PASI-I
50306617002	A51sed	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	ADT	1	PASI-I
50306617003	DUP2	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	ADT	1	PASI-I
50306617004	A52sed	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	ADT	1	PASI-I
50306617005	SW-2	EPA 6010	JDG	8	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 5030/8260	SLB	75	PASI-I
50306617006	DUP3	EPA 6010	JDG	8	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 5030/8260	SLB	75	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306617001</b>	<b>A50sed</b>					
EPA 6010	Arsenic	4.4	mg/kg	1.2	01/13/22 11:00	
EPA 6010	Barium	71.7	mg/kg	1.2	01/13/22 11:00	
EPA 6010	Chromium	12.9	mg/kg	1.2	01/13/22 11:00	
EPA 6010	Lead	83.8	mg/kg	1.2	01/13/22 11:00	
EPA 6010	Lithium	11.6	mg/kg	6.2	01/13/22 11:00	N2
SM 2540G	Percent Moisture	28.0	%	0.10	01/08/22 08:54	N2
<b>50306617002</b>	<b>A51sed</b>					
EPA 6010	Arsenic	5.0	mg/kg	1.5	01/13/22 11:02	
EPA 6010	Barium	91.8	mg/kg	1.5	01/13/22 11:02	
EPA 6010	Chromium	14.6	mg/kg	1.5	01/13/22 11:02	
EPA 6010	Lead	53.8	mg/kg	1.5	01/13/22 11:02	
EPA 6010	Lithium	9.3	mg/kg	7.3	01/13/22 11:02	N2
SM 2540G	Percent Moisture	39.7	%	0.10	01/08/22 08:54	N2
<b>50306617003</b>	<b>DUP2</b>					
EPA 6010	Arsenic	5.4	mg/kg	1.9	01/13/22 11:04	
EPA 6010	Barium	121	mg/kg	1.9	01/13/22 11:04	
EPA 6010	Chromium	18.0	mg/kg	1.9	01/13/22 11:04	
EPA 6010	Lead	61.8	mg/kg	1.9	01/13/22 11:04	
EPA 6010	Lithium	12.1	mg/kg	9.4	01/13/22 11:04	N2
SM 2540G	Percent Moisture	50.4	%	0.10	01/08/22 08:54	N2
<b>50306617004</b>	<b>A52sed</b>					
EPA 6010	Arsenic	5.4	mg/kg	1.9	01/13/22 11:07	
EPA 6010	Barium	109	mg/kg	1.9	01/13/22 11:07	
EPA 6010	Chromium	18.0	mg/kg	1.9	01/13/22 11:07	
EPA 6010	Lead	50.6	mg/kg	1.9	01/13/22 11:07	
EPA 6010	Lithium	14.3	mg/kg	9.3	01/13/22 11:07	N2
SM 2540G	Percent Moisture	54.1	%	0.10	01/08/22 08:55	N2
<b>50306617005</b>	<b>SW-2</b>					
EPA 6010	Barium	120	ug/L	10.0	01/11/22 11:34	
<b>50306617006</b>	<b>DUP3</b>					
EPA 6010	Barium	116	ug/L	10.0	01/11/22 11:36	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

**Sample: A50sed**      **Lab ID: 50306617001**      Collected: 01/06/22 14:00      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	4.4	mg/kg	1.2	1	01/11/22 10:22	01/13/22 11:00	7440-38-2	
Barium	71.7	mg/kg	1.2	1	01/11/22 10:22	01/13/22 11:00	7440-39-3	
Cadmium	ND	mg/kg	0.62	1	01/11/22 10:22	01/13/22 11:00	7440-43-9	
Chromium	12.9	mg/kg	1.2	1	01/11/22 10:22	01/13/22 11:00	7440-47-3	
Lead	83.8	mg/kg	1.2	1	01/11/22 10:22	01/13/22 11:00	7439-92-1	
Lithium	11.6	mg/kg	6.2	1	01/11/22 10:22	01/13/22 11:00	7439-93-2	N2
Selenium	ND	mg/kg	1.2	1	01/11/22 10:22	01/13/22 11:00	7782-49-2	
Silver	ND	mg/kg	0.62	1	01/11/22 10:22	01/13/22 11:00	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.29	1	01/11/22 11:23	01/13/22 08:48	7439-97-6	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	ug/kg	116	1		01/10/22 23:49	67-64-1	
Acrolein	ND	ug/kg	116	1		01/10/22 23:49	107-02-8	
Acrylonitrile	ND	ug/kg	116	1		01/10/22 23:49	107-13-1	
Benzene	ND	ug/kg	5.8	1		01/10/22 23:49	71-43-2	
Bromobenzene	ND	ug/kg	5.8	1		01/10/22 23:49	108-86-1	
Bromochloromethane	ND	ug/kg	5.8	1		01/10/22 23:49	74-97-5	
Bromodichloromethane	ND	ug/kg	5.8	1		01/10/22 23:49	75-27-4	
Bromoform	ND	ug/kg	5.8	1		01/10/22 23:49	75-25-2	
Bromomethane	ND	ug/kg	5.8	1		01/10/22 23:49	74-83-9	
2-Butanone (MEK)	ND	ug/kg	28.9	1		01/10/22 23:49	78-93-3	
n-Butylbenzene	ND	ug/kg	5.8	1		01/10/22 23:49	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.8	1		01/10/22 23:49	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.8	1		01/10/22 23:49	98-06-6	
Carbon disulfide	ND	ug/kg	11.6	1		01/10/22 23:49	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.8	1		01/10/22 23:49	56-23-5	
Chlorobenzene	ND	ug/kg	5.8	1		01/10/22 23:49	108-90-7	
Chloroethane	ND	ug/kg	5.8	1		01/10/22 23:49	75-00-3	
Chloroform	ND	ug/kg	5.8	1		01/10/22 23:49	67-66-3	
Chloromethane	ND	ug/kg	5.8	1		01/10/22 23:49	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.8	1		01/10/22 23:49	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.8	1		01/10/22 23:49	106-43-4	
Dibromochloromethane	ND	ug/kg	5.8	1		01/10/22 23:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.8	1		01/10/22 23:49	106-93-4	
Dibromomethane	ND	ug/kg	5.8	1		01/10/22 23:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.8	1		01/10/22 23:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.8	1		01/10/22 23:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.8	1		01/10/22 23:49	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	116	1		01/10/22 23:49	110-57-6	
Dichlorodifluoromethane	ND	ug/kg	5.8	1		01/10/22 23:49	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.8	1		01/10/22 23:49	75-34-3	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

**Sample: A50sed**      **Lab ID: 50306617001**      Collected: 01/06/22 14:00      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/kg	5.8	1		01/10/22 23:49	107-06-2	
1,1-Dichloroethene	ND	ug/kg	5.8	1		01/10/22 23:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.8	1		01/10/22 23:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.8	1		01/10/22 23:49	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.8	1		01/10/22 23:49	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.8	1		01/10/22 23:49	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.8	1		01/10/22 23:49	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.8	1		01/10/22 23:49	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.8	1		01/10/22 23:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.8	1		01/10/22 23:49	10061-02-6	
Ethylbenzene	ND	ug/kg	5.8	1		01/10/22 23:49	100-41-4	
Ethyl methacrylate	ND	ug/kg	116	1		01/10/22 23:49	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/kg	5.8	1		01/10/22 23:49	87-68-3	
n-Hexane	ND	ug/kg	5.8	1		01/10/22 23:49	110-54-3	
2-Hexanone	ND	ug/kg	116	1		01/10/22 23:49	591-78-6	
Iodomethane	ND	ug/kg	116	1		01/10/22 23:49	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	5.8	1		01/10/22 23:49	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.8	1		01/10/22 23:49	99-87-6	
Methylene Chloride	ND	ug/kg	23.2	1		01/10/22 23:49	75-09-2	
1-Methylnaphthalene	ND	ug/kg	11.6	1		01/10/22 23:49	90-12-0	
2-Methylnaphthalene	ND	ug/kg	11.6	1		01/10/22 23:49	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	28.9	1		01/10/22 23:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.8	1		01/10/22 23:49	1634-04-4	
Naphthalene	ND	ug/kg	5.8	1		01/10/22 23:49	91-20-3	
n-Propylbenzene	ND	ug/kg	5.8	1		01/10/22 23:49	103-65-1	
Styrene	ND	ug/kg	5.8	1		01/10/22 23:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.8	1		01/10/22 23:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.8	1		01/10/22 23:49	79-34-5	
Tetrachloroethene	ND	ug/kg	5.8	1		01/10/22 23:49	127-18-4	
Toluene	ND	ug/kg	5.8	1		01/10/22 23:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.8	1		01/10/22 23:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.8	1		01/10/22 23:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.8	1		01/10/22 23:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.8	1		01/10/22 23:49	79-00-5	
Trichloroethene	ND	ug/kg	5.8	1		01/10/22 23:49	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.8	1		01/10/22 23:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.8	1		01/10/22 23:49	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.8	1		01/10/22 23:49	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.8	1		01/10/22 23:49	108-67-8	
Vinyl acetate	ND	ug/kg	116	1		01/10/22 23:49	108-05-4	
Vinyl chloride	ND	ug/kg	5.8	1		01/10/22 23:49	75-01-4	
Xylene (Total)	ND	ug/kg	11.6	1		01/10/22 23:49	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	97	%	73-132	1		01/10/22 23:49	1868-53-7	
Toluene-d8 (S)	107	%	66-148	1		01/10/22 23:49	2037-26-5	

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

**Sample: A50sed**      **Lab ID: 50306617001**      Collected: 01/06/22 14:00      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	56	%	40-149	1		01/10/22 23:49	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>28.0</b>	%	0.10	1		01/08/22 08:54		N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

**Sample: A51sed**      **Lab ID: 50306617002**      Collected: 01/06/22 14:15      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	5.0	mg/kg	1.5	1	01/11/22 10:22	01/13/22 11:02	7440-38-2	
Barium	91.8	mg/kg	1.5	1	01/11/22 10:22	01/13/22 11:02	7440-39-3	
Cadmium	ND	mg/kg	0.73	1	01/11/22 10:22	01/13/22 11:02	7440-43-9	
Chromium	14.6	mg/kg	1.5	1	01/11/22 10:22	01/13/22 11:02	7440-47-3	
Lead	53.8	mg/kg	1.5	1	01/11/22 10:22	01/13/22 11:02	7439-92-1	
Lithium	9.3	mg/kg	7.3	1	01/11/22 10:22	01/13/22 11:02	7439-93-2	N2
Selenium	ND	mg/kg	1.5	1	01/11/22 10:22	01/13/22 11:02	7782-49-2	
Silver	ND	mg/kg	0.73	1	01/11/22 10:22	01/13/22 11:02	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471    Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.35	1	01/11/22 11:23	01/13/22 08:51	7439-97-6	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	ug/kg	170	1		01/11/22 00:14	67-64-1	
Acrolein	ND	ug/kg	170	1		01/11/22 00:14	107-02-8	
Acrylonitrile	ND	ug/kg	170	1		01/11/22 00:14	107-13-1	
Benzene	ND	ug/kg	8.5	1		01/11/22 00:14	71-43-2	
Bromobenzene	ND	ug/kg	8.5	1		01/11/22 00:14	108-86-1	
Bromochloromethane	ND	ug/kg	8.5	1		01/11/22 00:14	74-97-5	
Bromodichloromethane	ND	ug/kg	8.5	1		01/11/22 00:14	75-27-4	
Bromoform	ND	ug/kg	8.5	1		01/11/22 00:14	75-25-2	
Bromomethane	ND	ug/kg	8.5	1		01/11/22 00:14	74-83-9	
2-Butanone (MEK)	ND	ug/kg	42.5	1		01/11/22 00:14	78-93-3	
n-Butylbenzene	ND	ug/kg	8.5	1		01/11/22 00:14	104-51-8	
sec-Butylbenzene	ND	ug/kg	8.5	1		01/11/22 00:14	135-98-8	
tert-Butylbenzene	ND	ug/kg	8.5	1		01/11/22 00:14	98-06-6	
Carbon disulfide	ND	ug/kg	17.0	1		01/11/22 00:14	75-15-0	
Carbon tetrachloride	ND	ug/kg	8.5	1		01/11/22 00:14	56-23-5	
Chlorobenzene	ND	ug/kg	8.5	1		01/11/22 00:14	108-90-7	
Chloroethane	ND	ug/kg	8.5	1		01/11/22 00:14	75-00-3	
Chloroform	ND	ug/kg	8.5	1		01/11/22 00:14	67-66-3	
Chloromethane	ND	ug/kg	8.5	1		01/11/22 00:14	74-87-3	
2-Chlorotoluene	ND	ug/kg	8.5	1		01/11/22 00:14	95-49-8	
4-Chlorotoluene	ND	ug/kg	8.5	1		01/11/22 00:14	106-43-4	
Dibromochloromethane	ND	ug/kg	8.5	1		01/11/22 00:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	8.5	1		01/11/22 00:14	106-93-4	
Dibromomethane	ND	ug/kg	8.5	1		01/11/22 00:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	8.5	1		01/11/22 00:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	8.5	1		01/11/22 00:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	8.5	1		01/11/22 00:14	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	170	1		01/11/22 00:14	110-57-6	
Dichlorodifluoromethane	ND	ug/kg	8.5	1		01/11/22 00:14	75-71-8	
1,1-Dichloroethane	ND	ug/kg	8.5	1		01/11/22 00:14	75-34-3	

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Sample: A51 sed Lab ID: 50306617002 Collected: 01/06/22 14:15 Received: 01/07/22 12:35 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/kg	8.5	1		01/11/22 00:14	107-06-2	
1,1-Dichloroethene	ND	ug/kg	8.5	1		01/11/22 00:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	8.5	1		01/11/22 00:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	8.5	1		01/11/22 00:14	156-60-5	
1,2-Dichloropropane	ND	ug/kg	8.5	1		01/11/22 00:14	78-87-5	
1,3-Dichloropropane	ND	ug/kg	8.5	1		01/11/22 00:14	142-28-9	
2,2-Dichloropropane	ND	ug/kg	8.5	1		01/11/22 00:14	594-20-7	
1,1-Dichloropropene	ND	ug/kg	8.5	1		01/11/22 00:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	8.5	1		01/11/22 00:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	8.5	1		01/11/22 00:14	10061-02-6	
Ethylbenzene	ND	ug/kg	8.5	1		01/11/22 00:14	100-41-4	
Ethyl methacrylate	ND	ug/kg	170	1		01/11/22 00:14	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/kg	8.5	1		01/11/22 00:14	87-68-3	
n-Hexane	ND	ug/kg	8.5	1		01/11/22 00:14	110-54-3	
2-Hexanone	ND	ug/kg	170	1		01/11/22 00:14	591-78-6	
Iodomethane	ND	ug/kg	170	1		01/11/22 00:14	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	8.5	1		01/11/22 00:14	98-82-8	
p-Isopropyltoluene	ND	ug/kg	8.5	1		01/11/22 00:14	99-87-6	
Methylene Chloride	ND	ug/kg	34.0	1		01/11/22 00:14	75-09-2	
1-Methylnaphthalene	ND	ug/kg	17.0	1		01/11/22 00:14	90-12-0	
2-Methylnaphthalene	ND	ug/kg	17.0	1		01/11/22 00:14	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	42.5	1		01/11/22 00:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	8.5	1		01/11/22 00:14	1634-04-4	
Naphthalene	ND	ug/kg	8.5	1		01/11/22 00:14	91-20-3	
n-Propylbenzene	ND	ug/kg	8.5	1		01/11/22 00:14	103-65-1	
Styrene	ND	ug/kg	8.5	1		01/11/22 00:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	8.5	1		01/11/22 00:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	8.5	1		01/11/22 00:14	79-34-5	
Tetrachloroethene	ND	ug/kg	8.5	1		01/11/22 00:14	127-18-4	
Toluene	ND	ug/kg	8.5	1		01/11/22 00:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	8.5	1		01/11/22 00:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	8.5	1		01/11/22 00:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	8.5	1		01/11/22 00:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	8.5	1		01/11/22 00:14	79-00-5	
Trichloroethene	ND	ug/kg	8.5	1		01/11/22 00:14	79-01-6	
Trichlorofluoromethane	ND	ug/kg	8.5	1		01/11/22 00:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	8.5	1		01/11/22 00:14	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	8.5	1		01/11/22 00:14	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	8.5	1		01/11/22 00:14	108-67-8	
Vinyl acetate	ND	ug/kg	170	1		01/11/22 00:14	108-05-4	
Vinyl chloride	ND	ug/kg	8.5	1		01/11/22 00:14	75-01-4	
Xylene (Total)	ND	ug/kg	17.0	1		01/11/22 00:14	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	104	%	73-132	1		01/11/22 00:14	1868-53-7	
Toluene-d8 (S)	108	%	66-148	1		01/11/22 00:14	2037-26-5	

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

**Sample: A51sed**      **Lab ID: 50306617002**      Collected: 01/06/22 14:15      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>	Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis							
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	80	%	40-149	1		01/11/22 00:14	460-00-4	
<b>Percent Moisture</b>	Analytical Method: SM 2540G Pace Analytical Services - Indianapolis							
Percent Moisture	<b>39.7</b>	%	0.10	1		01/08/22 08:54		N2

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

**Sample:** DUP2 **Lab ID:** 50306617003 **Collected:** 01/06/22 08:00 **Received:** 01/07/22 12:35 **Matrix:** Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	5.4	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:04	7440-38-2	
Barium	121	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:04	7440-39-3	
Cadmium	ND	mg/kg	0.94	1	01/11/22 10:22	01/13/22 11:04	7440-43-9	
Chromium	18.0	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:04	7440-47-3	
Lead	61.8	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:04	7439-92-1	
Lithium	12.1	mg/kg	9.4	1	01/11/22 10:22	01/13/22 11:04	7439-93-2	N2
Selenium	ND	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:04	7782-49-2	
Silver	ND	mg/kg	0.94	1	01/11/22 10:22	01/13/22 11:04	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.43	1	01/11/22 11:23	01/13/22 08:53	7439-97-6	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	ug/kg	185	1		01/11/22 00:38	67-64-1	
Acrolein	ND	ug/kg	185	1		01/11/22 00:38	107-02-8	
Acrylonitrile	ND	ug/kg	185	1		01/11/22 00:38	107-13-1	
Benzene	ND	ug/kg	9.3	1		01/11/22 00:38	71-43-2	
Bromobenzene	ND	ug/kg	9.3	1		01/11/22 00:38	108-86-1	
Bromochloromethane	ND	ug/kg	9.3	1		01/11/22 00:38	74-97-5	
Bromodichloromethane	ND	ug/kg	9.3	1		01/11/22 00:38	75-27-4	
Bromoform	ND	ug/kg	9.3	1		01/11/22 00:38	75-25-2	
Bromomethane	ND	ug/kg	9.3	1		01/11/22 00:38	74-83-9	
2-Butanone (MEK)	ND	ug/kg	46.3	1		01/11/22 00:38	78-93-3	
n-Butylbenzene	ND	ug/kg	9.3	1		01/11/22 00:38	104-51-8	
sec-Butylbenzene	ND	ug/kg	9.3	1		01/11/22 00:38	135-98-8	
tert-Butylbenzene	ND	ug/kg	9.3	1		01/11/22 00:38	98-06-6	
Carbon disulfide	ND	ug/kg	18.5	1		01/11/22 00:38	75-15-0	
Carbon tetrachloride	ND	ug/kg	9.3	1		01/11/22 00:38	56-23-5	
Chlorobenzene	ND	ug/kg	9.3	1		01/11/22 00:38	108-90-7	
Chloroethane	ND	ug/kg	9.3	1		01/11/22 00:38	75-00-3	
Chloroform	ND	ug/kg	9.3	1		01/11/22 00:38	67-66-3	
Chloromethane	ND	ug/kg	9.3	1		01/11/22 00:38	74-87-3	
2-Chlorotoluene	ND	ug/kg	9.3	1		01/11/22 00:38	95-49-8	
4-Chlorotoluene	ND	ug/kg	9.3	1		01/11/22 00:38	106-43-4	
Dibromochloromethane	ND	ug/kg	9.3	1		01/11/22 00:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	9.3	1		01/11/22 00:38	106-93-4	
Dibromomethane	ND	ug/kg	9.3	1		01/11/22 00:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	9.3	1		01/11/22 00:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	9.3	1		01/11/22 00:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	9.3	1		01/11/22 00:38	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	185	1		01/11/22 00:38	110-57-6	
Dichlorodifluoromethane	ND	ug/kg	9.3	1		01/11/22 00:38	75-71-8	
1,1-Dichloroethane	ND	ug/kg	9.3	1		01/11/22 00:38	75-34-3	

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Sample: DUP2 Lab ID: 50306617003 Collected: 01/06/22 08:00 Received: 01/07/22 12:35 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/kg	9.3	1		01/11/22 00:38	107-06-2	
1,1-Dichloroethene	ND	ug/kg	9.3	1		01/11/22 00:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	9.3	1		01/11/22 00:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	9.3	1		01/11/22 00:38	156-60-5	
1,2-Dichloropropane	ND	ug/kg	9.3	1		01/11/22 00:38	78-87-5	
1,3-Dichloropropane	ND	ug/kg	9.3	1		01/11/22 00:38	142-28-9	
2,2-Dichloropropane	ND	ug/kg	9.3	1		01/11/22 00:38	594-20-7	
1,1-Dichloropropene	ND	ug/kg	9.3	1		01/11/22 00:38	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	9.3	1		01/11/22 00:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	9.3	1		01/11/22 00:38	10061-02-6	
Ethylbenzene	ND	ug/kg	9.3	1		01/11/22 00:38	100-41-4	
Ethyl methacrylate	ND	ug/kg	185	1		01/11/22 00:38	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/kg	9.3	1		01/11/22 00:38	87-68-3	
n-Hexane	ND	ug/kg	9.3	1		01/11/22 00:38	110-54-3	
2-Hexanone	ND	ug/kg	185	1		01/11/22 00:38	591-78-6	
Iodomethane	ND	ug/kg	185	1		01/11/22 00:38	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	9.3	1		01/11/22 00:38	98-82-8	
p-Isopropyltoluene	ND	ug/kg	9.3	1		01/11/22 00:38	99-87-6	
Methylene Chloride	ND	ug/kg	37.0	1		01/11/22 00:38	75-09-2	
1-Methylnaphthalene	ND	ug/kg	18.5	1		01/11/22 00:38	90-12-0	
2-Methylnaphthalene	ND	ug/kg	18.5	1		01/11/22 00:38	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	46.3	1		01/11/22 00:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	9.3	1		01/11/22 00:38	1634-04-4	
Naphthalene	ND	ug/kg	9.3	1		01/11/22 00:38	91-20-3	
n-Propylbenzene	ND	ug/kg	9.3	1		01/11/22 00:38	103-65-1	
Styrene	ND	ug/kg	9.3	1		01/11/22 00:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	9.3	1		01/11/22 00:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	9.3	1		01/11/22 00:38	79-34-5	
Tetrachloroethene	ND	ug/kg	9.3	1		01/11/22 00:38	127-18-4	
Toluene	ND	ug/kg	9.3	1		01/11/22 00:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	9.3	1		01/11/22 00:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	9.3	1		01/11/22 00:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	9.3	1		01/11/22 00:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	9.3	1		01/11/22 00:38	79-00-5	
Trichloroethene	ND	ug/kg	9.3	1		01/11/22 00:38	79-01-6	
Trichlorofluoromethane	ND	ug/kg	9.3	1		01/11/22 00:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	9.3	1		01/11/22 00:38	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	9.3	1		01/11/22 00:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	9.3	1		01/11/22 00:38	108-67-8	
Vinyl acetate	ND	ug/kg	185	1		01/11/22 00:38	108-05-4	
Vinyl chloride	ND	ug/kg	9.3	1		01/11/22 00:38	75-01-4	
Xylene (Total)	ND	ug/kg	18.5	1		01/11/22 00:38	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	97	%	73-132	1		01/11/22 00:38	1868-53-7	
Toluene-d8 (S)	109	%	66-148	1		01/11/22 00:38	2037-26-5	

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

**Sample: DUP2**      **Lab ID: 50306617003**      Collected: 01/06/22 08:00      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	52	%	40-149	1		01/11/22 00:38	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>50.4</b>	%	0.10	1		01/08/22 08:54		N2

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Sample: A52sed Lab ID: 50306617004 Collected: 01/06/22 14:30 Received: 01/07/22 12:35 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	5.4	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:07	7440-38-2	
Barium	109	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:07	7440-39-3	
Cadmium	ND	mg/kg	0.93	1	01/11/22 10:22	01/13/22 11:07	7440-43-9	
Chromium	18.0	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:07	7440-47-3	
Lead	50.6	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:07	7439-92-1	
Lithium	14.3	mg/kg	9.3	1	01/11/22 10:22	01/13/22 11:07	7439-93-2	N2
Selenium	ND	mg/kg	1.9	1	01/11/22 10:22	01/13/22 11:07	7782-49-2	
Silver	ND	mg/kg	0.93	1	01/11/22 10:22	01/13/22 11:07	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.45	1	01/11/22 11:23	01/13/22 08:56	7439-97-6	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	ug/kg	195	1		01/11/22 01:02	67-64-1	
Acrolein	ND	ug/kg	195	1		01/11/22 01:02	107-02-8	
Acrylonitrile	ND	ug/kg	195	1		01/11/22 01:02	107-13-1	
Benzene	ND	ug/kg	9.8	1		01/11/22 01:02	71-43-2	
Bromobenzene	ND	ug/kg	9.8	1		01/11/22 01:02	108-86-1	
Bromochloromethane	ND	ug/kg	9.8	1		01/11/22 01:02	74-97-5	
Bromodichloromethane	ND	ug/kg	9.8	1		01/11/22 01:02	75-27-4	
Bromoform	ND	ug/kg	9.8	1		01/11/22 01:02	75-25-2	
Bromomethane	ND	ug/kg	9.8	1		01/11/22 01:02	74-83-9	
2-Butanone (MEK)	ND	ug/kg	48.8	1		01/11/22 01:02	78-93-3	
n-Butylbenzene	ND	ug/kg	9.8	1		01/11/22 01:02	104-51-8	
sec-Butylbenzene	ND	ug/kg	9.8	1		01/11/22 01:02	135-98-8	
tert-Butylbenzene	ND	ug/kg	9.8	1		01/11/22 01:02	98-06-6	
Carbon disulfide	ND	ug/kg	19.5	1		01/11/22 01:02	75-15-0	
Carbon tetrachloride	ND	ug/kg	9.8	1		01/11/22 01:02	56-23-5	
Chlorobenzene	ND	ug/kg	9.8	1		01/11/22 01:02	108-90-7	
Chloroethane	ND	ug/kg	9.8	1		01/11/22 01:02	75-00-3	
Chloroform	ND	ug/kg	9.8	1		01/11/22 01:02	67-66-3	
Chloromethane	ND	ug/kg	9.8	1		01/11/22 01:02	74-87-3	
2-Chlorotoluene	ND	ug/kg	9.8	1		01/11/22 01:02	95-49-8	
4-Chlorotoluene	ND	ug/kg	9.8	1		01/11/22 01:02	106-43-4	
Dibromochloromethane	ND	ug/kg	9.8	1		01/11/22 01:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	9.8	1		01/11/22 01:02	106-93-4	
Dibromomethane	ND	ug/kg	9.8	1		01/11/22 01:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	9.8	1		01/11/22 01:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	9.8	1		01/11/22 01:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	9.8	1		01/11/22 01:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	195	1		01/11/22 01:02	110-57-6	
Dichlorodifluoromethane	ND	ug/kg	9.8	1		01/11/22 01:02	75-71-8	
1,1-Dichloroethane	ND	ug/kg	9.8	1		01/11/22 01:02	75-34-3	

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Sample: A52sed Lab ID: 50306617004 Collected: 01/06/22 14:30 Received: 01/07/22 12:35 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/kg	9.8	1		01/11/22 01:02	107-06-2	
1,1-Dichloroethene	ND	ug/kg	9.8	1		01/11/22 01:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	9.8	1		01/11/22 01:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	9.8	1		01/11/22 01:02	156-60-5	
1,2-Dichloropropane	ND	ug/kg	9.8	1		01/11/22 01:02	78-87-5	
1,3-Dichloropropane	ND	ug/kg	9.8	1		01/11/22 01:02	142-28-9	
2,2-Dichloropropane	ND	ug/kg	9.8	1		01/11/22 01:02	594-20-7	
1,1-Dichloropropene	ND	ug/kg	9.8	1		01/11/22 01:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	9.8	1		01/11/22 01:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	9.8	1		01/11/22 01:02	10061-02-6	
Ethylbenzene	ND	ug/kg	9.8	1		01/11/22 01:02	100-41-4	
Ethyl methacrylate	ND	ug/kg	195	1		01/11/22 01:02	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/kg	9.8	1		01/11/22 01:02	87-68-3	
n-Hexane	ND	ug/kg	9.8	1		01/11/22 01:02	110-54-3	
2-Hexanone	ND	ug/kg	195	1		01/11/22 01:02	591-78-6	
Iodomethane	ND	ug/kg	195	1		01/11/22 01:02	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	9.8	1		01/11/22 01:02	98-82-8	
p-Isopropyltoluene	ND	ug/kg	9.8	1		01/11/22 01:02	99-87-6	
Methylene Chloride	ND	ug/kg	39.0	1		01/11/22 01:02	75-09-2	
1-Methylnaphthalene	ND	ug/kg	19.5	1		01/11/22 01:02	90-12-0	
2-Methylnaphthalene	ND	ug/kg	19.5	1		01/11/22 01:02	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	48.8	1		01/11/22 01:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	9.8	1		01/11/22 01:02	1634-04-4	
Naphthalene	ND	ug/kg	9.8	1		01/11/22 01:02	91-20-3	
n-Propylbenzene	ND	ug/kg	9.8	1		01/11/22 01:02	103-65-1	
Styrene	ND	ug/kg	9.8	1		01/11/22 01:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	9.8	1		01/11/22 01:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	9.8	1		01/11/22 01:02	79-34-5	
Tetrachloroethene	ND	ug/kg	9.8	1		01/11/22 01:02	127-18-4	
Toluene	ND	ug/kg	9.8	1		01/11/22 01:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	9.8	1		01/11/22 01:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	9.8	1		01/11/22 01:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	9.8	1		01/11/22 01:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	9.8	1		01/11/22 01:02	79-00-5	
Trichloroethene	ND	ug/kg	9.8	1		01/11/22 01:02	79-01-6	
Trichlorofluoromethane	ND	ug/kg	9.8	1		01/11/22 01:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	9.8	1		01/11/22 01:02	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	9.8	1		01/11/22 01:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	9.8	1		01/11/22 01:02	108-67-8	
Vinyl acetate	ND	ug/kg	195	1		01/11/22 01:02	108-05-4	
Vinyl chloride	ND	ug/kg	9.8	1		01/11/22 01:02	75-01-4	
Xylene (Total)	ND	ug/kg	19.5	1		01/11/22 01:02	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	99	%	73-132	1		01/11/22 01:02	1868-53-7	
Toluene-d8 (S)	102	%	66-148	1		01/11/22 01:02	2037-26-5	

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

**Sample: A52sed**      **Lab ID: 50306617004**      Collected: 01/06/22 14:30      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>	Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis							
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	80	%	40-149	1		01/11/22 01:02	460-00-4	
<b>Percent Moisture</b>	Analytical Method: SM 2540G Pace Analytical Services - Indianapolis							
Percent Moisture	<b>54.1</b>	%	0.10	1		01/08/22 08:55		N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Sample: SW-2	Lab ID: 50306617005	Collected: 01/06/22 14:45	Received: 01/07/22 12:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:34	7440-38-2	
Barium	<b>120</b>	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:34	7440-39-3	
Cadmium	ND	ug/L	2.0	1	01/10/22 10:22	01/11/22 11:34	7440-43-9	
Chromium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:34	7440-47-3	
Lead	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:34	7439-92-1	
Lithium	ND	ug/L	20.0	1	01/10/22 10:22	01/11/22 11:34	7439-93-2	
Selenium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:34	7782-49-2	
Silver	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:34	7440-22-4	
<b>7470 Mercury</b>								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	01/14/22 06:55	01/14/22 12:15	7439-97-6	
<b>8260 MSV Indiana</b>								
Analytical Method: EPA 5030/8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		01/10/22 13:05	67-64-1	
Acrolein	ND	ug/L	50.0	1		01/10/22 13:05	107-02-8	
Acrylonitrile	ND	ug/L	100	1		01/10/22 13:05	107-13-1	
Benzene	ND	ug/L	5.0	1		01/10/22 13:05	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		01/10/22 13:05	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		01/10/22 13:05	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		01/10/22 13:05	75-27-4	
Bromoform	ND	ug/L	5.0	1		01/10/22 13:05	75-25-2	
Bromomethane	ND	ug/L	5.0	1		01/10/22 13:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		01/10/22 13:05	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		01/10/22 13:05	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		01/10/22 13:05	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		01/10/22 13:05	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		01/10/22 13:05	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		01/10/22 13:05	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/10/22 13:05	108-90-7	
Chloroethane	ND	ug/L	5.0	1		01/10/22 13:05	75-00-3	
Chloroform	ND	ug/L	5.0	1		01/10/22 13:05	67-66-3	
Chloromethane	ND	ug/L	5.0	1		01/10/22 13:05	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		01/10/22 13:05	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		01/10/22 13:05	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		01/10/22 13:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		01/10/22 13:05	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		01/10/22 13:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:05	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		01/10/22 13:05	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		01/10/22 13:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		01/10/22 13:05	75-34-3	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Sample: SW-2	Lab ID: 50306617005	Collected: 01/06/22 14:45	Received: 01/07/22 12:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Indiana</b>		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	5.0	1		01/10/22 13:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		01/10/22 13:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		01/10/22 13:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		01/10/22 13:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		01/10/22 13:05	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		01/10/22 13:05	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		01/10/22 13:05	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		01/10/22 13:05	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		01/10/22 13:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		01/10/22 13:05	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		01/10/22 13:05	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		01/10/22 13:05	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		01/10/22 13:05	87-68-3	
n-Hexane	ND	ug/L	5.0	1		01/10/22 13:05	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		01/10/22 13:05	591-78-6	
Iodomethane	ND	ug/L	10.0	1		01/10/22 13:05	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		01/10/22 13:05	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		01/10/22 13:05	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		01/10/22 13:05	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		01/10/22 13:05	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		01/10/22 13:05	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		01/10/22 13:05	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		01/10/22 13:05	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		01/10/22 13:05	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		01/10/22 13:05	103-65-1	
Styrene	ND	ug/L	5.0	1		01/10/22 13:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		01/10/22 13:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		01/10/22 13:05	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		01/10/22 13:05	127-18-4	
Toluene	ND	ug/L	5.0	1		01/10/22 13:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		01/10/22 13:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		01/10/22 13:05	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		01/10/22 13:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		01/10/22 13:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		01/10/22 13:05	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		01/10/22 13:05	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		01/10/22 13:05	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		01/10/22 13:05	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		01/10/22 13:05	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		01/10/22 13:05	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102	%.	78-120	1		01/10/22 13:05	1868-53-7	
4-Bromofluorobenzene (S)	104	%.	78-117	1		01/10/22 13:05	460-00-4	
Toluene-d8 (S)	99	%.	77-118	1		01/10/22 13:05	2037-26-5	

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Sample: DUP3	Lab ID: 50306617006	Collected: 01/06/22 08:00	Received: 01/07/22 12:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:36	7440-38-2	
Barium	116	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:36	7440-39-3	
Cadmium	ND	ug/L	2.0	1	01/10/22 10:22	01/11/22 11:36	7440-43-9	
Chromium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:36	7440-47-3	
Lead	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:36	7439-92-1	
Lithium	ND	ug/L	20.0	1	01/10/22 10:22	01/11/22 11:36	7439-93-2	
Selenium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:36	7782-49-2	
Silver	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:36	7440-22-4	
<b>7470 Mercury</b>								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	01/14/22 06:55	01/14/22 12:18	7439-97-6	
<b>8260 MSV Indiana</b>								
Analytical Method: EPA 5030/8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		01/10/22 13:36	67-64-1	
Acrolein	ND	ug/L	50.0	1		01/10/22 13:36	107-02-8	
Acrylonitrile	ND	ug/L	100	1		01/10/22 13:36	107-13-1	
Benzene	ND	ug/L	5.0	1		01/10/22 13:36	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		01/10/22 13:36	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		01/10/22 13:36	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		01/10/22 13:36	75-27-4	
Bromoform	ND	ug/L	5.0	1		01/10/22 13:36	75-25-2	
Bromomethane	ND	ug/L	5.0	1		01/10/22 13:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		01/10/22 13:36	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		01/10/22 13:36	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		01/10/22 13:36	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		01/10/22 13:36	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		01/10/22 13:36	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		01/10/22 13:36	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/10/22 13:36	108-90-7	
Chloroethane	ND	ug/L	5.0	1		01/10/22 13:36	75-00-3	
Chloroform	ND	ug/L	5.0	1		01/10/22 13:36	67-66-3	
Chloromethane	ND	ug/L	5.0	1		01/10/22 13:36	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		01/10/22 13:36	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		01/10/22 13:36	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		01/10/22 13:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		01/10/22 13:36	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		01/10/22 13:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:36	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		01/10/22 13:36	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		01/10/22 13:36	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		01/10/22 13:36	75-34-3	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Sample: DUP3	Lab ID: 50306617006	Collected: 01/06/22 08:00	Received: 01/07/22 12:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Indiana</b>		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	5.0	1		01/10/22 13:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		01/10/22 13:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		01/10/22 13:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		01/10/22 13:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		01/10/22 13:36	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		01/10/22 13:36	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		01/10/22 13:36	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		01/10/22 13:36	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		01/10/22 13:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		01/10/22 13:36	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		01/10/22 13:36	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		01/10/22 13:36	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		01/10/22 13:36	87-68-3	
n-Hexane	ND	ug/L	5.0	1		01/10/22 13:36	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		01/10/22 13:36	591-78-6	
Iodomethane	ND	ug/L	10.0	1		01/10/22 13:36	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		01/10/22 13:36	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		01/10/22 13:36	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		01/10/22 13:36	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		01/10/22 13:36	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		01/10/22 13:36	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		01/10/22 13:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		01/10/22 13:36	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		01/10/22 13:36	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		01/10/22 13:36	103-65-1	
Styrene	ND	ug/L	5.0	1		01/10/22 13:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		01/10/22 13:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		01/10/22 13:36	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		01/10/22 13:36	127-18-4	
Toluene	ND	ug/L	5.0	1		01/10/22 13:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		01/10/22 13:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		01/10/22 13:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		01/10/22 13:36	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		01/10/22 13:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		01/10/22 13:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		01/10/22 13:36	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		01/10/22 13:36	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		01/10/22 13:36	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		01/10/22 13:36	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		01/10/22 13:36	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		01/10/22 13:36	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103	%.	78-120	1		01/10/22 13:36	1868-53-7	
4-Bromofluorobenzene (S)	103	%.	78-117	1		01/10/22 13:36	460-00-4	
Toluene-d8 (S)	101	%.	77-118	1		01/10/22 13:36	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

QC Batch: 658512

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306617005, 50306617006

METHOD BLANK: 3034138

Matrix: Water

Associated Lab Samples: 50306617005, 50306617006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	2.0	01/14/22 12:11	

LABORATORY CONTROL SAMPLE: 3034139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034140 3034141

Parameter	Units	3034140		3034141		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306625001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	ug/L	ND	5	5	5.0	5.0	99	98	75-125	0	20

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

QC Batch: 658132

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306617001, 50306617002, 50306617003, 50306617004

METHOD BLANK: 3032515

Matrix: Solid

Associated Lab Samples: 50306617001, 50306617002, 50306617003, 50306617004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.21	01/13/22 07:47	

LABORATORY CONTROL SAMPLE: 3032516

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.47	0.32	67	80-120	L5

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032517 3032518

Parameter	Units	50306282008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.23	0.56	0.53	0.74	0.84	93	116	75-125	13	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

QC Batch: 658130 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
 Laboratory: Pace Analytical Services - Indianapolis  
 Associated Lab Samples: 50306617001, 50306617002, 50306617003, 50306617004

METHOD BLANK: 3032509 Matrix: Solid  
 Associated Lab Samples: 50306617001, 50306617002, 50306617003, 50306617004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.92	01/13/22 10:40	
Barium	mg/kg	ND	0.92	01/13/22 10:40	
Cadmium	mg/kg	ND	0.46	01/13/22 10:40	
Chromium	mg/kg	ND	0.92	01/13/22 10:40	
Lead	mg/kg	ND	0.92	01/13/22 10:40	
Lithium	mg/kg	ND	4.6	01/13/22 10:40	N2
Selenium	mg/kg	ND	0.92	01/13/22 10:40	
Silver	mg/kg	ND	0.46	01/13/22 10:40	

LABORATORY CONTROL SAMPLE: 3032510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	45.2	44.7	99	80-120	
Barium	mg/kg	45.2	44.0	97	80-120	
Cadmium	mg/kg	45.2	43.1	95	80-120	
Chromium	mg/kg	45.2	46.4	103	80-120	
Lead	mg/kg	45.2	42.2	93	80-120	
Lithium	mg/kg	45.2	44.9	99	80-120	N2
Selenium	mg/kg	45.2	43.4	96	80-120	
Silver	mg/kg	22.6	21.3	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032511 3032512

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	mg/kg	3.4	74.7	74.9	74.9	96	94	75-125	2	20	
Barium	mg/kg	85.4	74.7	74.9	160	100	107	75-125	3	20	
Cadmium	mg/kg	ND	74.7	74.9	67.9	91	89	75-125	1	20	
Chromium	mg/kg	9.3	74.7	74.9	77.5	91	92	75-125	1	20	
Lead	mg/kg	40.8	74.7	74.9	96.3	74	78	75-125	3	20	M0
Lithium	mg/kg	9.0	74.7	74.9	80.5	96	95	75-125	0	20	N2
Selenium	mg/kg	ND	74.7	74.9	67.4	90	88	75-125	2	20	
Silver	mg/kg	ND	37.3	37.5	34.0	91	90	75-125	1	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032513 3032514												
Parameter	Units	50306619001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	
		Result	Conc.	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Arsenic	mg/kg	7.3	61.9	61.9	56.4	63.6	53.9	91	83	75-125	16	20
Barium	mg/kg	90.8	61.9	61.9	56.4	165	154	120	112	75-125	7	20
Cadmium	mg/kg	ND	61.9	61.9	56.4	54.9	45.9	88	81	75-125	18	20
Chromium	mg/kg	16.2	61.9	61.9	56.4	77.1	64.3	98	85	75-125	18	20
Lead	mg/kg	19.7	61.9	61.9	56.4	69.7	60.0	81	72	75-125	15	20 M0
Lithium	mg/kg	9.8	61.9	61.9	56.4	70.3	58.9	98	87	75-125	18	20 N2
Selenium	mg/kg	ND	61.9	61.9	56.4	54.5	45.3	88	80	75-125	18	20
Silver	mg/kg	ND	31	31	28.1	26.7	22.6	86	80	75-125	17	20

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306617

QC Batch: 658009 Analysis Method: EPA 6010  
QC Batch Method: EPA 3010 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306617005, 50306617006

METHOD BLANK: 3032099 Matrix: Water

Associated Lab Samples: 50306617005, 50306617006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	01/11/22 11:26	
Barium	ug/L	ND	10.0	01/11/22 11:26	
Cadmium	ug/L	ND	2.0	01/11/22 11:26	
Chromium	ug/L	ND	10.0	01/11/22 11:26	
Lead	ug/L	ND	10.0	01/11/22 11:26	
Lithium	ug/L	ND	20.0	01/11/22 11:26	
Selenium	ug/L	ND	10.0	01/11/22 11:26	
Silver	ug/L	ND	10.0	01/11/22 11:26	

LABORATORY CONTROL SAMPLE: 3032100

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	1040	104	80-120	
Barium	ug/L	1000	1040	104	80-120	
Cadmium	ug/L	1000	998	100	80-120	
Chromium	ug/L	1000	1030	103	80-120	
Lead	ug/L	1000	970	97	80-120	
Lithium	ug/L	1000	1040	104	80-120	
Selenium	ug/L	1000	1010	101	80-120	
Silver	ug/L	500	483	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032101 3032102

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306625001 Result	Spike Conc.	Spike Conc.	Conc.							
Arsenic	ug/L	ND	1000	1000	1110	1100	111	110	75-125	0	20	
Barium	ug/L	155	1000	1000	1260	1260	110	110	75-125	0	20	
Cadmium	ug/L	ND	1000	1000	1040	1040	104	104	75-125	0	20	
Chromium	ug/L	ND	1000	1000	1060	1060	106	105	75-125	1	20	
Lead	ug/L	ND	1000	1000	979	982	98	98	75-125	0	20	
Lithium	ug/L	ND	1000	1000	1080	1090	107	108	75-125	1	20	
Selenium	ug/L	ND	1000	1000	1060	1060	105	106	75-125	0	20	
Silver	ug/L	ND	500	500	508	504	102	101	75-125	1	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50306617

QC Batch: 658044      Analysis Method: EPA 5030/8260  
QC Batch Method: EPA 5030/8260      Analysis Description: 8260 MSV  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306617005, 50306617006

METHOD BLANK: 3032187      Matrix: Water

Associated Lab Samples: 50306617005, 50306617006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	01/10/22 10:01	
1,1,1-Trichloroethane	ug/L	ND	5.0	01/10/22 10:01	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	01/10/22 10:01	
1,1,2-Trichloroethane	ug/L	ND	5.0	01/10/22 10:01	
1,1-Dichloroethane	ug/L	ND	5.0	01/10/22 10:01	
1,1-Dichloroethene	ug/L	ND	5.0	01/10/22 10:01	
1,1-Dichloropropene	ug/L	ND	5.0	01/10/22 10:01	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	01/10/22 10:01	
1,2,3-Trichloropropane	ug/L	ND	5.0	01/10/22 10:01	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	01/10/22 10:01	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	01/10/22 10:01	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	01/10/22 10:01	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/10/22 10:01	
1,2-Dichloroethane	ug/L	ND	5.0	01/10/22 10:01	
1,2-Dichloropropane	ug/L	ND	5.0	01/10/22 10:01	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	01/10/22 10:01	
1,3-Dichlorobenzene	ug/L	ND	5.0	01/10/22 10:01	
1,3-Dichloropropane	ug/L	ND	5.0	01/10/22 10:01	
1,4-Dichlorobenzene	ug/L	ND	5.0	01/10/22 10:01	
1-Methylnaphthalene	ug/L	ND	10.0	01/10/22 10:01	
2,2-Dichloropropane	ug/L	ND	5.0	01/10/22 10:01	
2-Butanone (MEK)	ug/L	ND	25.0	01/10/22 10:01	
2-Chlorotoluene	ug/L	ND	5.0	01/10/22 10:01	
2-Hexanone	ug/L	ND	25.0	01/10/22 10:01	
2-Methylnaphthalene	ug/L	ND	10.0	01/10/22 10:01	
4-Chlorotoluene	ug/L	ND	5.0	01/10/22 10:01	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	01/10/22 10:01	
Acetone	ug/L	ND	100	01/10/22 10:01	
Acrolein	ug/L	ND	50.0	01/10/22 10:01	
Acrylonitrile	ug/L	ND	100	01/10/22 10:01	
Benzene	ug/L	ND	5.0	01/10/22 10:01	
Bromobenzene	ug/L	ND	5.0	01/10/22 10:01	
Bromochloromethane	ug/L	ND	5.0	01/10/22 10:01	
Bromodichloromethane	ug/L	ND	5.0	01/10/22 10:01	
Bromoform	ug/L	ND	5.0	01/10/22 10:01	
Bromomethane	ug/L	ND	5.0	01/10/22 10:01	
Carbon disulfide	ug/L	ND	10.0	01/10/22 10:01	
Carbon tetrachloride	ug/L	ND	5.0	01/10/22 10:01	
Chlorobenzene	ug/L	ND	5.0	01/10/22 10:01	
Chloroethane	ug/L	ND	5.0	01/10/22 10:01	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

METHOD BLANK: 3032187

Matrix: Water

Associated Lab Samples: 50306617005, 50306617006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	01/10/22 10:01	
Chloromethane	ug/L	ND	5.0	01/10/22 10:01	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/10/22 10:01	
cis-1,3-Dichloropropene	ug/L	ND	5.0	01/10/22 10:01	
Dibromochloromethane	ug/L	ND	5.0	01/10/22 10:01	
Dibromomethane	ug/L	ND	5.0	01/10/22 10:01	
Dichlorodifluoromethane	ug/L	ND	5.0	01/10/22 10:01	
Ethyl methacrylate	ug/L	ND	100	01/10/22 10:01	
Ethylbenzene	ug/L	ND	5.0	01/10/22 10:01	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	01/10/22 10:01	
Iodomethane	ug/L	ND	10.0	01/10/22 10:01	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	01/10/22 10:01	
Methyl-tert-butyl ether	ug/L	ND	4.0	01/10/22 10:01	
Methylene Chloride	ug/L	ND	5.0	01/10/22 10:01	
n-Butylbenzene	ug/L	ND	5.0	01/10/22 10:01	
n-Hexane	ug/L	ND	5.0	01/10/22 10:01	
n-Propylbenzene	ug/L	ND	5.0	01/10/22 10:01	
Naphthalene	ug/L	ND	1.2	01/10/22 10:01	
p-Isopropyltoluene	ug/L	ND	5.0	01/10/22 10:01	
sec-Butylbenzene	ug/L	ND	5.0	01/10/22 10:01	
Styrene	ug/L	ND	5.0	01/10/22 10:01	
tert-Butylbenzene	ug/L	ND	5.0	01/10/22 10:01	
Tetrachloroethene	ug/L	ND	5.0	01/10/22 10:01	
Toluene	ug/L	ND	5.0	01/10/22 10:01	
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/10/22 10:01	
trans-1,3-Dichloropropene	ug/L	ND	5.0	01/10/22 10:01	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	01/10/22 10:01	
Trichloroethene	ug/L	ND	5.0	01/10/22 10:01	
Trichlorofluoromethane	ug/L	ND	5.0	01/10/22 10:01	
Vinyl acetate	ug/L	ND	50.0	01/10/22 10:01	
Vinyl chloride	ug/L	ND	2.0	01/10/22 10:01	
Xylene (Total)	ug/L	ND	10.0	01/10/22 10:01	
4-Bromofluorobenzene (S)	%	103	78-117	01/10/22 10:01	
Dibromofluoromethane (S)	%	102	78-120	01/10/22 10:01	
Toluene-d8 (S)	%	100	77-118	01/10/22 10:01	

LABORATORY CONTROL SAMPLE: 3032188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.1	102	76-125	
1,1,1-Trichloroethane	ug/L	50	52.3	105	73-132	
1,1,2,2-Tetrachloroethane	ug/L	50	53.2	106	65-131	
1,1,2-Trichloroethane	ug/L	50	52.8	106	74-127	
1,1-Dichloroethane	ug/L	50	54.4	109	73-133	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

LABORATORY CONTROL SAMPLE: 3032188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	56.8	114	67-136	
1,1-Dichloropropene	ug/L	50	60.6	121	72-128	
1,2,3-Trichlorobenzene	ug/L	50	47.2	94	58-136	
1,2,3-Trichloropropane	ug/L	50	49.0	98	69-126	
1,2,4-Trichlorobenzene	ug/L	50	48.6	97	48-149	
1,2,4-Trimethylbenzene	ug/L	50	52.0	104	68-122	
1,2-Dibromoethane (EDB)	ug/L	50	50.6	101	76-126	
1,2-Dichlorobenzene	ug/L	50	49.9	100	75-114	
1,2-Dichloroethane	ug/L	50	53.1	106	69-135	
1,2-Dichloropropane	ug/L	50	54.2	108	78-134	
1,3,5-Trimethylbenzene	ug/L	50	53.1	106	68-120	
1,3-Dichlorobenzene	ug/L	50	49.9	100	70-119	
1,3-Dichloropropane	ug/L	50	53.0	106	74-131	
1,4-Dichlorobenzene	ug/L	50	49.0	98	69-117	
1-Methylnaphthalene	ug/L	50	47.8	96	68-139	
2,2-Dichloropropane	ug/L	50	54.6	109	61-127	
2-Butanone (MEK)	ug/L	250	302	121	56-164	
2-Chlorotoluene	ug/L	50	52.7	105	74-115	
2-Hexanone	ug/L	250	276	110	63-137	
2-Methylnaphthalene	ug/L	50	49.7	99	62-129	
4-Chlorotoluene	ug/L	50	51.9	104	74-115	
4-Methyl-2-pentanone (MIBK)	ug/L	250	271	109	64-134	
Acetone	ug/L	250	315	126	46-140	
Acrolein	ug/L	1000	856	86	53-126	
Acrylonitrile	ug/L	250	266	106	68-132	
Benzene	ug/L	50	52.6	105	77-128	
Bromobenzene	ug/L	50	53.1	106	62-133	
Bromochloromethane	ug/L	50	56.6	113	71-124	
Bromodichloromethane	ug/L	50	53.4	107	70-124	
Bromoform	ug/L	50	45.3	91	65-116	
Bromomethane	ug/L	50	57.3	115	10-200	
Carbon disulfide	ug/L	50	51.4	103	70-131	
Carbon tetrachloride	ug/L	50	55.7	111	61-139	
Chlorobenzene	ug/L	50	50.8	102	76-124	
Chloroethane	ug/L	50	58.2	116	56-142	
Chloroform	ug/L	50	52.2	104	77-120	
Chloromethane	ug/L	50	52.6	105	29-141	
cis-1,2-Dichloroethene	ug/L	50	52.6	105	72-127	
cis-1,3-Dichloropropene	ug/L	50	54.5	109	71-131	
Dibromochloromethane	ug/L	50	50.0	100	69-132	
Dibromomethane	ug/L	50	50.5	101	76-130	
Dichlorodifluoromethane	ug/L	50	48.8	98	23-139	
Ethyl methacrylate	ug/L	50	54.4J	109	66-128	
Ethylbenzene	ug/L	50	51.7	103	76-119	
Hexachloro-1,3-butadiene	ug/L	50	50.0	100	58-140	
Iodomethane	ug/L	50	45.9	92	10-200	
Isopropylbenzene (Cumene)	ug/L	50	53.6	107	77-128	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

LABORATORY CONTROL SAMPLE: 3032188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methyl-tert-butyl ether	ug/L	50	55.2	110	75-129	
Methylene Chloride	ug/L	50	54.6	109	72-129	
n-Butylbenzene	ug/L	50	55.0	110	59-128	
n-Hexane	ug/L	50	58.9	118	75-141	
n-Propylbenzene	ug/L	50	53.3	107	71-116	
Naphthalene	ug/L	50	46.7	93	67-136	
p-Isopropyltoluene	ug/L	50	51.8	104	67-123	
sec-Butylbenzene	ug/L	50	55.3	111	70-119	
Styrene	ug/L	50	52.4	105	66-123	
tert-Butylbenzene	ug/L	50	52.0	104	54-133	
Tetrachloroethene	ug/L	50	50.5	101	70-124	
Toluene	ug/L	50	51.1	102	72-117	
trans-1,2-Dichloroethene	ug/L	50	53.4	107	75-133	
trans-1,3-Dichloropropene	ug/L	50	53.3	107	75-111	
trans-1,4-Dichloro-2-butene	ug/L	50	58.4J	117	39-147	
Trichloroethene	ug/L	50	52.2	104	75-130	
Trichlorofluoromethane	ug/L	50	52.3	105	63-162	
Vinyl acetate	ug/L	200	178	89	42-139	
Vinyl chloride	ug/L	50	54.2	108	51-140	
Xylene (Total)	ug/L	150	152	101	73-117	
4-Bromofluorobenzene (S)	%			104	78-117	
Dibromofluoromethane (S)	%			99	78-120	
Toluene-d8 (S)	%			100	77-118	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032189 3032190

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306583004 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	51.1	50.5	102	101	40-147	1	20		
1,1,1-Trichloroethane	ug/L	ND	50	50	52.6	52.7	105	105	53-161	0	20		
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	54.0	56.9	108	114	58-134	5	20		
1,1,2-Trichloroethane	ug/L	ND	50	50	53.6	53.7	107	107	60-141	0	20		
1,1-Dichloroethane	ug/L	ND	50	50	55.6	55.0	111	110	67-140	1	20		
1,1-Dichloroethene	ug/L	ND	50	50	58.9	60.3	118	121	59-154	2	20		
1,1-Dichloropropene	ug/L	ND	50	50	59.9	59.7	120	119	31-153	0	20		
1,2,3-Trichlorobenzene	ug/L	ND	50	50	43.3	43.6	87	87	10-151	1	20		
1,2,3-Trichloropropane	ug/L	ND	50	50	50.4	50.3	101	101	63-140	0	20		
1,2,4-Trichlorobenzene	ug/L	ND	50	50	42.0	41.5	84	83	10-156	1	20		
1,2,4-Trimethylbenzene	ug/L	ND	50	50	49.8	49.0	99	97	11-145	2	20		
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	50.7	51.3	101	103	54-144	1	20		
1,2-Dichlorobenzene	ug/L	ND	50	50	49.7	48.4	99	97	17-145	3	20		
1,2-Dichloroethane	ug/L	ND	50	50	55.0	56.0	110	112	66-130	2	20		
1,2-Dichloropropane	ug/L	ND	50	50	55.6	55.6	111	111	65-136	0	20		
1,3,5-Trimethylbenzene	ug/L	ND	50	50	50.4	50.6	101	101	11-143	0	20		
1,3-Dichlorobenzene	ug/L	ND	50	50	47.4	47.2	95	94	10-146	0	20		

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032189 3032190												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306583004 Result	Spike Conc.	Spike Conc.	MS Result							
1,3-Dichloropropane	ug/L	ND	50	50	54.2	54.3	108	109	53-145	0	20	
1,4-Dichlorobenzene	ug/L	ND	50	50	46.8	47.4	94	95	17-141	1	20	
1-Methylnaphthalene	ug/L	ND	50	50	45.6	46.8	91	94	28-147	3	20	
2,2-Dichloropropane	ug/L	ND	50	50	52.6	52.8	105	106	35-142	0	20	
2-Butanone (MEK)	ug/L	ND	250	250	302	315	121	126	49-173	4	20	
2-Chlorotoluene	ug/L	ND	50	50	51.0	52.3	102	105	10-148	3	20	
2-Hexanone	ug/L	ND	250	250	295	302	118	121	57-142	2	20	
2-Methylnaphthalene	ug/L	ND	50	50	47.3	47.6	95	95	15-141	1	20	
4-Chlorotoluene	ug/L	ND	50	50	49.5	50.3	99	101	11-142	2	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	291	298	116	119	59-139	3	20	
Acetone	ug/L	ND	250	250	349	360	139	144	44-171	3	20	
Acrolein	ug/L	ND	1000	1000	907	919	91	92	25-131	1	20	
Acrylonitrile	ug/L	ND	250	250	276	284	110	114	60-145	3	20	
Benzene	ug/L	ND	50	50	53.4	53.1	107	106	69-128	1	20	
Bromobenzene	ug/L	ND	50	50	52.8	53.4	106	107	10-157	1	20	
Bromochloromethane	ug/L	ND	50	50	61.5	60.4	123	121	58-138	2	20	
Bromodichloromethane	ug/L	ND	50	50	54.2	55.2	108	110	51-138	2	20	
Bromoform	ug/L	ND	50	50	44.5	46.7	89	93	43-130	5	20	
Bromomethane	ug/L	ND	50	50	58.7	57.2	117	114	10-195	3	20	
Carbon disulfide	ug/L	ND	50	50	53.7	52.9	107	106	37-149	2	20	
Carbon tetrachloride	ug/L	ND	50	50	54.4	54.0	109	108	39-155	1	20	
Chlorobenzene	ug/L	ND	50	50	50.6	50.6	101	101	28-147	0	20	
Chloroethane	ug/L	ND	50	50	61.6	61.4	123	123	58-158	0	20	
Chloroform	ug/L	ND	50	50	52.9	53.1	106	106	54-141	0	20	
Chloromethane	ug/L	ND	50	50	54.1	52.8	108	106	41-145	2	20	
cis-1,2-Dichloroethene	ug/L	ND	50	50	52.7	52.9	105	106	45-150	0	20	
cis-1,3-Dichloropropene	ug/L	ND	50	50	53.9	54.5	108	109	42-139	1	20	
Dibromochloromethane	ug/L	ND	50	50	50.5	50.6	101	101	48-139	0	20	
Dibromomethane	ug/L	ND	50	50	52.0	52.6	104	105	58-140	1	20	
Dichlorodifluoromethane	ug/L	ND	50	50	43.8	43.7	88	87	45-161	0	20	
Ethyl methacrylate	ug/L	ND	50	50	54.6J	55.1J	109	110	63-149		20	
Ethylbenzene	ug/L	ND	50	50	50.8	50.5	102	101	36-144	1	20	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	43.9	43.3	88	87	10-164	1	20	
Iodomethane	ug/L	ND	50	50	48.4	49.5	97	99	10-196	2	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	51.5	51.9	103	104	21-148	1	20	
Methyl-tert-butyl ether	ug/L	ND	50	50	56.9	57.7	112	114	72-135	1	20	
Methylene Chloride	ug/L	ND	50	50	53.0	53.3	106	107	58-136	1	20	
n-Butylbenzene	ug/L	ND	50	50	50.9	50.8	102	102	10-147	0	20	
n-Hexane	ug/L	ND	50	50	57.9	56.9	116	114	52-157	2	20	
n-Propylbenzene	ug/L	ND	50	50	51.3	51.9	103	104	11-141	1	20	
Naphthalene	ug/L	ND	50	50	46.4	47.0	93	94	45-134	1	20	
p-Isopropyltoluene	ug/L	ND	50	50	49.9	49.4	100	99	10-149	1	20	
sec-Butylbenzene	ug/L	ND	50	50	53.2	53.3	106	107	10-148	0	20	
Styrene	ug/L	ND	50	50	49.4	48.4	99	97	19-143	2	20	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Parameter	Units	3032189		3032190		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306583004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
tert-Butylbenzene	ug/L	ND	50	50	50.5	51.0	101	102	14-123	1	20		
Tetrachloroethene	ug/L	ND	50	50	47.1	46.4	94	93	26-148	1	20		
Toluene	ug/L	ND	50	50	50.7	50.3	101	100	46-134	1	20		
trans-1,2-Dichloroethene	ug/L	ND	50	50	52.3	52.4	105	105	43-155	0	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	53.3	52.8	107	106	39-132	1	20		
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	59.7J	58.9J	119	118	18-143		20		
Trichloroethene	ug/L	ND	50	50	51.4	51.8	103	104	35-151	1	20		
Trichlorofluoromethane	ug/L	ND	50	50	51.9	51.9	104	104	55-170	0	20		
Vinyl acetate	ug/L	ND	200	200	174	176	87	88	24-134	1	20		
Vinyl chloride	ug/L	ND	50	50	55.5	54.9	111	110	59-146	1	20		
Xylene (Total)	ug/L	ND	150	150	149	146	100	98	32-140	2	20		
4-Bromofluorobenzene (S)	%						105	101	78-117				
Dibromofluoromethane (S)	%						100	99	78-120				
Toluene-d8 (S)	%						101	100	77-118				

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

QC Batch: 658080

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306617001, 50306617002, 50306617003, 50306617004

METHOD BLANK: 3032291

Matrix: Solid

Associated Lab Samples: 50306617001, 50306617002, 50306617003, 50306617004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,1-Trichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,2-Trichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,3-Trichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,3-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,3-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,4-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1-Methylnaphthalene	ug/kg	ND	10.0	01/10/22 19:46	
2,2-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
2-Butanone (MEK)	ug/kg	ND	25.0	01/10/22 19:46	
2-Chlorotoluene	ug/kg	ND	5.0	01/10/22 19:46	
2-Hexanone	ug/kg	ND	100	01/10/22 19:46	
2-Methylnaphthalene	ug/kg	ND	10.0	01/10/22 19:46	
4-Chlorotoluene	ug/kg	ND	5.0	01/10/22 19:46	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	25.0	01/10/22 19:46	
Acetone	ug/kg	ND	100	01/10/22 19:46	
Acrolein	ug/kg	ND	100	01/10/22 19:46	
Acrylonitrile	ug/kg	ND	100	01/10/22 19:46	
Benzene	ug/kg	ND	5.0	01/10/22 19:46	
Bromobenzene	ug/kg	ND	5.0	01/10/22 19:46	
Bromochloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Bromodichloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Bromoform	ug/kg	ND	5.0	01/10/22 19:46	
Bromomethane	ug/kg	ND	5.0	01/10/22 19:46	
Carbon disulfide	ug/kg	ND	10.0	01/10/22 19:46	
Carbon tetrachloride	ug/kg	ND	5.0	01/10/22 19:46	
Chlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
Chloroethane	ug/kg	ND	5.0	01/10/22 19:46	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

METHOD BLANK: 3032291

Matrix: Solid

Associated Lab Samples: 50306617001, 50306617002, 50306617003, 50306617004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/kg	ND	5.0	01/10/22 19:46	
Chloromethane	ug/kg	ND	5.0	01/10/22 19:46	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
Dibromochloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Dibromomethane	ug/kg	ND	5.0	01/10/22 19:46	
Dichlorodifluoromethane	ug/kg	ND	5.0	01/10/22 19:46	
Ethyl methacrylate	ug/kg	ND	100	01/10/22 19:46	
Ethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	01/10/22 19:46	
Iodomethane	ug/kg	ND	100	01/10/22 19:46	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	01/10/22 19:46	
Methyl-tert-butyl ether	ug/kg	ND	5.0	01/10/22 19:46	
Methylene Chloride	ug/kg	ND	20.0	01/10/22 19:46	
n-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
n-Hexane	ug/kg	ND	5.0	01/10/22 19:46	
n-Propylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Naphthalene	ug/kg	ND	5.0	01/10/22 19:46	
p-Isopropyltoluene	ug/kg	ND	5.0	01/10/22 19:46	
sec-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Styrene	ug/kg	ND	5.0	01/10/22 19:46	
tert-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Tetrachloroethene	ug/kg	ND	5.0	01/10/22 19:46	
Toluene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,4-Dichloro-2-butene	ug/kg	ND	100	01/10/22 19:46	
Trichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
Trichlorofluoromethane	ug/kg	ND	5.0	01/10/22 19:46	
Vinyl acetate	ug/kg	ND	100	01/10/22 19:46	
Vinyl chloride	ug/kg	ND	5.0	01/10/22 19:46	
Xylene (Total)	ug/kg	ND	10.0	01/10/22 19:46	
4-Bromofluorobenzene (S)	%	97	40-149	01/10/22 19:46	
Dibromofluoromethane (S)	%	101	73-132	01/10/22 19:46	
Toluene-d8 (S)	%	96	66-148	01/10/22 19:46	

LABORATORY CONTROL SAMPLE: 3032292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	50	43.6	87	68-129	
1,1,2,2-Tetrachloroethane	ug/kg	50	44.1	88	67-137	
1,1-Dichloroethene	ug/kg	50	46.8	94	53-135	
1,2,4-Trimethylbenzene	ug/kg	50	44.1	88	61-125	
1,2-Dibromoethane (EDB)	ug/kg	50	48.7	97	68-125	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

LABORATORY CONTROL SAMPLE: 3032292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/kg	50	45.9	92	69-128	
1,2-Dichloropropane	ug/kg	50	45.7	91	70-130	
Benzene	ug/kg	50	45.9	92	69-125	
Chlorobenzene	ug/kg	50	44.6	89	66-121	
Chloroform	ug/kg	50	44.2	88	66-123	
cis-1,2-Dichloroethene	ug/kg	50	44.5	89	67-122	
Ethylbenzene	ug/kg	50	46.0	92	57-126	
Isopropylbenzene (Cumene)	ug/kg	50	46.8	94	62-132	
Methyl-tert-butyl ether	ug/kg	50	47.0	94	66-136	
Naphthalene	ug/kg	50	44.4	89	59-131	
Tetrachloroethene	ug/kg	50	44.9	90	61-123	
Toluene	ug/kg	50	45.8	92	67-128	
trans-1,2-Dichloroethene	ug/kg	50	42.6	85	61-127	
Trichloroethene	ug/kg	50	44.6	89	64-122	
Vinyl chloride	ug/kg	50	41.4	83	42-148	
Xylene (Total)	ug/kg	150	149	100	62-126	
4-Bromofluorobenzene (S)	%			102	40-149	
Dibromofluoromethane (S)	%			99	73-132	
Toluene-d8 (S)	%			98	66-148	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032293 3032294

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1-Trichloroethane	ug/kg	ND	133	100	133	103	99	103	38-149	25	20	R1	
1,1,2,2-Tetrachloroethane	ug/kg	ND	133	100	147	111	110	111	19-169	28	20	R1	
1,1-Dichloroethene	ug/kg	ND	133	100	153	121	115	121	24-162	23	20	R1	
1,2,4-Trimethylbenzene	ug/kg	ND	133	100	137	97.3	103	97	10-169	34	20	R1	
1,2-Dibromoethane (EDB)	ug/kg	ND	133	100	130	89.7	98	90	19-153	37	20	R1	
1,2-Dichloroethane	ug/kg	ND	133	100	134	98.6	100	99	32-146	30	20	R1	
1,2-Dichloropropane	ug/kg	ND	133	100	129	99.1	97	99	39-141	26	20	R1	
Benzene	ug/kg	ND	133	100	136	102	102	102	35-140	28	20	R1	
Chlorobenzene	ug/kg	ND	133	100	120	80.5	90	80	16-142	40	20	R1	
Chloroform	ug/kg	ND	133	100	133	102	100	102	30-146	27	20	R1	
cis-1,2-Dichloroethene	ug/kg	ND	133	100	133	101	100	101	30-145	28	20	R1	
Ethylbenzene	ug/kg	ND	133	100	131	88.5	98	88	10-150	38	20	R1	
Isopropylbenzene (Cumene)	ug/kg	ND	133	100	131	91.6	99	92	10-153	36	20	R1	
Methyl-tert-butyl ether	ug/kg	ND	133	100	138	106	104	106	45-153	26	20	R1	
Naphthalene	ug/kg	ND	133	100	87.0	53.3	65	53	10-130	48	20	R1	
Tetrachloroethene	ug/kg	ND	133	100	138	105	104	105	10-179	28	20	R1	
Toluene	ug/kg	ND	133	100	139	98.1	104	98	20-158	34	20	R1	
trans-1,2-Dichloroethene	ug/kg	ND	133	100	128	100	96	100	24-149	25	20	R1	
Trichloroethene	ug/kg	ND	133	100	122	93.2	91	93	10-168	26	20	R1	
Vinyl chloride	ug/kg	ND	133	100	136	105	102	105	10-165	26	20	R1	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Parameter	Units	3032293		3032294		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Xylene (Total)	ug/kg	ND	400	300	415	284	104	95	10-152	38	20	RS	
4-Bromofluorobenzene (S)	%						96	89	40-149				
Dibromofluoromethane (S)	%						97	96	73-132				
Toluene-d8 (S)	%						107	108	66-148				

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

QC Batch: 657974

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306617001, 50306617002, 50306617003, 50306617004

SAMPLE DUPLICATE: 3031995

Parameter	Units	50306616001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	42.7	47.6	11	5	N2,R1

SAMPLE DUPLICATE: 3031996

Parameter	Units	50306619001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.5	22.8	2	5	N2

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

RS The RPD value in one of the constituent analytes was outside the control limits.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50306617

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306617001	A50sed	EPA 3050	658130	EPA 6010	658450
50306617002	A51sed	EPA 3050	658130	EPA 6010	658450
50306617003	DUP2	EPA 3050	658130	EPA 6010	658450
50306617004	A52sed	EPA 3050	658130	EPA 6010	658450
50306617005	SW-2	EPA 3010	658009	EPA 6010	658163
50306617006	DUP3	EPA 3010	658009	EPA 6010	658163
50306617005	SW-2	EPA 7470	658512	EPA 7470	658586
50306617006	DUP3	EPA 7470	658512	EPA 7470	658586
50306617001	A50sed	EPA 7471	658132	EPA 7471	658400
50306617002	A51sed	EPA 7471	658132	EPA 7471	658400
50306617003	DUP2	EPA 7471	658132	EPA 7471	658400
50306617004	A52sed	EPA 7471	658132	EPA 7471	658400
50306617005	SW-2	EPA 5030/8260	658044		
50306617006	DUP3	EPA 5030/8260	658044		
50306617001	A50sed	EPA 8260	658080		
50306617002	A51sed	EPA 8260	658080		
50306617003	DUP2	EPA 8260	658080		
50306617004	A52sed	EPA 8260	658080		
50306617001	A50sed	SM 2540G	657974		
50306617002	A51sed	SM 2540G	657974		
50306617003	DUP2	SM 2540G	657974		
50306617004	A52sed	SM 2540G	657974		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

# WO#: 50306617



Workorder Number or

**USE ONLY**

Company: Mundell and Associates, Inc. Billing Information: 110 S Downey Ave, Indianapolis, IN 46219

Address: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com

Copy To: Site Collection Info/Address: 4300/4400 BLK S Hoyt Ave Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II State: IN County/City: Muncie Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No

Email: ljohnstone@mundellassociates.com Purchase Order #: DW PWS ID #: [ ] Yes [ ] No

Collected By (print): Luke Johnstone Quote #: DW Location Code: Immediately Packed on Ice: [x] Yes [ ] No

Collected By (signature): Turnaround Date Required: Field Filtered (if applicable): [ ] Yes [ ] No

Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold: Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day Analysis: \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals + Lithium via EPA 6010B	Total RCRA 8 Metals + Lithium	VOC's full list EPA8260	VOC's full list EPA8260
			Date	Time	Date	Time							
A50sed	SL	Grab	1/6	14:00				5	G	X			X
A51sed	SL	Grab	1/6	14:15				5	G	X			X
DUP2	SL	Grab	1/6					5	G	X			X
A52sed	SL	Grab	1/6	14:30				5	G	X			X
SW-2	W	Grab	1/6	14:45				4	G/P		X	X	
DUP3	W	Grab	1/6					4	G/P		X	X	

U 1 3 6/U/C  
\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water

Analyses				Lab Profile/Line:	
				Lab Sample Receipt Checklist:	
				Custody Seals Present/Intact Y N NA	
				Custody Signatures Present Y N NA	
				Collector Signature Present Y N NA	
				Bottles Intact Y N NA	
				Correct Bottles Y N NA	
				Sufficient Volume Y N NA	
				Samples Received on Ice Y N NA	
				VOA - Headspace Acceptable Y N NA	
				USDA Regulated Soils Y N NA	
				Samples in Holding Time Y N NA	
				Residual Chlorine Present Y N NA	
				Cl Strips: _____	
				Sample pH Acceptable Y N NA	
				pH Strips: _____	
				Sulfide Present Y N NA	
				Lead Acetate Strips: _____	
				LAB USE ONLY:	
				Lab Sample # / Comments:	
				see slur	
				001	
				002	
				003	
				004	
				005	
				006	

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium

Type of Ice Used: Wet Blue Dry None

SHORT HOLDS PRESENT (<72 hours): Y N N/A

LAB Sample Temperature Info: Temp Blank Received: Y N NA

Packing Material Used:

Lab Tracking #:

Therm ID#: 4

VOC full list

Samples received via: FEDEX UPS Client Courier Pace Courier

Cooler 1 Temp Upon Receipt: 4.8°C

Radchem sample(s) screened (<500 cpm): Y N NA

Comments:

Cooler 1 Therm Corr. Factor: 2.0°C

Relinquished by/Company: (Signature) Date/Time: 1/7/22 11:05 Received by/Company: (Signature) Date/Time: 1/7/22 11:00

MTJL LAB USE ONLY

Cooler 1 Corrected Temp: 4.2°C

Relinquished by/Company: (Signature) Date/Time: 1/7/22 12:35 Received by/Company: (Signature) Date/Time: 1-7-22 12:35

Table #:

Trip Blank Received: Y N NA

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:

Acctnum: Template: Prelogin: PM: PB:

HCL MeOH TSP Other

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:

Non Conformance(s): Page: \_\_\_\_\_

YES / NO of: \_\_\_\_\_

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:

Page: \_\_\_\_\_

of: \_\_\_\_\_



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 1-7-22 15:21

- 1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No  
(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
- 4. Cooler Temperature: 4.4 / 4.2  
Temp should be above freezing to 6°C (Initial/Corrected)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis: <u>TC</u>	<input checked="" type="checkbox"/>		Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> <u>RC 1-7-22</u>
Time 5035A TC placed in Freezer or Short Holds To Lab		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)	<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<input checked="" type="checkbox"/>	<u>No VOA Vials Sent</u>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?		<input checked="" type="checkbox"/>	
Extra labels on Terracore Vials? (soils only)	<input checked="" type="checkbox"/>		Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS



MeOH

(only)



Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1	1	4																									SL			
2	1	1																												
3																														
4	1	1																												
5				3																	1						WT	✓		
6				1																	1						1	1		
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1 liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

January 17, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20023 Muncie Phase II  
Pace Project No.: 50306629

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on January 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50306629001	SW-3	Water	01/06/22 15:45	01/07/22 12:35
50306629002	A53sed	Solid	01/06/22 15:30	01/07/22 12:35
50306629003	A54	Water	01/06/22 16:00	01/07/22 12:35
50306629004	Trip Blank	Water	01/06/22 08:00	01/07/22 12:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50306629001	SW-3	EPA 6010	JDG	8	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 5030/8260	SLB	75	PASI-I
50306629002	A53sed	EPA 6010	JDG	8	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	ADT	1	PASI-I
50306629003	A54	EPA 6010	JDG	8	PASI-I
		EPA 7470	ILP	1	PASI-I
50306629004	Trip Blank	EPA 5030/8260	SLB	75	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50306629001</b>	<b>SW-3</b>					
EPA 6010	Barium	144	ug/L	10.0	01/11/22 11:59	
<b>50306629002</b>	<b>A53sed</b>					
EPA 6010	Arsenic	4.4	mg/kg	1.5	01/13/22 12:18	
EPA 6010	Barium	58.1	mg/kg	1.5	01/13/22 12:18	
EPA 6010	Chromium	8.6	mg/kg	1.5	01/13/22 12:18	
EPA 6010	Lead	18.9	mg/kg	1.5	01/13/22 12:18	
EPA 6010	Lithium	8.7	mg/kg	7.5	01/13/22 12:18	N2
SM 2540G	Percent Moisture	38.8	%	0.10	01/08/22 08:56	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Sample: SW-3	Lab ID: 50306629001	Collected: 01/06/22 15:45	Received: 01/07/22 12:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:59	7440-38-2	
Barium	144	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:59	7440-39-3	
Cadmium	ND	ug/L	2.0	1	01/10/22 10:22	01/11/22 11:59	7440-43-9	
Chromium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:59	7440-47-3	
Lead	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:59	7439-92-1	
Lithium	ND	ug/L	20.0	1	01/10/22 10:22	01/11/22 11:59	7439-93-2	
Selenium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:59	7782-49-2	
Silver	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 11:59	7440-22-4	
<b>7470 Mercury</b>								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	01/14/22 06:55	01/14/22 13:28	7439-97-6	
<b>8260 MSV Indiana</b>								
Analytical Method: EPA 5030/8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		01/11/22 16:05	67-64-1	L1
Acrolein	ND	ug/L	50.0	1		01/11/22 16:05	107-02-8	
Acrylonitrile	ND	ug/L	100	1		01/11/22 16:05	107-13-1	
Benzene	ND	ug/L	5.0	1		01/11/22 16:05	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		01/11/22 16:05	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		01/11/22 16:05	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		01/11/22 16:05	75-27-4	
Bromoform	ND	ug/L	5.0	1		01/11/22 16:05	75-25-2	
Bromomethane	ND	ug/L	5.0	1		01/11/22 16:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		01/11/22 16:05	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		01/11/22 16:05	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		01/11/22 16:05	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		01/11/22 16:05	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		01/11/22 16:05	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		01/11/22 16:05	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/11/22 16:05	108-90-7	
Chloroethane	ND	ug/L	5.0	1		01/11/22 16:05	75-00-3	
Chloroform	ND	ug/L	5.0	1		01/11/22 16:05	67-66-3	
Chloromethane	ND	ug/L	5.0	1		01/11/22 16:05	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		01/11/22 16:05	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		01/11/22 16:05	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		01/11/22 16:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		01/11/22 16:05	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		01/11/22 16:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:05	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		01/11/22 16:05	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		01/11/22 16:05	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		01/11/22 16:05	75-34-3	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Sample: SW-3	Lab ID: 50306629001	Collected: 01/06/22 15:45	Received: 01/07/22 12:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Indiana</b>		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	5.0	1		01/11/22 16:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		01/11/22 16:05	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		01/11/22 16:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		01/11/22 16:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		01/11/22 16:05	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		01/11/22 16:05	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		01/11/22 16:05	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		01/11/22 16:05	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		01/11/22 16:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		01/11/22 16:05	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		01/11/22 16:05	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		01/11/22 16:05	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		01/11/22 16:05	87-68-3	
n-Hexane	ND	ug/L	5.0	1		01/11/22 16:05	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		01/11/22 16:05	591-78-6	
Iodomethane	ND	ug/L	10.0	1		01/11/22 16:05	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		01/11/22 16:05	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		01/11/22 16:05	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		01/11/22 16:05	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		01/11/22 16:05	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		01/11/22 16:05	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		01/11/22 16:05	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		01/11/22 16:05	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		01/11/22 16:05	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		01/11/22 16:05	103-65-1	
Styrene	ND	ug/L	5.0	1		01/11/22 16:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		01/11/22 16:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		01/11/22 16:05	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		01/11/22 16:05	127-18-4	
Toluene	ND	ug/L	5.0	1		01/11/22 16:05	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:05	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:05	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		01/11/22 16:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		01/11/22 16:05	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		01/11/22 16:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		01/11/22 16:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		01/11/22 16:05	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		01/11/22 16:05	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		01/11/22 16:05	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		01/11/22 16:05	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		01/11/22 16:05	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		01/11/22 16:05	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103	%.	78-120	1		01/11/22 16:05	1868-53-7	
4-Bromofluorobenzene (S)	103	%.	78-117	1		01/11/22 16:05	460-00-4	
Toluene-d8 (S)	99	%.	77-118	1		01/11/22 16:05	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

**Sample: A53sed**      **Lab ID: 50306629002**      Collected: 01/06/22 15:30      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	4.4	mg/kg	1.5	1	01/11/22 10:22	01/13/22 12:18	7440-38-2	
Barium	58.1	mg/kg	1.5	1	01/11/22 10:22	01/13/22 12:18	7440-39-3	
Cadmium	ND	mg/kg	0.75	1	01/11/22 10:22	01/13/22 12:18	7440-43-9	
Chromium	8.6	mg/kg	1.5	1	01/11/22 10:22	01/13/22 12:18	7440-47-3	
Lead	18.9	mg/kg	1.5	1	01/11/22 10:22	01/13/22 12:18	7439-92-1	
Lithium	8.7	mg/kg	7.5	1	01/11/22 10:22	01/13/22 12:18	7439-93-2	N2
Selenium	ND	mg/kg	1.5	1	01/11/22 10:22	01/13/22 12:18	7782-49-2	
Silver	ND	mg/kg	0.75	1	01/11/22 10:22	01/13/22 12:18	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.34	1	01/11/22 11:25	01/13/22 09:28	7439-97-6	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/kg	146	1		01/11/22 01:51	67-64-1	
Acrolein	ND	ug/kg	146	1		01/11/22 01:51	107-02-8	
Acrylonitrile	ND	ug/kg	146	1		01/11/22 01:51	107-13-1	
Benzene	ND	ug/kg	7.3	1		01/11/22 01:51	71-43-2	
Bromobenzene	ND	ug/kg	7.3	1		01/11/22 01:51	108-86-1	
Bromochloromethane	ND	ug/kg	7.3	1		01/11/22 01:51	74-97-5	
Bromodichloromethane	ND	ug/kg	7.3	1		01/11/22 01:51	75-27-4	
Bromoform	ND	ug/kg	7.3	1		01/11/22 01:51	75-25-2	
Bromomethane	ND	ug/kg	7.3	1		01/11/22 01:51	74-83-9	
2-Butanone (MEK)	ND	ug/kg	36.4	1		01/11/22 01:51	78-93-3	
n-Butylbenzene	ND	ug/kg	7.3	1		01/11/22 01:51	104-51-8	
sec-Butylbenzene	ND	ug/kg	7.3	1		01/11/22 01:51	135-98-8	
tert-Butylbenzene	ND	ug/kg	7.3	1		01/11/22 01:51	98-06-6	
Carbon disulfide	ND	ug/kg	14.6	1		01/11/22 01:51	75-15-0	
Carbon tetrachloride	ND	ug/kg	7.3	1		01/11/22 01:51	56-23-5	
Chlorobenzene	ND	ug/kg	7.3	1		01/11/22 01:51	108-90-7	
Chloroethane	ND	ug/kg	7.3	1		01/11/22 01:51	75-00-3	
Chloroform	ND	ug/kg	7.3	1		01/11/22 01:51	67-66-3	
Chloromethane	ND	ug/kg	7.3	1		01/11/22 01:51	74-87-3	
2-Chlorotoluene	ND	ug/kg	7.3	1		01/11/22 01:51	95-49-8	
4-Chlorotoluene	ND	ug/kg	7.3	1		01/11/22 01:51	106-43-4	
Dibromochloromethane	ND	ug/kg	7.3	1		01/11/22 01:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	7.3	1		01/11/22 01:51	106-93-4	
Dibromomethane	ND	ug/kg	7.3	1		01/11/22 01:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	7.3	1		01/11/22 01:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	7.3	1		01/11/22 01:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	7.3	1		01/11/22 01:51	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	146	1		01/11/22 01:51	110-57-6	
Dichlorodifluoromethane	ND	ug/kg	7.3	1		01/11/22 01:51	75-71-8	
1,1-Dichloroethane	ND	ug/kg	7.3	1		01/11/22 01:51	75-34-3	

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## ANALYTICAL RESULTS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

**Sample: A53sed**      **Lab ID: 50306629002**      Collected: 01/06/22 15:30      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/kg	7.3	1		01/11/22 01:51	107-06-2	
1,1-Dichloroethene	ND	ug/kg	7.3	1		01/11/22 01:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	7.3	1		01/11/22 01:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	7.3	1		01/11/22 01:51	156-60-5	
1,2-Dichloropropane	ND	ug/kg	7.3	1		01/11/22 01:51	78-87-5	
1,3-Dichloropropane	ND	ug/kg	7.3	1		01/11/22 01:51	142-28-9	
2,2-Dichloropropane	ND	ug/kg	7.3	1		01/11/22 01:51	594-20-7	
1,1-Dichloropropene	ND	ug/kg	7.3	1		01/11/22 01:51	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	7.3	1		01/11/22 01:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	7.3	1		01/11/22 01:51	10061-02-6	
Ethylbenzene	ND	ug/kg	7.3	1		01/11/22 01:51	100-41-4	
Ethyl methacrylate	ND	ug/kg	146	1		01/11/22 01:51	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/kg	7.3	1		01/11/22 01:51	87-68-3	
n-Hexane	ND	ug/kg	7.3	1		01/11/22 01:51	110-54-3	
2-Hexanone	ND	ug/kg	146	1		01/11/22 01:51	591-78-6	
Iodomethane	ND	ug/kg	146	1		01/11/22 01:51	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	7.3	1		01/11/22 01:51	98-82-8	
p-Isopropyltoluene	ND	ug/kg	7.3	1		01/11/22 01:51	99-87-6	
Methylene Chloride	ND	ug/kg	29.1	1		01/11/22 01:51	75-09-2	
1-Methylnaphthalene	ND	ug/kg	14.6	1		01/11/22 01:51	90-12-0	
2-Methylnaphthalene	ND	ug/kg	14.6	1		01/11/22 01:51	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	36.4	1		01/11/22 01:51	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	7.3	1		01/11/22 01:51	1634-04-4	
Naphthalene	ND	ug/kg	7.3	1		01/11/22 01:51	91-20-3	
n-Propylbenzene	ND	ug/kg	7.3	1		01/11/22 01:51	103-65-1	
Styrene	ND	ug/kg	7.3	1		01/11/22 01:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	7.3	1		01/11/22 01:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	7.3	1		01/11/22 01:51	79-34-5	
Tetrachloroethene	ND	ug/kg	7.3	1		01/11/22 01:51	127-18-4	
Toluene	ND	ug/kg	7.3	1		01/11/22 01:51	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	7.3	1		01/11/22 01:51	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	7.3	1		01/11/22 01:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	7.3	1		01/11/22 01:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	7.3	1		01/11/22 01:51	79-00-5	
Trichloroethene	ND	ug/kg	7.3	1		01/11/22 01:51	79-01-6	
Trichlorofluoromethane	ND	ug/kg	7.3	1		01/11/22 01:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	7.3	1		01/11/22 01:51	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	7.3	1		01/11/22 01:51	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	7.3	1		01/11/22 01:51	108-67-8	
Vinyl acetate	ND	ug/kg	146	1		01/11/22 01:51	108-05-4	
Vinyl chloride	ND	ug/kg	7.3	1		01/11/22 01:51	75-01-4	
Xylene (Total)	ND	ug/kg	14.6	1		01/11/22 01:51	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	101	%	73-132	1		01/11/22 01:51	1868-53-7	
Toluene-d8 (S)	117	%	66-148	1		01/11/22 01:51	2037-26-5	

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## ANALYTICAL RESULTS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

**Sample: A53sed**      **Lab ID: 50306629002**      Collected: 01/06/22 15:30      Received: 01/07/22 12:35      Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>	Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis							
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	83	%	40-149	1		01/11/22 01:51	460-00-4	
<b>Percent Moisture</b>	Analytical Method: SM 2540G Pace Analytical Services - Indianapolis							
Percent Moisture	<b>38.8</b>	%	0.10	1		01/08/22 08:56		N2

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### ANALYTICAL RESULTS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

<b>Sample: A54</b>		<b>Lab ID: 50306629003</b>		Collected: 01/06/22 16:00	Received: 01/07/22 12:35	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis						
Arsenic	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 12:05	7440-38-2	
Barium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 12:05	7440-39-3	
Cadmium	ND	ug/L	2.0	1	01/10/22 10:22	01/11/22 12:05	7440-43-9	
Chromium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 12:05	7440-47-3	
Lead	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 12:05	7439-92-1	
Lithium	ND	ug/L	20.0	1	01/10/22 10:22	01/11/22 12:05	7439-93-2	
Selenium	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 12:05	7782-49-2	
Silver	ND	ug/L	10.0	1	01/10/22 10:22	01/11/22 12:05	7440-22-4	
<b>7470 Mercury</b>		Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis						
Mercury	ND	ug/L	2.0	1	01/14/22 06:55	01/14/22 12:34	7439-97-6	

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### ANALYTICAL RESULTS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Sample: Trip Blank	Lab ID: 50306629004	Collected: 01/06/22 08:00	Received: 01/07/22 12:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Indiana</b>	Analytical Method: EPA 5030/8260							
	Pace Analytical Services - Indianapolis							
Acetone	ND	ug/L	100	1		01/11/22 16:36	67-64-1	L1
Acrolein	ND	ug/L	50.0	1		01/11/22 16:36	107-02-8	
Acrylonitrile	ND	ug/L	100	1		01/11/22 16:36	107-13-1	
Benzene	ND	ug/L	5.0	1		01/11/22 16:36	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		01/11/22 16:36	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		01/11/22 16:36	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		01/11/22 16:36	75-27-4	
Bromoform	ND	ug/L	5.0	1		01/11/22 16:36	75-25-2	
Bromomethane	ND	ug/L	5.0	1		01/11/22 16:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		01/11/22 16:36	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		01/11/22 16:36	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		01/11/22 16:36	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		01/11/22 16:36	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		01/11/22 16:36	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		01/11/22 16:36	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		01/11/22 16:36	108-90-7	
Chloroethane	ND	ug/L	5.0	1		01/11/22 16:36	75-00-3	
Chloroform	ND	ug/L	5.0	1		01/11/22 16:36	67-66-3	
Chloromethane	ND	ug/L	5.0	1		01/11/22 16:36	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		01/11/22 16:36	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		01/11/22 16:36	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		01/11/22 16:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		01/11/22 16:36	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		01/11/22 16:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:36	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		01/11/22 16:36	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		01/11/22 16:36	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		01/11/22 16:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		01/11/22 16:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		01/11/22 16:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		01/11/22 16:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		01/11/22 16:36	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		01/11/22 16:36	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		01/11/22 16:36	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		01/11/22 16:36	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		01/11/22 16:36	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		01/11/22 16:36	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		01/11/22 16:36	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		01/11/22 16:36	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		01/11/22 16:36	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		01/11/22 16:36	87-68-3	
n-Hexane	ND	ug/L	5.0	1		01/11/22 16:36	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		01/11/22 16:36	591-78-6	
Iodomethane	ND	ug/L	10.0	1		01/11/22 16:36	74-88-4	

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## ANALYTICAL RESULTS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Sample: Trip Blank		Lab ID: 50306629004	Collected: 01/06/22 08:00	Received: 01/07/22 12:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Indiana</b>		Analytical Method: EPA 5030/8260						
		Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		01/11/22 16:36	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		01/11/22 16:36	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		01/11/22 16:36	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		01/11/22 16:36	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		01/11/22 16:36	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		01/11/22 16:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		01/11/22 16:36	1634-04-4	
Naphthalene	ND	ug/L	1.2	1		01/11/22 16:36	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	1		01/11/22 16:36	103-65-1	
Styrene	ND	ug/L	5.0	1		01/11/22 16:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		01/11/22 16:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		01/11/22 16:36	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		01/11/22 16:36	127-18-4	
Toluene	ND	ug/L	5.0	1		01/11/22 16:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		01/11/22 16:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		01/11/22 16:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		01/11/22 16:36	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		01/11/22 16:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		01/11/22 16:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		01/11/22 16:36	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		01/11/22 16:36	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		01/11/22 16:36	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		01/11/22 16:36	108-05-4	
Vinyl chloride	ND	ug/L	2.0	1		01/11/22 16:36	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		01/11/22 16:36	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103	%	78-120	1		01/11/22 16:36	1868-53-7	
4-Bromofluorobenzene (S)	104	%	78-117	1		01/11/22 16:36	460-00-4	
Toluene-d8 (S)	102	%	77-118	1		01/11/22 16:36	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

QC Batch: 658512

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306629001, 50306629003

METHOD BLANK: 3034138

Matrix: Water

Associated Lab Samples: 50306629001, 50306629003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	2.0	01/14/22 12:11	

LABORATORY CONTROL SAMPLE: 3034139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034140 3034141

Parameter	Units	3034140		3034141		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306625001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	ug/L	ND	5	5	5.0	5.0	99	98	75-125	0	20

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

QC Batch: 658134

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306629002

METHOD BLANK: 3032522

Matrix: Solid

Associated Lab Samples: 50306629002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/13/22 08:58	

LABORATORY CONTROL SAMPLE: 3032523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.52	0.54	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032524 3032525

Parameter	Units	3032524		3032525		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50306619001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Mercury	mg/kg	ND	0.66	0.66	0.72	0.74	103	106	75-125	2	20	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II  
Pace Project No.: 50306629

QC Batch: 658130      Analysis Method: EPA 6010  
QC Batch Method: EPA 3050      Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306629002

METHOD BLANK: 3032509      Matrix: Solid  
Associated Lab Samples: 50306629002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.92	01/13/22 10:40	
Barium	mg/kg	ND	0.92	01/13/22 10:40	
Cadmium	mg/kg	ND	0.46	01/13/22 10:40	
Chromium	mg/kg	ND	0.92	01/13/22 10:40	
Lead	mg/kg	ND	0.92	01/13/22 10:40	
Lithium	mg/kg	ND	4.6	01/13/22 10:40	N2
Selenium	mg/kg	ND	0.92	01/13/22 10:40	
Silver	mg/kg	ND	0.46	01/13/22 10:40	

LABORATORY CONTROL SAMPLE: 3032510

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	45.2	44.7	99	80-120	
Barium	mg/kg	45.2	44.0	97	80-120	
Cadmium	mg/kg	45.2	43.1	95	80-120	
Chromium	mg/kg	45.2	46.4	103	80-120	
Lead	mg/kg	45.2	42.2	93	80-120	
Lithium	mg/kg	45.2	44.9	99	80-120	N2
Selenium	mg/kg	45.2	43.4	96	80-120	
Silver	mg/kg	22.6	21.3	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032511      3032512

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	Spike Conc.	Spike Conc.	Conc.								
Arsenic	mg/kg	3.4	74.7	74.9	74.9	74.9	73.6	96	94	75-125	2	20	
Barium	mg/kg	85.4	74.7	74.9	74.9	160	166	100	107	75-125	3	20	
Cadmium	mg/kg	ND	74.7	74.9	74.9	67.9	67.1	91	89	75-125	1	20	
Chromium	mg/kg	9.3	74.7	74.9	74.9	77.5	78.3	91	92	75-125	1	20	
Lead	mg/kg	40.8	74.7	74.9	74.9	96.3	99.1	74	78	75-125	3	20	M0
Lithium	mg/kg	9.0	74.7	74.9	74.9	80.5	80.1	96	95	75-125	0	20	N2
Selenium	mg/kg	ND	74.7	74.9	74.9	67.4	66.1	90	88	75-125	2	20	
Silver	mg/kg	ND	37.3	37.5	34.0	34.0	33.5	91	90	75-125	1	20	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032513 3032514														
Parameter	Units	50306619001		3032513		3032514		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/kg	7.3	61.9	56.4	63.6	53.9	91	83	75-125	16	20			
Barium	mg/kg	90.8	61.9	56.4	165	154	120	112	75-125	7	20			
Cadmium	mg/kg	ND	61.9	56.4	54.9	45.9	88	81	75-125	18	20			
Chromium	mg/kg	16.2	61.9	56.4	77.1	64.3	98	85	75-125	18	20			
Lead	mg/kg	19.7	61.9	56.4	69.7	60.0	81	72	75-125	15	20	M0		
Lithium	mg/kg	9.8	61.9	56.4	70.3	58.9	98	87	75-125	18	20	N2		
Selenium	mg/kg	ND	61.9	56.4	54.5	45.3	88	80	75-125	18	20			
Silver	mg/kg	ND	31	28.1	26.7	22.6	86	80	75-125	17	20			

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**QUALITY CONTROL DATA**

Project: M20023 Muncie Phase II  
Pace Project No.: 50306629

QC Batch: 658009 Analysis Method: EPA 6010  
QC Batch Method: EPA 3010 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306629001, 50306629003

METHOD BLANK: 3032099 Matrix: Water

Associated Lab Samples: 50306629001, 50306629003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	01/11/22 11:26	
Barium	ug/L	ND	10.0	01/11/22 11:26	
Cadmium	ug/L	ND	2.0	01/11/22 11:26	
Chromium	ug/L	ND	10.0	01/11/22 11:26	
Lead	ug/L	ND	10.0	01/11/22 11:26	
Lithium	ug/L	ND	20.0	01/11/22 11:26	
Selenium	ug/L	ND	10.0	01/11/22 11:26	
Silver	ug/L	ND	10.0	01/11/22 11:26	

LABORATORY CONTROL SAMPLE: 3032100

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	1040	104	80-120	
Barium	ug/L	1000	1040	104	80-120	
Cadmium	ug/L	1000	998	100	80-120	
Chromium	ug/L	1000	1030	103	80-120	
Lead	ug/L	1000	970	97	80-120	
Lithium	ug/L	1000	1040	104	80-120	
Selenium	ug/L	1000	1010	101	80-120	
Silver	ug/L	500	483	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032101 3032102

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306625001 Result	Spike Conc.	Spike Conc.	Conc.							
Arsenic	ug/L	ND	1000	1000	1110	1100	111	110	75-125	0	20	
Barium	ug/L	155	1000	1000	1260	1260	110	110	75-125	0	20	
Cadmium	ug/L	ND	1000	1000	1040	1040	104	104	75-125	0	20	
Chromium	ug/L	ND	1000	1000	1060	1060	106	105	75-125	1	20	
Lead	ug/L	ND	1000	1000	979	982	98	98	75-125	0	20	
Lithium	ug/L	ND	1000	1000	1080	1090	107	108	75-125	1	20	
Selenium	ug/L	ND	1000	1000	1060	1060	105	106	75-125	0	20	
Silver	ug/L	ND	500	500	508	504	102	101	75-125	1	20	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II  
Pace Project No.: 50306629

QC Batch: 658149      Analysis Method: EPA 5030/8260  
QC Batch Method: EPA 5030/8260      Analysis Description: 8260 MSV  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306629001, 50306629004

METHOD BLANK: 3032569      Matrix: Water

Associated Lab Samples: 50306629001, 50306629004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1,1-Trichloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1,2-Trichloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1-Dichloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,1-Dichloroethene	ug/L	ND	5.0	01/11/22 09:26	
1,1-Dichloropropene	ug/L	ND	5.0	01/11/22 09:26	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1,2,3-Trichloropropane	ug/L	ND	5.0	01/11/22 09:26	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	01/11/22 09:26	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	01/11/22 09:26	
1,2-Dichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1,2-Dichloroethane	ug/L	ND	5.0	01/11/22 09:26	
1,2-Dichloropropane	ug/L	ND	5.0	01/11/22 09:26	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	01/11/22 09:26	
1,3-Dichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1,3-Dichloropropane	ug/L	ND	5.0	01/11/22 09:26	
1,4-Dichlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
1-Methylnaphthalene	ug/L	ND	10.0	01/11/22 09:26	
2,2-Dichloropropane	ug/L	ND	5.0	01/11/22 09:26	
2-Butanone (MEK)	ug/L	ND	25.0	01/11/22 09:26	
2-Chlorotoluene	ug/L	ND	5.0	01/11/22 09:26	
2-Hexanone	ug/L	ND	25.0	01/11/22 09:26	
2-Methylnaphthalene	ug/L	ND	10.0	01/11/22 09:26	
4-Chlorotoluene	ug/L	ND	5.0	01/11/22 09:26	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	01/11/22 09:26	
Acetone	ug/L	ND	100	01/11/22 09:26	
Acrolein	ug/L	ND	50.0	01/11/22 09:26	
Acrylonitrile	ug/L	ND	100	01/11/22 09:26	
Benzene	ug/L	ND	5.0	01/11/22 09:26	
Bromobenzene	ug/L	ND	5.0	01/11/22 09:26	
Bromochloromethane	ug/L	ND	5.0	01/11/22 09:26	
Bromodichloromethane	ug/L	ND	5.0	01/11/22 09:26	
Bromoform	ug/L	ND	5.0	01/11/22 09:26	
Bromomethane	ug/L	ND	5.0	01/11/22 09:26	
Carbon disulfide	ug/L	ND	10.0	01/11/22 09:26	
Carbon tetrachloride	ug/L	ND	5.0	01/11/22 09:26	
Chlorobenzene	ug/L	ND	5.0	01/11/22 09:26	
Chloroethane	ug/L	ND	5.0	01/11/22 09:26	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

METHOD BLANK: 3032569

Matrix: Water

Associated Lab Samples: 50306629001, 50306629004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	5.0	01/11/22 09:26	
Chloromethane	ug/L	ND	5.0	01/11/22 09:26	
cis-1,2-Dichloroethene	ug/L	ND	5.0	01/11/22 09:26	
cis-1,3-Dichloropropene	ug/L	ND	5.0	01/11/22 09:26	
Dibromochloromethane	ug/L	ND	5.0	01/11/22 09:26	
Dibromomethane	ug/L	ND	5.0	01/11/22 09:26	
Dichlorodifluoromethane	ug/L	ND	5.0	01/11/22 09:26	
Ethyl methacrylate	ug/L	ND	100	01/11/22 09:26	
Ethylbenzene	ug/L	ND	5.0	01/11/22 09:26	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	01/11/22 09:26	
Iodomethane	ug/L	ND	10.0	01/11/22 09:26	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	01/11/22 09:26	
Methyl-tert-butyl ether	ug/L	ND	4.0	01/11/22 09:26	
Methylene Chloride	ug/L	ND	5.0	01/11/22 09:26	
n-Butylbenzene	ug/L	ND	5.0	01/11/22 09:26	
n-Hexane	ug/L	ND	5.0	01/11/22 09:26	
n-Propylbenzene	ug/L	ND	5.0	01/11/22 09:26	
Naphthalene	ug/L	ND	1.2	01/11/22 09:26	
p-Isopropyltoluene	ug/L	ND	5.0	01/11/22 09:26	
sec-Butylbenzene	ug/L	ND	5.0	01/11/22 09:26	
Styrene	ug/L	ND	5.0	01/11/22 09:26	
tert-Butylbenzene	ug/L	ND	5.0	01/11/22 09:26	
Tetrachloroethene	ug/L	ND	5.0	01/11/22 09:26	
Toluene	ug/L	ND	5.0	01/11/22 09:26	
trans-1,2-Dichloroethene	ug/L	ND	5.0	01/11/22 09:26	
trans-1,3-Dichloropropene	ug/L	ND	5.0	01/11/22 09:26	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	01/11/22 09:26	
Trichloroethene	ug/L	ND	5.0	01/11/22 09:26	
Trichlorofluoromethane	ug/L	ND	5.0	01/11/22 09:26	
Vinyl acetate	ug/L	ND	50.0	01/11/22 09:26	
Vinyl chloride	ug/L	ND	2.0	01/11/22 09:26	
Xylene (Total)	ug/L	ND	10.0	01/11/22 09:26	
4-Bromofluorobenzene (S)	%	105	78-117	01/11/22 09:26	
Dibromofluoromethane (S)	%	101	78-120	01/11/22 09:26	
Toluene-d8 (S)	%	102	77-118	01/11/22 09:26	

LABORATORY CONTROL SAMPLE: 3032570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.3	101	76-125	
1,1,1-Trichloroethane	ug/L	50	52.9	106	73-132	
1,1,2,2-Tetrachloroethane	ug/L	50	56.3	113	65-131	
1,1,2-Trichloroethane	ug/L	50	53.3	107	74-127	
1,1-Dichloroethane	ug/L	50	54.7	109	73-133	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

LABORATORY CONTROL SAMPLE: 3032570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	58.7	117	67-136	
1,1-Dichloropropene	ug/L	50	60.7	121	72-128	
1,2,3-Trichlorobenzene	ug/L	50	45.4	91	58-136	
1,2,3-Trichloropropane	ug/L	50	49.9	100	69-126	
1,2,4-Trichlorobenzene	ug/L	50	46.5	93	48-149	
1,2,4-Trimethylbenzene	ug/L	50	52.0	104	68-122	
1,2-Dibromoethane (EDB)	ug/L	50	50.4	101	76-126	
1,2-Dichlorobenzene	ug/L	50	50.4	101	75-114	
1,2-Dichloroethane	ug/L	50	54.8	110	69-135	
1,2-Dichloropropane	ug/L	50	54.8	110	78-134	
1,3,5-Trimethylbenzene	ug/L	50	51.6	103	68-120	
1,3-Dichlorobenzene	ug/L	50	49.6	99	70-119	
1,3-Dichloropropane	ug/L	50	53.1	106	74-131	
1,4-Dichlorobenzene	ug/L	50	49.2	98	69-117	
1-Methylnaphthalene	ug/L	50	49.4	99	68-139	
2,2-Dichloropropane	ug/L	50	54.5	109	61-127	
2-Butanone (MEK)	ug/L	250	315	126	56-164	
2-Chlorotoluene	ug/L	50	51.5	103	74-115	
2-Hexanone	ug/L	250	315	126	63-137	
2-Methylnaphthalene	ug/L	50	51.6	103	62-129	
4-Chlorotoluene	ug/L	50	51.1	102	74-115	
4-Methyl-2-pentanone (MIBK)	ug/L	250	310	124	64-134	
Acetone	ug/L	250	361	145	46-140	L1
Acrolein	ug/L	1000	984	98	53-126	
Acrylonitrile	ug/L	250	287	115	68-132	
Benzene	ug/L	50	52.4	105	77-128	
Bromobenzene	ug/L	50	54.5	109	62-133	
Bromochloromethane	ug/L	50	58.3	117	71-124	
Bromodichloromethane	ug/L	50	53.9	108	70-124	
Bromoform	ug/L	50	45.7	91	65-116	
Bromomethane	ug/L	50	56.5	113	10-200	
Carbon disulfide	ug/L	50	52.0	104	70-131	
Carbon tetrachloride	ug/L	50	54.4	109	61-139	
Chlorobenzene	ug/L	50	49.8	100	76-124	
Chloroethane	ug/L	50	59.2	118	56-142	
Chloroform	ug/L	50	53.0	106	77-120	
Chloromethane	ug/L	50	52.7	105	29-141	
cis-1,2-Dichloroethene	ug/L	50	52.1	104	72-127	
cis-1,3-Dichloropropene	ug/L	50	53.9	108	71-131	
Dibromochloromethane	ug/L	50	49.6	99	69-132	
Dibromomethane	ug/L	50	52.4	105	76-130	
Dichlorodifluoromethane	ug/L	50	43.3	87	23-139	
Ethyl methacrylate	ug/L	50	56J	112	66-128	
Ethylbenzene	ug/L	50	50.7	101	76-119	
Hexachloro-1,3-butadiene	ug/L	50	47.9	96	58-140	
Iodomethane	ug/L	50	48.7	97	10-200	
Isopropylbenzene (Cumene)	ug/L	50	52.2	104	77-128	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

LABORATORY CONTROL SAMPLE: 3032570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methyl-tert-butyl ether	ug/L	50	56.0	112	75-129	
Methylene Chloride	ug/L	50	55.3	111	72-129	
n-Butylbenzene	ug/L	50	54.5	109	59-128	
n-Hexane	ug/L	50	57.1	114	75-141	
n-Propylbenzene	ug/L	50	52.7	105	71-116	
Naphthalene	ug/L	50	48.9	98	67-136	
p-Isopropyltoluene	ug/L	50	51.5	103	67-123	
sec-Butylbenzene	ug/L	50	53.8	108	70-119	
Styrene	ug/L	50	51.9	104	66-123	
tert-Butylbenzene	ug/L	50	51.6	103	54-133	
Tetrachloroethene	ug/L	50	47.3	95	70-124	
Toluene	ug/L	50	50.0	100	72-117	
trans-1,2-Dichloroethene	ug/L	50	52.2	104	75-133	
trans-1,3-Dichloropropene	ug/L	50	53.4	107	75-111	
trans-1,4-Dichloro-2-butene	ug/L	50	63.4J	127	39-147	
Trichloroethene	ug/L	50	51.4	103	75-130	
Trichlorofluoromethane	ug/L	50	52.7	105	63-162	
Vinyl acetate	ug/L	200	187	93	42-139	
Vinyl chloride	ug/L	50	55.0	110	51-140	
Xylene (Total)	ug/L	150	148	99	73-117	
4-Bromofluorobenzene (S)	%			103	78-117	
Dibromofluoromethane (S)	%			100	78-120	
Toluene-d8 (S)	%			100	77-118	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032571 3032572

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306625001 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	51.8	50.6	104	101	40-147	2	20		
1,1,1-Trichloroethane	ug/L	ND	50	50	53.5	53.5	107	107	53-161	0	20		
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	55.0	54.0	110	108	58-134	2	20		
1,1,2-Trichloroethane	ug/L	ND	50	50	53.9	54.0	108	108	60-141	0	20		
1,1-Dichloroethane	ug/L	ND	50	50	57.7	57.3	115	115	67-140	1	20		
1,1-Dichloroethene	ug/L	ND	50	50	62.1	59.7	124	119	59-154	4	20		
1,1-Dichloropropene	ug/L	ND	50	50	60.6	61.0	121	122	31-153	1	20		
1,2,3-Trichlorobenzene	ug/L	ND	50	50	42.8	41.5	86	83	10-151	3	20		
1,2,3-Trichloropropane	ug/L	ND	50	50	50.8	49.8	102	100	63-140	2	20		
1,2,4-Trichlorobenzene	ug/L	ND	50	50	42.0	39.5	84	79	10-156	6	20		
1,2,4-Trimethylbenzene	ug/L	ND	50	50	50.6	49.9	101	100	11-145	1	20		
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	52.1	51.0	104	102	54-144	2	20		
1,2-Dichlorobenzene	ug/L	ND	50	50	49.7	48.4	99	97	17-145	3	20		
1,2-Dichloroethane	ug/L	ND	50	50	57.0	56.7	114	113	66-130	1	20		
1,2-Dichloropropane	ug/L	ND	50	50	56.6	56.4	113	113	65-136	0	20		
1,3,5-Trimethylbenzene	ug/L	ND	50	50	51.3	50.0	103	100	11-143	2	20		
1,3-Dichlorobenzene	ug/L	ND	50	50	47.1	45.7	94	91	10-146	3	20		

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Parameter	Units	3032571		3032572		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50306625001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
1,3-Dichloropropane	ug/L	ND	50	50	55.3	54.5	111	109	53-145	1	20	
1,4-Dichlorobenzene	ug/L	ND	50	50	47.0	45.3	94	91	17-141	4	20	
1-Methylnaphthalene	ug/L	ND	50	50	46.7	45.1	93	90	28-147	3	20	
2,2-Dichloropropane	ug/L	ND	50	50	53.6	53.7	107	107	35-142	0	20	
2-Butanone (MEK)	ug/L	ND	250	250	314	309	126	124	49-173	2	20	
2-Chlorotoluene	ug/L	ND	50	50	51.2	49.9	102	100	10-148	3	20	
2-Hexanone	ug/L	ND	250	250	311	308	124	123	57-142	1	20	
2-Methylnaphthalene	ug/L	ND	50	50	47.5	45.4	95	91	15-141	5	20	
4-Chlorotoluene	ug/L	ND	50	50	50.2	48.8	100	98	11-142	3	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	310	306	124	123	59-139	1	20	
Acetone	ug/L	ND	250	250	394	379	157	152	44-171	4	20	
Acrolein	ug/L	ND	1000	1000	980	958	98	96	25-131	2	20	
Acrylonitrile	ug/L	ND	250	250	286	286	114	114	60-145	0	20	
Benzene	ug/L	ND	50	50	53.5	53.8	107	108	69-128	1	20	
Bromobenzene	ug/L	ND	50	50	55.7	53.3	111	107	10-157	5	20	
Bromochloromethane	ug/L	ND	50	50	63.3	63.2	127	126	58-138	0	20	
Bromodichloromethane	ug/L	ND	50	50	54.8	55.1	110	110	51-138	0	20	
Bromoform	ug/L	ND	50	50	45.5	44.1	91	88	43-130	3	20	
Bromomethane	ug/L	ND	50	50	62.0	59.5	124	119	10-195	4	20	
Carbon disulfide	ug/L	ND	50	50	55.7	54.4	111	109	37-149	2	20	
Carbon tetrachloride	ug/L	ND	50	50	54.7	55.4	109	111	39-155	1	20	
Chlorobenzene	ug/L	ND	50	50	50.4	50.0	101	100	28-147	1	20	
Chloroethane	ug/L	ND	50	50	66.4	65.4	133	131	58-158	2	20	
Chloroform	ug/L	ND	50	50	54.3	54.0	109	108	54-141	1	20	
Chloromethane	ug/L	ND	50	50	57.0	57.2	114	114	41-145	0	20	
cis-1,2-Dichloroethene	ug/L	ND	50	50	52.7	53.2	105	106	45-150	1	20	
cis-1,3-Dichloropropene	ug/L	ND	50	50	54.1	53.9	108	108	42-139	0	20	
Dibromochloromethane	ug/L	ND	50	50	51.1	50.1	102	100	48-139	2	20	
Dibromomethane	ug/L	ND	50	50	52.9	52.8	106	106	58-140	0	20	
Dichlorodifluoromethane	ug/L	ND	50	50	43.2	43.3	86	87	45-161	0	20	
Ethyl methacrylate	ug/L	ND	50	50	56.2J	55.2J	112	110	63-149		20	
Ethylbenzene	ug/L	ND	50	50	50.5	49.7	101	99	36-144	2	20	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	43.7	41.8	87	84	10-164	4	20	
Iodomethane	ug/L	ND	50	50	51.7	52.5	103	105	10-196	2	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	52.8	51.7	106	103	21-148	2	20	
Methyl-tert-butyl ether	ug/L	ND	50	50	57.2	56.8	114	114	72-135	1	20	
Methylene Chloride	ug/L	ND	50	50	54.4	53.4	109	107	58-136	2	20	
n-Butylbenzene	ug/L	ND	50	50	51.5	49.5	103	99	10-147	4	20	
n-Hexane	ug/L	ND	50	50	57.2	58.1	114	116	52-157	2	20	
n-Propylbenzene	ug/L	ND	50	50	52.2	50.3	104	101	11-141	4	20	
Naphthalene	ug/L	ND	50	50	46.8	44.8	94	90	45-134	4	20	
p-Isopropyltoluene	ug/L	ND	50	50	50.5	48.6	101	97	10-149	4	20	
sec-Butylbenzene	ug/L	ND	50	50	53.2	51.7	106	103	10-148	3	20	
Styrene	ug/L	ND	50	50	53.3	51.6	107	103	19-143	3	20	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Parameter	Units	3032571		3032572		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306625001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
tert-Butylbenzene	ug/L	ND	50	50	50.2	49.9	100	100	14-123	0	20		
Tetrachloroethene	ug/L	ND	50	50	46.9	46.7	94	93	26-148	1	20		
Toluene	ug/L	ND	50	50	50.9	50.9	101	101	46-134	0	20		
trans-1,2-Dichloroethene	ug/L	ND	50	50	52.5	52.0	105	104	43-155	1	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	54.8	53.0	110	106	39-132	3	20		
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	61.5J	60.6J	123	121	18-143		20		
Trichloroethene	ug/L	ND	50	50	51.0	51.7	102	103	35-151	1	20		
Trichlorofluoromethane	ug/L	ND	50	50	55.0	54.3	110	109	55-170	1	20		
Vinyl acetate	ug/L	ND	200	200	176	173	88	87	24-134	2	20		
Vinyl chloride	ug/L	ND	50	50	57.6	57.2	115	114	59-146	1	20		
Xylene (Total)	ug/L	ND	150	150	151	148	101	99	32-140	2	20		
4-Bromofluorobenzene (S)	%						106	104	78-117				
Dibromofluoromethane (S)	%						101	102	78-120				
Toluene-d8 (S)	%						101	99	77-118				

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

QC Batch: 658080

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306629002

METHOD BLANK: 3032291

Matrix: Solid

Associated Lab Samples: 50306629002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,1-Trichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1,2-Trichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
1,1-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,3-Trichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichloroethane	ug/kg	ND	5.0	01/10/22 19:46	
1,2-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,3-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1,3-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
1,4-Dichlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
1-Methylnaphthalene	ug/kg	ND	10.0	01/10/22 19:46	
2,2-Dichloropropane	ug/kg	ND	5.0	01/10/22 19:46	
2-Butanone (MEK)	ug/kg	ND	25.0	01/10/22 19:46	
2-Chlorotoluene	ug/kg	ND	5.0	01/10/22 19:46	
2-Hexanone	ug/kg	ND	100	01/10/22 19:46	
2-Methylnaphthalene	ug/kg	ND	10.0	01/10/22 19:46	
4-Chlorotoluene	ug/kg	ND	5.0	01/10/22 19:46	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	25.0	01/10/22 19:46	
Acetone	ug/kg	ND	100	01/10/22 19:46	
Acrolein	ug/kg	ND	100	01/10/22 19:46	
Acrylonitrile	ug/kg	ND	100	01/10/22 19:46	
Benzene	ug/kg	ND	5.0	01/10/22 19:46	
Bromobenzene	ug/kg	ND	5.0	01/10/22 19:46	
Bromochloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Bromodichloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Bromoform	ug/kg	ND	5.0	01/10/22 19:46	
Bromomethane	ug/kg	ND	5.0	01/10/22 19:46	
Carbon disulfide	ug/kg	ND	10.0	01/10/22 19:46	
Carbon tetrachloride	ug/kg	ND	5.0	01/10/22 19:46	
Chlorobenzene	ug/kg	ND	5.0	01/10/22 19:46	
Chloroethane	ug/kg	ND	5.0	01/10/22 19:46	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

METHOD BLANK: 3032291

Matrix: Solid

Associated Lab Samples: 50306629002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/kg	ND	5.0	01/10/22 19:46	
Chloromethane	ug/kg	ND	5.0	01/10/22 19:46	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
Dibromochloromethane	ug/kg	ND	5.0	01/10/22 19:46	
Dibromomethane	ug/kg	ND	5.0	01/10/22 19:46	
Dichlorodifluoromethane	ug/kg	ND	5.0	01/10/22 19:46	
Ethyl methacrylate	ug/kg	ND	100	01/10/22 19:46	
Ethylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	01/10/22 19:46	
Iodomethane	ug/kg	ND	100	01/10/22 19:46	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	01/10/22 19:46	
Methyl-tert-butyl ether	ug/kg	ND	5.0	01/10/22 19:46	
Methylene Chloride	ug/kg	ND	20.0	01/10/22 19:46	
n-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
n-Hexane	ug/kg	ND	5.0	01/10/22 19:46	
n-Propylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Naphthalene	ug/kg	ND	5.0	01/10/22 19:46	
p-Isopropyltoluene	ug/kg	ND	5.0	01/10/22 19:46	
sec-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Styrene	ug/kg	ND	5.0	01/10/22 19:46	
tert-Butylbenzene	ug/kg	ND	5.0	01/10/22 19:46	
Tetrachloroethene	ug/kg	ND	5.0	01/10/22 19:46	
Toluene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	01/10/22 19:46	
trans-1,4-Dichloro-2-butene	ug/kg	ND	100	01/10/22 19:46	
Trichloroethene	ug/kg	ND	5.0	01/10/22 19:46	
Trichlorofluoromethane	ug/kg	ND	5.0	01/10/22 19:46	
Vinyl acetate	ug/kg	ND	100	01/10/22 19:46	
Vinyl chloride	ug/kg	ND	5.0	01/10/22 19:46	
Xylene (Total)	ug/kg	ND	10.0	01/10/22 19:46	
4-Bromofluorobenzene (S)	%	97	40-149	01/10/22 19:46	
Dibromofluoromethane (S)	%	101	73-132	01/10/22 19:46	
Toluene-d8 (S)	%	96	66-148	01/10/22 19:46	

LABORATORY CONTROL SAMPLE: 3032292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	50	43.6	87	68-129	
1,1,2,2-Tetrachloroethane	ug/kg	50	44.1	88	67-137	
1,1-Dichloroethene	ug/kg	50	46.8	94	53-135	
1,2,4-Trimethylbenzene	ug/kg	50	44.1	88	61-125	
1,2-Dibromoethane (EDB)	ug/kg	50	48.7	97	68-125	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

LABORATORY CONTROL SAMPLE: 3032292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/kg	50	45.9	92	69-128	
1,2-Dichloropropane	ug/kg	50	45.7	91	70-130	
Benzene	ug/kg	50	45.9	92	69-125	
Chlorobenzene	ug/kg	50	44.6	89	66-121	
Chloroform	ug/kg	50	44.2	88	66-123	
cis-1,2-Dichloroethene	ug/kg	50	44.5	89	67-122	
Ethylbenzene	ug/kg	50	46.0	92	57-126	
Isopropylbenzene (Cumene)	ug/kg	50	46.8	94	62-132	
Methyl-tert-butyl ether	ug/kg	50	47.0	94	66-136	
Naphthalene	ug/kg	50	44.4	89	59-131	
Tetrachloroethene	ug/kg	50	44.9	90	61-123	
Toluene	ug/kg	50	45.8	92	67-128	
trans-1,2-Dichloroethene	ug/kg	50	42.6	85	61-127	
Trichloroethene	ug/kg	50	44.6	89	64-122	
Vinyl chloride	ug/kg	50	41.4	83	42-148	
Xylene (Total)	ug/kg	150	149	100	62-126	
4-Bromofluorobenzene (S)	%			102	40-149	
Dibromofluoromethane (S)	%			99	73-132	
Toluene-d8 (S)	%			98	66-148	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3032293 3032294

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1-Trichloroethane	ug/kg	ND	133	100	133	103	99	103	38-149	25	20	R1	
1,1,2,2-Tetrachloroethane	ug/kg	ND	133	100	147	111	110	111	19-169	28	20	R1	
1,1-Dichloroethene	ug/kg	ND	133	100	153	121	115	121	24-162	23	20	R1	
1,2,4-Trimethylbenzene	ug/kg	ND	133	100	137	97.3	103	97	10-169	34	20	R1	
1,2-Dibromoethane (EDB)	ug/kg	ND	133	100	130	89.7	98	90	19-153	37	20	R1	
1,2-Dichloroethane	ug/kg	ND	133	100	134	98.6	100	99	32-146	30	20	R1	
1,2-Dichloropropane	ug/kg	ND	133	100	129	99.1	97	99	39-141	26	20	R1	
Benzene	ug/kg	ND	133	100	136	102	102	102	35-140	28	20	R1	
Chlorobenzene	ug/kg	ND	133	100	120	80.5	90	80	16-142	40	20	R1	
Chloroform	ug/kg	ND	133	100	133	102	100	102	30-146	27	20	R1	
cis-1,2-Dichloroethene	ug/kg	ND	133	100	133	101	100	101	30-145	28	20	R1	
Ethylbenzene	ug/kg	ND	133	100	131	88.5	98	88	10-150	38	20	R1	
Isopropylbenzene (Cumene)	ug/kg	ND	133	100	131	91.6	99	92	10-153	36	20	R1	
Methyl-tert-butyl ether	ug/kg	ND	133	100	138	106	104	106	45-153	26	20	R1	
Naphthalene	ug/kg	ND	133	100	87.0	53.3	65	53	10-130	48	20	R1	
Tetrachloroethene	ug/kg	ND	133	100	138	105	104	105	10-179	28	20	R1	
Toluene	ug/kg	ND	133	100	139	98.1	104	98	20-158	34	20	R1	
trans-1,2-Dichloroethene	ug/kg	ND	133	100	128	100	96	100	24-149	25	20	R1	
Trichloroethene	ug/kg	ND	133	100	122	93.2	91	93	10-168	26	20	R1	
Vinyl chloride	ug/kg	ND	133	100	136	105	102	105	10-165	26	20	R1	

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Parameter	Units	3032293		3032294		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50306616001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Xylene (Total)	ug/kg	ND	400	300	415	284	104	95	10-152	38	20	RS	
4-Bromofluorobenzene (S)	%						96	89	40-149				
Dibromofluoromethane (S)	%						97	96	73-132				
Toluene-d8 (S)	%						107	108	66-148				

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### QUALITY CONTROL DATA

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

QC Batch: 657974

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50306629002

SAMPLE DUPLICATE: 3031995

Parameter	Units	50306616001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	42.7	47.6	11	5	N2,R1

SAMPLE DUPLICATE: 3031996

Parameter	Units	50306619001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.5	22.8	2	5	N2

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.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

RS The RPD value in one of the constituent analytes was outside the control limits.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20023 Muncie Phase II

Pace Project No.: 50306629

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50306629002	A53sed	EPA 3050	658130	EPA 6010	658450
50306629001	SW-3	EPA 3010	658009	EPA 6010	658163
50306629003	A54	EPA 3010	658009	EPA 6010	658163
50306629001	SW-3	EPA 7470	658512	EPA 7470	658586
50306629003	A54	EPA 7470	658512	EPA 7470	658586
50306629002	A53sed	EPA 7471	658134	EPA 7471	658401
50306629001	SW-3	EPA 5030/8260	658149		
50306629004	Trip Blank	EPA 5030/8260	658149		
50306629002	A53sed	EPA 8260	658080		
50306629002	A53sed	SM 2540G	657974		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

# WO#: 50306629



Order Number or

SE ONLY

Company: Mundell and Associates, Inc.	Billing Information: 110 S Downey Ave, Indianapolis, IN 46219
Address: 110 S Downey Ave, Indianapolis, IN 46219	
Report To: Luke Johnstone	Email To: ljohnstone@mundellassociates.com
Copy To:	Site Collection Info/Address: Heath Ditch Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II	State: IN / County/City: Muncie / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 317-630-9060 Email: ljohnstone@mundellassociates.com	Site/Facility ID #: Purchase Order #: Quote #:
Collected By (print): Luke Johnstone	Compliance Monitoring? [ ] Yes [ ] No
Collected By (signature): <i>[Signature]</i>	DW PWS ID #: DW Location Code: Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Turnaround Date Required: Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
SW-3	W	Grab	1/6	15:45				4	G/P
A53sed	SL	Grab	1/6	15:30				5	G
A54	W	Grab	1/6	16:00				1	P
Trip Blank	W							3	G

Container Preservative Type **	Lab Project Manager:
U 1 3 6/U/O	
** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other <u>DI water</u>	

Analyses				Lab Profile/Line:		
Total RCRA 8 Metals + Lithium via EPA 6010B	Total RCRA 8 Metals + Lithium	VOC's full list EPA 8260	VOC's full list EPA8260	Lab Sample Receipt Checklist:		
				Custody Seals Present/Intact	Y N NA	
				Custody Signatures Present	Y N NA	
				Collector Signature Present	Y N NA	
				Bottles Intact		Y N NA
				Correct Bottles		Y N NA
				Sufficient Volume		Y N NA
				Samples Received on Ice		Y N NA
				VOA - Headspace Acceptable		Y N NA
				USDA Regulated Soils		Y N NA
				Samples in Holding Time		Y N NA
				Residual Chlorine Present		Y N NA
				Cl Strips:		
				Sample pH Acceptable		Y N NA
				pH Strips:		
				Sulfide Present		Y N NA
				Lead Acetate Strips:		
				LAB USE ONLY:		
				Lab Sample # / Comments:		

Customer Remarks / Special Conditions / Possible Hazards: Total RCRA 8 Metals + Lithium VOC full list	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: 4 Cooler 1 Temp Upon Receipt: 4.4 °C Cooler 1 Therm Corr. Factor: 0.2 °C Cooler 1 Corrected Temp: 4.2 °C Comments:
	Packing Material Used:	Lab Tracking #:	
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	

Relinquished by/Company: (Signature) <i>[Signature]</i> (Mundell)	Date/Time: 1/7/22 11:00	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 1/7/22 11:00	MTJL LAB USE ONLY	
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 1/7/22 12:35	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 1/7/22 12:35	Table #:	Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Acctnum:	Non Conformance(s): Page: _____
				Template:	YES / NO of: _____
				Prelogin:	
				PM:	
				PB:	



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC F722 15:21

- 1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No
- (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
- 4. Cooler Temperature: 4.4 / 4.2  
Temp should be above freezing to 8°C (Initial/Corrected)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, collform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis: <u>TC</u>	<input checked="" type="checkbox"/>		Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab			Time: <u>15:54</u>	<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details		<input checked="" type="checkbox"/>	
Extra labels on Terracore Vials? (soils only)	<input checked="" type="checkbox"/>		Trip Blank Present?	<input checked="" type="checkbox"/>		
			Trip Blank Custody Seals?:	<input checked="" type="checkbox"/>		

COMMENTS:

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Sample Container Count

SBS

~~DL~~

MeOH  
(only)

~~BR~~

Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1				3																							WT	✓		
2																														
3	1	4																									SL			
4																				1							WT	✓		
5				3																							I			
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac		
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	Syringe Kit	LL Cr+6 sampling kit
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic		
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	AF	Air Filter
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	C	Air Cassettes
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	R	Terracore kit
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	SP5T	120mL Coliform Na Thiosulfate
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	U	Summa Can
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	ZPLC	Ziploc Bag
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic		
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	WT	Water
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	SL	Solid
						NAL	OL Non-aqueous liquid
						WP	Oil Wipe

## **APPENDIX A3**

### **APRIL 2022 LABORATORY CERTIFICATES OF ANALYSIS AND CHAINS OF CUSTODY**



April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313437

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313437001	DW-1	Drinking Water	04/06/22 10:15	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313437001	DW-1	EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313437001</b>	<b>DW-1</b>					
EPA 200.8	Barium	164	ug/L	1.0	04/19/22 06:32	N2
EPA 200.8	Lead	5.0	ug/L	1.0	04/19/22 06:32	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

**Sample: DW-1**      **Lab ID: 50313437001**      Collected: 04/06/22 10:15      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:32	7440-38-2	N2
Barium	<b>164</b>	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:32	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 06:32	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:32	7440-47-3	N2
Lead	<b>5.0</b>	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:32	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:32	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 06:32	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:38	04/19/22 18:52	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/13/22 07:49	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/13/22 07:49	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/13/22 07:49	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/13/22 07:49	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/13/22 07:49	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/13/22 07:49	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/13/22 07:49	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/13/22 07:49	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/13/22 07:49	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/13/22 07:49	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/13/22 07:49	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/13/22 07:49	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/13/22 07:49	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/13/22 07:49	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 07:49	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 07:49	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 07:49	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/13/22 07:49	75-34-3	N2
1,2-Dichloroethane	ND	ug/L	0.50	1		04/13/22 07:49	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/13/22 07:49	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 07:49	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 07:49	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 07:49	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/13/22 07:49	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 07:49	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/13/22 07:49	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 07:49	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 07:49	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/13/22 07:49	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/13/22 07:49	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/13/22 07:49	1634-04-4	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

Sample: DW-1		Lab ID: 50313437001		Collected: 04/06/22 10:15	Received: 04/08/22 12:50	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
Styrene	ND	ug/L	0.50	1		04/13/22 07:49	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/13/22 07:49	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/13/22 07:49	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/13/22 07:49	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/13/22 07:49	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/13/22 07:49	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/13/22 07:49	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/13/22 07:49	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/13/22 07:49	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/13/22 07:49	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/13/22 07:49	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 07:49	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/13/22 07:49	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/13/22 07:49	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	93	%.	70-130	1		04/13/22 07:49	460-00-4	
Dibromofluoromethane (S)	93	%.	70-130	1		04/13/22 07:49	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/13/22 07:49	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313437

QC Batch: 671367	Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1	Analysis Description: 245.1 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313437001

METHOD BLANK: 3091672 Matrix: Water

Associated Lab Samples: 50313437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 18:45	

LABORATORY CONTROL SAMPLE: 3091673

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	113	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091674 3091675

Parameter	Units	50313512004		3091675		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	ug/L	<0.000085 mg/L	5	5	5.5	5.5	111	110	70-130	1	20

MATRIX SPIKE SAMPLE: 3091676

Parameter	Units	50313512015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.000085 mg/L	5	5.5	109	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313437

QC Batch: 671085 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313437001

METHOD BLANK: 3090225 Matrix: Water

Associated Lab Samples: 50313437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313437

QC Batch: 670792	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313437001

METHOD BLANK: 3088894 Matrix: Water

Associated Lab Samples: 50313437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/13/22 03:31	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/13/22 03:31	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/13/22 03:31	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
2-Chlorotoluene	ug/L	ND	1.0	04/13/22 03:31	N2
4-Chlorotoluene	ug/L	ND	0.50	04/13/22 03:31	N2
Benzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromodichloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Bromoform	ug/L	ND	1.0	04/13/22 03:31	N2
Bromomethane	ug/L	ND	5.0	04/13/22 03:31	N2
Carbon tetrachloride	ug/L	ND	0.50	04/13/22 03:31	N2
Chlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroform	ug/L	ND	1.0	04/13/22 03:31	N2
Chloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Dibromochloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Dibromomethane	ug/L	ND	0.50	04/13/22 03:31	N2
Ethylbenzene	ug/L	ND	0.50	04/13/22 03:31	N2
m&p-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/13/22 03:31	N2
Methylene Chloride	ug/L	ND	2.5	04/13/22 03:31	N2
o-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Styrene	ug/L	ND	0.50	04/13/22 03:31	N2
Tetrachloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Toluene	ug/L	ND	1.0	04/13/22 03:31	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313437

METHOD BLANK: 3088894 Matrix: Water  
Associated Lab Samples: 50313437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Trichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Vinyl chloride	ug/L	ND	0.50	04/13/22 03:31	N2
Xylene (Total)	ug/L	ND	0.50	04/13/22 03:31	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/13/22 03:31	
Dibromofluoromethane (S)	%	95	70-130	04/13/22 03:31	
Toluene-d8 (S)	%	105	70-130	04/13/22 03:31	

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.8	119	70-130	N2
1,1,1-Trichloroethane	ug/L	20	20.2	101	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	23.1	116	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.2	111	70-130	N2
1,1-Dichloroethane	ug/L	20	19.2	96	70-130	N2
1,1-Dichloroethene	ug/L	20	22.6	113	70-130	N2
1,1-Dichloropropene	ug/L	20	22.0	110	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.9	115	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.7	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	23.1	115	70-130	N2
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	N2
1,2-Dichloropropane	ug/L	20	20.3	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	22.5	112	70-130	N2
1,3-Dichloropropane	ug/L	20	22.3	112	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.0	110	70-130	N2
2,2-Dichloropropane	ug/L	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	20	22.2	111	70-130	N2
4-Chlorotoluene	ug/L	20	23.1	116	70-130	N2
Benzene	ug/L	20	19.9	100	70-130	N2
Bromobenzene	ug/L	20	21.1	105	70-130	N2
Bromodichloromethane	ug/L	20	21.1	105	70-130	N2
Bromoform	ug/L	20	23.7	118	70-130	N2
Bromomethane	ug/L	20	15.5	78	70-130	N2
Carbon tetrachloride	ug/L	20	21.6	108	70-130	N2
Chlorobenzene	ug/L	20	22.5	113	70-130	N2
Chloroethane	ug/L	20	18.8	94	70-130	N2
Chloroform	ug/L	20	18.3	92	70-130	N2
Chloromethane	ug/L	20	17.3	86	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.6	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.8	109	70-130	N2
Dibromochloromethane	ug/L	20	22.9	114	70-130	N2
Dibromomethane	ug/L	20	21.5	107	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	22.1	110	70-130	N2
m&p-Xylene	ug/L	40	44.8	112	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.8	99	70-130	N2
Methylene Chloride	ug/L	20	18.7	94	70-130	N2
o-Xylene	ug/L	20	22.3	112	70-130	N2
Styrene	ug/L	20	22.7	113	70-130	N2
Tetrachloroethene	ug/L	20	22.0	110	70-130	N2
Toluene	ug/L	20	21.3	107	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.7	99	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	21.6	108	70-130	N2
Trichloroethene	ug/L	20	19.8	99	70-130	N2
Vinyl chloride	ug/L	20	16.8	84	70-130	N2
Xylene (Total)	ug/L	60	67.1	112	70-130	N2
4-Bromofluorobenzene (S)	%			95	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 3088897

Parameter	Units	50313431001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.4	117	70-130	N2
1,1,1-Trichloroethane	ug/L	ND	20	21.0	105	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	20	22.5	112	70-130	N2
1,1,2-Trichloroethane	ug/L	ND	20	21.7	108	70-130	N2
1,1-Dichloroethane	ug/L	ND	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	ND	20	21.9	110	70-130	N2
1,1-Dichloropropene	ug/L	ND	20	23.0	115	70-130	N2
1,2,3-Trichloropropane	ug/L	ND	20	21.7	109	70-130	N2
1,2,4-Trichlorobenzene	ug/L	ND	20	22.9	115	70-130	N2
1,2-Dichlorobenzene	ug/L	ND	20	22.8	114	70-130	N2
1,2-Dichloroethane	ug/L	ND	20	18.7	94	70-130	N2
1,2-Dichloropropane	ug/L	ND	20	20.5	103	70-130	N2
1,3-Dichlorobenzene	ug/L	ND	20	22.0	110	70-130	N2
1,3-Dichloropropane	ug/L	ND	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	ND	20	21.6	108	70-130	N2
2,2-Dichloropropane	ug/L	ND	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	ND	20	22.3	111	70-130	N2
4-Chlorotoluene	ug/L	ND	20	22.7	113	70-130	N2
Benzene	ug/L	ND	20	20.2	101	70-130	N2
Bromobenzene	ug/L	ND	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	ND	20	20.5	103	70-130	N2
Bromoform	ug/L	ND	20	23.1	115	70-130	N2
Bromomethane	ug/L	ND	20	16.0	80	70-130	N2
Carbon tetrachloride	ug/L	ND	20	22.6	113	70-130	N2
Chlorobenzene	ug/L	ND	20	22.0	110	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

MATRIX SPIKE SAMPLE: 3088897		50313431001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloroethane	ug/L	ND	20	20.0	100	70-130	N2
Chloroform	ug/L	ND	20	17.8	89	70-130	N2
Chloromethane	ug/L	ND	20	17.8	89	70-130	N2
cis-1,2-Dichloroethene	ug/L	ND	20	20.5	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	ND	20	20.9	105	70-130	N2
Dibromochloromethane	ug/L	ND	20	22.0	110	70-130	N2
Dibromomethane	ug/L	ND	20	20.3	102	70-130	N2
Ethylbenzene	ug/L	ND	20	21.8	109	70-130	N2
m&p-Xylene	ug/L	ND	40	44.9	112	70-130	N2
Methyl-tert-butyl ether	ug/L	ND	20	19.1	96	70-130	N2
Methylene Chloride	ug/L	ND	20	17.3	87	70-130	N2
o-Xylene	ug/L	ND	20	22.1	111	70-130	N2
Styrene	ug/L	ND	20	21.6	108	70-130	N2
Tetrachloroethene	ug/L	ND	20	22.2	111	70-130	N2
Toluene	ug/L	ND	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	ND	20	20.3	102	70-130	N2
trans-1,3-Dichloropropene	ug/L	ND	20	20.3	101	70-130	N2
Trichloroethene	ug/L	ND	20	20.3	102	70-130	N2
Vinyl chloride	ug/L	ND	20	18.0	90	70-130	N2
Xylene (Total)	ug/L	ND	60	67.0	112	70-130	N2
4-Bromofluorobenzene (S)	%				96	70-130	
Dibromofluoromethane (S)	%				96	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,1-Trichloroethane	ug/L	ND	ND		20	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,2-Trichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethene	ug/L	ND	ND		20	N2
1,1-Dichloropropene	ug/L	ND	ND		20	N2
1,2,3-Trichloropropane	ug/L	ND	ND		20	N2
1,2,4-Trichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichloroethane	ug/L	ND	ND		20	N2
1,2-Dichloropropane	ug/L	ND	ND		20	N2
1,3-Dichlorobenzene	ug/L	ND	ND		20	N2
1,3-Dichloropropane	ug/L	ND	ND		20	N2
1,4-Dichlorobenzene	ug/L	ND	ND		20	N2
2,2-Dichloropropane	ug/L	ND	ND		20	N2
2-Chlorotoluene	ug/L	ND	ND		20	N2
4-Chlorotoluene	ug/L	ND	ND		20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	N2
Bromobenzene	ug/L	ND	ND		20	N2
Bromodichloromethane	ug/L	ND	ND		20	N2
Bromoform	ug/L	ND	ND		20	N2
Bromomethane	ug/L	ND	ND		20	N2
Carbon tetrachloride	ug/L	ND	ND		20	N2
Chlorobenzene	ug/L	ND	ND		20	N2
Chloroethane	ug/L	ND	ND		20	N2
Chloroform	ug/L	ND	ND		20	N2
Chloromethane	ug/L	ND	ND		20	N2
cis-1,2-Dichloroethene	ug/L	ND	ND		20	N2
cis-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Dibromochloromethane	ug/L	ND	ND		20	N2
Dibromomethane	ug/L	ND	ND		20	N2
Ethylbenzene	ug/L	ND	ND		20	N2
m&p-Xylene	ug/L	ND	ND		20	N2
Methyl-tert-butyl ether	ug/L	ND	ND		20	N2
Methylene Chloride	ug/L	ND	ND		20	N2
o-Xylene	ug/L	ND	ND		20	N2
Styrene	ug/L	ND	ND		20	N2
Tetrachloroethene	ug/L	ND	ND		20	N2
Toluene	ug/L	ND	ND		20	N2
trans-1,2-Dichloroethene	ug/L	ND	ND		20	N2
trans-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Trichloroethene	ug/L	ND	ND		20	N2
Vinyl chloride	ug/L	ND	ND		20	N2
Xylene (Total)	ug/L	ND	ND		20	N2
4-Bromofluorobenzene (S)	%	95	94			
Dibromofluoromethane (S)	%	96	96			
Toluene-d8 (S)	%	106	105			

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.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: M20032 Muncie Phase II

Pace Project No.: 50313437

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313437001	DW-1	EPA 200.8	671085	EPA 200.8	671359
50313437001	DW-1	EPA 245.1	671367	EPA 245.1	671892
50313437001	DW-1	EPA 524.2	670792		

**REPORT OF LABORATORY ANALYSIS**

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or  
MTIL Log-in Number Here

Company: Mundell and Associates, Inc.  
Address: 110 S Downey Ave, Indianapolis, IN 46219

Billing Information:  
110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone

Email To: ljohnstone@mundellassociates.com

Copy To:

Site Collection Info/Address: [Redacted] Muncie, Indiana

Customer Project Name/Number:  
M20032 Muncie Phase II

State: IN / County/City: Muncie / Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: 317-630-9060  
Email: ljohnstone@mundellassociates.com

Site/Facility ID #:  
Purchase Order #:  
Quote #:

Compliance Monitoring?  
[ ] Yes [ ] No  
DW PWS ID #:  
DW Location Code:

Collected By (print):  
Luke Johnstone

Turnaround Date Required:

Immediately Packed on Ice:  
[x] Yes [ ] No

Collected By (signature):  
*[Signature]*

Rush: (Expedite Charges Apply)  
[ ] Same Day [ ] Next Day  
[ ] 2 Day [ ] 3 Day  
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable):  
[ ] Yes [x] No

Sample Disposal:  
[x] Dispose as appropriate  
[ ] Return  
[ ] Archive:  
[ ] Hold:

Analysis:

Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1
			Date	Time	Date	Time							
DW-1	DW/GW	Grab	4/6/22	10:15				4	G/P	X	X		

### ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Container Preservative Type \*\*  
 1 3 8 0  
 \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water

Lab Project Manager:

Analyses										Lab Profile/Line:
Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: _____ Sample pH Acceptable Y N NA pH Strips: _____ Sulfide Present Y N NA Lead Acetate Strips: _____										
LAB USE ONLY:										Lab Sample # / Comments:
										<i>See SCUR</i>

Customer Remarks / Special Conditions / Possible Hazards:  
VOC full list, Total RCRA 8 Metals  
All sampled via drinking water methods

Type of Ice Used: Wet Blue Dry None  
Packing Material Used:  
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
Lab Tracking #:  
Samples received via:  
FEDEX UPS Client Courier Pace Courier

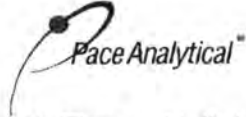
LAB Sample Temperature Info:  
Temp Blank Received: Y N NA  
Therm ID#:  
Cooler 1 Temp Upon Receipt: \_\_\_oC  
Cooler 1 Therm Corr. Factor: \_\_\_oC  
Cooler 1 Corrected Temp: \_\_\_oC  
Comments:

Relinquished by/Company: (Signature)  
*[Signature]*  
Date/Time: 4/8 11:15

Received by/Company: (Signature)  
*[Signature]*  
Date/Time: 4/8/22 12:50

Relinquished by/Company: (Signature)  
*[Signature]*  
Date/Time: 4/8-22  
Relinquished by/Company: (Signature)  
*[Signature]*  
Date/Time:

MTIL LAB USE ONLY  
Table #:  
Acctnum:  
Template:  
Prelogin:  
PM:  
PB:  
Trip Blank Received: Y N NA  
HCL MeOH TSP Other  
Non Conformance(s): Page: \_\_\_\_\_  
YES / NO of: \_\_\_\_\_



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details.	Present	Absent	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers  
that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1				3																1							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe



April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313431

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313431001	DW-2	Drinking Water	04/06/22 10:50	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313431001	DW-2	EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313431001</b>	<b>DW-2</b>					
EPA 200.8	Barium	185	ug/L	2.0	04/19/22 07:43	N2
EPA 200.8	Cadmium	0.51	ug/L	0.20	04/19/22 05:59	N2
EPA 200.8	Lead	19.9	ug/L	1.0	04/19/22 05:59	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

Sample: DW-2	Lab ID: 50313431001	Collected: 04/06/22 10:50	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:59	7440-38-2	N2
Barium	185	ug/L	2.0	2	04/15/22 02:00	04/19/22 07:43	7440-39-3	N2
Cadmium	0.51	ug/L	0.20	1	04/15/22 02:00	04/19/22 05:59	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:59	7440-47-3	N2
Lead	19.9	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:59	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:59	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 05:59	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 18:25	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/13/22 04:49	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/13/22 04:49	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/13/22 04:49	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/13/22 04:49	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/13/22 04:49	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/13/22 04:49	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/13/22 04:49	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/13/22 04:49	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/13/22 04:49	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/13/22 04:49	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/13/22 04:49	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/13/22 04:49	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/13/22 04:49	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/13/22 04:49	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 04:49	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 04:49	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 04:49	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/13/22 04:49	75-34-3	N2
1,2-Dichloroethane	ND	ug/L	0.50	1		04/13/22 04:49	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/13/22 04:49	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 04:49	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 04:49	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 04:49	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/13/22 04:49	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 04:49	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/13/22 04:49	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 04:49	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 04:49	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/13/22 04:49	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/13/22 04:49	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/13/22 04:49	1634-04-4	N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

Sample: DW-2		Lab ID: 50313431001		Collected: 04/06/22 10:50	Received: 04/08/22 12:50	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
Styrene	ND	ug/L	0.50	1		04/13/22 04:49	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/13/22 04:49	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/13/22 04:49	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/13/22 04:49	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/13/22 04:49	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/13/22 04:49	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/13/22 04:49	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/13/22 04:49	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/13/22 04:49	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/13/22 04:49	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/13/22 04:49	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 04:49	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/13/22 04:49	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/13/22 04:49	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%.	70-130	1		04/13/22 04:49	460-00-4	
Dibromofluoromethane (S)	95	%.	70-130	1		04/13/22 04:49	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/13/22 04:49	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313431001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313431001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091668		3091669		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

QC Batch: 671085

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313431001

METHOD BLANK: 3090225

Matrix: Water

Associated Lab Samples: 50313431001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313431

QC Batch: 670792	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313431001

METHOD BLANK: 3088894 Matrix: Water

Associated Lab Samples: 50313431001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/13/22 03:31	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/13/22 03:31	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/13/22 03:31	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
2-Chlorotoluene	ug/L	ND	1.0	04/13/22 03:31	N2
4-Chlorotoluene	ug/L	ND	0.50	04/13/22 03:31	N2
Benzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromodichloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Bromoform	ug/L	ND	1.0	04/13/22 03:31	N2
Bromomethane	ug/L	ND	5.0	04/13/22 03:31	N2
Carbon tetrachloride	ug/L	ND	0.50	04/13/22 03:31	N2
Chlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroform	ug/L	ND	1.0	04/13/22 03:31	N2
Chloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Dibromochloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Dibromomethane	ug/L	ND	0.50	04/13/22 03:31	N2
Ethylbenzene	ug/L	ND	0.50	04/13/22 03:31	N2
m&p-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/13/22 03:31	N2
Methylene Chloride	ug/L	ND	2.5	04/13/22 03:31	N2
o-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Styrene	ug/L	ND	0.50	04/13/22 03:31	N2
Tetrachloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Toluene	ug/L	ND	1.0	04/13/22 03:31	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

METHOD BLANK: 3088894

Matrix: Water

Associated Lab Samples: 50313431001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Trichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Vinyl chloride	ug/L	ND	0.50	04/13/22 03:31	N2
Xylene (Total)	ug/L	ND	0.50	04/13/22 03:31	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/13/22 03:31	
Dibromofluoromethane (S)	%	95	70-130	04/13/22 03:31	
Toluene-d8 (S)	%	105	70-130	04/13/22 03:31	

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.8	119	70-130	N2
1,1,1-Trichloroethane	ug/L	20	20.2	101	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	23.1	116	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.2	111	70-130	N2
1,1-Dichloroethane	ug/L	20	19.2	96	70-130	N2
1,1-Dichloroethene	ug/L	20	22.6	113	70-130	N2
1,1-Dichloropropene	ug/L	20	22.0	110	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.9	115	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.7	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	23.1	115	70-130	N2
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	N2
1,2-Dichloropropane	ug/L	20	20.3	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	22.5	112	70-130	N2
1,3-Dichloropropane	ug/L	20	22.3	112	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.0	110	70-130	N2
2,2-Dichloropropane	ug/L	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	20	22.2	111	70-130	N2
4-Chlorotoluene	ug/L	20	23.1	116	70-130	N2
Benzene	ug/L	20	19.9	100	70-130	N2
Bromobenzene	ug/L	20	21.1	105	70-130	N2
Bromodichloromethane	ug/L	20	21.1	105	70-130	N2
Bromoform	ug/L	20	23.7	118	70-130	N2
Bromomethane	ug/L	20	15.5	78	70-130	N2
Carbon tetrachloride	ug/L	20	21.6	108	70-130	N2
Chlorobenzene	ug/L	20	22.5	113	70-130	N2
Chloroethane	ug/L	20	18.8	94	70-130	N2
Chloroform	ug/L	20	18.3	92	70-130	N2
Chloromethane	ug/L	20	17.3	86	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.6	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.8	109	70-130	N2
Dibromochloromethane	ug/L	20	22.9	114	70-130	N2
Dibromomethane	ug/L	20	21.5	107	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	22.1	110	70-130	N2
m&p-Xylene	ug/L	40	44.8	112	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.8	99	70-130	N2
Methylene Chloride	ug/L	20	18.7	94	70-130	N2
o-Xylene	ug/L	20	22.3	112	70-130	N2
Styrene	ug/L	20	22.7	113	70-130	N2
Tetrachloroethene	ug/L	20	22.0	110	70-130	N2
Toluene	ug/L	20	21.3	107	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.7	99	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	21.6	108	70-130	N2
Trichloroethene	ug/L	20	19.8	99	70-130	N2
Vinyl chloride	ug/L	20	16.8	84	70-130	N2
Xylene (Total)	ug/L	60	67.1	112	70-130	N2
4-Bromofluorobenzene (S)	%			95	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 3088897

Parameter	Units	50313431001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.4	117	70-130	N2
1,1,1-Trichloroethane	ug/L	ND	20	21.0	105	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	20	22.5	112	70-130	N2
1,1,2-Trichloroethane	ug/L	ND	20	21.7	108	70-130	N2
1,1-Dichloroethane	ug/L	ND	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	ND	20	21.9	110	70-130	N2
1,1-Dichloropropene	ug/L	ND	20	23.0	115	70-130	N2
1,2,3-Trichloropropane	ug/L	ND	20	21.7	109	70-130	N2
1,2,4-Trichlorobenzene	ug/L	ND	20	22.9	115	70-130	N2
1,2-Dichlorobenzene	ug/L	ND	20	22.8	114	70-130	N2
1,2-Dichloroethane	ug/L	ND	20	18.7	94	70-130	N2
1,2-Dichloropropane	ug/L	ND	20	20.5	103	70-130	N2
1,3-Dichlorobenzene	ug/L	ND	20	22.0	110	70-130	N2
1,3-Dichloropropane	ug/L	ND	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	ND	20	21.6	108	70-130	N2
2,2-Dichloropropane	ug/L	ND	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	ND	20	22.3	111	70-130	N2
4-Chlorotoluene	ug/L	ND	20	22.7	113	70-130	N2
Benzene	ug/L	ND	20	20.2	101	70-130	N2
Bromobenzene	ug/L	ND	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	ND	20	20.5	103	70-130	N2
Bromoform	ug/L	ND	20	23.1	115	70-130	N2
Bromomethane	ug/L	ND	20	16.0	80	70-130	N2
Carbon tetrachloride	ug/L	ND	20	22.6	113	70-130	N2
Chlorobenzene	ug/L	ND	20	22.0	110	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

MATRIX SPIKE SAMPLE: 3088897		50313431001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloroethane	ug/L	ND	20	20.0	100	70-130	N2
Chloroform	ug/L	ND	20	17.8	89	70-130	N2
Chloromethane	ug/L	ND	20	17.8	89	70-130	N2
cis-1,2-Dichloroethene	ug/L	ND	20	20.5	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	ND	20	20.9	105	70-130	N2
Dibromochloromethane	ug/L	ND	20	22.0	110	70-130	N2
Dibromomethane	ug/L	ND	20	20.3	102	70-130	N2
Ethylbenzene	ug/L	ND	20	21.8	109	70-130	N2
m&p-Xylene	ug/L	ND	40	44.9	112	70-130	N2
Methyl-tert-butyl ether	ug/L	ND	20	19.1	96	70-130	N2
Methylene Chloride	ug/L	ND	20	17.3	87	70-130	N2
o-Xylene	ug/L	ND	20	22.1	111	70-130	N2
Styrene	ug/L	ND	20	21.6	108	70-130	N2
Tetrachloroethene	ug/L	ND	20	22.2	111	70-130	N2
Toluene	ug/L	ND	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	ND	20	20.3	102	70-130	N2
trans-1,3-Dichloropropene	ug/L	ND	20	20.3	101	70-130	N2
Trichloroethene	ug/L	ND	20	20.3	102	70-130	N2
Vinyl chloride	ug/L	ND	20	18.0	90	70-130	N2
Xylene (Total)	ug/L	ND	60	67.0	112	70-130	N2
4-Bromofluorobenzene (S)	%				96	70-130	
Dibromofluoromethane (S)	%				96	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,1-Trichloroethane	ug/L	ND	ND		20	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,2-Trichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethene	ug/L	ND	ND		20	N2
1,1-Dichloropropene	ug/L	ND	ND		20	N2
1,2,3-Trichloropropane	ug/L	ND	ND		20	N2
1,2,4-Trichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichloroethane	ug/L	ND	ND		20	N2
1,2-Dichloropropane	ug/L	ND	ND		20	N2
1,3-Dichlorobenzene	ug/L	ND	ND		20	N2
1,3-Dichloropropane	ug/L	ND	ND		20	N2
1,4-Dichlorobenzene	ug/L	ND	ND		20	N2
2,2-Dichloropropane	ug/L	ND	ND		20	N2
2-Chlorotoluene	ug/L	ND	ND		20	N2
4-Chlorotoluene	ug/L	ND	ND		20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	N2
Bromobenzene	ug/L	ND	ND		20	N2
Bromodichloromethane	ug/L	ND	ND		20	N2
Bromoform	ug/L	ND	ND		20	N2
Bromomethane	ug/L	ND	ND		20	N2
Carbon tetrachloride	ug/L	ND	ND		20	N2
Chlorobenzene	ug/L	ND	ND		20	N2
Chloroethane	ug/L	ND	ND		20	N2
Chloroform	ug/L	ND	ND		20	N2
Chloromethane	ug/L	ND	ND		20	N2
cis-1,2-Dichloroethene	ug/L	ND	ND		20	N2
cis-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Dibromochloromethane	ug/L	ND	ND		20	N2
Dibromomethane	ug/L	ND	ND		20	N2
Ethylbenzene	ug/L	ND	ND		20	N2
m&p-Xylene	ug/L	ND	ND		20	N2
Methyl-tert-butyl ether	ug/L	ND	ND		20	N2
Methylene Chloride	ug/L	ND	ND		20	N2
o-Xylene	ug/L	ND	ND		20	N2
Styrene	ug/L	ND	ND		20	N2
Tetrachloroethene	ug/L	ND	ND		20	N2
Toluene	ug/L	ND	ND		20	N2
trans-1,2-Dichloroethene	ug/L	ND	ND		20	N2
trans-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Trichloroethene	ug/L	ND	ND		20	N2
Vinyl chloride	ug/L	ND	ND		20	N2
Xylene (Total)	ug/L	ND	ND		20	N2
4-Bromofluorobenzene (S)	%	95	94			
Dibromofluoromethane (S)	%	96	96			
Toluene-d8 (S)	%	106	105			

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.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313431

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313431001	DW-2	EPA 200.8	671085	EPA 200.8	671359
50313431001	DW-2	EPA 245.1	671366	EPA 245.1	671891
50313431001	DW-2	EPA 524.2	670792		

## REPORT OF LABORATORY ANALYSIS

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

Company: Mundell and Associates, Inc.		Billing Information:	
Address: 110 S Downey Ave, Indianapolis, IN 46219		110 S Downey Ave, Indianapolis, IN 46219	
Report To: Luke Johnstone		Email To: ljohnstone@mundellassociates.com	
Copy To:		Site Collection Info/Address: <i>Edgewood</i> 5200 S <del>Breezewood Dr</del> Muncie, Indiana	
Customer Project Name/Number: M20032 Muncie Phase II		State: County/City: Time Zone Collected: IN / Muncie [ ]PT [ ]MT [ ]CT [X]ET	
Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring?	
Email: ljohnstone@mundellassociates.com		[ ] Yes [ ] No	
Collected By (print): Luke Johnstone	Purchase Order #:	DW PWS ID #:	
	Quote #:	DW Location Code:	
Collected By (signature): <i>Luke Johnstone</i>	Turnaround Date Required:	Immediately Packed on Ice:	
		[X] Yes [ ] No	
Sample Disposal:	Rush: (Expedite Charges Apply)	Field Filtered (if applicable):	
[X] Dispose as appropriate	[ ] Same Day [ ] Next Day	[ ] Yes [X] No	
[ ] Return	[ ] 2 Day [ ] 3 Day	Analysis: _____	
[ ] Archive: _____	[ ] 4 Day [ ] 5 Day		
[ ] Hold:			

**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Container Preservative Type **										Lab Project Manager:
1	3	8	0							

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_\_DI water

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses				Lab Profile/Line:
			Date	Time	Date	Time				Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1	
DW-2	DW/GW	Grab	4/6/22	10:50				4	G/P	X	X			Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: _____ Sample pH Acceptable Y N NA pH Strips: _____ Sulfide Present Y N NA Lead Acetate Strips: _____
														LAB USE ONLY: Lab Sample # / Comments: <i>See SCUR</i>

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals All sampled via drinking water methods	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: _____ Cooler 1 Temp Upon Receipt: ___oC Cooler 1 Therm Corr. Factor: ___oC Cooler 1 Corrected Temp: ___oC Comments:
	Packing Material Used:	Lab Tracking #:	see SCUR
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	

Relinquished by/Company: (Signature) <i>Luke Johnstone</i>	Date/Time: 4-6 11:15	Received by/Company: (Signature) <i>pac</i>	Date/Time: 4/8/22 11:15	MTJL LAB USE ONLY Table #: Acctnum: Template: Prelogin: PM: PB:	Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signature) <i>pac</i>	Date/Time: 4/8/22 12:00	Received by/Company: (Signature) <i>R. Ammer</i>	Date/Time: 4-8-22 12:00		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:		



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 11:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent <input checked="" type="checkbox"/>	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WG9H	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1			3																	1							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313430

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50313430001	DW-3	Drinking Water	04/06/22 11:26	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313430001	DW-3	EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313430001</b>	<b>DW-3</b>					
EPA 200.8	Arsenic	2.0	ug/L	1.0	04/19/22 05:55	N2
EPA 200.8	Barium	314	ug/L	2.0	04/19/22 07:30	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

**Sample: DW-3**      **Lab ID: 50313430001**      Collected: 04/06/22 11:26      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	2.0	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:55	7440-38-2	N2
Barium	314	ug/L	2.0	2	04/15/22 02:00	04/19/22 07:30	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 05:55	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:55	7440-47-3	N2
Lead	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:55	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:55	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 05:55	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 18:23	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/13/22 03:57	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/13/22 03:57	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/13/22 03:57	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/13/22 03:57	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/13/22 03:57	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/13/22 03:57	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/13/22 03:57	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/13/22 03:57	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/13/22 03:57	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/13/22 03:57	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/13/22 03:57	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/13/22 03:57	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/13/22 03:57	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/13/22 03:57	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 03:57	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 03:57	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 03:57	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/13/22 03:57	75-34-3	N2
1,2-Dichloroethane	ND	ug/L	0.50	1		04/13/22 03:57	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/13/22 03:57	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 03:57	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 03:57	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 03:57	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/13/22 03:57	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 03:57	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/13/22 03:57	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 03:57	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 03:57	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/13/22 03:57	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/13/22 03:57	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/13/22 03:57	1634-04-4	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

Sample: DW-3		Lab ID: 50313430001		Collected: 04/06/22 11:26	Received: 04/08/22 12:50	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
Styrene	ND	ug/L	0.50	1		04/13/22 03:57	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/13/22 03:57	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/13/22 03:57	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/13/22 03:57	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/13/22 03:57	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/13/22 03:57	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/13/22 03:57	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/13/22 03:57	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/13/22 03:57	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/13/22 03:57	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/13/22 03:57	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 03:57	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/13/22 03:57	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/13/22 03:57	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%.	70-130	1		04/13/22 03:57	460-00-4	
Dibromofluoromethane (S)	96	%.	70-130	1		04/13/22 03:57	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/13/22 03:57	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313430001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313430001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20	

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

QC Batch: 671085

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313430001

METHOD BLANK: 3090225

Matrix: Water

Associated Lab Samples: 50313430001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313430

QC Batch: 670792	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313430001

METHOD BLANK: 3088894 Matrix: Water

Associated Lab Samples: 50313430001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/13/22 03:31	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/13/22 03:31	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/13/22 03:31	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
2-Chlorotoluene	ug/L	ND	1.0	04/13/22 03:31	N2
4-Chlorotoluene	ug/L	ND	0.50	04/13/22 03:31	N2
Benzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromodichloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Bromoform	ug/L	ND	1.0	04/13/22 03:31	N2
Bromomethane	ug/L	ND	5.0	04/13/22 03:31	N2
Carbon tetrachloride	ug/L	ND	0.50	04/13/22 03:31	N2
Chlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroform	ug/L	ND	1.0	04/13/22 03:31	N2
Chloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Dibromochloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Dibromomethane	ug/L	ND	0.50	04/13/22 03:31	N2
Ethylbenzene	ug/L	ND	0.50	04/13/22 03:31	N2
m&p-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/13/22 03:31	N2
Methylene Chloride	ug/L	ND	2.5	04/13/22 03:31	N2
o-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Styrene	ug/L	ND	0.50	04/13/22 03:31	N2
Tetrachloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Toluene	ug/L	ND	1.0	04/13/22 03:31	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

METHOD BLANK: 3088894

Matrix: Water

Associated Lab Samples: 50313430001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Trichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Vinyl chloride	ug/L	ND	0.50	04/13/22 03:31	N2
Xylene (Total)	ug/L	ND	0.50	04/13/22 03:31	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/13/22 03:31	
Dibromofluoromethane (S)	%	95	70-130	04/13/22 03:31	
Toluene-d8 (S)	%	105	70-130	04/13/22 03:31	

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.8	119	70-130	N2
1,1,1-Trichloroethane	ug/L	20	20.2	101	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	23.1	116	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.2	111	70-130	N2
1,1-Dichloroethane	ug/L	20	19.2	96	70-130	N2
1,1-Dichloroethene	ug/L	20	22.6	113	70-130	N2
1,1-Dichloropropene	ug/L	20	22.0	110	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.9	115	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.7	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	23.1	115	70-130	N2
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	N2
1,2-Dichloropropane	ug/L	20	20.3	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	22.5	112	70-130	N2
1,3-Dichloropropane	ug/L	20	22.3	112	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.0	110	70-130	N2
2,2-Dichloropropane	ug/L	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	20	22.2	111	70-130	N2
4-Chlorotoluene	ug/L	20	23.1	116	70-130	N2
Benzene	ug/L	20	19.9	100	70-130	N2
Bromobenzene	ug/L	20	21.1	105	70-130	N2
Bromodichloromethane	ug/L	20	21.1	105	70-130	N2
Bromoform	ug/L	20	23.7	118	70-130	N2
Bromomethane	ug/L	20	15.5	78	70-130	N2
Carbon tetrachloride	ug/L	20	21.6	108	70-130	N2
Chlorobenzene	ug/L	20	22.5	113	70-130	N2
Chloroethane	ug/L	20	18.8	94	70-130	N2
Chloroform	ug/L	20	18.3	92	70-130	N2
Chloromethane	ug/L	20	17.3	86	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.6	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.8	109	70-130	N2
Dibromochloromethane	ug/L	20	22.9	114	70-130	N2
Dibromomethane	ug/L	20	21.5	107	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	22.1	110	70-130	N2
m&p-Xylene	ug/L	40	44.8	112	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.8	99	70-130	N2
Methylene Chloride	ug/L	20	18.7	94	70-130	N2
o-Xylene	ug/L	20	22.3	112	70-130	N2
Styrene	ug/L	20	22.7	113	70-130	N2
Tetrachloroethene	ug/L	20	22.0	110	70-130	N2
Toluene	ug/L	20	21.3	107	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.7	99	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	21.6	108	70-130	N2
Trichloroethene	ug/L	20	19.8	99	70-130	N2
Vinyl chloride	ug/L	20	16.8	84	70-130	N2
Xylene (Total)	ug/L	60	67.1	112	70-130	N2
4-Bromofluorobenzene (S)	%			95	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 3088897

Parameter	Units	50313431001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.4	117	70-130	N2
1,1,1-Trichloroethane	ug/L	ND	20	21.0	105	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	20	22.5	112	70-130	N2
1,1,2-Trichloroethane	ug/L	ND	20	21.7	108	70-130	N2
1,1-Dichloroethane	ug/L	ND	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	ND	20	21.9	110	70-130	N2
1,1-Dichloropropene	ug/L	ND	20	23.0	115	70-130	N2
1,2,3-Trichloropropane	ug/L	ND	20	21.7	109	70-130	N2
1,2,4-Trichlorobenzene	ug/L	ND	20	22.9	115	70-130	N2
1,2-Dichlorobenzene	ug/L	ND	20	22.8	114	70-130	N2
1,2-Dichloroethane	ug/L	ND	20	18.7	94	70-130	N2
1,2-Dichloropropane	ug/L	ND	20	20.5	103	70-130	N2
1,3-Dichlorobenzene	ug/L	ND	20	22.0	110	70-130	N2
1,3-Dichloropropane	ug/L	ND	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	ND	20	21.6	108	70-130	N2
2,2-Dichloropropane	ug/L	ND	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	ND	20	22.3	111	70-130	N2
4-Chlorotoluene	ug/L	ND	20	22.7	113	70-130	N2
Benzene	ug/L	ND	20	20.2	101	70-130	N2
Bromobenzene	ug/L	ND	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	ND	20	20.5	103	70-130	N2
Bromoform	ug/L	ND	20	23.1	115	70-130	N2
Bromomethane	ug/L	ND	20	16.0	80	70-130	N2
Carbon tetrachloride	ug/L	ND	20	22.6	113	70-130	N2
Chlorobenzene	ug/L	ND	20	22.0	110	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

MATRIX SPIKE SAMPLE: 3088897		50313431001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloroethane	ug/L	ND	20	20.0	100	70-130	N2
Chloroform	ug/L	ND	20	17.8	89	70-130	N2
Chloromethane	ug/L	ND	20	17.8	89	70-130	N2
cis-1,2-Dichloroethene	ug/L	ND	20	20.5	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	ND	20	20.9	105	70-130	N2
Dibromochloromethane	ug/L	ND	20	22.0	110	70-130	N2
Dibromomethane	ug/L	ND	20	20.3	102	70-130	N2
Ethylbenzene	ug/L	ND	20	21.8	109	70-130	N2
m&p-Xylene	ug/L	ND	40	44.9	112	70-130	N2
Methyl-tert-butyl ether	ug/L	ND	20	19.1	96	70-130	N2
Methylene Chloride	ug/L	ND	20	17.3	87	70-130	N2
o-Xylene	ug/L	ND	20	22.1	111	70-130	N2
Styrene	ug/L	ND	20	21.6	108	70-130	N2
Tetrachloroethene	ug/L	ND	20	22.2	111	70-130	N2
Toluene	ug/L	ND	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	ND	20	20.3	102	70-130	N2
trans-1,3-Dichloropropene	ug/L	ND	20	20.3	101	70-130	N2
Trichloroethene	ug/L	ND	20	20.3	102	70-130	N2
Vinyl chloride	ug/L	ND	20	18.0	90	70-130	N2
Xylene (Total)	ug/L	ND	60	67.0	112	70-130	N2
4-Bromofluorobenzene (S)	%				96	70-130	
Dibromofluoromethane (S)	%				96	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,1-Trichloroethane	ug/L	ND	ND		20	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,2-Trichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethene	ug/L	ND	ND		20	N2
1,1-Dichloropropene	ug/L	ND	ND		20	N2
1,2,3-Trichloropropane	ug/L	ND	ND		20	N2
1,2,4-Trichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichloroethane	ug/L	ND	ND		20	N2
1,2-Dichloropropane	ug/L	ND	ND		20	N2
1,3-Dichlorobenzene	ug/L	ND	ND		20	N2
1,3-Dichloropropane	ug/L	ND	ND		20	N2
1,4-Dichlorobenzene	ug/L	ND	ND		20	N2
2,2-Dichloropropane	ug/L	ND	ND		20	N2
2-Chlorotoluene	ug/L	ND	ND		20	N2
4-Chlorotoluene	ug/L	ND	ND		20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	N2
Bromobenzene	ug/L	ND	ND		20	N2
Bromodichloromethane	ug/L	ND	ND		20	N2
Bromoform	ug/L	ND	ND		20	N2
Bromomethane	ug/L	ND	ND		20	N2
Carbon tetrachloride	ug/L	ND	ND		20	N2
Chlorobenzene	ug/L	ND	ND		20	N2
Chloroethane	ug/L	ND	ND		20	N2
Chloroform	ug/L	ND	ND		20	N2
Chloromethane	ug/L	ND	ND		20	N2
cis-1,2-Dichloroethene	ug/L	ND	ND		20	N2
cis-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Dibromochloromethane	ug/L	ND	ND		20	N2
Dibromomethane	ug/L	ND	ND		20	N2
Ethylbenzene	ug/L	ND	ND		20	N2
m&p-Xylene	ug/L	ND	ND		20	N2
Methyl-tert-butyl ether	ug/L	ND	ND		20	N2
Methylene Chloride	ug/L	ND	ND		20	N2
o-Xylene	ug/L	ND	ND		20	N2
Styrene	ug/L	ND	ND		20	N2
Tetrachloroethene	ug/L	ND	ND		20	N2
Toluene	ug/L	ND	ND		20	N2
trans-1,2-Dichloroethene	ug/L	ND	ND		20	N2
trans-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Trichloroethene	ug/L	ND	ND		20	N2
Vinyl chloride	ug/L	ND	ND		20	N2
Xylene (Total)	ug/L	ND	ND		20	N2
4-Bromofluorobenzene (S)	%	95	94			
Dibromofluoromethane (S)	%	96	96			
Toluene-d8 (S)	%	106	105			

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.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313430

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313430001	DW-3	EPA 200.8	671085	EPA 200.8	671359
50313430001	DW-3	EPA 245.1	671366	EPA 245.1	671891
50313430001	DW-3	EPA 524.2	670792		

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

- 1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
- 4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent <input checked="" type="checkbox"/>	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1			3																	1							WT			
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe



April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313429

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50313429001	DW-4	Drinking Water	04/06/22 11:50	04/08/22 12:50

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II  
Pace Project No.: 50313429

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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313429001	DW-4	EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

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PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313429001</b>	<b>DW-4</b>					
EPA 200.8	Arsenic	3.2	ug/L	1.0	04/19/22 05:51	N2
EPA 200.8	Barium	144	ug/L	1.0	04/19/22 05:51	N2
EPA 200.8	Lead	29.4	ug/L	1.0	04/19/22 05:51	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

Sample: DW-4	Lab ID: 50313429001	Collected: 04/06/22 11:50	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	3.2	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:51	7440-38-2	N2
Barium	144	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:51	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 05:51	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:51	7440-47-3	N2
Lead	29.4	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:51	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:51	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 05:51	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 18:21	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/13/22 00:31	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/13/22 00:31	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/13/22 00:31	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/13/22 00:31	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/13/22 00:31	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/13/22 00:31	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/13/22 00:31	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/13/22 00:31	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/13/22 00:31	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/13/22 00:31	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/13/22 00:31	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/13/22 00:31	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/13/22 00:31	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/13/22 00:31	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 00:31	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 00:31	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 00:31	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/13/22 00:31	75-34-3	N2
1,2-Dichloroethane	ND	ug/L	0.50	1		04/13/22 00:31	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/13/22 00:31	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 00:31	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 00:31	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 00:31	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/13/22 00:31	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 00:31	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/13/22 00:31	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 00:31	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 00:31	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/13/22 00:31	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/13/22 00:31	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/13/22 00:31	1634-04-4	N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

Sample: DW-4	Lab ID: 50313429001	Collected: 04/06/22 11:50	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
Styrene	ND	ug/L	0.50	1		04/13/22 00:31	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/13/22 00:31	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/13/22 00:31	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/13/22 00:31	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/13/22 00:31	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/13/22 00:31	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/13/22 00:31	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/13/22 00:31	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/13/22 00:31	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/13/22 00:31	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/13/22 00:31	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 00:31	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/13/22 00:31	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/13/22 00:31	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%.	70-130	1		04/13/22 00:31	460-00-4	
Dibromofluoromethane (S)	98	%.	70-130	1		04/13/22 00:31	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/13/22 00:31	2037-26-5	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

QC Batch: 671366	Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1	Analysis Description: 245.1 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313429001

METHOD BLANK: 3091666 Matrix: Water

Associated Lab Samples: 50313429001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20	

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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: M20032 Muncie Phase II  
Pace Project No.: 50313429

QC Batch: 671085 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313429001

METHOD BLANK: 3090225 Matrix: Water

Associated Lab Samples: 50313429001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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: M20032 Muncie Phase II

Pace Project No.: 50313429

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	Conc.							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313429

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313429001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313429001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313429001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313429

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313429001	DW-4	EPA 200.8	671085	EPA 200.8	671359
50313429001	DW-4	EPA 245.1	671366	EPA 245.1	671891
50313429001	DW-4	EPA 524.2	670791		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

### ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Mundell and Associates, Inc. Billing Information: 110 S Downey Ave, Indianapolis, IN 46219

Address: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com

Copy To: Site Collection Info/Address: 3305 W CR 325 S Muncie, Indiana

Container Preservative Type \*\*

1	3	8	0								
---	---	---	---	--	--	--	--	--	--	--	--

Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_\_DI water

Customer Project Name/Number: M20032 Muncie Phase II

State: IN / County/City: Muncie / Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No

Email: ljohnstone@mundellassociates.com

Collected By (print): Luke Johnstone Purchase Order #: DW PWS ID #: DW Location Code:

Collected By (signature): Turnaround Date Required: Immediately Packed on Ice: [X] Yes [ ] No

Sample Disposal: Rush: (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [X] No

[X] Dispose as appropriate [ ] Same Day [ ] Next Day [ ] Return [ ] 2 Day [ ] 3 Day [ ] Archive: [ ] 4 Day [ ] 5 Day [ ] Hold: Analysis: \_\_\_\_\_

Container Type: Plastic (P) or Glass (G)	Analyses								Lab Profile/Line:	
	Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1						
G/P	X	X								Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: Sample pH Acceptable Y N NA pH Strips: Sulfide Present Y N NA Lead Acetate Strips: _____

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
DW-4	DW/GW	Grab	4/6/22	1150				4	G/P

LAB USE ONLY:  
Lab Sample # / Comments:  
*See SCUR*

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals

All sampled via drinking water methods

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
Temp Blank Received: Y N NA  
Therm ID#: \_\_\_\_\_  
Cooler 1 Temp Upon Receipt: \_\_\_oC  
Cooler 1 Therm Corr. Factor: \_\_\_oC  
Cooler 1 Corrected Temp: \_\_\_oC  
Comments:

Relinquished by/Company: (Signature) Date/Time: 4-8-22 11:15

Relinquished by/Company: (Signature) Date/Time: 4/8/22 12:50

Relinquished by/Company: (Signature) Date/Time:

Received by/Company: (Signature) Date/Time: 4/8/22 11:50

Received by/Company: (Signature) Date/Time: 4-8-22 12:50

Received by/Company: (Signature) Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Non Conformance(s): Page: \_\_\_\_\_

YES / NO of:





**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

- 1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
- 2. Custody Seal on Cooler/Box Present:  Yes  No  
(If yes) Seals Intact:  Yes  No (leave blank if no seals were present)
- 3. Thermometer: 1 2 3 4 5 6 A B C D E F
- 4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
Temp should be above freezing to 6°C (Initial/Corrected)

- 5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
- 6. Ice Type:  Wet  Blue  None
- 7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1			3																1							WT	✓		
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1 liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313428

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313428001	DW-5	Drinking Water	04/06/22 12:13	04/08/22 12:50

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313428001	DW-5	EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313428001</b>	<b>DW-5</b>					
EPA 200.8	Arsenic	4.0	ug/L	1.0	04/19/22 05:47	N2
EPA 200.8	Lead	4.1	ug/L	1.0	04/19/22 05:47	N2

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

**Sample: DW-5**      **Lab ID: 50313428001**      Collected: 04/06/22 12:13      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**200.8 MET ICPMS**

Analytical Method: EPA 200.8 Preparation Method: EPA 200.8  
Pace Analytical Services - Indianapolis

Arsenic	4.0	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:47	7440-38-2	N2
Barium	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:47	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 05:47	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:47	7440-47-3	N2
Lead	4.1	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:47	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:47	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 05:47	7440-22-4	N2

**245.1 Mercury**

Analytical Method: EPA 245.1 Preparation Method: EPA 245.1  
Pace Analytical Services - Indianapolis

Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 18:18	7439-97-6	
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**524.2 MSV**

Analytical Method: EPA 524.2  
Pace Analytical Services - Indianapolis

Benzene	ND	ug/L	0.50	1		04/13/22 00:05	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/13/22 00:05	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/13/22 00:05	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/13/22 00:05	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/13/22 00:05	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/13/22 00:05	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/13/22 00:05	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/13/22 00:05	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/13/22 00:05	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/13/22 00:05	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/13/22 00:05	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/13/22 00:05	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/13/22 00:05	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/13/22 00:05	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 00:05	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 00:05	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 00:05	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/13/22 00:05	75-34-3	N2
1,2-Dichloroethane	ND	ug/L	0.50	1		04/13/22 00:05	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/13/22 00:05	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 00:05	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 00:05	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 00:05	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/13/22 00:05	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 00:05	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/13/22 00:05	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 00:05	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 00:05	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/13/22 00:05	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/13/22 00:05	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/13/22 00:05	1634-04-4	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

Sample: DW-5		Lab ID: 50313428001		Collected: 04/06/22 12:13	Received: 04/08/22 12:50	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
Styrene	ND	ug/L	0.50	1		04/13/22 00:05	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/13/22 00:05	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/13/22 00:05	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/13/22 00:05	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/13/22 00:05	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/13/22 00:05	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/13/22 00:05	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/13/22 00:05	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/13/22 00:05	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/13/22 00:05	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/13/22 00:05	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 00:05	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/13/22 00:05	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/13/22 00:05	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	97	%.	70-130	1		04/13/22 00:05	460-00-4	
Dibromofluoromethane (S)	98	%.	70-130	1		04/13/22 00:05	1868-53-7	
Toluene-d8 (S)	107	%.	70-130	1		04/13/22 00:05	2037-26-5	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313428

QC Batch: 671366	Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1	Analysis Description: 245.1 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313428001

METHOD BLANK: 3091666 Matrix: Water

Associated Lab Samples: 50313428001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

QC Batch: 671085

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313428001

METHOD BLANK: 3090225

Matrix: Water

Associated Lab Samples: 50313428001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313428

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313428001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313428001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313428001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313428

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313428001	DW-5	EPA 200.8	671085	EPA 200.8	671359
50313428001	DW-5	EPA 245.1	671366	EPA 245.1	671891
50313428001	DW-5	EPA 524.2	670791		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

Company: Mundell and Associates, Inc. Billing Information: 110 S Downey Ave, Indianapolis, IN 46219

Address: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com

Copy To: Site Collection Info/Address: 5304 S Breezewood Dr Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II State: IN County/City: Muncie Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No

Email: ljohnstone@mundellassociates.com

Collected By (print): Luke Johnstone Purchase Order #: DW PWS ID #: DW Location Code:

Collected By (signature): Turnaround Date Required: Immediately Packed on Ice: [x] Yes [ ] No

Sample Disposal: Rush: (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [x] No

[x] Dispose as appropriate [ ] Same Day [ ] Next Day

[ ] Return [ ] 2 Day [ ] 3 Day

[ ] Archive: [ ] 4 Day [ ] 5 Day

[ ] Hold: Analysis: \_\_\_\_\_

### ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Container Preservative Type \*\*

1	3	8	0								
---	---	---	---	--	--	--	--	--	--	--	--

Lab Project Manager: \_\_\_\_\_

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res CI	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
DW-5	DW/GW	Grab	4/6/22	12:13				4	G/P

Analyses									
Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1						

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY:  
Lab Sample # / Comments:  
**see SCUR**

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals  
All sampled via drinking water methods

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: \_\_\_\_\_

Cooler 1 Temp Upon Receipt: \_\_\_\_oC

Cooler 1 Therm Corr. Factor: \_\_\_\_oC

Cooler 1 Corrected Temp: \_\_\_\_oC

Comments:

Relinquished by/Company: (Signature) Date/Time: 4-8-22 11:15 Received by/Company: (Signature) Date/Time: 4/8/22 11:50

Relinquished by/Company: (Signature) Date/Time: 4/8/22 12:50 Received by/Company: (Signature) Date/Time: 4-8-22 12:15

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

see SCUR

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): Page: \_\_\_\_\_

YES / NO of: \_\_\_\_\_



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes) Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.						
	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<input checked="" type="checkbox"/>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	DG9P	VOA VIAL HS (p=6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1																				I							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313425

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313425001	DW-6	Drinking Water	04/06/22 12:36	04/08/22 12:50

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313425001	DW-6	EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313425001</b>	<b>DW-6</b>					
EPA 200.8	Barium	1.5	ug/L	1.0	04/19/22 05:18	N2
EPA 200.8	Lead	27.9	ug/L	1.0	04/19/22 05:18	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

**Sample: DW-6**      **Lab ID: 50313425001**      Collected: 04/06/22 12:36      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**200.8 MET ICPMS**

Analytical Method: EPA 200.8      Preparation Method: EPA 200.8  
Pace Analytical Services - Indianapolis

Arsenic	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:18	7440-38-2	N2
Barium	1.5	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:18	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 05:18	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:18	7440-47-3	N2
Lead	27.9	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:18	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:18	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 05:18	7440-22-4	N2

**245.1 Mercury**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1  
Pace Analytical Services - Indianapolis

Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:25	7439-97-6	
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**524.2 MSV**

Analytical Method: EPA 524.2  
Pace Analytical Services - Indianapolis

Benzene	ND	ug/L	0.50	1		04/12/22 21:56	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 21:56	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 21:56	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 21:56	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 21:56	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 21:56	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 21:56	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 21:56	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 21:56	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 21:56	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 21:56	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 21:56	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 21:56	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 21:56	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:56	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:56	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:56	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 21:56	75-34-3	N2
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 21:56	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 21:56	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 21:56	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 21:56	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 21:56	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 21:56	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 21:56	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 21:56	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 21:56	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 21:56	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 21:56	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 21:56	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 21:56	1634-04-4	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

**Sample: DW-6**      **Lab ID: 50313425001**      Collected: 04/06/22 12:36      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis						
Styrene	ND	ug/L	0.50	1		04/12/22 21:56	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 21:56	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 21:56	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 21:56	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 21:56	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:56	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 21:56	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 21:56	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 21:56	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 21:56	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 21:56	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 21:56	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 21:56	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 21:56	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%.	70-130	1		04/12/22 21:56	460-00-4	
Dibromofluoromethane (S)	97	%.	70-130	1		04/12/22 21:56	1868-53-7	
Toluene-d8 (S)	107	%.	70-130	1		04/12/22 21:56	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313425001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313425001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20	

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313425

QC Batch: 671085 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313425001

METHOD BLANK: 3090225 Matrix: Water

Associated Lab Samples: 50313425001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

Parameter	Units	3090229		3090230		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6	
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2	
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2	
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2	
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2	
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313425

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313425001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313425001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313425001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313425

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: M20032 Muncie Phase II  
Pace Project No.: 50313425

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313425001	DW-6	EPA 200.8	671085	EPA 200.8	671359
50313425001	DW-6	EPA 245.1	671366	EPA 245.1	671891
50313425001	DW-6	EPA 524.2	670791		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
 Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

**LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here**

**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Company: Mundell and Associates, Inc.		Billing Information: 110 S Downey Ave, Indianapolis, IN 46219	
Address: 110 S Downey Ave, Indianapolis, IN 46219		Email To: ljohnstone@mundellassociates.com	
Report To: Luke Johnstone		Site Collection Info/Address: 3605 W Fleetwood Dr Muncie, Indiana	
Copy To:		State: County/City: Time Zone Collected: IN / Muncie [ ] PT [ ] MT [ ] CT [ ] ET	
Customer Project Name/Number: M20032 Muncie Phase II		Compliance Monitoring? [ ] Yes [ ] No	
Phone: 317-630-9060	Site/Facility ID #:	DW PWS ID #:	
Email: ljohnstone@mundellassociates.com		DW Location Code:	
Collected By (print): Luke Johnstone	Purchase Order #: Quote #:	Immediately Packed on Ice: [x] Yes [ ] No	
Collected By (signature): <i>[Signature]</i>	Turnaround Date Required:	Field Filtered (if applicable): [ ] Yes [x] No	
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Analysis: _____	

Container Preservative Type **		Lab Project Manager:
1	3	
8	0	

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1	Analyses	Lab Profile/Line:
			Date	Time	Date	Time									
DW-6	DW/GW	Grab	4/6/22	12:36				4	G/P	X	X				Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: _____ Sample pH Acceptable Y N NA pH Strips: _____ Sulfide Present Y N NA Lead Acetate Strips: _____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:  
 Custody Seals Present/Intact Y N NA  
 Custody Signatures Present Y N NA  
 Collector Signature Present Y N NA  
 Bottles Intact Y N NA  
 Correct Bottles Y N NA  
 Sufficient Volume Y N NA  
 Samples Received on Ice Y N NA  
 VOA - Headspace Acceptable Y N NA  
 USDA Regulated Soils Y N NA  
 Samples in Holding Time Y N NA  
 Residual Chlorine Present Y N NA  
 Cl Strips: \_\_\_\_\_  
 Sample pH Acceptable Y N NA  
 pH Strips: \_\_\_\_\_  
 Sulfide Present Y N NA  
 Lead Acetate Strips: \_\_\_\_\_

LAB USE ONLY:  
Lab Sample # / Comments:  
*see SCUR*

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals  All sampled via drinking water methods	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A
	Packing Material Used:	Lab Tracking #:
Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	

LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID#: \_\_\_\_\_  
 Cooler 1 Temp Upon Receipt: \_\_\_\_ °C  
 Cooler 1 Therm Corr. Factor: \_\_\_\_ °C  
 Cooler 1 Corrected Temp: \_\_\_\_ °C  
 Comments:

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 4-6 11:15	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 4/8/22 11:15
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 4/8/22 12:30	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 4-8-22 12:50
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

**MTJL LAB USE ONLY**

Table #: \_\_\_\_\_

Acctnum: \_\_\_\_\_

Template: \_\_\_\_\_

Prelogin: \_\_\_\_\_

PM: \_\_\_\_\_

PB: \_\_\_\_\_

Non Conformance(s): Page: \_\_\_\_\_  
YES / NO of: \_\_\_\_\_

*see SCUR*

Trip Blank Received: Y N NA  
HCL MeOH TSP Other



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No
- (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u> <input checked="" type="checkbox"/>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1				3																							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313426

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313426001	DW-7	Drinking Water	04/06/22 13:00	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313426001	DW-7	EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313426001</b>	<b>DW-7</b>					
EPA 200.8	Barium	532	ug/L	4.0	04/19/22 07:18	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

Sample: DW-7	Lab ID: 50313426001	Collected: 04/06/22 13:00	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:22	7440-38-2	N2
Barium	532	ug/L	4.0	4	04/15/22 02:00	04/19/22 07:18	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 05:22	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:22	7440-47-3	N2
Lead	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:22	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:22	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 05:22	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:28	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/14/22 18:33	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/14/22 18:33	108-86-1	M1,N2
Bromodichloromethane	ND	ug/L	1.0	1		04/14/22 18:33	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/14/22 18:33	75-25-2	L1,M0, N2
Bromomethane	ND	ug/L	5.0	1		04/14/22 18:33	74-83-9	L1,M0, N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/14/22 18:33	56-23-5	M1,N2
Chlorobenzene	ND	ug/L	0.50	1		04/14/22 18:33	108-90-7	M1,N2
Chloroethane	ND	ug/L	0.50	1		04/14/22 18:33	75-00-3	M1,N2
Chloroform	ND	ug/L	1.0	1		04/14/22 18:33	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/14/22 18:33	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/14/22 18:33	95-49-8	M1,N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/14/22 18:33	106-43-4	M1,N2
Dibromochloromethane	ND	ug/L	1.0	1		04/14/22 18:33	124-48-1	M1,N2
Dibromomethane	ND	ug/L	0.50	1		04/14/22 18:33	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/14/22 18:33	95-50-1	M1,N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/14/22 18:33	541-73-1	M1,N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/14/22 18:33	106-46-7	M1,N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/14/22 18:33	75-34-3	N2
1,2-Dichloroethane	ND	ug/L	0.50	1		04/14/22 18:33	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/14/22 18:33	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/14/22 18:33	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/14/22 18:33	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/14/22 18:33	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/14/22 18:33	142-28-9	M1,N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/14/22 18:33	594-20-7	M1,N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/14/22 18:33	563-58-6	M1,N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/14/22 18:33	10061-01-5	M1,N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/14/22 18:33	10061-02-6	M1,N2
Ethylbenzene	ND	ug/L	0.50	1		04/14/22 18:33	100-41-4	M1,N2
Methylene Chloride	ND	ug/L	2.5	1		04/14/22 18:33	75-09-2	N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

Sample: DW-7	Lab ID: 50313426001	Collected: 04/06/22 13:00	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/14/22 18:33	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/14/22 18:33	100-42-5	M1,N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/14/22 18:33	630-20-6	M1,N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/14/22 18:33	79-34-5	M1,N2
Tetrachloroethene	ND	ug/L	0.50	1		04/14/22 18:33	127-18-4	M1,N2
Toluene	ND	ug/L	1.0	1		04/14/22 18:33	108-88-3	M1,N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/14/22 18:33	120-82-1	M1,N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/14/22 18:33	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/14/22 18:33	79-00-5	M1,N2
Trichloroethene	ND	ug/L	0.50	1		04/14/22 18:33	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/14/22 18:33	96-18-4	M1,N2
Vinyl chloride	ND	ug/L	0.50	1		04/14/22 18:33	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/14/22 18:33	1330-20-7	MS,N2
m&p-Xylene	ND	ug/L	0.50	1		04/14/22 18:33	179601-23-1	M1,N2
o-Xylene	ND	ug/L	0.50	1		04/14/22 18:33	95-47-6	M1,N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	94	%.	70-130	1		04/14/22 18:33	460-00-4	
Dibromofluoromethane (S)	95	%.	70-130	1		04/14/22 18:33	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/14/22 18:33	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313426

QC Batch: 671366	Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1	Analysis Description: 245.1 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313426001

METHOD BLANK: 3091666 Matrix: Water

Associated Lab Samples: 50313426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313426

QC Batch: 671085 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313426001

METHOD BLANK: 3090225 Matrix: Water  
Associated Lab Samples: 50313426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	Conc.							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313426

QC Batch: 671276	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313426001

METHOD BLANK: 3091257 Matrix: Water

Associated Lab Samples: 50313426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/14/22 17:43	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/14/22 17:43	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/14/22 17:43	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/14/22 17:43	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/14/22 17:43	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/14/22 17:43	N2
2-Chlorotoluene	ug/L	ND	1.0	04/14/22 17:43	N2
4-Chlorotoluene	ug/L	ND	0.50	04/14/22 17:43	N2
Benzene	ug/L	ND	0.50	04/14/22 17:43	N2
Bromobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
Bromodichloromethane	ug/L	ND	1.0	04/14/22 17:43	N2
Bromoform	ug/L	ND	1.0	04/14/22 17:43	N2
Bromomethane	ug/L	ND	5.0	04/14/22 17:43	N2
Carbon tetrachloride	ug/L	ND	0.50	04/14/22 17:43	N2
Chlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
Chloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
Chloroform	ug/L	ND	1.0	04/14/22 17:43	N2
Chloromethane	ug/L	ND	1.0	04/14/22 17:43	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/14/22 17:43	N2
Dibromochloromethane	ug/L	ND	1.0	04/14/22 17:43	N2
Dibromomethane	ug/L	ND	0.50	04/14/22 17:43	N2
Ethylbenzene	ug/L	ND	0.50	04/14/22 17:43	N2
m&p-Xylene	ug/L	ND	0.50	04/14/22 17:43	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/14/22 17:43	N2
Methylene Chloride	ug/L	ND	2.5	04/14/22 17:43	N2
o-Xylene	ug/L	ND	0.50	04/14/22 17:43	N2
Styrene	ug/L	ND	0.50	04/14/22 17:43	N2
Tetrachloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
Toluene	ug/L	ND	1.0	04/14/22 17:43	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

METHOD BLANK: 3091257

Matrix: Water

Associated Lab Samples: 50313426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/14/22 17:43	N2
Trichloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
Vinyl chloride	ug/L	ND	0.50	04/14/22 17:43	N2
Xylene (Total)	ug/L	ND	0.50	04/14/22 17:43	N2
4-Bromofluorobenzene (S)	%	96	70-130	04/14/22 17:43	
Dibromofluoromethane (S)	%	95	70-130	04/14/22 17:43	
Toluene-d8 (S)	%	107	70-130	04/14/22 17:43	

LABORATORY CONTROL SAMPLE: 3091258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.7	118	70-130	N2
1,1,1-Trichloroethane	ug/L	20	21.6	108	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	23.1	116	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.8	114	70-130	N2
1,1-Dichloroethane	ug/L	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	20	20.0	100	70-130	N2
1,1-Dichloropropene	ug/L	20	21.4	107	70-130	N2
1,2,3-Trichloropropane	ug/L	20	23.5	118	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	24.7	123	70-130	N2
1,2-Dichlorobenzene	ug/L	20	24.0	120	70-130	N2
1,2-Dichloroethane	ug/L	20	19.7	99	70-130	N2
1,2-Dichloropropane	ug/L	20	20.4	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	23.8	119	70-130	N2
1,3-Dichloropropane	ug/L	20	21.9	109	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.9	115	70-130	N2
2,2-Dichloropropane	ug/L	20	22.2	111	70-130	N2
2-Chlorotoluene	ug/L	20	23.3	116	70-130	N2
4-Chlorotoluene	ug/L	20	24.4	122	70-130	N2
Benzene	ug/L	20	19.4	97	70-130	N2
Bromobenzene	ug/L	20	21.1	106	70-130	N2
Bromodichloromethane	ug/L	20	20.6	103	70-130	N2
Bromoform	ug/L	20	26.2	131	70-130	L1,N2
Bromomethane	ug/L	20	29.0	145	70-130	L1,N2
Carbon tetrachloride	ug/L	20	21.8	109	70-130	N2
Chlorobenzene	ug/L	20	22.6	113	70-130	N2
Chloroethane	ug/L	20	23.3	117	70-130	N2
Chloroform	ug/L	20	18.6	93	70-130	N2
Chloromethane	ug/L	20	15.8	79	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.8	104	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	22.8	114	70-130	N2
Dibromochloromethane	ug/L	20	23.8	119	70-130	N2
Dibromomethane	ug/L	20	19.2	96	70-130	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

LABORATORY CONTROL SAMPLE: 3091258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	22.8	114	70-130	N2
m&p-Xylene	ug/L	20	22.7	114	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.9	100	70-130	N2
Methylene Chloride	ug/L	20	18.7	93	70-130	N2
o-Xylene	ug/L	20	23.0	115	70-130	N2
Styrene	ug/L	20	23.2	116	70-130	N2
Tetrachloroethene	ug/L	20	23.6	118	70-130	N2
Toluene	ug/L	20	22.3	112	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	21.4	107	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	23.2	116	70-130	N2
Trichloroethene	ug/L	20	21.5	108	70-130	N2
Vinyl chloride	ug/L	20	22.4	112	70-130	N2
Xylene (Total)	ug/L	40	45.7	114	70-130	N2
4-Bromofluorobenzene (S)	%			97	70-130	
Dibromofluoromethane (S)	%			95	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091259 3091260

Parameter	Units	50313426001		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	31.2	26.8	156	134	70-130	15	20	M1,N2	
1,1,1-Trichloroethane	ug/L	ND	20	20	25.7	23.2	128	116	70-130	10	20	N2	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	30.4	26.6	152	133	70-130	14	20	M1,N2	
1,1,2-Trichloroethane	ug/L	ND	20	20	28.8	25.3	144	126	70-130	13	20	M1,N2	
1,1-Dichloroethane	ug/L	ND	20	20	23.9	21.2	119	106	70-130	12	20	N2	
1,1-Dichloroethene	ug/L	ND	20	20	24.8	22.3	124	111	70-130	11	20	N2	
1,1-Dichloropropene	ug/L	ND	20	20	29.7	25.7	149	128	70-130	15	20	M1,N2	
1,2,3-Trichloropropane	ug/L	ND	20	20	30.2	27.2	151	136	70-130	11	20	M1,N2	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	30.7	27.2	153	136	70-130	12	20	M1,N2	
1,2-Dichlorobenzene	ug/L	ND	20	20	29.4	25.8	147	129	70-130	13	20	M1,N2	
1,2-Dichloroethane	ug/L	ND	20	20	23.5	20.7	118	104	70-130	13	20	N2	
1,2-Dichloropropane	ug/L	ND	20	20	25.6	21.8	128	109	70-130	16	20	N2	
1,3-Dichlorobenzene	ug/L	ND	20	20	29.1	25.8	145	129	70-130	12	20	M1,N2	
1,3-Dichloropropane	ug/L	ND	20	20	27.8	24.1	139	121	70-130	14	20	M1,N2	
1,4-Dichlorobenzene	ug/L	ND	20	20	28.7	25.2	144	126	70-130	13	20	M1,N2	
2,2-Dichloropropane	ug/L	ND	20	20	28.2	24.3	141	121	70-130	15	20	M1,N2	
2-Chlorotoluene	ug/L	ND	20	20	28.7	25.2	143	126	70-130	13	20	M1,N2	
4-Chlorotoluene	ug/L	ND	20	20	30.3	26.9	151	134	70-130	12	20	M1,N2	
Benzene	ug/L	ND	20	20	24.4	21.4	122	107	70-130	13	20	N2	
Bromobenzene	ug/L	ND	20	20	26.4	23.2	132	116	70-130	13	20	M1,N2	
Bromodichloromethane	ug/L	ND	20	20	25.5	21.6	128	108	70-130	17	20	N2	
Bromoform	ug/L	ND	20	20	30.1	26.3	150	131	70-130	13	20	M0,N2	
Bromomethane	ug/L	ND	20	20	28.2	23.2	141	116	70-130	20	20	M0,N2	
Carbon tetrachloride	ug/L	ND	20	20	27.7	24.5	138	122	70-130	12	20	M1,N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091259 3091260														
Parameter	Units	50313426001		MS	MSD	3091260		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	MS Result	MSD Result							
Chlorobenzene	ug/L	ND	20	20	20	28.3	24.7	141	123	70-130	14	20	M1,N2	
Chloroethane	ug/L	ND	20	20	20	27.4	23.3	137	116	70-130	16	20	M1,N2	
Chloroform	ug/L	ND	20	20	20	22.1	18.9	111	95	70-130	16	20	N2	
Chloromethane	ug/L	ND	20	20	20	16.1	14.8	81	74	70-130	9	20	N2	
cis-1,2-Dichloroethene	ug/L	ND	20	20	20	25.4	22.0	127	110	70-130	14	20	N2	
cis-1,3-Dichloropropene	ug/L	ND	20	20	20	28.5	24.1	142	121	70-130	17	20	M1,N2	
Dibromochloromethane	ug/L	ND	20	20	20	29.4	25.5	147	128	70-130	14	20	M1,N2	
Dibromomethane	ug/L	ND	20	20	20	23.8	20.3	119	102	70-130	16	20	N2	
Ethylbenzene	ug/L	ND	20	20	20	28.2	25.0	141	125	70-130	12	20	M1,N2	
m&p-Xylene	ug/L	ND	20	20	20	58.0	50.9	290	255	70-130	13	20	M1,N2	
Methyl-tert-butyl ether	ug/L	ND	20	20	20	24.1	21.5	120	108	70-130	11	20	N2	
Methylene Chloride	ug/L	ND	20	20	20	20.7	18.6	104	93	70-130	11	20	N2	
o-Xylene	ug/L	ND	20	20	20	29.2	24.8	146	124	70-130	16	20	M1,N2	
Styrene	ug/L	ND	20	20	20	28.8	24.7	144	124	70-130	15	20	M1,N2	
Tetrachloroethene	ug/L	ND	20	20	20	29.1	25.8	146	129	70-130	12	20	M1,N2	
Toluene	ug/L	ND	20	20	20	27.9	24.5	140	123	70-130	13	20	M1,N2	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20	25.7	22.9	128	115	70-130	11	20	N2	
trans-1,3-Dichloropropene	ug/L	ND	20	20	20	27.6	24.5	138	123	70-130	12	20	M1,N2	
Trichloroethene	ug/L	ND	20	20	20	26.1	23.2	130	116	70-130	12	20	N2	
Vinyl chloride	ug/L	ND	20	20	20	21.0	18.7	105	94	70-130	12	20	N2	
Xylene (Total)	ug/L	ND	40	40	40	87.2	75.7	218	189	70-130	14	20	MS,N2	
4-Bromofluorobenzene (S)	%							95	96	70-130				
Dibromofluoromethane (S)	%							92	93	70-130				
Toluene-d8 (S)	%							103	104	70-130				

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- 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.
- MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
- N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
- P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313426

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
50313426001	DW-7	EPA 200.8	671085	EPA 200.8	671359
50313426001	DW-7	EPA 245.1	671366	EPA 245.1	671891
50313426001	DW-7	EPA 524.2	671276		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTIL Log-in Number Here

### ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Mundell and Associates, Inc.

Address: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone

Copy To:

Customer Project Name/Number:  
M20032 Muncie Phase II

Billing Information:

110 S Downey Ave, Indianapolis, IN 46219

Email To: ljohnstone@mundellassociates.com

Site Collection Info/Address:  
██████████ S Eldorado Ln Muncie, Indiana

State: IN / County/City: Muncie Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: 317-630-9060  
Email: ljohnstone@mundellassociates.com

Site/Facility ID #:  
Quote #:

Compliance Monitoring?  
[ ] Yes [ ] No

Collected By (print):  
Luke Johnstone

Purchase Order #:  
Turnaround Date Required:

DW PWS ID #:  
DW Location Code:  
Immediately Packed on Ice:  
[X] Yes [ ] No

Collected By (signature):  
*Luke Johnstone*

Rush: (Expedite Charges Apply)  
[ ] Same Day [ ] Next Day  
[ ] 2 Day [ ] 3 Day  
[ ] 4 Day [ ] 5 Day

Field Filtered (if applicable):  
[ ] Yes [X] No  
Analysis:

Sample Disposal:  
[X] Dispose as appropriate  
[ ] Return  
[ ] Archive:  
[ ] Hold:

Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Type: Plastic (P) or Glass (G)

Container Preservative Type \*\*  
1 3 8 0

Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_\_ DI water

Analyses

Lab Profile/Line:

Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)									
VOC's full list via EPA 524.2									
PCB via EPA 505									
PFAS via EPA 537.1									

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOL - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
DW-7 (M5/MSD)	DW/GW	Grab	4/6/22	1300				11	G/P

LAB USE ONLY:  
Lab Sample # / Comments:

see SCUR

Customer Remarks / Special Conditions / Possible Hazards:  
VOC full list, Total RCRA 8 Metals  
All sampled via drinking water methods

Type of Ice Used: Wet Blue Dry None  
Packing Material Used:  
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
Lab Tracking #:  
Samples received via:  
FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:  
Temp Blank Received: Y N NA  
Therm ID#:  
Cooler 1 Temp Upon Receipt: °C  
Cooler 1 Therm Corr. Factor: °C  
Cooler 1 Corrected Temp: °C  
Comments:

Relinquished by/Company: (Signature)  
*Luke Johnstone*

Date/Time:  
4-5-1115

Received by/Company: (Signature)  
*Paula*

Date/Time:  
4/8/22 1115

MTIL LAB USE ONLY  
Table #:

Relinquished by/Company: (Signature)  
*Paula*

Date/Time:  
4/8/22 1200

Received by/Company: (Signature)  
*R. Williams*

Date/Time:  
4-8-22 12:00

Acctnum:  
Template:  
Prelogin:

see SCUR  
Trip Blank Received: Y N NA  
HCL MeOH TSP Other

Relinquished by/Company: (Signature)

Date/Time:

Received by/Company: (Signature)

Date/Time:

PM:  
PB:

Non Conformance(s):  
YES / NO  
Page: \_\_\_\_\_  
of: \_\_\_\_\_



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 10:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 09/07 02/00 03/01  
 Temp should be above freezing to 8°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent <input checked="" type="checkbox"/>	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1																				2							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313424

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313424001	DW-8	Drinking Water	04/06/22 13:05	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313424001	DW-8	EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313424001</b>	<b>DW-8</b>					
EPA 200.8	Barium	503	ug/L	4.0	04/19/22 07:14	N2
EPA 200.8	Lead	9.2	ug/L	1.0	04/19/22 05:06	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

Sample: DW-8	Lab ID: 50313424001	Collected: 04/06/22 13:05	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:06	7440-38-2	N2
Barium	503	ug/L	4.0	4	04/15/22 02:00	04/19/22 07:14	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 05:06	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:06	7440-47-3	N2
Lead	9.2	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:06	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:06	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 05:06	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:23	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/12/22 21:30	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 21:30	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 21:30	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 21:30	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 21:30	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 21:30	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 21:30	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 21:30	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 21:30	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 21:30	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 21:30	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 21:30	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 21:30	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 21:30	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:30	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:30	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:30	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 21:30	75-34-3	N2
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 21:30	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 21:30	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 21:30	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 21:30	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 21:30	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 21:30	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 21:30	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 21:30	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 21:30	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 21:30	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 21:30	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 21:30	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 21:30	1634-04-4	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

Sample: DW-8		Lab ID: 50313424001		Collected: 04/06/22 13:05	Received: 04/08/22 12:50	Matrix: Drinking Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
Styrene	ND	ug/L	0.50	1		04/12/22 21:30	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 21:30	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 21:30	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 21:30	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 21:30	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:30	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 21:30	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 21:30	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 21:30	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 21:30	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 21:30	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 21:30	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 21:30	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 21:30	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%.	70-130	1		04/12/22 21:30	460-00-4	
Dibromofluoromethane (S)	97	%.	70-130	1		04/12/22 21:30	1868-53-7	
Toluene-d8 (S)	107	%.	70-130	1		04/12/22 21:30	2037-26-5	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313424001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

QC Batch: 671085

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313424001

METHOD BLANK: 3090225

Matrix: Water

Associated Lab Samples: 50313424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		3090227		3090228		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		3090229		3090230		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	Conc.							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313424

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313424001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313424

METHOD BLANK: 3088889 Matrix: Water  
Associated Lab Samples: 50313424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313424

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313424001	DW-8	EPA 200.8	671085	EPA 200.8	671359
50313424001	DW-8	EPA 245.1	671366	EPA 245.1	671891
50313424001	DW-8	EPA 524.2	670791		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

### ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Mundell and Associates, Inc. Billing Information:  
 Address: 110 S Downey Ave, Indianapolis, IN 46219 110 S Downey Ave, Indianapolis, IN 46219  
 Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com  
 Copy To: Site Collection Info/Address:  
 3408 W Fleetwood Dr Muncie, Indiana

Container Preservative Type \*\* Lab Project Manager:  
 1 3 8 0  
 \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water

Customer Project Name/Number: M20032 Muncie Phase II State: County/City: Time Zone Collected:  
 IN / Muncie [ ]PT [ ]MT [ ]CT [X]ET  
 Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring?  
 Email: ljohnstone@mundellassociates.com [ ] Yes [ ] No  
 Collected By (print): Purchase Order #: DW PWS ID #:  
 Luke Johnstone Quote #: DW Location Code:  
 Collected By (signature): Turnaround Date Required: Immediately Packed on Ice:  
 [X] Yes [ ] No  
 Sample Disposal: Rush: (Expedite Charges Apply) Field Filtered (if applicable):  
 [X] Dispose as appropriate [ ] Same Day [ ] Next Day [ ] Yes [X] No  
 [ ] Return [ ] 2 Day [ ] 3 Day  
 [ ] Archive: [ ] 4 Day [ ] 5 Day  
 [ ] Hold: Analysis: \_\_\_\_\_

Container Type: Plastic (P) or Glass (G)	Analyses				Lab Profile/Line:
	Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1	
G/P	X	X			Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: _____ Sample pH Acceptable Y N NA pH Strips: _____ Sulfide Present Y N NA Lead Acetate Strips: _____

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
DW-8	DW/GW	Grab	4/6/22	1305				4

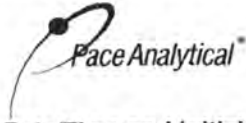
Lab USE ONLY:  
 Lab Sample # / Comments:  
 see SCUP

Customer Remarks / Special Conditions / Possible Hazards: Type of Ice Used: Wet Blue Dry None  
 VOC full list, Total RCRA 8 Metals Packing Material Used:  
 All sampled via drinking water methods Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
 Lab Tracking #:  
 Samples received via:  
 FEDEX UPS Client Courier Pace Courier  
 LAB Sample Temperature Info:  
 Temp Blank Received: Y N NA  
 Therm ID#: \_\_\_\_\_  
 Cooler 1 Temp Upon Receipt: \_\_\_oC  
 Cooler 1 Therm Corr. Factor: \_\_\_oC  
 Cooler 1 Corrected Temp: \_\_\_oC  
 Comments:

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:  
 [Signature] 4-8 1115 [Signature] 4/8/22 1115  
 Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:  
 [Signature] 4/8/22 12:50 [Signature] 4-8-22 12:50  
 Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:

MTJL LAB USE ONLY  
 Table #:  
 Acctnum:  
 Template:  
 Prelogin:  
 PM:  
 PB:  
 Trip Blank Received: Y N NA  
 HCL MeOH TSP Other  
 Non Conformance(s): Page: \_\_\_\_\_  
 YES / NO of: \_\_\_\_\_



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?; exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm); See Container Count form for details	<u>Present</u>	<input checked="" type="checkbox"/>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	DG9P	VGA VIAL HS (6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1																											WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313423

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50313423001	DW-9	Drinking Water	04/06/22 14:20	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313423001	DW-9	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313423001</b>	<b>DW-9</b>					
EPA 200.8	Barium	519	ug/L	4.0	04/19/22 07:01	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

Sample: DW-9	Lab ID: 50313423001	Collected: 04/06/22 14:20	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>505 GCS PCB-TOX-TCH</b>								
Analytical Method: EPA 505 Preparation Method: EPA 505								
Pace Analytical Services - Ormond Beach								
Chlordane (Technical)	ND	ug/L	0.21	1	04/13/22 03:18	04/13/22 09:50	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 09:50	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 09:50	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 09:50	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 09:50	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 09:50	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 09:50	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 09:50	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 09:50	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 09:50	8001-35-2	
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:01	7440-38-2	N2
Barium	519	ug/L	4.0	4	04/15/22 02:00	04/19/22 07:01	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 05:01	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:01	7440-47-3	N2
Lead	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:01	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:01	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 05:01	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:20	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/12/22 21:04	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 21:04	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 21:04	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 21:04	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 21:04	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 21:04	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 21:04	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 21:04	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 21:04	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 21:04	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 21:04	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 21:04	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 21:04	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 21:04	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:04	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:04	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:04	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 21:04	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

**Sample: DW-9**      **Lab ID: 50313423001**      Collected: 04/06/22 14:20      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 21:04	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 21:04	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 21:04	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 21:04	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 21:04	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 21:04	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 21:04	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 21:04	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 21:04	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 21:04	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 21:04	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 21:04	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 21:04	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/12/22 21:04	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 21:04	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 21:04	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 21:04	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 21:04	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 21:04	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 21:04	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 21:04	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 21:04	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 21:04	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 21:04	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 21:04	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 21:04	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 21:04	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	93	%.	70-130	1		04/12/22 21:04	460-00-4	
Dibromofluoromethane (S)	99	%.	70-130	1		04/12/22 21:04	1868-53-7	
Toluene-d8 (S)	105	%.	70-130	1		04/12/22 21:04	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313423

QC Batch: 671366	Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1	Analysis Description: 245.1 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313423001

METHOD BLANK: 3091666 Matrix: Water

Associated Lab Samples: 50313423001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313423

QC Batch: 671085 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313423001

METHOD BLANK: 3090225 Matrix: Water

Associated Lab Samples: 50313423001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313423

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313423001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313423001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313423001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313423

QC Batch: 815516	Analysis Method: EPA 505
QC Batch Method: EPA 505	Analysis Description: 505 GCS PCB-TOX-TCH
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313423001

METHOD BLANK: 4477979 Matrix: Water

Associated Lab Samples: 50313423001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		4478001		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	70-130	10	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	70-130	10	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		4478003		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	70-130	2	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	70-130	7	20	

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313423

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313423001	DW-9	EPA 505	815516	EPA 505	815530
50313423001	DW-9	EPA 200.8	671085	EPA 200.8	671359
50313423001	DW-9	EPA 245.1	671366	EPA 245.1	671891
50313423001	DW-9	EPA 524.2	670791		

### REPORT OF LABORATORY ANALYSIS

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

Company: Mundell and Associates, Inc.		Billing Information: 110 S Downey Ave, Indianapolis, IN 46219	
Address: 110 S Downey Ave, Indianapolis, IN 46219		Email To: ljohnstone@mundellassociates.com	
Report To: Luke Johnstone		Site Collection Info/Address: 3300 W Fuson Rd Muncie, Indiana	
Copy To:		State: IN / Muncie    County/City:    Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET	
Customer Project Name/Number: M20032 Muncie Phase II		Compliance Monitoring? [ ] Yes [ ] No	
Phone: 317-630-9060	Site/Facility ID #:	DW PWS ID #:	
Email: ljohnstone@mundellassociates.com	Purchase Order #:	DW Location Code:	
Collected By (print): Luke Johnstone	Quote #:	Immediately Packed on Ice: [x] Yes [ ] No	
Collected By (signature): <i>Luke Johnstone</i>	Turnaround Date Required:	Field Filtered (if applicable): [ ] Yes [x] No	
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Analysis: _____	

**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Container Preservative Type **										Lab Project Manager:
1	3	8	0							

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_\_ DI water

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses				Lab Profile/Line:
			Date	Time	Date	Time				Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1	
DW-9	DW/GW	Grab	4/6/22	14:20				7	G/P	X	X	X		Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: Sample pH Acceptable Y N NA pH Strips: Sulfide Present Y N NA Lead Acetate Strips: _____  LAB USE ONLY: Lab Sample # / Comments:  <i>see SCUR</i>

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals, PCB  All sampled via drinking water methods	Type of Ice Used:    Wet    Blue    Dry    None	SHORT HOLDS PRESENT (<72 hours):    Y    N    N/A	LAB Sample Temperature Info: Temp Blank Received:    Y    N    NA Therm ID#: _____ Cooler 1 Temp Upon Receipt: _____ °C Cooler 1 Therm Corr. Factor: _____ °C Cooler 1 Corrected Temp: _____ °C Comments:
	Packing Material Used:	Lab Tracking #:	
	Radchem sample(s) screened (<500 cpm):    Y    N    NA	Samples received via: FEDEX    UPS    Client    Courier    Pace Courier	

Relinquished by/Company: (Signature) <i>only with</i>	Date/Time: 4-8 11:15	Received by/Company: (Signature) <i>Zut Paa</i>	Date/Time: 4/8 11:15	MTJL LAB USE ONLY Table #: Acctnum: Template: Prelogin: PM: PB:	see SCUR	
Relinquished by/Company: (Signature) <i>Zut Paa</i>	Date/Time: 4/8/22 12:50	Received by/Company: (Signature) <i>R. K...</i>	Date/Time: 4-8-22 12:50			Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:			Non Conformance(s): YES / NO



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes) Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.1 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VG9H	VOA MIAL HS (+6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1																											WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313422

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: M20032 Muncie Phase II  
Pace Project No.: 50313422

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50313422001	DW-10	Drinking Water	04/06/22 14:55	04/08/22 12:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313422001	DW-10	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313422001</b>	<b>DW-10</b>					
EPA 200.8	Barium	9.3	ug/L	1.0	04/19/22 04:32	N2
EPA 200.8	Lead	1.8	ug/L	1.0	04/19/22 04:32	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

**Sample: DW-10**      **Lab ID: 50313422001**      Collected: 04/06/22 14:55      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
------------	---------	-------	--------------	----	----------	----------	---------	------

**505 GCS PCB-TOX-TCH**

Analytical Method: EPA 505      Preparation Method: EPA 505  
Pace Analytical Services - Ormond Beach

Chlordane (Technical)	ND	ug/L	0.21	1	04/13/22 03:18	04/13/22 10:07	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:07	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:07	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:07	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:07	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:07	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:07	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:07	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:07	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 10:07	8001-35-2	

**200.8 MET ICPMS**

Analytical Method: EPA 200.8      Preparation Method: EPA 200.8  
Pace Analytical Services - Indianapolis

Arsenic	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:32	7440-38-2	N2
Barium	9.3	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:32	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 04:32	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:32	7440-47-3	N2
Lead	1.8	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:32	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:32	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 04:32	7440-22-4	N2

**245.1 Mercury**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1  
Pace Analytical Services - Indianapolis

Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:18	7439-97-6	
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**524.2 MSV**

Analytical Method: EPA 524.2  
Pace Analytical Services - Indianapolis

Benzene	ND	ug/L	0.50	1		04/12/22 20:38	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 20:38	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 20:38	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 20:38	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 20:38	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 20:38	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 20:38	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 20:38	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 20:38	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 20:38	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 20:38	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 20:38	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 20:38	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 20:38	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 20:38	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 20:38	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 20:38	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 20:38	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

Sample: DW-10	Lab ID: 50313422001	Collected: 04/06/22 14:55	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 20:38	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 20:38	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 20:38	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 20:38	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 20:38	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 20:38	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 20:38	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 20:38	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 20:38	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 20:38	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 20:38	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 20:38	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 20:38	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/12/22 20:38	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 20:38	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 20:38	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 20:38	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 20:38	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 20:38	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 20:38	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 20:38	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 20:38	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 20:38	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 20:38	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 20:38	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 20:38	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 20:38	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%.	70-130	1		04/12/22 20:38	460-00-4	
Dibromofluoromethane (S)	96	%.	70-130	1		04/12/22 20:38	1868-53-7	
Toluene-d8 (S)	107	%.	70-130	1		04/12/22 20:38	2037-26-5	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313422

QC Batch: 671366	Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1	Analysis Description: 245.1 Mercury
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313422001

METHOD BLANK: 3091666 Matrix: Water

Associated Lab Samples: 50313422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

QC Batch: 671085

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313422001

METHOD BLANK: 3090225

Matrix: Water

Associated Lab Samples: 50313422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		3090228		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20 N2
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20 N2
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20 N2
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20 N2
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20 N2
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20 N2
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20 N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		3090230		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20 N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313422

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313422001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313422

METHOD BLANK: 3088889 Matrix: Water  
Associated Lab Samples: 50313422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

QC Batch: 815516

QC Batch Method: EPA 505

Analysis Method: EPA 505

Analysis Description: 505 GCS PCB-TOX-TCH

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313422001

METHOD BLANK: 4477979

Matrix: Water

Associated Lab Samples: 50313422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	104	70-130	10	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	93	70-130	10	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	104	70-130	2	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	104	70-130	7	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.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313422

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313422001	DW-10	EPA 505	815516	EPA 505	815530
50313422001	DW-10	EPA 200.8	671085	EPA 200.8	671359
50313422001	DW-10	EPA 245.1	671366	EPA 245.1	671891
50313422001	DW-10	EPA 524.2	670791		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

### ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Mundell and Associates, Inc.	Billing Information:
Address: 110 S Downey Ave, Indianapolis, IN 46219	110 S Downey Ave, Indianapolis, IN 46219
Report To: Luke Johnstone	Email To: ljohnstone@mundellassociates.com
Copy To:	Site Collection Info/Address: 3500 W Fuson Rd Muncie, Indiana

Container Preservative Type **										Lab Project Manager:
1	3	8	0							
** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other __DI water										

Customer Project Name/Number: M20032 Muncie Phase II	State: IN / Muncie	County/City: Muncie	Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring? [ ] Yes [ ] No	
Email: ljohnstone@mundellassociates.com	Purchase Order #:	DW PWS ID #:	
Collected By (print): Luke Johnstone	Quote #:	DW Location Code:	
Collected By (signature): <i>Luke Johnstone</i>	Turnaround Date Required:	Immediately Packed on Ice: [x] Yes [ ] No	
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [x] No	

Container Type: Plastic (P) or Glass (G)	Analyses									
	Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1						
G/P	X	X	X							

Lab Profile/Line:	
Lab Sample Receipt Checklist:	
Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signatures Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	
LAB USE ONLY: Lab Sample # / Comments:  <i>See SCUR</i>	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
DW-10 (MS/MSP for PCB only)	DW/GW	Grab	4/6/22	14:55				13

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals, PCB  All sampled via drinking water methods	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A
	Packing Material Used:	Lab Tracking #:
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: _____ Cooler 1 Temp Upon Receipt: ___oC Cooler 1 Therm Corr. Factor: ___oC Cooler 1 Corrected Temp: ___oC Comments:
---

Relinquished by/Company: (Signature) <i>Mit</i>	Date/Time: 4-16-22 11:15	Received by/Company: (Signature) <i>Pace</i>	Date/Time: 4/18/22 11:15
Relinquished by/Company: (Signature) <i>Z...</i>	Date/Time: 4/18/22 12:50	Received by/Company: (Signature) <i>R...</i>	Date/Time: 4-18-22 12:40
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

<i>see SCUR</i>	
Trip Blank Received: Y N NA	
HCL MeOH TSP Other	
Non Conformance(s): YES / NO	Page: _____ of: _____



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.3/0.1 0.2/0.0  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?		<input checked="" type="checkbox"/>	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1			3				9													1							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313421

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50313421001	DW-11	Drinking Water	04/06/22 15:28	04/08/22 12:50
50313421002	DUP	Drinking Water	04/06/22 08:00	04/08/22 12:50

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313421001	DW-11	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I
50313421002	DUP	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313421001</b>	<b>DW-11</b>					
EPA 200.8	Arsenic	2.7	ug/L	1.0	04/19/22 04:24	N2
EPA 200.8	Barium	250	ug/L	2.0	04/19/22 06:53	N2
EPA 200.8	Cadmium	0.22	ug/L	0.20	04/19/22 04:24	N2
EPA 200.8	Lead	24.4	ug/L	1.0	04/19/22 04:24	N2
<b>50313421002</b>	<b>DUP</b>					
EPA 200.8	Arsenic	2.7	ug/L	1.0	04/19/22 04:28	N2
EPA 200.8	Barium	243	ug/L	2.0	04/19/22 06:57	N2
EPA 200.8	Lead	3.4	ug/L	1.0	04/19/22 04:28	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

Sample:	Lab ID:	Collected:	Received:	Matrix:				
DW-11	50313421001	04/06/22 15:28	04/08/22 12:50	Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>505 GCS PCB-TOX-TCH</b>								
Analytical Method: EPA 505 Preparation Method: EPA 505								
Pace Analytical Services - Ormond Beach								
Chlordane (Technical)	ND	ug/L	0.21	1	04/13/22 03:18	04/13/22 11:50	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:50	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:50	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:50	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:50	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:50	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:50	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:50	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:50	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 11:50	8001-35-2	
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	2.7	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:24	7440-38-2	N2
Barium	250	ug/L	2.0	2	04/15/22 02:00	04/19/22 06:53	7440-39-3	N2
Cadmium	0.22	ug/L	0.20	1	04/15/22 02:00	04/19/22 04:24	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:24	7440-47-3	N2
Lead	24.4	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:24	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:24	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 04:24	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:13	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/12/22 19:47	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 19:47	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 19:47	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 19:47	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 19:47	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 19:47	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 19:47	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 19:47	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 19:47	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 19:47	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 19:47	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 19:47	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 19:47	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 19:47	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 19:47	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 19:47	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 19:47	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 19:47	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

**Sample:** DW-11      **Lab ID:** 50313421001      Collected: 04/06/22 15:28      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 19:47	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 19:47	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 19:47	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 19:47	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 19:47	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 19:47	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 19:47	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 19:47	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 19:47	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 19:47	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 19:47	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 19:47	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 19:47	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/12/22 19:47	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 19:47	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 19:47	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 19:47	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 19:47	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 19:47	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 19:47	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 19:47	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 19:47	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 19:47	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 19:47	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 19:47	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 19:47	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 19:47	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	94	%.	70-130	1		04/12/22 19:47	460-00-4	
Dibromofluoromethane (S)	97	%.	70-130	1		04/12/22 19:47	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/12/22 19:47	2037-26-5	

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

**Sample: DUP**      **Lab ID: 50313421002**      Collected: 04/06/22 08:00      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**505 GCS PCB-TOX-TCH**

Analytical Method: EPA 505      Preparation Method: EPA 505  
Pace Analytical Services - Ormond Beach

Chlordane (Technical)	ND	ug/L	0.22	1	04/13/22 03:18	04/13/22 11:33	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:33	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:33	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:33	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:33	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:33	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:33	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:33	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:33	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 11:33	8001-35-2	

**200.8 MET ICPMS**

Analytical Method: EPA 200.8      Preparation Method: EPA 200.8  
Pace Analytical Services - Indianapolis

Arsenic	2.7	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:28	7440-38-2	N2
Barium	243	ug/L	2.0	2	04/15/22 02:00	04/19/22 06:57	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 04:28	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:28	7440-47-3	N2
Lead	3.4	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:28	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:28	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 04:28	7440-22-4	N2

**245.1 Mercury**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1  
Pace Analytical Services - Indianapolis

Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:16	7439-97-6	
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**524.2 MSV**

Analytical Method: EPA 524.2  
Pace Analytical Services - Indianapolis

Benzene	ND	ug/L	0.50	1		04/12/22 20:13	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 20:13	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 20:13	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 20:13	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 20:13	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 20:13	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 20:13	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 20:13	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 20:13	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 20:13	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 20:13	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 20:13	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 20:13	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 20:13	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 20:13	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 20:13	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 20:13	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 20:13	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

**Sample: DUP**      **Lab ID: 50313421002**      Collected: 04/06/22 08:00      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 20:13	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 20:13	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 20:13	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 20:13	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 20:13	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 20:13	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 20:13	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 20:13	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 20:13	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 20:13	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 20:13	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 20:13	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 20:13	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/12/22 20:13	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 20:13	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 20:13	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 20:13	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 20:13	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 20:13	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 20:13	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 20:13	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 20:13	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 20:13	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 20:13	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 20:13	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 20:13	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 20:13	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	94	%.	70-130	1		04/12/22 20:13	460-00-4	
Dibromofluoromethane (S)	99	%.	70-130	1		04/12/22 20:13	1868-53-7	
Toluene-d8 (S)	105	%.	70-130	1		04/12/22 20:13	2037-26-5	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313421001, 50313421002

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313421001, 50313421002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20	

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

QC Batch: 671085

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313421001, 50313421002

METHOD BLANK: 3090225

Matrix: Water

Associated Lab Samples: 50313421001, 50313421002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

QC Batch: 670791

Analysis Method: EPA 524.2

QC Batch Method: EPA 524.2

Analysis Description: 524.2 MSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313421001, 50313421002

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313421001, 50313421002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313421001, 50313421002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

QC Batch: 815516

Analysis Method: EPA 505

QC Batch Method: EPA 505

Analysis Description: 505 GCS PCB-TOX-TCH

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313421001, 50313421002

METHOD BLANK: 4477979

Matrix: Water

Associated Lab Samples: 50313421001, 50313421002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	70-130	10	20		
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	70-130	10	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	70-130	2	20		
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	70-130	7	20		

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313421

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313421001	DW-11	EPA 505	815516	EPA 505	815530
50313421002	DUP	EPA 505	815516	EPA 505	815530
50313421001	DW-11	EPA 200.8	671085	EPA 200.8	671359
50313421002	DUP	EPA 200.8	671085	EPA 200.8	671359
50313421001	DW-11	EPA 245.1	671366	EPA 245.1	671891
50313421002	DUP	EPA 245.1	671366	EPA 245.1	671891
50313421001	DW-11	EPA 524.2	670791		
50313421002	DUP	EPA 524.2	670791		

### REPORT OF LABORATORY ANALYSIS

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

Company: Mundell and Associates, Inc.		Billing Information:	
Address: 110 S Downey Ave, Indianapolis, IN 46219		110 S Downey Ave, Indianapolis, IN 46219	
Report To: Luke Johnstone		Email To: ljohnstone@mundellassociates.com	
Copy To:		Site Collection Info/Address: 4500 S Hoyt Ave Muncie, Indiana	
Customer Project Name/Number: M20032 Muncie Phase II		State: County/City: Time Zone Collected: IN / Muncie [ ]PT [ ]MT [ ]CT [X]ET	
Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring? [ ] Yes [ ] No	
Email: ljohnstone@mundellassociates.com	Purchase Order #:	DW PWS ID #:	
Collected By (print): Luke Johnstone	Quote #:	DW Location Code:	
Collected By (signature): <i>Luke Johnstone</i>	Turnaround Date Required:	Immediately Packed on Ice: [x] Yes [ ] No	
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [x] No	
Analysis: _____			

### ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Container Preservative Type **										Lab Project Manager:	
1	3	8	0								

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1
			Date	Time	Date	Time							
DW-11	DW/GW	Grab	4/6/22	15:28				7	G/P	X	X	X	
DUP								7	G/P	X	X	X	

Analyses										Lab Profile/Line:	
										Lab Sample Receipt Checklist:	
										Custody Seals Present/Intact Y N NA	
										Custody Signatures Present Y N NA	
										Collector Signature Present Y N NA	
										Bottles Intact Y N NA	
										Correct Bottles Y N NA	
										Sufficient Volume Y N NA	
										Samples Received on Ice Y N NA	
										VOA - Headspace Acceptable Y N NA	
										USDA Regulated Soils Y N NA	
										Samples in Holding Time Y N NA	
										Residual Chlorine Present Y N NA	
										Cl Strips: _____	
										Sample pH Acceptable Y N NA	
										pH Strips: _____	
										Sulfide Present Y N NA	
										Lead Acetate Strips: _____	
										LAB USE ONLY:	
										Lab Sample # / Comments:	
										<i>see SCUR</i>	

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals, PCB  All sampled via drinking water methods	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info:
	Packing Material Used:	Lab Tracking #:	Temp Blank Received: Y N NA
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	Therm ID#: _____
			Cooler 1 Temp Upon Receipt: ____oC
			Cooler 1 Therm Corr. Factor: ____oC
			Cooler 1 Corrected Temp: ____oC
			Comments:

Relinquished by/Company: (Signature) <i>Andy Hill</i>	Date/Time: 4-6 11:19	Received by/Company: (Signature) <i>PGA</i>	Date/Time: 4/6/22 11:15	MTJL LAB USE ONLY
Relinquished by/Company: (Signature) <i>PGA</i>	Date/Time: 4/8/22 12:50	Received by/Company: (Signature) <i>R. L...</i>	Date/Time: 4-8-22 12:09	Table #:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Acctnum:
				Template:
				Prelogin:
				PM:
				PB:
				Non Conformance(s):
				Page: _____
				of: _____



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 11:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	VOA VIAL HS (>6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1			3			3													1							WT	✓		
2			1			1													1							1	1		
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit	LL Cr+6 sampling kit
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGUFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313420

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313420001	DW-12	Drinking Water	04/06/22 15:32	04/08/22 12:50

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313420001	DW-12	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313420001</b>	<b>DW-12</b>					
EPA 200.8	Barium	279	ug/L	2.0	04/19/22 06:49	N2
EPA 200.8	Lead	1.8	ug/L	1.0	04/19/22 04:20	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

**Sample:** DW-12      **Lab ID:** 50313420001      Collected: 04/06/22 15:32      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**505 GCS PCB-TOX-TCH**

Analytical Method: EPA 505      Preparation Method: EPA 505  
Pace Analytical Services - Ormond Beach

Chlordane (Technical)	ND	ug/L	0.22	1	04/13/22 03:18	04/13/22 12:07	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:07	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:07	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:07	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:07	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:07	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:07	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:07	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:07	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 12:07	8001-35-2	

**200.8 MET ICPMS**

Analytical Method: EPA 200.8      Preparation Method: EPA 200.8  
Pace Analytical Services - Indianapolis

Arsenic	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:20	7440-38-2	N2
Barium	279	ug/L	2.0	2	04/15/22 02:00	04/19/22 06:49	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 04:20	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:20	7440-47-3	N2
Lead	1.8	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:20	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:20	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 04:20	7440-22-4	N2

**245.1 Mercury**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1  
Pace Analytical Services - Indianapolis

Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:11	7439-97-6	
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**524.2 MSV**

Analytical Method: EPA 524.2  
Pace Analytical Services - Indianapolis

Benzene	ND	ug/L	0.50	1		04/12/22 19:21	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 19:21	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 19:21	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 19:21	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 19:21	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 19:21	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 19:21	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 19:21	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 19:21	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 19:21	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 19:21	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 19:21	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 19:21	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 19:21	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 19:21	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 19:21	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 19:21	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 19:21	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

**Sample:** DW-12      **Lab ID:** 50313420001      Collected: 04/06/22 15:32      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 19:21	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 19:21	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 19:21	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 19:21	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 19:21	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 19:21	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 19:21	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 19:21	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 19:21	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 19:21	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 19:21	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 19:21	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 19:21	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/12/22 19:21	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 19:21	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 19:21	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 19:21	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 19:21	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 19:21	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 19:21	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 19:21	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 19:21	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 19:21	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 19:21	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 19:21	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 19:21	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 19:21	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	96	%.	70-130	1		04/12/22 19:21	460-00-4	
Dibromofluoromethane (S)	97	%.	70-130	1		04/12/22 19:21	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/12/22 19:21	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313420001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313420001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20	

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313420

QC Batch: 671085 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313420001

METHOD BLANK: 3090225 Matrix: Water

Associated Lab Samples: 50313420001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	Conc.							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313420

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313420001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313420001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313420001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313420

QC Batch: 815516 Analysis Method: EPA 505  
QC Batch Method: EPA 505 Analysis Description: 505 GCS PCB-TOX-TCH  
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313420001

METHOD BLANK: 4477979 Matrix: Water  
Associated Lab Samples: 50313420001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		4478001		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	70-130	10	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	70-130	10	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		4478003		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	70-130	2	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	70-130	7	20	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313420

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313420001	DW-12	EPA 505	815516	EPA 505	815530
50313420001	DW-12	EPA 200.8	671085	EPA 200.8	671359
50313420001	DW-12	EPA 245.1	671366	EPA 245.1	671891
50313420001	DW-12	EPA 524.2	670791		

### REPORT OF LABORATORY ANALYSIS

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Mundell and Associates, Inc.		Billing Information: 110 S Downey Ave, Indianapolis, IN 46219	
Address: 110 S Downey Ave, Indianapolis, IN 46219		Report To: Luke Johnstone	
Email To: ljohnstone@mundellassociates.com		Site Collection Info/Address: 4512 S Hoyt Ave Muncie, Indiana	
State: IN / County/City: Muncie		Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET	
Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring? [ ] Yes [ ] No	
Email: ljohnstone@mundellassociates.com	Purchase Order #:	DW PWS ID #:	
Collected By (print): Luke Johnstone	Quote #:	DW Location Code:	
Collected By (signature): <i>[Signature]</i>	Turnaround Date Required:	Immediately Packed on Ice: [x] Yes [ ] No	
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [x] No	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
DW-12	DW/GW	Grab	4/6/22	1532				7	G/P

**LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here**

**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Container Preservative Type **								Lab Project Manager:	
1	3	8	0						

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water

Analyses										Lab Profile/Line:	
Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1							Lab Sample Receipt Checklist:	
										Custody Seals Present/Intact Y N NA	
										Custody Signatures Present Y N NA	
										Collector Signature Present Y N NA	
Bottles Intact Y N NA		Correct Bottles Y N NA									
Sufficient Volume Y N NA		Samples Received on Ice Y N NA									
VOA - Headspace Acceptable Y N NA		USDA Regulated Soils Y N NA									
Samples in Holding Time Y N NA		Residual Chlorine Present Y N NA									
Cl Strips: _____		Sample pH Acceptable Y N NA									
pH Strips: _____		Sulfide Present Y N NA									
Lead Acetate Strips: _____											

LAB USE ONLY:  
Lab Sample # / Comments:  
*See SCLR*

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals, PCB  All sampled via drinking water methods	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: _____ Cooler 1 Temp Upon Receipt: ___oC Cooler 1 Therm Corr. Factor: ___oC Cooler 1 Corrected Temp: ___oC Comments:
	Packing Material Used:	Lab Tracking #:	
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 4-6-22 1115	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 4/8/22 1115	<b>MTJL LAB USE ONLY</b> Table #: Acctnum: Template: Prelogin: PM: PB:	<i>See SCLR</i> Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: 4/8/22 1200	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: 4-8-22 1215		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:		



### SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 48-22 11:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER

2. Custody Seal on Cooler/Box Present:  Yes  No

(If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 0.9 / 0.7 0.2 / 0.0 0.3 / 0.1  
Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Custody Signatures Present?	✓		Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Containers Intact?:	✓		Headspace Wisconsin Sulfide?			✓
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<u>Absent</u> ✓	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		✓	
			Trip Blank Custody Seals?:			✓

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFL	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1				3			3													1							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac		
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	Syringe Kit	LL Cr+6 sampling kit
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic		
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	AF	Air Filter
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	C	Air Cassettes
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	R	Terracore kit
WGFL	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	SP5T	120mL Coliform Na Thiosulfate
JGFL	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	U	Summa Can
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	ZPLC	Ziploc Bag
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic		
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	WT	Water
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	SL	Solid
						NAL	OL Non-aqueous liquid Oil
						WP	Wipe

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313427

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II  
Pace Project No.: 50313427

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maine Certification #: FL01264  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268  
Illinois Accreditation #: 200074  
Indiana Drinking Water Laboratory #: C-49-06  
Kansas/TNI Certification #: E-10177  
Kentucky UST Agency Interest #: 80226  
Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050  
Ohio VAP Certified Laboratory #: CL0065  
Oklahoma Laboratory #: 9204  
Texas Certification #: T104704355  
Wisconsin Laboratory #: 999788130  
USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313427001	DW-13	Drinking Water	04/06/22 16:07	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313427001	DW-13	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313427001</b>	<b>DW-13</b>					
EPA 200.8	Arsenic	4.2	ug/L	1.0	04/19/22 05:34	N2
EPA 200.8	Barium	114	ug/L	1.0	04/19/22 05:34	N2
EPA 200.8	Lead	2.2	ug/L	1.0	04/19/22 05:34	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

Sample:	Lab ID:	Collected:	Received:	Matrix:				
DW-13	50313427001	04/06/22 16:07	04/08/22 12:50	Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>505 GCS PCB-TOX-TCH</b>								
Analytical Method: EPA 505 Preparation Method: EPA 505								
Pace Analytical Services - Ormond Beach								
Chlordane (Technical)	ND	ug/L	0.22	1	04/13/22 03:18	04/13/22 12:24	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:24	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:24	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:24	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:24	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:24	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:24	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:24	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:24	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 12:24	8001-35-2	
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	4.2	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:34	7440-38-2	N2
Barium	114	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:34	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 05:34	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:34	7440-47-3	N2
Lead	2.2	ug/L	1.0	1	04/15/22 02:00	04/19/22 05:34	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 05:34	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 05:34	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 18:16	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/12/22 23:39	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 23:39	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 23:39	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 23:39	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 23:39	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 23:39	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 23:39	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 23:39	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 23:39	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 23:39	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 23:39	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 23:39	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 23:39	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 23:39	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 23:39	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 23:39	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 23:39	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 23:39	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

Sample: DW-13	Lab ID: 50313427001	Collected: 04/06/22 16:07	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 23:39	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 23:39	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 23:39	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 23:39	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 23:39	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 23:39	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 23:39	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 23:39	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 23:39	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 23:39	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 23:39	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 23:39	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 23:39	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/12/22 23:39	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 23:39	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 23:39	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 23:39	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 23:39	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 23:39	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 23:39	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 23:39	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 23:39	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 23:39	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 23:39	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 23:39	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 23:39	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 23:39	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	98	%.	70-130	1		04/12/22 23:39	460-00-4	
Dibromofluoromethane (S)	98	%.	70-130	1		04/12/22 23:39	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/12/22 23:39	2037-26-5	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313427001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313427

QC Batch: 671085      Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8      Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313427001

METHOD BLANK: 3090225      Matrix: Water  
Associated Lab Samples: 50313427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227      3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229      3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313427

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313427001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

QC Batch: 815516

Analysis Method: EPA 505

QC Batch Method: EPA 505

Analysis Description: 505 GCS PCB-TOX-TCH

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313427001

METHOD BLANK: 4477979

Matrix: Water

Associated Lab Samples: 50313427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	104	70-130	10	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	93	70-130	10	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	104	70-130	2	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	104	70-130	7	20	

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: M20032 Muncie Phase II

Pace Project No.: 50313427

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313427001	DW-13	EPA 505	815516	EPA 505	815530
50313427001	DW-13	EPA 200.8	671085	EPA 200.8	671359
50313427001	DW-13	EPA 245.1	671366	EPA 245.1	671891
50313427001	DW-13	EPA 524.2	670791		

**REPORT OF LABORATORY ANALYSIS**

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Mundell and Associates, Inc.		Billing Information: 110 S Downey Ave, Indianapolis, IN 46219	
Address: 110 S Downey Ave, Indianapolis, IN 46219		Email To: ljohnstone@mundellassociates.com	
Report To: Luke Johnstone		Site Collection Info/Address: 3109 S Hoyt Ave Muncie, Indiana	
Copy To:		State: IN / Muncie County/City: Muncie Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET	
Customer Project Name/Number: M20032 Muncie Phase II		Compliance Monitoring? [ ] Yes [ ] No	
Phone: 317-630-9060	Site/Facility ID #:	DW PWS ID #:	Container Type: Plastic (P) or Glass (G)
Email: ljohnstone@mundellassociates.com	Purchase Order #:	DW Location Code:	
Collected By (print): Luke Johnstone	Quote #:	Immediately Packed on Ice: [x] Yes [ ] No	
Collected By (signature): <i>Luke Johnstone</i>	Turnaround Date Required:	Field Filtered (if applicable): [ ] Yes [x] No	
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Analysis:	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
DW-13	DW/GW	Grab	4/6/22	16:07				7	G/P

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Container Preservative Type \*\*  
1 3 8 0

Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_\_DI water \_\_\_

Analyses	Lab Profile/Line:	
	Lab Sample Receipt Checklist:	Y N NA
Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	Custody Seals Present/Intact	Y N NA
VOC's full list via EPA 524.2	Custody Signatures Present	Y N NA
PCB via EPA 505	Collector Signature Present	Y N NA
PFAS via EPA 537.1	Bottles Intact	Y N NA
	Correct Bottles	Y N NA
	Sufficient Volume	Y N NA
	Samples Received on Ice	Y N NA
	VOA - Headspace Acceptable	Y N NA
	USDA Regulated Soils	Y N NA
	Samples in Holding Time	Y N NA
	Residual Chlorine Present	Y N NA
	Cl Strips:	
	Sample pH Acceptable	Y N NA
	pH Strips:	
	Sulfide Present	Y N NA
	Lead Acetate Strips:	

LAB USE ONLY:  
Lab Sample # / Comments:  
*See SCUP*

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals, PCB All sampled via drinking water methods	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info:
	Packing Material Used:	Lab Tracking #:	Temp Blank Received: Y N NA
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	Therm ID#:

Relinquished by/Company: (Signature) <i>andrew mitch</i>	Date/Time: 4-6-22 11:15	Received by/Company: (Signature) <i>Page</i>	Date/Time: 4/8 11:15	<b>MTJL LAB USE ONLY</b> Table #: Acctnum: Template: Prelogin: PM: PB:	<i>See SCUP</i> Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signature) <i>Kevin For page</i>	Date/Time: 4/8/22 12:00	Received by/Company: (Signature) <i>M. Huns</i>	Date/Time: 4-8-22 12:50		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:		

Non Conformance(s): YES / NO Page: of:   
 *See SCUP*



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes) Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<input checked="" type="checkbox"/>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1				3			3													1							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313419

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II  
Pace Project No.: 50313419

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maine Certification #: FL01264  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268  
Illinois Accreditation #: 200074  
Indiana Drinking Water Laboratory #: C-49-06  
Kansas/TNI Certification #: E-10177  
Kentucky UST Agency Interest #: 80226  
Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050  
Ohio VAP Certified Laboratory #: CL0065  
Oklahoma Laboratory #: 9204  
Texas Certification #: T104704355  
Wisconsin Laboratory #: 999788130  
USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313419001	DW-14	Drinking Water	04/07/22 09:45	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313419001	DW-14	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313419001</b>	<b>DW-14</b>					
EPA 200.8	Arsenic	2.8	ug/L	1.0	04/19/22 04:16	N2
EPA 200.8	Barium	303	ug/L	2.0	04/19/22 06:45	N2
EPA 200.8	Lead	25.0	ug/L	1.0	04/19/22 04:16	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

Sample: DW-14	Lab ID: 50313419001	Collected: 04/07/22 09:45	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>505 GCS PCB-TOX-TCH</b>								
Analytical Method: EPA 505 Preparation Method: EPA 505								
Pace Analytical Services - Ormond Beach								
Chlordane (Technical)	ND	ug/L	0.22	1	04/13/22 03:18	04/13/22 12:42	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:42	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:42	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:42	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:42	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:42	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:42	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:42	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:42	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 12:42	8001-35-2	
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	2.8	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:16	7440-38-2	N2
Barium	303	ug/L	2.0	2	04/15/22 02:00	04/19/22 06:45	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 04:16	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:16	7440-47-3	N2
Lead	25.0	ug/L	1.0	1	04/15/22 02:00	04/19/22 04:16	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 04:16	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 04:16	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:03	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/12/22 18:55	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 18:55	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 18:55	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 18:55	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 18:55	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 18:55	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 18:55	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 18:55	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 18:55	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 18:55	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 18:55	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 18:55	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 18:55	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 18:55	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 18:55	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 18:55	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 18:55	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 18:55	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

Sample: DW-14	Lab ID: 50313419001	Collected: 04/07/22 09:45	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 18:55	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 18:55	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 18:55	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 18:55	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 18:55	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 18:55	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 18:55	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 18:55	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 18:55	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 18:55	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 18:55	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 18:55	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 18:55	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/12/22 18:55	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 18:55	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 18:55	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 18:55	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 18:55	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 18:55	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 18:55	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 18:55	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 18:55	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 18:55	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 18:55	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 18:55	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 18:55	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 18:55	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	97	%.	70-130	1		04/12/22 18:55	460-00-4	
Dibromofluoromethane (S)	98	%.	70-130	1		04/12/22 18:55	1868-53-7	
Toluene-d8 (S)	107	%.	70-130	1		04/12/22 18:55	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313419001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313419001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313419

QC Batch: 671085 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313419001

METHOD BLANK: 3090225 Matrix: Water

Associated Lab Samples: 50313419001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313419

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313419001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313419001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313419001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313419

QC Batch: 815516 Analysis Method: EPA 505  
QC Batch Method: EPA 505 Analysis Description: 505 GCS PCB-TOX-TCH  
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313419001

METHOD BLANK: 4477979 Matrix: Water  
Associated Lab Samples: 50313419001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	104	70-130	10	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	93	70-130	10	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	104	70-130	2	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	104	70-130	7	20	

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313419

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313419001	DW-14	EPA 505	815516	EPA 505	815530
50313419001	DW-14	EPA 200.8	671085	EPA 200.8	671359
50313419001	DW-14	EPA 245.1	671366	EPA 245.1	671891
50313419001	DW-14	EPA 524.2	670791		

### REPORT OF LABORATORY ANALYSIS

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

### ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Mundell and Associates, Inc. Billing Information: 110 S Downey Ave, Indianapolis, IN 46219

Address: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com

Copy To: Site Collection Info/Address: 4612 S Hoyt Ave Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II State: IN County/City: Muncie Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No

Email: ljohnstone@mundellassociates.com DW PWS ID #: DW Location Code:

Collected By (print): Luke Johnstone Purchase Order #: Quote #: Turnaround Date Required: Immediately Packed on Ice: [x] Yes [ ] No

Collected By (signature): [Signature] Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day Field Filtered (if applicable): [ ] Yes [x] No

Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive [ ] Hold Analysis: \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
DW-14	DW/GW	Grab	4/7/22	945				7	G/P

Container Preservative Type \*\*

1	3	8	0						
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\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other DI water

Analyses

Analyses	Lab Profile/Line:
Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	Lab Sample Receipt Checklist:
VOC's full list via EPA 524.2	Custody Seals Present/Intact Y N NA
PCB via EPA 505	Custody Signatures Present Y N NA
PFAS via EPA 537.1	Collector Signature Present Y N NA
	Bottles Intact Y N NA
	Correct Bottles Y N NA
	Sufficient Volume Y N NA
	Samples Received on Ice Y N NA
	VOA - Headspace Acceptable Y N NA
	USDA Regulated Soils Y N NA
	Samples in Holding Time Y N NA
	Residual Chlorine Present Y N NA
	Cl Strips: _____
	Sample pH Acceptable Y N NA
	pH Strips: _____
	Sulfide Present Y N NA
	Lead Acetate Strips: _____

Lab Project Manager:

LAB USE ONLY:  
Lab Sample # / Comments:  
**see SCUR**

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals, PCB  
All sampled via drinking water methods

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#:

Cooler 1 Temp Upon Receipt: \_\_\_oC

Cooler 1 Therm Corr. Factor: \_\_\_oC

Cooler 1 Corrected Temp: \_\_\_oC

Comments:

Relinquished by/Company: (Signature) Date/Time: 4-8 1115 Received by/Company: (Signature) Date/Time: 4/8/22 1115

Relinquished by/Company: (Signature) Date/Time: 4/8/22 1250 Received by/Company: (Signature) Date/Time: 4-8-22 12:50

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Non Conformance(s): YES / NO Page: of:



## SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 0.9/0.7 0.8/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

**All discrepancies will be written out in the comments section below.**

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓	Circle: <u>NO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Custody Signatures Present?	✓		Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Containers Intact?:	✓		Headspace Wisconsin Sulfide?			✓
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		✓	
			Trip Blank Custody Seals?:			✓

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFI	R	DG9H	DG9P	VIA VIAL HS (<6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1				3			3													1							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313436

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313436001	DW-15	Drinking Water	04/07/22 09:50	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313436001	DW-15	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313436001</b>	<b>DW-15</b>					
EPA 200.8	Arsenic	2.7	ug/L	1.0	04/19/22 06:28	N2
EPA 200.8	Barium	290	ug/L	2.0	04/19/22 07:55	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

**Sample: DW-15**      **Lab ID: 50313436001**      Collected: 04/07/22 09:50      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**505 GCS PCB-TOX-TCH**

Analytical Method: EPA 505      Preparation Method: EPA 505  
Pace Analytical Services - Ormond Beach

Chlordane (Technical)	ND	ug/L	0.22	1	04/13/22 03:18	04/13/22 12:59	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:59	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:59	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:59	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:59	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:59	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:59	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:59	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 12:59	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 12:59	8001-35-2	

**200.8 MET ICPMS**

Analytical Method: EPA 200.8      Preparation Method: EPA 200.8  
Pace Analytical Services - Indianapolis

Arsenic	2.7	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:28	7440-38-2	N2
Barium	290	ug/L	2.0	2	04/15/22 02:00	04/19/22 07:55	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 06:28	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:28	7440-47-3	N2
Lead	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:28	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:28	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 06:28	7440-22-4	N2

**245.1 Mercury**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1  
Pace Analytical Services - Indianapolis

Mercury	ND	ug/L	0.20	1	04/19/22 09:38	04/19/22 18:50	7439-97-6	
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**524.2 MSV**

Analytical Method: EPA 524.2  
Pace Analytical Services - Indianapolis

Benzene	ND	ug/L	0.50	1		04/13/22 07:23	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/13/22 07:23	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/13/22 07:23	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/13/22 07:23	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/13/22 07:23	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/13/22 07:23	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/13/22 07:23	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/13/22 07:23	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/13/22 07:23	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/13/22 07:23	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/13/22 07:23	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/13/22 07:23	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/13/22 07:23	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/13/22 07:23	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 07:23	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 07:23	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 07:23	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/13/22 07:23	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

**Sample: DW-15**      **Lab ID: 50313436001**      Collected: 04/07/22 09:50      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/13/22 07:23	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/13/22 07:23	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 07:23	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 07:23	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 07:23	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/13/22 07:23	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 07:23	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/13/22 07:23	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 07:23	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 07:23	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/13/22 07:23	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/13/22 07:23	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/13/22 07:23	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/13/22 07:23	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/13/22 07:23	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/13/22 07:23	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/13/22 07:23	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/13/22 07:23	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/13/22 07:23	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/13/22 07:23	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/13/22 07:23	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/13/22 07:23	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/13/22 07:23	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/13/22 07:23	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 07:23	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/13/22 07:23	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/13/22 07:23	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	93	%.	70-130	1		04/13/22 07:23	460-00-4	
Dibromofluoromethane (S)	95	%.	70-130	1		04/13/22 07:23	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/13/22 07:23	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

QC Batch: 671367

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313436001

METHOD BLANK: 3091672

Matrix: Water

Associated Lab Samples: 50313436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 18:45	

LABORATORY CONTROL SAMPLE: 3091673

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	113	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091674 3091675

Parameter	Units	50313512004		3091675		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Mercury	ug/L	<0.000085 mg/L	5	5	5.5	5.5	111	110	70-130	1	20		

MATRIX SPIKE SAMPLE: 3091676

Parameter	Units	50313512015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.000085 mg/L	5	5.5	109	70-130	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

QC Batch: 671085

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313436001

METHOD BLANK: 3090225

Matrix: Water

Associated Lab Samples: 50313436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		3090228		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20 N2
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20 N2
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20 N2
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20 N2
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20 N2
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20 N2
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20 N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		3090230		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20 N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313436

QC Batch: 670792	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313436001

METHOD BLANK: 3088894 Matrix: Water

Associated Lab Samples: 50313436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/13/22 03:31	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/13/22 03:31	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/13/22 03:31	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
2-Chlorotoluene	ug/L	ND	1.0	04/13/22 03:31	N2
4-Chlorotoluene	ug/L	ND	0.50	04/13/22 03:31	N2
Benzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromodichloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Bromoform	ug/L	ND	1.0	04/13/22 03:31	N2
Bromomethane	ug/L	ND	5.0	04/13/22 03:31	N2
Carbon tetrachloride	ug/L	ND	0.50	04/13/22 03:31	N2
Chlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroform	ug/L	ND	1.0	04/13/22 03:31	N2
Chloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Dibromochloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Dibromomethane	ug/L	ND	0.50	04/13/22 03:31	N2
Ethylbenzene	ug/L	ND	0.50	04/13/22 03:31	N2
m&p-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/13/22 03:31	N2
Methylene Chloride	ug/L	ND	2.5	04/13/22 03:31	N2
o-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Styrene	ug/L	ND	0.50	04/13/22 03:31	N2
Tetrachloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Toluene	ug/L	ND	1.0	04/13/22 03:31	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313436

METHOD BLANK: 3088894 Matrix: Water  
Associated Lab Samples: 50313436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Trichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Vinyl chloride	ug/L	ND	0.50	04/13/22 03:31	N2
Xylene (Total)	ug/L	ND	0.50	04/13/22 03:31	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/13/22 03:31	
Dibromofluoromethane (S)	%	95	70-130	04/13/22 03:31	
Toluene-d8 (S)	%	105	70-130	04/13/22 03:31	

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.8	119	70-130	N2
1,1,1-Trichloroethane	ug/L	20	20.2	101	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	23.1	116	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.2	111	70-130	N2
1,1-Dichloroethane	ug/L	20	19.2	96	70-130	N2
1,1-Dichloroethene	ug/L	20	22.6	113	70-130	N2
1,1-Dichloropropene	ug/L	20	22.0	110	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.9	115	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.7	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	23.1	115	70-130	N2
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	N2
1,2-Dichloropropane	ug/L	20	20.3	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	22.5	112	70-130	N2
1,3-Dichloropropane	ug/L	20	22.3	112	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.0	110	70-130	N2
2,2-Dichloropropane	ug/L	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	20	22.2	111	70-130	N2
4-Chlorotoluene	ug/L	20	23.1	116	70-130	N2
Benzene	ug/L	20	19.9	100	70-130	N2
Bromobenzene	ug/L	20	21.1	105	70-130	N2
Bromodichloromethane	ug/L	20	21.1	105	70-130	N2
Bromoform	ug/L	20	23.7	118	70-130	N2
Bromomethane	ug/L	20	15.5	78	70-130	N2
Carbon tetrachloride	ug/L	20	21.6	108	70-130	N2
Chlorobenzene	ug/L	20	22.5	113	70-130	N2
Chloroethane	ug/L	20	18.8	94	70-130	N2
Chloroform	ug/L	20	18.3	92	70-130	N2
Chloromethane	ug/L	20	17.3	86	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.6	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.8	109	70-130	N2
Dibromochloromethane	ug/L	20	22.9	114	70-130	N2
Dibromomethane	ug/L	20	21.5	107	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	22.1	110	70-130	N2
m&p-Xylene	ug/L	40	44.8	112	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.8	99	70-130	N2
Methylene Chloride	ug/L	20	18.7	94	70-130	N2
o-Xylene	ug/L	20	22.3	112	70-130	N2
Styrene	ug/L	20	22.7	113	70-130	N2
Tetrachloroethene	ug/L	20	22.0	110	70-130	N2
Toluene	ug/L	20	21.3	107	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.7	99	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	21.6	108	70-130	N2
Trichloroethene	ug/L	20	19.8	99	70-130	N2
Vinyl chloride	ug/L	20	16.8	84	70-130	N2
Xylene (Total)	ug/L	60	67.1	112	70-130	N2
4-Bromofluorobenzene (S)	%			95	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 3088897

Parameter	Units	50313431001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.4	117	70-130	N2
1,1,1-Trichloroethane	ug/L	ND	20	21.0	105	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	20	22.5	112	70-130	N2
1,1,2-Trichloroethane	ug/L	ND	20	21.7	108	70-130	N2
1,1-Dichloroethane	ug/L	ND	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	ND	20	21.9	110	70-130	N2
1,1-Dichloropropene	ug/L	ND	20	23.0	115	70-130	N2
1,2,3-Trichloropropane	ug/L	ND	20	21.7	109	70-130	N2
1,2,4-Trichlorobenzene	ug/L	ND	20	22.9	115	70-130	N2
1,2-Dichlorobenzene	ug/L	ND	20	22.8	114	70-130	N2
1,2-Dichloroethane	ug/L	ND	20	18.7	94	70-130	N2
1,2-Dichloropropane	ug/L	ND	20	20.5	103	70-130	N2
1,3-Dichlorobenzene	ug/L	ND	20	22.0	110	70-130	N2
1,3-Dichloropropane	ug/L	ND	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	ND	20	21.6	108	70-130	N2
2,2-Dichloropropane	ug/L	ND	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	ND	20	22.3	111	70-130	N2
4-Chlorotoluene	ug/L	ND	20	22.7	113	70-130	N2
Benzene	ug/L	ND	20	20.2	101	70-130	N2
Bromobenzene	ug/L	ND	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	ND	20	20.5	103	70-130	N2
Bromoform	ug/L	ND	20	23.1	115	70-130	N2
Bromomethane	ug/L	ND	20	16.0	80	70-130	N2
Carbon tetrachloride	ug/L	ND	20	22.6	113	70-130	N2
Chlorobenzene	ug/L	ND	20	22.0	110	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

MATRIX SPIKE SAMPLE: 3088897		50313431001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloroethane	ug/L	ND	20	20.0	100	70-130	N2
Chloroform	ug/L	ND	20	17.8	89	70-130	N2
Chloromethane	ug/L	ND	20	17.8	89	70-130	N2
cis-1,2-Dichloroethene	ug/L	ND	20	20.5	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	ND	20	20.9	105	70-130	N2
Dibromochloromethane	ug/L	ND	20	22.0	110	70-130	N2
Dibromomethane	ug/L	ND	20	20.3	102	70-130	N2
Ethylbenzene	ug/L	ND	20	21.8	109	70-130	N2
m&p-Xylene	ug/L	ND	40	44.9	112	70-130	N2
Methyl-tert-butyl ether	ug/L	ND	20	19.1	96	70-130	N2
Methylene Chloride	ug/L	ND	20	17.3	87	70-130	N2
o-Xylene	ug/L	ND	20	22.1	111	70-130	N2
Styrene	ug/L	ND	20	21.6	108	70-130	N2
Tetrachloroethene	ug/L	ND	20	22.2	111	70-130	N2
Toluene	ug/L	ND	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	ND	20	20.3	102	70-130	N2
trans-1,3-Dichloropropene	ug/L	ND	20	20.3	101	70-130	N2
Trichloroethene	ug/L	ND	20	20.3	102	70-130	N2
Vinyl chloride	ug/L	ND	20	18.0	90	70-130	N2
Xylene (Total)	ug/L	ND	60	67.0	112	70-130	N2
4-Bromofluorobenzene (S)	%				96	70-130	
Dibromofluoromethane (S)	%				96	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,1-Trichloroethane	ug/L	ND	ND		20	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,2-Trichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethene	ug/L	ND	ND		20	N2
1,1-Dichloropropene	ug/L	ND	ND		20	N2
1,2,3-Trichloropropane	ug/L	ND	ND		20	N2
1,2,4-Trichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichloroethane	ug/L	ND	ND		20	N2
1,2-Dichloropropane	ug/L	ND	ND		20	N2
1,3-Dichlorobenzene	ug/L	ND	ND		20	N2
1,3-Dichloropropane	ug/L	ND	ND		20	N2
1,4-Dichlorobenzene	ug/L	ND	ND		20	N2
2,2-Dichloropropane	ug/L	ND	ND		20	N2
2-Chlorotoluene	ug/L	ND	ND		20	N2
4-Chlorotoluene	ug/L	ND	ND		20	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	N2
Bromobenzene	ug/L	ND	ND		20	N2
Bromodichloromethane	ug/L	ND	ND		20	N2
Bromoform	ug/L	ND	ND		20	N2
Bromomethane	ug/L	ND	ND		20	N2
Carbon tetrachloride	ug/L	ND	ND		20	N2
Chlorobenzene	ug/L	ND	ND		20	N2
Chloroethane	ug/L	ND	ND		20	N2
Chloroform	ug/L	ND	ND		20	N2
Chloromethane	ug/L	ND	ND		20	N2
cis-1,2-Dichloroethene	ug/L	ND	ND		20	N2
cis-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Dibromochloromethane	ug/L	ND	ND		20	N2
Dibromomethane	ug/L	ND	ND		20	N2
Ethylbenzene	ug/L	ND	ND		20	N2
m&p-Xylene	ug/L	ND	ND		20	N2
Methyl-tert-butyl ether	ug/L	ND	ND		20	N2
Methylene Chloride	ug/L	ND	ND		20	N2
o-Xylene	ug/L	ND	ND		20	N2
Styrene	ug/L	ND	ND		20	N2
Tetrachloroethene	ug/L	ND	ND		20	N2
Toluene	ug/L	ND	ND		20	N2
trans-1,2-Dichloroethene	ug/L	ND	ND		20	N2
trans-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Trichloroethene	ug/L	ND	ND		20	N2
Vinyl chloride	ug/L	ND	ND		20	N2
Xylene (Total)	ug/L	ND	ND		20	N2
4-Bromofluorobenzene (S)	%	95	94			
Dibromofluoromethane (S)	%	96	96			
Toluene-d8 (S)	%	106	105			

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313436

QC Batch: 815516	Analysis Method: EPA 505
QC Batch Method: EPA 505	Analysis Description: 505 GCS PCB-TOX-TCH
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313436001

METHOD BLANK: 4477979 Matrix: Water  
Associated Lab Samples: 50313436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	70-130	10	20		
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	70-130	10	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	70-130	2	20		
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	70-130	7	20		

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313436001	DW-15	EPA 505	815516	EPA 505	815530
50313436001	DW-15	EPA 200.8	671085	EPA 200.8	671359
50313436001	DW-15	EPA 245.1	671367	EPA 245.1	671892
50313436001	DW-15	EPA 524.2	670792		

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 10:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_

2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 A B C D E F

4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_

6. Ice Type:  Wet  Blue  None

7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.						
	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent <input checked="" type="checkbox"/>	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1																											WT	✓		
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass			Plastic / Misc.		
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic
BP4U	125mL unpreserved plastic				
BP4N	125mL HNO3 plastic				
BP4S	125mL H2SO4 plastic				
Syringe Kit	LL Cr+6 sampling kit				
AF	Air Filter				
C	Air Cassettes				
R	Terracore kit				
SP5T	120mL Coliform Na Thiosulfate				
U	Summa Can				
ZPLC	Ziploc Bag				
WT	Water				
SL	Solid				
NAL	OL Non-aqueous liquid				Oil
WP	Wipe				

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313412

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II  
Pace Project No.: 50313412

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maine Certification #: FL01264  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268  
Illinois Accreditation #: 200074  
Indiana Drinking Water Laboratory #: C-49-06  
Kansas/TNI Certification #: E-10177  
Kentucky UST Agency Interest #: 80226  
Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050  
Ohio VAP Certified Laboratory #: CL0065  
Oklahoma Laboratory #: 9204  
Texas Certification #: T104704355  
Wisconsin Laboratory #: 999788130  
USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313412001	DW-16	Drinking Water	04/07/22 10:20	04/08/22 12:50

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313412001	DW-16	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313412001</b>	<b>DW-16</b>					
EPA 200.8	Arsenic	1.2	ug/L	1.0	04/19/22 02:25	N2
EPA 200.8	Barium	131	ug/L	1.0	04/19/22 02:25	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

Sample: DW-16	Lab ID: 50313412001	Collected: 04/07/22 10:20	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>505 GCS PCB-TOX-TCH</b>								
Analytical Method: EPA 505 Preparation Method: EPA 505								
Pace Analytical Services - Ormond Beach								
Chlordane (Technical)	ND	ug/L	0.21	1	04/13/22 03:18	04/13/22 13:16	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:16	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:16	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:16	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:16	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:16	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:16	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:16	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:16	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 13:16	8001-35-2	
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	1.2	ug/L	1.0	1	04/15/22 02:00	04/19/22 02:25	7440-38-2	N2
Barium	131	ug/L	1.0	1	04/15/22 02:00	04/19/22 02:25	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 02:25	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 02:25	7440-47-3	N2
Lead	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 02:25	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 02:25	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 02:25	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 17:01	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/12/22 18:30	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/12/22 18:30	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/12/22 18:30	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/12/22 18:30	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/12/22 18:30	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/12/22 18:30	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/12/22 18:30	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/12/22 18:30	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/12/22 18:30	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/12/22 18:30	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/12/22 18:30	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/12/22 18:30	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/12/22 18:30	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/12/22 18:30	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 18:30	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 18:30	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/12/22 18:30	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/12/22 18:30	75-34-3	N2

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

Sample: DW-16	Lab ID: 50313412001	Collected: 04/07/22 10:20	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/12/22 18:30	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/12/22 18:30	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 18:30	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/12/22 18:30	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 18:30	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/12/22 18:30	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/12/22 18:30	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/12/22 18:30	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 18:30	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/12/22 18:30	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/12/22 18:30	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/12/22 18:30	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/12/22 18:30	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/12/22 18:30	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/12/22 18:30	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/12/22 18:30	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/12/22 18:30	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/12/22 18:30	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/12/22 18:30	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/12/22 18:30	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/12/22 18:30	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/12/22 18:30	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/12/22 18:30	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/12/22 18:30	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/12/22 18:30	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/12/22 18:30	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/12/22 18:30	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%.	70-130	1		04/12/22 18:30	460-00-4	
Dibromofluoromethane (S)	100	%.	70-130	1		04/12/22 18:30	1868-53-7	
Toluene-d8 (S)	105	%.	70-130	1		04/12/22 18:30	2037-26-5	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313412001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313412001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

QC Batch: 671086

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313412001

METHOD BLANK: 3090231

Matrix: Water

Associated Lab Samples: 50313412001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 02:16	N2
Barium	ug/L	ND	1.0	04/19/22 02:16	N2
Cadmium	ug/L	ND	0.20	04/19/22 02:16	N2
Chromium	ug/L	ND	2.0	04/19/22 02:16	N2
Lead	ug/L	ND	1.0	04/19/22 02:16	N2
Selenium	ug/L	ND	2.0	04/19/22 02:16	N2
Silver	ug/L	ND	0.50	04/19/22 02:16	N2

LABORATORY CONTROL SAMPLE: 3090232

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	38.5	96	85-115	N2
Barium	ug/L	40	39.6	99	85-115	N2
Cadmium	ug/L	40	39.2	98	85-115	N2
Chromium	ug/L	40	41.1	103	85-115	N2
Lead	ug/L	40	41.3	103	85-115	N2
Selenium	ug/L	40	40.1	100	85-115	N2
Silver	ug/L	40	40.2	101	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090233 3090234

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50313412001 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	ug/L	1.2	40	40	39.4	40.2	95	97	70-130	2	20 N2
Barium	ug/L	131	40	40	172	174	102	107	70-130	1	20 N2
Cadmium	ug/L	ND	40	40	37.9	38.0	95	95	70-130	0	20 N2
Chromium	ug/L	ND	40	40	38.8	39.4	96	97	70-130	1	20 N2
Lead	ug/L	ND	40	40	41.2	41.6	101	102	70-130	1	20 N2
Selenium	ug/L	ND	40	40	39.6	40.3	94	96	70-130	2	20 N2
Silver	ug/L	ND	40	40	38.4	38.4	96	96	70-130	0	20 N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313412

QC Batch: 670791	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313412001

METHOD BLANK: 3088889 Matrix: Water

Associated Lab Samples: 50313412001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/12/22 16:47	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/12/22 16:47	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/12/22 16:47	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/12/22 16:47	N2
2-Chlorotoluene	ug/L	ND	1.0	04/12/22 16:47	N2
4-Chlorotoluene	ug/L	ND	0.50	04/12/22 16:47	N2
Benzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Bromodichloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Bromoform	ug/L	ND	1.0	04/12/22 16:47	N2
Bromomethane	ug/L	ND	5.0	04/12/22 16:47	N2
Carbon tetrachloride	ug/L	ND	0.50	04/12/22 16:47	N2
Chlorobenzene	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroethane	ug/L	ND	0.50	04/12/22 16:47	N2
Chloroform	ug/L	ND	1.0	04/12/22 16:47	N2
Chloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Dibromochloromethane	ug/L	ND	1.0	04/12/22 16:47	N2
Dibromomethane	ug/L	ND	0.50	04/12/22 16:47	N2
Ethylbenzene	ug/L	ND	0.50	04/12/22 16:47	N2
m&p-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/12/22 16:47	N2
Methylene Chloride	ug/L	ND	2.5	04/12/22 16:47	N2
o-Xylene	ug/L	ND	0.50	04/12/22 16:47	N2
Styrene	ug/L	ND	0.50	04/12/22 16:47	N2
Tetrachloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Toluene	ug/L	ND	1.0	04/12/22 16:47	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

METHOD BLANK: 3088889

Matrix: Water

Associated Lab Samples: 50313412001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/12/22 16:47	N2
Trichloroethene	ug/L	ND	0.50	04/12/22 16:47	N2
Vinyl chloride	ug/L	ND	0.50	04/12/22 16:47	N2
Xylene (Total)	ug/L	ND	0.50	04/12/22 16:47	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/12/22 16:47	
Dibromofluoromethane (S)	%	98	70-130	04/12/22 16:47	
Toluene-d8 (S)	%	106	70-130	04/12/22 16:47	

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.0	115	70-130	N2
1,1,1-Trichloroethane	ug/L	20	19.8	99	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	22.3	111	70-130	N2
1,1,2-Trichloroethane	ug/L	20	21.8	109	70-130	N2
1,1-Dichloroethane	ug/L	20	19.1	96	70-130	N2
1,1-Dichloroethene	ug/L	20	20.8	104	70-130	N2
1,1-Dichloropropene	ug/L	20	21.9	109	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.8	114	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.9	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	22.7	113	70-130	N2
1,2-Dichloroethane	ug/L	20	18.8	94	70-130	N2
1,2-Dichloropropane	ug/L	20	19.7	99	70-130	N2
1,3-Dichlorobenzene	ug/L	20	21.9	109	70-130	N2
1,3-Dichloropropane	ug/L	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	20	21.7	109	70-130	N2
2,2-Dichloropropane	ug/L	20	20.2	101	70-130	N2
2-Chlorotoluene	ug/L	20	22.4	112	70-130	N2
4-Chlorotoluene	ug/L	20	22.5	113	70-130	N2
Benzene	ug/L	20	19.7	99	70-130	N2
Bromobenzene	ug/L	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	20	20.3	101	70-130	N2
Bromoform	ug/L	20	23.2	116	70-130	N2
Bromomethane	ug/L	20	16.7	84	70-130	N2
Carbon tetrachloride	ug/L	20	21.5	108	70-130	N2
Chlorobenzene	ug/L	20	22.1	110	70-130	N2
Chloroethane	ug/L	20	18.1	91	70-130	N2
Chloroform	ug/L	20	17.9	90	70-130	N2
Chloromethane	ug/L	20	17.4	87	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.1	100	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.9	109	70-130	N2
Dibromochloromethane	ug/L	20	22.5	112	70-130	N2
Dibromomethane	ug/L	20	20.6	103	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

LABORATORY CONTROL SAMPLE: 3088890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	21.9	110	70-130	N2
m&p-Xylene	ug/L	40	45.2	113	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.2	96	70-130	N2
Methylene Chloride	ug/L	20	17.6	88	70-130	N2
o-Xylene	ug/L	20	22.0	110	70-130	N2
Styrene	ug/L	20	22.4	112	70-130	N2
Tetrachloroethene	ug/L	20	22.5	112	70-130	N2
Toluene	ug/L	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.5	98	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	22.4	112	70-130	N2
Trichloroethene	ug/L	20	20.2	101	70-130	N2
Vinyl chloride	ug/L	20	16.3	81	70-130	N2
Xylene (Total)	ug/L	60	67.2	112	70-130	N2
4-Bromofluorobenzene (S)	%			96	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

QC Batch: 815516

QC Batch Method: EPA 505

Analysis Method: EPA 505

Analysis Description: 505 GCS PCB-TOX-TCH

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313412001

METHOD BLANK: 4477979

Matrix: Water

Associated Lab Samples: 50313412001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	104	70-130	10	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	93	70-130	10	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	104	70-130	2	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	104	70-130	7	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.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: M20032 Muncie Phase II

Pace Project No.: 50313412

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313412001	DW-16	EPA 505	815516	EPA 505	815530
50313412001	DW-16	EPA 200.8	671086	EPA 200.8	671361
50313412001	DW-16	EPA 245.1	671366	EPA 245.1	671891
50313412001	DW-16	EPA 524.2	670791		

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes) Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<input checked="" type="checkbox"/>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	DG9P	VOA VIAL HS (+6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1			3				3													1							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313432

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313432001	DW-17	Drinking Water	04/07/22 10:50	04/08/22 12:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313432001	DW-17	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313432001</b>	<b>DW-17</b>					
EPA 200.8	Arsenic	1.5	ug/L	1.0	04/19/22 06:03	N2
EPA 200.8	Barium	2.6	ug/L	1.0	04/19/22 06:03	N2
EPA 200.8	Cadmium	0.33	ug/L	0.20	04/19/22 06:03	N2
EPA 200.8	Lead	188	ug/L	2.0	04/19/22 07:47	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

**Sample: DW-17**      **Lab ID: 50313432001**      Collected: 04/07/22 10:50      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**505 GCS PCB-TOX-TCH**

Analytical Method: EPA 505      Preparation Method: EPA 505  
Pace Analytical Services - Ormond Beach

Chlordane (Technical)	ND	ug/L	0.21	1	04/13/22 03:18	04/13/22 10:58	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:58	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:58	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:58	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:58	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:58	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:58	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:58	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 10:58	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 10:58	8001-35-2	

**200.8 MET ICPMS**

Analytical Method: EPA 200.8      Preparation Method: EPA 200.8  
Pace Analytical Services - Indianapolis

Arsenic	1.5	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:03	7440-38-2	N2
Barium	2.6	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:03	7440-39-3	N2
Cadmium	0.33	ug/L	0.20	1	04/15/22 02:00	04/19/22 06:03	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:03	7440-47-3	N2
Lead	188	ug/L	2.0	2	04/15/22 02:00	04/19/22 07:47	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:03	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 06:03	7440-22-4	N2

**245.1 Mercury**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1  
Pace Analytical Services - Indianapolis

Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 18:28	7439-97-6	
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**524.2 MSV**

Analytical Method: EPA 524.2  
Pace Analytical Services - Indianapolis

Benzene	ND	ug/L	0.50	1		04/13/22 05:40	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/13/22 05:40	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/13/22 05:40	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/13/22 05:40	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/13/22 05:40	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/13/22 05:40	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/13/22 05:40	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/13/22 05:40	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/13/22 05:40	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/13/22 05:40	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/13/22 05:40	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/13/22 05:40	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/13/22 05:40	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/13/22 05:40	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 05:40	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 05:40	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 05:40	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/13/22 05:40	75-34-3	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

Sample: DW-17	Lab ID: 50313432001	Collected: 04/07/22 10:50	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/13/22 05:40	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/13/22 05:40	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 05:40	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 05:40	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 05:40	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/13/22 05:40	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 05:40	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/13/22 05:40	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 05:40	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 05:40	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/13/22 05:40	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/13/22 05:40	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/13/22 05:40	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/13/22 05:40	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/13/22 05:40	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/13/22 05:40	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/13/22 05:40	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/13/22 05:40	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/13/22 05:40	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/13/22 05:40	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/13/22 05:40	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/13/22 05:40	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/13/22 05:40	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/13/22 05:40	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 05:40	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/13/22 05:40	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/13/22 05:40	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%.	70-130	1		04/13/22 05:40	460-00-4	
Dibromofluoromethane (S)	97	%.	70-130	1		04/13/22 05:40	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/13/22 05:40	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313432001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313432001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20	

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313432

QC Batch: 671085 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313432001

METHOD BLANK: 3090225 Matrix: Water

Associated Lab Samples: 50313432001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313432

QC Batch: 670792	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313432001

METHOD BLANK: 3088894 Matrix: Water

Associated Lab Samples: 50313432001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/13/22 03:31	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/13/22 03:31	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/13/22 03:31	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
2-Chlorotoluene	ug/L	ND	1.0	04/13/22 03:31	N2
4-Chlorotoluene	ug/L	ND	0.50	04/13/22 03:31	N2
Benzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromodichloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Bromoform	ug/L	ND	1.0	04/13/22 03:31	N2
Bromomethane	ug/L	ND	5.0	04/13/22 03:31	N2
Carbon tetrachloride	ug/L	ND	0.50	04/13/22 03:31	N2
Chlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroform	ug/L	ND	1.0	04/13/22 03:31	N2
Chloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Dibromochloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Dibromomethane	ug/L	ND	0.50	04/13/22 03:31	N2
Ethylbenzene	ug/L	ND	0.50	04/13/22 03:31	N2
m&p-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/13/22 03:31	N2
Methylene Chloride	ug/L	ND	2.5	04/13/22 03:31	N2
o-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Styrene	ug/L	ND	0.50	04/13/22 03:31	N2
Tetrachloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Toluene	ug/L	ND	1.0	04/13/22 03:31	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

METHOD BLANK: 3088894

Matrix: Water

Associated Lab Samples: 50313432001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Trichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Vinyl chloride	ug/L	ND	0.50	04/13/22 03:31	N2
Xylene (Total)	ug/L	ND	0.50	04/13/22 03:31	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/13/22 03:31	
Dibromofluoromethane (S)	%	95	70-130	04/13/22 03:31	
Toluene-d8 (S)	%	105	70-130	04/13/22 03:31	

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.8	119	70-130	N2
1,1,1-Trichloroethane	ug/L	20	20.2	101	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	23.1	116	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.2	111	70-130	N2
1,1-Dichloroethane	ug/L	20	19.2	96	70-130	N2
1,1-Dichloroethene	ug/L	20	22.6	113	70-130	N2
1,1-Dichloropropene	ug/L	20	22.0	110	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.9	115	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.7	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	23.1	115	70-130	N2
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	N2
1,2-Dichloropropane	ug/L	20	20.3	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	22.5	112	70-130	N2
1,3-Dichloropropane	ug/L	20	22.3	112	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.0	110	70-130	N2
2,2-Dichloropropane	ug/L	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	20	22.2	111	70-130	N2
4-Chlorotoluene	ug/L	20	23.1	116	70-130	N2
Benzene	ug/L	20	19.9	100	70-130	N2
Bromobenzene	ug/L	20	21.1	105	70-130	N2
Bromodichloromethane	ug/L	20	21.1	105	70-130	N2
Bromoform	ug/L	20	23.7	118	70-130	N2
Bromomethane	ug/L	20	15.5	78	70-130	N2
Carbon tetrachloride	ug/L	20	21.6	108	70-130	N2
Chlorobenzene	ug/L	20	22.5	113	70-130	N2
Chloroethane	ug/L	20	18.8	94	70-130	N2
Chloroform	ug/L	20	18.3	92	70-130	N2
Chloromethane	ug/L	20	17.3	86	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.6	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.8	109	70-130	N2
Dibromochloromethane	ug/L	20	22.9	114	70-130	N2
Dibromomethane	ug/L	20	21.5	107	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	22.1	110	70-130	N2
m&p-Xylene	ug/L	40	44.8	112	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.8	99	70-130	N2
Methylene Chloride	ug/L	20	18.7	94	70-130	N2
o-Xylene	ug/L	20	22.3	112	70-130	N2
Styrene	ug/L	20	22.7	113	70-130	N2
Tetrachloroethene	ug/L	20	22.0	110	70-130	N2
Toluene	ug/L	20	21.3	107	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.7	99	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	21.6	108	70-130	N2
Trichloroethene	ug/L	20	19.8	99	70-130	N2
Vinyl chloride	ug/L	20	16.8	84	70-130	N2
Xylene (Total)	ug/L	60	67.1	112	70-130	N2
4-Bromofluorobenzene (S)	%			95	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 3088897

Parameter	Units	50313431001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.4	117	70-130	N2
1,1,1-Trichloroethane	ug/L	ND	20	21.0	105	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	20	22.5	112	70-130	N2
1,1,2-Trichloroethane	ug/L	ND	20	21.7	108	70-130	N2
1,1-Dichloroethane	ug/L	ND	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	ND	20	21.9	110	70-130	N2
1,1-Dichloropropene	ug/L	ND	20	23.0	115	70-130	N2
1,2,3-Trichloropropane	ug/L	ND	20	21.7	109	70-130	N2
1,2,4-Trichlorobenzene	ug/L	ND	20	22.9	115	70-130	N2
1,2-Dichlorobenzene	ug/L	ND	20	22.8	114	70-130	N2
1,2-Dichloroethane	ug/L	ND	20	18.7	94	70-130	N2
1,2-Dichloropropane	ug/L	ND	20	20.5	103	70-130	N2
1,3-Dichlorobenzene	ug/L	ND	20	22.0	110	70-130	N2
1,3-Dichloropropane	ug/L	ND	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	ND	20	21.6	108	70-130	N2
2,2-Dichloropropane	ug/L	ND	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	ND	20	22.3	111	70-130	N2
4-Chlorotoluene	ug/L	ND	20	22.7	113	70-130	N2
Benzene	ug/L	ND	20	20.2	101	70-130	N2
Bromobenzene	ug/L	ND	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	ND	20	20.5	103	70-130	N2
Bromoform	ug/L	ND	20	23.1	115	70-130	N2
Bromomethane	ug/L	ND	20	16.0	80	70-130	N2
Carbon tetrachloride	ug/L	ND	20	22.6	113	70-130	N2
Chlorobenzene	ug/L	ND	20	22.0	110	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

MATRIX SPIKE SAMPLE: 3088897		50313431001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloroethane	ug/L	ND	20	20.0	100	70-130	N2
Chloroform	ug/L	ND	20	17.8	89	70-130	N2
Chloromethane	ug/L	ND	20	17.8	89	70-130	N2
cis-1,2-Dichloroethene	ug/L	ND	20	20.5	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	ND	20	20.9	105	70-130	N2
Dibromochloromethane	ug/L	ND	20	22.0	110	70-130	N2
Dibromomethane	ug/L	ND	20	20.3	102	70-130	N2
Ethylbenzene	ug/L	ND	20	21.8	109	70-130	N2
m&p-Xylene	ug/L	ND	40	44.9	112	70-130	N2
Methyl-tert-butyl ether	ug/L	ND	20	19.1	96	70-130	N2
Methylene Chloride	ug/L	ND	20	17.3	87	70-130	N2
o-Xylene	ug/L	ND	20	22.1	111	70-130	N2
Styrene	ug/L	ND	20	21.6	108	70-130	N2
Tetrachloroethene	ug/L	ND	20	22.2	111	70-130	N2
Toluene	ug/L	ND	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	ND	20	20.3	102	70-130	N2
trans-1,3-Dichloropropene	ug/L	ND	20	20.3	101	70-130	N2
Trichloroethene	ug/L	ND	20	20.3	102	70-130	N2
Vinyl chloride	ug/L	ND	20	18.0	90	70-130	N2
Xylene (Total)	ug/L	ND	60	67.0	112	70-130	N2
4-Bromofluorobenzene (S)	%				96	70-130	
Dibromofluoromethane (S)	%				96	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,1-Trichloroethane	ug/L	ND	ND		20	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,2-Trichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethene	ug/L	ND	ND		20	N2
1,1-Dichloropropene	ug/L	ND	ND		20	N2
1,2,3-Trichloropropane	ug/L	ND	ND		20	N2
1,2,4-Trichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichloroethane	ug/L	ND	ND		20	N2
1,2-Dichloropropane	ug/L	ND	ND		20	N2
1,3-Dichlorobenzene	ug/L	ND	ND		20	N2
1,3-Dichloropropane	ug/L	ND	ND		20	N2
1,4-Dichlorobenzene	ug/L	ND	ND		20	N2
2,2-Dichloropropane	ug/L	ND	ND		20	N2
2-Chlorotoluene	ug/L	ND	ND		20	N2
4-Chlorotoluene	ug/L	ND	ND		20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	N2
Bromobenzene	ug/L	ND	ND		20	N2
Bromodichloromethane	ug/L	ND	ND		20	N2
Bromoform	ug/L	ND	ND		20	N2
Bromomethane	ug/L	ND	ND		20	N2
Carbon tetrachloride	ug/L	ND	ND		20	N2
Chlorobenzene	ug/L	ND	ND		20	N2
Chloroethane	ug/L	ND	ND		20	N2
Chloroform	ug/L	ND	ND		20	N2
Chloromethane	ug/L	ND	ND		20	N2
cis-1,2-Dichloroethene	ug/L	ND	ND		20	N2
cis-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Dibromochloromethane	ug/L	ND	ND		20	N2
Dibromomethane	ug/L	ND	ND		20	N2
Ethylbenzene	ug/L	ND	ND		20	N2
m&p-Xylene	ug/L	ND	ND		20	N2
Methyl-tert-butyl ether	ug/L	ND	ND		20	N2
Methylene Chloride	ug/L	ND	ND		20	N2
o-Xylene	ug/L	ND	ND		20	N2
Styrene	ug/L	ND	ND		20	N2
Tetrachloroethene	ug/L	ND	ND		20	N2
Toluene	ug/L	ND	ND		20	N2
trans-1,2-Dichloroethene	ug/L	ND	ND		20	N2
trans-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Trichloroethene	ug/L	ND	ND		20	N2
Vinyl chloride	ug/L	ND	ND		20	N2
Xylene (Total)	ug/L	ND	ND		20	N2
4-Bromofluorobenzene (S)	%	95	94			
Dibromofluoromethane (S)	%	96	96			
Toluene-d8 (S)	%	106	105			

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

QC Batch: 815516

Analysis Method: EPA 505

QC Batch Method: EPA 505

Analysis Description: 505 GCS PCB-TOX-TCH

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313432001

METHOD BLANK: 4477979

Matrix: Water

Associated Lab Samples: 50313432001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	104	70-130	10	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	93	70-130	10	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	104	70-130	2	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	104	70-130	7	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.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313432

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313432001	DW-17	EPA 505	815516	EPA 505	815530
50313432001	DW-17	EPA 200.8	671085	EPA 200.8	671359
50313432001	DW-17	EPA 245.1	671366	EPA 245.1	671891
50313432001	DW-17	EPA 524.2	670792		

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

### ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Mundell and Associates, Inc.		Billing Information:	
Address: 110 S Downey Ave, Indianapolis, IN 46219		110 S Downey Ave, Indianapolis, IN 46219	
Report To: Luke Johnstone		Email To: ljohnstone@mundellassociates.com	
Copy To:		Site Collection Info/Address: 4408 S Hoyt Ave Muncie, Indiana	
Customer Project Name/Number: M20032 Muncie Phase II		State: County/City: Time Zone Collected: IN / Muncie [ ]PT [ ]MT [ ]CT [X]ET	
Phone: 317-630-9060	Site/Facility ID #:	Compliance Monitoring? [ ] Yes [ ] No	
Email: ljohnstone@mundellassociates.com	Purchase Order #:	DW PWS ID #:	
Collected By (print): Luke Johnstone	Quote #:	DW Location Code:	
Collected By (signature): <i>[Signature]</i>	Turnaround Date Required:	Immediately Packed on Ice: [x] Yes [ ] No	
Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [x] No	

Container Preservative Type **										Lab Project Manager:	
1	3	8	0								

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water

Container Type: Plastic (P) or Glass (G)	Analyses				Lab Profile/Line:	
	Total RCRA & Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1	Lab Sample Receipt Checklist:	
					Custody Seals Present/Intact Y N NA	
					Custody Signatures Present Y N NA	
					Collector Signature Present Y N NA	
					Bottles Intact Y N NA	
					Correct Bottles Y N NA	
					Sufficient Volume Y N NA	
					Samples Received on Ice Y N NA	
					VOA - Headspace Acceptable Y N NA	
					USDA Regulated Soils Y N NA	
					Samples in Holding Time Y N NA	
					Residual Chlorine Present Y N NA	
					Cl Strips: _____	
					Sample pH Acceptable Y N NA	
					pH Strips: _____	
					Sulfide Present Y N NA	
					Lead Acetate Strips: _____	

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
<i>DW-15<sup>45</sup> DW-17<sup>45</sup></i>	DW/GW	Grab	<i>10/5/22</i>					G/P
<i>DW-17</i>			<i>4/7/22</i>	<i>1050</i>				<i>7 6/P</i>

LAB USE ONLY:  
Lab Sample # / Comments:  
*see SCUR*

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA & Metals, PCB All sampled via drinking water methods	Type of Ice Used: Wet Blue Dry None	SHORT HOLDS PRESENT (<72 hours): Y N N/A	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: _____ Cooler 1 Temp Upon Receipt: ____oC Cooler 1 Therm Corr. Factor: ____oC Cooler 1 Corrected Temp: ____oC Comments:
	Packing Material Used:	Lab Tracking #:	
	Radchem sample(s) screened (<500 cpm): Y N NA	Samples received via: FEDEX UPS Client Courier Pace Courier	

Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>4/8/22 1115</i>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>4/8/22 1115</i>	MTJL LAB USE ONLY Table #:
Relinquished by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>4/8/22 1250</i>	Received by/Company: (Signature) <i>[Signature]</i>	Date/Time: <i>4/8/22 12:10</i>	Acctnum: Template: Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: PB:

LAB USE ONLY:  
Trip Blank Received: Y N NA  
HCL MeOH TSP Other  
Non Conformance(s): YES / NO  
Page: \_\_\_\_ of: \_\_\_\_



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 11:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.4/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Containter Count form for details	<u>Present</u>	<input checked="" type="checkbox"/>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGFU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1			3				3														1						WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic		
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	Syringe Kit	LL Cr+6 sampling kit
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic		
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	AF	Air Filter
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	C	Air Cassettes
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	R	Terracore kit
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	SP5T	120mL Coliform Na Thiosulfate
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	U	Summa Can
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	ZPLC	Ziploc Bag
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered		
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WT	Water
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic	SL	Solid
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic	NAL	OL Non-aqueous liquid Oil
						WP	Wipe

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313433

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II  
Pace Project No.: 50313433

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174  
Alaska DEC- CS/UST/LUST  
Alabama Certification #: 41320  
Colorado Certification: FL NELAC Reciprocity  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Kentucky Certification #: 90050  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maine Certification #: FL01264  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236

Montana Certification #: Cert 0074  
Nebraska Certification: NE-OS-28-14  
New Hampshire Certification #: 2958  
New Jersey Certification #: FL022  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Ohio DEP 87780  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268  
Illinois Accreditation #: 200074  
Indiana Drinking Water Laboratory #: C-49-06  
Kansas/TNI Certification #: E-10177  
Kentucky UST Agency Interest #: 80226  
Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050  
Ohio VAP Certified Laboratory #: CL0065  
Oklahoma Laboratory #: 9204  
Texas Certification #: T104704355  
Wisconsin Laboratory #: 999788130  
USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
50313433001	DW-18	Drinking Water	04/07/22 11:35	04/08/22 12:50

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313433001	DW-18	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313433001</b>	<b>DW-18</b>					
EPA 200.8	Arsenic	5.4	ug/L	1.0	04/19/22 06:16	N2
EPA 200.8	Lead	10.6	ug/L	1.0	04/19/22 06:16	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

**Sample: DW-18**      **Lab ID: 50313433001**      Collected: 04/07/22 11:35      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
------------	---------	-------	--------------	----	----------	----------	---------	------

**505 GCS PCB-TOX-TCH**

Analytical Method: EPA 505      Preparation Method: EPA 505  
Pace Analytical Services - Ormond Beach

Chlordane (Technical)	ND	ug/L	0.22	1	04/13/22 03:18	04/13/22 11:15	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:15	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:15	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:15	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:15	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:15	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:15	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:15	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 11:15	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 11:15	8001-35-2	

**200.8 MET ICPMS**

Analytical Method: EPA 200.8      Preparation Method: EPA 200.8  
Pace Analytical Services - Indianapolis

Arsenic	<b>5.4</b>	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:16	7440-38-2	N2
Barium	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:16	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 06:16	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:16	7440-47-3	N2
Lead	<b>10.6</b>	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:16	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:16	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 06:16	7440-22-4	N2

**245.1 Mercury**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1  
Pace Analytical Services - Indianapolis

Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 18:30	7439-97-6	
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**524.2 MSV**

Analytical Method: EPA 524.2  
Pace Analytical Services - Indianapolis

Benzene	ND	ug/L	0.50	1		04/13/22 06:06	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/13/22 06:06	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/13/22 06:06	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/13/22 06:06	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/13/22 06:06	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/13/22 06:06	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/13/22 06:06	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/13/22 06:06	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/13/22 06:06	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/13/22 06:06	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/13/22 06:06	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/13/22 06:06	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/13/22 06:06	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/13/22 06:06	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 06:06	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 06:06	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 06:06	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/13/22 06:06	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

Sample: DW-18	Lab ID: 50313433001	Collected: 04/07/22 11:35	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/13/22 06:06	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/13/22 06:06	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 06:06	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 06:06	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 06:06	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/13/22 06:06	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 06:06	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/13/22 06:06	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 06:06	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 06:06	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/13/22 06:06	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/13/22 06:06	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/13/22 06:06	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/13/22 06:06	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/13/22 06:06	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/13/22 06:06	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/13/22 06:06	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/13/22 06:06	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/13/22 06:06	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/13/22 06:06	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/13/22 06:06	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/13/22 06:06	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/13/22 06:06	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/13/22 06:06	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 06:06	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/13/22 06:06	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/13/22 06:06	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%.	70-130	1		04/13/22 06:06	460-00-4	
Dibromofluoromethane (S)	96	%.	70-130	1		04/13/22 06:06	1868-53-7	
Toluene-d8 (S)	107	%.	70-130	1		04/13/22 06:06	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313433001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313433001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

QC Batch: 671085

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313433001

METHOD BLANK: 3090225

Matrix: Water

Associated Lab Samples: 50313433001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313433

QC Batch: 670792	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313433001

METHOD BLANK: 3088894 Matrix: Water

Associated Lab Samples: 50313433001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/13/22 03:31	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/13/22 03:31	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/13/22 03:31	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
2-Chlorotoluene	ug/L	ND	1.0	04/13/22 03:31	N2
4-Chlorotoluene	ug/L	ND	0.50	04/13/22 03:31	N2
Benzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromodichloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Bromoform	ug/L	ND	1.0	04/13/22 03:31	N2
Bromomethane	ug/L	ND	5.0	04/13/22 03:31	N2
Carbon tetrachloride	ug/L	ND	0.50	04/13/22 03:31	N2
Chlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroform	ug/L	ND	1.0	04/13/22 03:31	N2
Chloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Dibromochloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Dibromomethane	ug/L	ND	0.50	04/13/22 03:31	N2
Ethylbenzene	ug/L	ND	0.50	04/13/22 03:31	N2
m&p-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/13/22 03:31	N2
Methylene Chloride	ug/L	ND	2.5	04/13/22 03:31	N2
o-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Styrene	ug/L	ND	0.50	04/13/22 03:31	N2
Tetrachloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Toluene	ug/L	ND	1.0	04/13/22 03:31	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

METHOD BLANK: 3088894

Matrix: Water

Associated Lab Samples: 50313433001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Trichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Vinyl chloride	ug/L	ND	0.50	04/13/22 03:31	N2
Xylene (Total)	ug/L	ND	0.50	04/13/22 03:31	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/13/22 03:31	
Dibromofluoromethane (S)	%	95	70-130	04/13/22 03:31	
Toluene-d8 (S)	%	105	70-130	04/13/22 03:31	

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.8	119	70-130	N2
1,1,1-Trichloroethane	ug/L	20	20.2	101	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	23.1	116	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.2	111	70-130	N2
1,1-Dichloroethane	ug/L	20	19.2	96	70-130	N2
1,1-Dichloroethene	ug/L	20	22.6	113	70-130	N2
1,1-Dichloropropene	ug/L	20	22.0	110	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.9	115	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.7	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	23.1	115	70-130	N2
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	N2
1,2-Dichloropropane	ug/L	20	20.3	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	22.5	112	70-130	N2
1,3-Dichloropropane	ug/L	20	22.3	112	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.0	110	70-130	N2
2,2-Dichloropropane	ug/L	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	20	22.2	111	70-130	N2
4-Chlorotoluene	ug/L	20	23.1	116	70-130	N2
Benzene	ug/L	20	19.9	100	70-130	N2
Bromobenzene	ug/L	20	21.1	105	70-130	N2
Bromodichloromethane	ug/L	20	21.1	105	70-130	N2
Bromoform	ug/L	20	23.7	118	70-130	N2
Bromomethane	ug/L	20	15.5	78	70-130	N2
Carbon tetrachloride	ug/L	20	21.6	108	70-130	N2
Chlorobenzene	ug/L	20	22.5	113	70-130	N2
Chloroethane	ug/L	20	18.8	94	70-130	N2
Chloroform	ug/L	20	18.3	92	70-130	N2
Chloromethane	ug/L	20	17.3	86	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.6	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.8	109	70-130	N2
Dibromochloromethane	ug/L	20	22.9	114	70-130	N2
Dibromomethane	ug/L	20	21.5	107	70-130	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	22.1	110	70-130	N2
m&p-Xylene	ug/L	40	44.8	112	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.8	99	70-130	N2
Methylene Chloride	ug/L	20	18.7	94	70-130	N2
o-Xylene	ug/L	20	22.3	112	70-130	N2
Styrene	ug/L	20	22.7	113	70-130	N2
Tetrachloroethene	ug/L	20	22.0	110	70-130	N2
Toluene	ug/L	20	21.3	107	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.7	99	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	21.6	108	70-130	N2
Trichloroethene	ug/L	20	19.8	99	70-130	N2
Vinyl chloride	ug/L	20	16.8	84	70-130	N2
Xylene (Total)	ug/L	60	67.1	112	70-130	N2
4-Bromofluorobenzene (S)	%			95	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 3088897

Parameter	Units	50313431001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.4	117	70-130	N2
1,1,1-Trichloroethane	ug/L	ND	20	21.0	105	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	20	22.5	112	70-130	N2
1,1,2-Trichloroethane	ug/L	ND	20	21.7	108	70-130	N2
1,1-Dichloroethane	ug/L	ND	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	ND	20	21.9	110	70-130	N2
1,1-Dichloropropene	ug/L	ND	20	23.0	115	70-130	N2
1,2,3-Trichloropropane	ug/L	ND	20	21.7	109	70-130	N2
1,2,4-Trichlorobenzene	ug/L	ND	20	22.9	115	70-130	N2
1,2-Dichlorobenzene	ug/L	ND	20	22.8	114	70-130	N2
1,2-Dichloroethane	ug/L	ND	20	18.7	94	70-130	N2
1,2-Dichloropropane	ug/L	ND	20	20.5	103	70-130	N2
1,3-Dichlorobenzene	ug/L	ND	20	22.0	110	70-130	N2
1,3-Dichloropropane	ug/L	ND	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	ND	20	21.6	108	70-130	N2
2,2-Dichloropropane	ug/L	ND	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	ND	20	22.3	111	70-130	N2
4-Chlorotoluene	ug/L	ND	20	22.7	113	70-130	N2
Benzene	ug/L	ND	20	20.2	101	70-130	N2
Bromobenzene	ug/L	ND	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	ND	20	20.5	103	70-130	N2
Bromoform	ug/L	ND	20	23.1	115	70-130	N2
Bromomethane	ug/L	ND	20	16.0	80	70-130	N2
Carbon tetrachloride	ug/L	ND	20	22.6	113	70-130	N2
Chlorobenzene	ug/L	ND	20	22.0	110	70-130	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

MATRIX SPIKE SAMPLE: 3088897		50313431001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloroethane	ug/L	ND	20	20.0	100	70-130	N2
Chloroform	ug/L	ND	20	17.8	89	70-130	N2
Chloromethane	ug/L	ND	20	17.8	89	70-130	N2
cis-1,2-Dichloroethene	ug/L	ND	20	20.5	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	ND	20	20.9	105	70-130	N2
Dibromochloromethane	ug/L	ND	20	22.0	110	70-130	N2
Dibromomethane	ug/L	ND	20	20.3	102	70-130	N2
Ethylbenzene	ug/L	ND	20	21.8	109	70-130	N2
m&p-Xylene	ug/L	ND	40	44.9	112	70-130	N2
Methyl-tert-butyl ether	ug/L	ND	20	19.1	96	70-130	N2
Methylene Chloride	ug/L	ND	20	17.3	87	70-130	N2
o-Xylene	ug/L	ND	20	22.1	111	70-130	N2
Styrene	ug/L	ND	20	21.6	108	70-130	N2
Tetrachloroethene	ug/L	ND	20	22.2	111	70-130	N2
Toluene	ug/L	ND	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	ND	20	20.3	102	70-130	N2
trans-1,3-Dichloropropene	ug/L	ND	20	20.3	101	70-130	N2
Trichloroethene	ug/L	ND	20	20.3	102	70-130	N2
Vinyl chloride	ug/L	ND	20	18.0	90	70-130	N2
Xylene (Total)	ug/L	ND	60	67.0	112	70-130	N2
4-Bromofluorobenzene (S)	%				96	70-130	
Dibromofluoromethane (S)	%				96	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,1-Trichloroethane	ug/L	ND	ND		20	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,2-Trichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethene	ug/L	ND	ND		20	N2
1,1-Dichloropropene	ug/L	ND	ND		20	N2
1,2,3-Trichloropropane	ug/L	ND	ND		20	N2
1,2,4-Trichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichloroethane	ug/L	ND	ND		20	N2
1,2-Dichloropropane	ug/L	ND	ND		20	N2
1,3-Dichlorobenzene	ug/L	ND	ND		20	N2
1,3-Dichloropropane	ug/L	ND	ND		20	N2
1,4-Dichlorobenzene	ug/L	ND	ND		20	N2
2,2-Dichloropropane	ug/L	ND	ND		20	N2
2-Chlorotoluene	ug/L	ND	ND		20	N2
4-Chlorotoluene	ug/L	ND	ND		20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	N2
Bromobenzene	ug/L	ND	ND		20	N2
Bromodichloromethane	ug/L	ND	ND		20	N2
Bromoform	ug/L	ND	ND		20	N2
Bromomethane	ug/L	ND	ND		20	N2
Carbon tetrachloride	ug/L	ND	ND		20	N2
Chlorobenzene	ug/L	ND	ND		20	N2
Chloroethane	ug/L	ND	ND		20	N2
Chloroform	ug/L	ND	ND		20	N2
Chloromethane	ug/L	ND	ND		20	N2
cis-1,2-Dichloroethene	ug/L	ND	ND		20	N2
cis-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Dibromochloromethane	ug/L	ND	ND		20	N2
Dibromomethane	ug/L	ND	ND		20	N2
Ethylbenzene	ug/L	ND	ND		20	N2
m&p-Xylene	ug/L	ND	ND		20	N2
Methyl-tert-butyl ether	ug/L	ND	ND		20	N2
Methylene Chloride	ug/L	ND	ND		20	N2
o-Xylene	ug/L	ND	ND		20	N2
Styrene	ug/L	ND	ND		20	N2
Tetrachloroethene	ug/L	ND	ND		20	N2
Toluene	ug/L	ND	ND		20	N2
trans-1,2-Dichloroethene	ug/L	ND	ND		20	N2
trans-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Trichloroethene	ug/L	ND	ND		20	N2
Vinyl chloride	ug/L	ND	ND		20	N2
Xylene (Total)	ug/L	ND	ND		20	N2
4-Bromofluorobenzene (S)	%	95	94			
Dibromofluoromethane (S)	%	96	96			
Toluene-d8 (S)	%	106	105			

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313433

QC Batch: 815516      Analysis Method: EPA 505  
QC Batch Method: EPA 505      Analysis Description: 505 GCS PCB-TOX-TCH  
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313433001

METHOD BLANK: 4477979      Matrix: Water  
Associated Lab Samples: 50313433001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000      4478001

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	70-130	10	20		
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	70-130	10	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002      4478003

Parameter	Units	92597558001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	70-130	2	20		
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	70-130	7	20		

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

Pace Project No.: 50313433

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313433001	DW-18	EPA 505	815516	EPA 505	815530
50313433001	DW-18	EPA 200.8	671085	EPA 200.8	671359
50313433001	DW-18	EPA 245.1	671366	EPA 245.1	671891
50313433001	DW-18	EPA 524.2	670792		

### REPORT OF LABORATORY ANALYSIS

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### CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Mundell and Associates, Inc. Billing Information: 110 S Downey Ave, Indianapolis, IN 46219

Address: 110 S Downey Ave, Indianapolis, IN 46219

Report To: Luke Johnstone Email To: ljohnstone@mundellassociates.com

Copy To: Site Collection Info/Address: 4301 S Hoyt Ave Muncie, Indiana

Customer Project Name/Number: M20032 Muncie Phase II State: IN County/City: Muncie Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: 317-630-9060 Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No

Email: ljohnstone@mundellassociates.com DW PWS ID #: DW Location Code:

Collected By (print): Luke Johnstone Purchase Order #: Quote #: Turnaround Date Required: Immediately Packed on Ice: [x] Yes [ ] No

Collected By (signature): [Signature] Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day Field Filtered (if applicable): [ ] Yes [x] No

Sample Disposal: [x] Dispose as appropriate [ ] Return [ ] Archive [ ] Hold: Analysis: \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Total RCRA 8 Metals via EPA 200.8 (and 245.1 for Hg)	VOC's full list via EPA 524.2	PCB via EPA 505	PFAS via EPA 537.1
			Date	Time	Date	Time							
DW-18	DW/GW	Grab	4/7/22	11:35				7	G/P	X	X	X	

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

**ALL BOLD OUTLINED AREAS are for LAB USE ONLY**

Container Preservative Type \*\*  
1 3 8 0

Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other \_\_DI water

Analyses										Lab Profile/Line:	
<p>Lab Sample Receipt Checklist:</p> <p>Custody Seals Present/Intact Y N NA</p> <p>Custody Signatures Present Y N NA</p> <p>Collector Signature Present Y N NA</p> <p>Bottles Intact Y N NA</p> <p>Correct Bottles Y N NA</p> <p>Sufficient Volume Y N NA</p> <p>Samples Received on Ice Y N NA</p> <p>VOA - Headspace Acceptable Y N NA</p> <p>USDA Regulated Soils Y N NA</p> <p>Samples in Holding Time Y N NA</p> <p>Residual Chlorine Present Y N NA</p> <p>Cl Strips: _____</p> <p>Sample pH Acceptable Y N NA</p> <p>pH Strips: _____</p> <p>Sulfide Present Y N NA</p> <p>Lead Acetate Strips: _____</p>										<p>LAB USE ONLY:</p> <p>Lab Sample # / Comments:</p> <p><b>SEE SCUA</b></p>	

Customer Remarks / Special Conditions / Possible Hazards: VOC full list, Total RCRA 8 Metals, PCB. All sampled via drinking water methods

Type of Ice Used: Wet Blue Dry None

Packing Material Used: Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info: Temp Blank Received: Y N NA. Therm ID#: \_\_\_\_\_. Cooler 1 Temp Upon Receipt: \_\_\_\_\_. Cooler 1 Therm Corr. Factor: \_\_\_\_\_. Cooler 1 Corrected Temp: \_\_\_\_\_. Comments:

Relinquished by/Company: (Signature) [Signature]	Date/Time: 4-8 11:15	Received by/Company: (Signature) [Signature]	Date/Time: 4/8/22 11:15	<p>MTJL LAB USE ONLY</p> <p>Table #:</p> <p>Acctnum:</p> <p>Template:</p> <p>Prelogin:</p> <p>PM:</p> <p>PB:</p>
Relinquished by/Company: (Signature) [Signature]	Date/Time: 4/8/22 12:50	Received by/Company: (Signature) [Signature]	Date/Time: 4/8/22 12:50	
Relinquished by/Company: (Signature) [Signature]	Date/Time:	Received by/Company: (Signature)	Date/Time:	

Non Conformance(s): YES / NO Page: \_\_\_\_ of: \_\_\_\_

**See SCUA**

Trip Blank Received: Y N NA  
HCL MeOH TSP Other



**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No
- (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.			
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<input checked="" type="checkbox"/>	<u>No VOA Vials Sent</u>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WG FU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10
1			3				3													1							WT	✓		
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass			Plastic / Misc.		
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic
BP4U	125mL unpreserved plastic				
BP4N	125mL HNO3 plastic				
BP4S	125mL H2SO4 plastic				
Syringe Kit	LL Cr+6 sampling kit				
AF	Air Filter				
C	Air Cassettes				
R	Terracore kit				
SP5T	120mL Coliform Na Thiosulfate				
U	Summa Can				
ZPLC	Ziploc Bag				
WT	Water				
SL	Solid				
NAL	OL	Non-aqueous liquid			Oil
WP	Wipe				



April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313434

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis
- Pace Analytical Services - Ormond Beach

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

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### **Pace Analytical Services Ormond Beach**

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50313434001	DW-19	Drinking Water	04/07/22 12:05	04/08/22 12:50

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313434001	DW-19	EPA 505	JPD	10	PASI-O
		EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

PASI-O = Pace Analytical Services - Ormond Beach

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313434001</b>	<b>DW-19</b>					
EPA 200.8	Arsenic	1.1	ug/L	1.0	04/19/22 06:20	N2
EPA 200.8	Barium	229	ug/L	2.0	04/19/22 07:51	N2
EPA 200.8	Lead	32.0	ug/L	1.0	04/19/22 06:20	N2
EPA 200.8	Silver	0.64	ug/L	0.50	04/19/22 06:20	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

**Sample: DW-19**      **Lab ID: 50313434001**      Collected: 04/07/22 12:05      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**505 GCS PCB-TOX-TCH**

Analytical Method: EPA 505      Preparation Method: EPA 505  
Pace Analytical Services - Ormond Beach

Chlordane (Technical)	ND	ug/L	0.22	1	04/13/22 03:18	04/13/22 13:33	57-74-9	
PCB-1016 (Aroclor 1016)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:33	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:33	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:33	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:33	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:33	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:33	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:33	11096-82-5	
PCB, Total	ND	ug/L	0.11	1	04/13/22 03:18	04/13/22 13:33	1336-36-3	
Toxaphene	ND	ug/L	1.1	1	04/13/22 03:18	04/13/22 13:33	8001-35-2	

**200.8 MET ICPMS**

Analytical Method: EPA 200.8      Preparation Method: EPA 200.8  
Pace Analytical Services - Indianapolis

Arsenic	1.1	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:20	7440-38-2	N2
Barium	229	ug/L	2.0	2	04/15/22 02:00	04/19/22 07:51	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 06:20	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:20	7440-47-3	N2
Lead	32.0	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:20	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:20	7782-49-2	N2
Silver	0.64	ug/L	0.50	1	04/15/22 02:00	04/19/22 06:20	7440-22-4	N2

**245.1 Mercury**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1  
Pace Analytical Services - Indianapolis

Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 18:33	7439-97-6	
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**524.2 MSV**

Analytical Method: EPA 524.2  
Pace Analytical Services - Indianapolis

Benzene	ND	ug/L	0.50	1		04/13/22 06:32	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/13/22 06:32	108-86-1	N2
Bromodichloromethane	ND	ug/L	1.0	1		04/13/22 06:32	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/13/22 06:32	75-25-2	N2
Bromomethane	ND	ug/L	5.0	1		04/13/22 06:32	74-83-9	N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/13/22 06:32	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/13/22 06:32	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/13/22 06:32	75-00-3	N2
Chloroform	ND	ug/L	1.0	1		04/13/22 06:32	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/13/22 06:32	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/13/22 06:32	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/13/22 06:32	106-43-4	N2
Dibromochloromethane	ND	ug/L	1.0	1		04/13/22 06:32	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/13/22 06:32	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 06:32	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 06:32	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/13/22 06:32	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/13/22 06:32	75-34-3	N2

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

Sample: DW-19	Lab ID: 50313434001	Collected: 04/07/22 12:05	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
1,2-Dichloroethane	ND	ug/L	0.50	1		04/13/22 06:32	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/13/22 06:32	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 06:32	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/13/22 06:32	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 06:32	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/13/22 06:32	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/13/22 06:32	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/13/22 06:32	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 06:32	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/13/22 06:32	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/13/22 06:32	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/13/22 06:32	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/13/22 06:32	1634-04-4	N2
Styrene	ND	ug/L	0.50	1		04/13/22 06:32	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/13/22 06:32	630-20-6	N2
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/13/22 06:32	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/13/22 06:32	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/13/22 06:32	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/13/22 06:32	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/13/22 06:32	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/13/22 06:32	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/13/22 06:32	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/13/22 06:32	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/13/22 06:32	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 06:32	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/13/22 06:32	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/13/22 06:32	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	96	%.	70-130	1		04/13/22 06:32	460-00-4	
Dibromofluoromethane (S)	94	%.	70-130	1		04/13/22 06:32	1868-53-7	
Toluene-d8 (S)	106	%.	70-130	1		04/13/22 06:32	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313434001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313434001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20	

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313434

QC Batch: 671085      Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8      Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313434001

METHOD BLANK: 3090225      Matrix: Water  
Associated Lab Samples: 50313434001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227      3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229      3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	Conc.							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

QC Batch: 670792

Analysis Method: EPA 524.2

QC Batch Method: EPA 524.2

Analysis Description: 524.2 MSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313434001

METHOD BLANK: 3088894

Matrix: Water

Associated Lab Samples: 50313434001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/13/22 03:31	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/13/22 03:31	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/13/22 03:31	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/13/22 03:31	N2
2-Chlorotoluene	ug/L	ND	1.0	04/13/22 03:31	N2
4-Chlorotoluene	ug/L	ND	0.50	04/13/22 03:31	N2
Benzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Bromodichloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Bromoform	ug/L	ND	1.0	04/13/22 03:31	N2
Bromomethane	ug/L	ND	5.0	04/13/22 03:31	N2
Carbon tetrachloride	ug/L	ND	0.50	04/13/22 03:31	N2
Chlorobenzene	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroethane	ug/L	ND	0.50	04/13/22 03:31	N2
Chloroform	ug/L	ND	1.0	04/13/22 03:31	N2
Chloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Dibromochloromethane	ug/L	ND	1.0	04/13/22 03:31	N2
Dibromomethane	ug/L	ND	0.50	04/13/22 03:31	N2
Ethylbenzene	ug/L	ND	0.50	04/13/22 03:31	N2
m&p-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/13/22 03:31	N2
Methylene Chloride	ug/L	ND	2.5	04/13/22 03:31	N2
o-Xylene	ug/L	ND	0.50	04/13/22 03:31	N2
Styrene	ug/L	ND	0.50	04/13/22 03:31	N2
Tetrachloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Toluene	ug/L	ND	1.0	04/13/22 03:31	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

METHOD BLANK: 3088894

Matrix: Water

Associated Lab Samples: 50313434001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/13/22 03:31	N2
Trichloroethene	ug/L	ND	0.50	04/13/22 03:31	N2
Vinyl chloride	ug/L	ND	0.50	04/13/22 03:31	N2
Xylene (Total)	ug/L	ND	0.50	04/13/22 03:31	N2
4-Bromofluorobenzene (S)	%	95	70-130	04/13/22 03:31	
Dibromofluoromethane (S)	%	95	70-130	04/13/22 03:31	
Toluene-d8 (S)	%	105	70-130	04/13/22 03:31	

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.8	119	70-130	N2
1,1,1-Trichloroethane	ug/L	20	20.2	101	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	23.1	116	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.2	111	70-130	N2
1,1-Dichloroethane	ug/L	20	19.2	96	70-130	N2
1,1-Dichloroethene	ug/L	20	22.6	113	70-130	N2
1,1-Dichloropropene	ug/L	20	22.0	110	70-130	N2
1,2,3-Trichloropropane	ug/L	20	22.9	115	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	23.7	119	70-130	N2
1,2-Dichlorobenzene	ug/L	20	23.1	115	70-130	N2
1,2-Dichloroethane	ug/L	20	19.6	98	70-130	N2
1,2-Dichloropropane	ug/L	20	20.3	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	22.5	112	70-130	N2
1,3-Dichloropropane	ug/L	20	22.3	112	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.0	110	70-130	N2
2,2-Dichloropropane	ug/L	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	20	22.2	111	70-130	N2
4-Chlorotoluene	ug/L	20	23.1	116	70-130	N2
Benzene	ug/L	20	19.9	100	70-130	N2
Bromobenzene	ug/L	20	21.1	105	70-130	N2
Bromodichloromethane	ug/L	20	21.1	105	70-130	N2
Bromoform	ug/L	20	23.7	118	70-130	N2
Bromomethane	ug/L	20	15.5	78	70-130	N2
Carbon tetrachloride	ug/L	20	21.6	108	70-130	N2
Chlorobenzene	ug/L	20	22.5	113	70-130	N2
Chloroethane	ug/L	20	18.8	94	70-130	N2
Chloroform	ug/L	20	18.3	92	70-130	N2
Chloromethane	ug/L	20	17.3	86	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.6	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	21.8	109	70-130	N2
Dibromochloromethane	ug/L	20	22.9	114	70-130	N2
Dibromomethane	ug/L	20	21.5	107	70-130	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	20	22.1	110	70-130	N2
m&p-Xylene	ug/L	40	44.8	112	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.8	99	70-130	N2
Methylene Chloride	ug/L	20	18.7	94	70-130	N2
o-Xylene	ug/L	20	22.3	112	70-130	N2
Styrene	ug/L	20	22.7	113	70-130	N2
Tetrachloroethene	ug/L	20	22.0	110	70-130	N2
Toluene	ug/L	20	21.3	107	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	19.7	99	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	21.6	108	70-130	N2
Trichloroethene	ug/L	20	19.8	99	70-130	N2
Vinyl chloride	ug/L	20	16.8	84	70-130	N2
Xylene (Total)	ug/L	60	67.1	112	70-130	N2
4-Bromofluorobenzene (S)	%			95	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 3088897

Parameter	Units	50313431001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.4	117	70-130	N2
1,1,1-Trichloroethane	ug/L	ND	20	21.0	105	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	20	22.5	112	70-130	N2
1,1,2-Trichloroethane	ug/L	ND	20	21.7	108	70-130	N2
1,1-Dichloroethane	ug/L	ND	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	ND	20	21.9	110	70-130	N2
1,1-Dichloropropene	ug/L	ND	20	23.0	115	70-130	N2
1,2,3-Trichloropropane	ug/L	ND	20	21.7	109	70-130	N2
1,2,4-Trichlorobenzene	ug/L	ND	20	22.9	115	70-130	N2
1,2-Dichlorobenzene	ug/L	ND	20	22.8	114	70-130	N2
1,2-Dichloroethane	ug/L	ND	20	18.7	94	70-130	N2
1,2-Dichloropropane	ug/L	ND	20	20.5	103	70-130	N2
1,3-Dichlorobenzene	ug/L	ND	20	22.0	110	70-130	N2
1,3-Dichloropropane	ug/L	ND	20	22.0	110	70-130	N2
1,4-Dichlorobenzene	ug/L	ND	20	21.6	108	70-130	N2
2,2-Dichloropropane	ug/L	ND	20	16.4	82	70-130	N2
2-Chlorotoluene	ug/L	ND	20	22.3	111	70-130	N2
4-Chlorotoluene	ug/L	ND	20	22.7	113	70-130	N2
Benzene	ug/L	ND	20	20.2	101	70-130	N2
Bromobenzene	ug/L	ND	20	20.7	103	70-130	N2
Bromodichloromethane	ug/L	ND	20	20.5	103	70-130	N2
Bromoform	ug/L	ND	20	23.1	115	70-130	N2
Bromomethane	ug/L	ND	20	16.0	80	70-130	N2
Carbon tetrachloride	ug/L	ND	20	22.6	113	70-130	N2
Chlorobenzene	ug/L	ND	20	22.0	110	70-130	N2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

MATRIX SPIKE SAMPLE: 3088897		50313431001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloroethane	ug/L	ND	20	20.0	100	70-130	N2
Chloroform	ug/L	ND	20	17.8	89	70-130	N2
Chloromethane	ug/L	ND	20	17.8	89	70-130	N2
cis-1,2-Dichloroethene	ug/L	ND	20	20.5	103	70-130	N2
cis-1,3-Dichloropropene	ug/L	ND	20	20.9	105	70-130	N2
Dibromochloromethane	ug/L	ND	20	22.0	110	70-130	N2
Dibromomethane	ug/L	ND	20	20.3	102	70-130	N2
Ethylbenzene	ug/L	ND	20	21.8	109	70-130	N2
m&p-Xylene	ug/L	ND	40	44.9	112	70-130	N2
Methyl-tert-butyl ether	ug/L	ND	20	19.1	96	70-130	N2
Methylene Chloride	ug/L	ND	20	17.3	87	70-130	N2
o-Xylene	ug/L	ND	20	22.1	111	70-130	N2
Styrene	ug/L	ND	20	21.6	108	70-130	N2
Tetrachloroethene	ug/L	ND	20	22.2	111	70-130	N2
Toluene	ug/L	ND	20	21.0	105	70-130	N2
trans-1,2-Dichloroethene	ug/L	ND	20	20.3	102	70-130	N2
trans-1,3-Dichloropropene	ug/L	ND	20	20.3	101	70-130	N2
Trichloroethene	ug/L	ND	20	20.3	102	70-130	N2
Vinyl chloride	ug/L	ND	20	18.0	90	70-130	N2
Xylene (Total)	ug/L	ND	60	67.0	112	70-130	N2
4-Bromofluorobenzene (S)	%				96	70-130	
Dibromofluoromethane (S)	%				96	70-130	
Toluene-d8 (S)	%				102	70-130	

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,1-Trichloroethane	ug/L	ND	ND		20	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		20	N2
1,1,2-Trichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethane	ug/L	ND	ND		20	N2
1,1-Dichloroethene	ug/L	ND	ND		20	N2
1,1-Dichloropropene	ug/L	ND	ND		20	N2
1,2,3-Trichloropropane	ug/L	ND	ND		20	N2
1,2,4-Trichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichlorobenzene	ug/L	ND	ND		20	N2
1,2-Dichloroethane	ug/L	ND	ND		20	N2
1,2-Dichloropropane	ug/L	ND	ND		20	N2
1,3-Dichlorobenzene	ug/L	ND	ND		20	N2
1,3-Dichloropropane	ug/L	ND	ND		20	N2
1,4-Dichlorobenzene	ug/L	ND	ND		20	N2
2,2-Dichloropropane	ug/L	ND	ND		20	N2
2-Chlorotoluene	ug/L	ND	ND		20	N2
4-Chlorotoluene	ug/L	ND	ND		20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	N2
Bromobenzene	ug/L	ND	ND		20	N2
Bromodichloromethane	ug/L	ND	ND		20	N2
Bromoform	ug/L	ND	ND		20	N2
Bromomethane	ug/L	ND	ND		20	N2
Carbon tetrachloride	ug/L	ND	ND		20	N2
Chlorobenzene	ug/L	ND	ND		20	N2
Chloroethane	ug/L	ND	ND		20	N2
Chloroform	ug/L	ND	ND		20	N2
Chloromethane	ug/L	ND	ND		20	N2
cis-1,2-Dichloroethene	ug/L	ND	ND		20	N2
cis-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Dibromochloromethane	ug/L	ND	ND		20	N2
Dibromomethane	ug/L	ND	ND		20	N2
Ethylbenzene	ug/L	ND	ND		20	N2
m&p-Xylene	ug/L	ND	ND		20	N2
Methyl-tert-butyl ether	ug/L	ND	ND		20	N2
Methylene Chloride	ug/L	ND	ND		20	N2
o-Xylene	ug/L	ND	ND		20	N2
Styrene	ug/L	ND	ND		20	N2
Tetrachloroethene	ug/L	ND	ND		20	N2
Toluene	ug/L	ND	ND		20	N2
trans-1,2-Dichloroethene	ug/L	ND	ND		20	N2
trans-1,3-Dichloropropene	ug/L	ND	ND		20	N2
Trichloroethene	ug/L	ND	ND		20	N2
Vinyl chloride	ug/L	ND	ND		20	N2
Xylene (Total)	ug/L	ND	ND		20	N2
4-Bromofluorobenzene (S)	%	95	94			
Dibromofluoromethane (S)	%	96	96			
Toluene-d8 (S)	%	106	105			

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313434

QC Batch: 815516	Analysis Method: EPA 505
QC Batch Method: EPA 505	Analysis Description: 505 GCS PCB-TOX-TCH
	Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 50313434001

METHOD BLANK: 4477979 Matrix: Water  
Associated Lab Samples: 50313434001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	ND	0.20	04/13/22 08:41	
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	04/13/22 08:41	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	04/13/22 08:41	
Toxaphene	ug/L	ND	1.0	04/13/22 08:41	

LABORATORY CONTROL SAMPLE: 4477980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.72	101	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.79	110	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478000 4478001

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.76	0.75	0.87	0.78	114	104	70-130	10	20		
PCB-1260 (Aroclor 1260)	ug/L	ND	0.76	0.75	0.77	0.70	101	93	70-130	10	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4478002 4478003

Parameter	Units	92597558001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
PCB-1016 (Aroclor 1016)	ug/L	ND	0.79	0.78	0.83	0.81	104	104	70-130	2	20		
PCB-1260 (Aroclor 1260)	ug/L	ND	0.79	0.78	0.76	0.81	96	104	70-130	7	20		

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: M20032 Muncie Phase II

Pace Project No.: 50313434

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313434001	DW-19	EPA 505	815516	EPA 505	815530
50313434001	DW-19	EPA 200.8	671085	EPA 200.8	671359
50313434001	DW-19	EPA 245.1	671366	EPA 245.1	671891
50313434001	DW-19	EPA 524.2	670792		

**REPORT OF LABORATORY ANALYSIS**

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**SAMPLE CONDITION UPON RECEIPT FORM**

Date/Time and Initials of person examining contents: RC 48-22 10:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes)Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGUFU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZnAc pH >9	NaOH pH >10	
1			3				3													1							WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass			Plastic / Misc.		
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic
BP4U	125mL unpreserved plastic				
BP4N	125mL HNO3 plastic				
BP4S	125mL H2SO4 plastic				
Syringe Kit	LL Cr+6 sampling kit				
AF	Air Filter				
C	Air Cassettes				
R	Terracore kit				
SP5T	120mL Coliform Na Thiosulfate				
U	Summa Can				
ZPLC	Ziploc Bag				
WT	Water				
SL	Solid				
NAL	OL	Non-aqueous liquid			Oil
WP	Wipe				

April 21, 2022

Mr. Luke Johnstone  
Mundell  
110 S. Downey Ave  
Indianapolis, IN 46219

RE: Project: M20032 Muncie Phase II  
Pace Project No.: 50313435

Dear Mr. Johnstone:

Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

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

Sincerely,



Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
50313435001	DW-20	Drinking Water	04/07/22 12:32	04/08/22 12:50
50313435002	.	Drinking Water	04/07/22 12:32	04/08/22 12:50
50313435003	.	Drinking Water	04/07/22 08:00	04/08/22 12:50

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### SAMPLE ANALYTE COUNT

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50313435001	DW-20	EPA 200.8	DMT	7	PASI-I
		EPA 245.1	EAE	1	PASI-I
		EPA 524.2	BES	48	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50313435001</b>	<b>DW-20</b>					
EPA 200.8	Barium	93.8	ug/L	1.0	04/19/22 06:24	N2
EPA 524.2	Bromodichloromethane	8.2	ug/L	1.0	04/14/22 18:08	N2
EPA 524.2	Chloroform	11.5	ug/L	1.0	04/14/22 18:08	N2
EPA 524.2	Dibromochloromethane	3.7	ug/L	1.0	04/14/22 18:08	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

**Sample:** DW-20      **Lab ID:** 50313435001      Collected: 04/07/22 12:32      Received: 04/08/22 12:50      Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.8 MET ICPMS</b>								
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:24	7440-38-2	N2
Barium	93.8	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:24	7440-39-3	N2
Cadmium	ND	ug/L	0.20	1	04/15/22 02:00	04/19/22 06:24	7440-43-9	N2
Chromium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:24	7440-47-3	N2
Lead	ND	ug/L	1.0	1	04/15/22 02:00	04/19/22 06:24	7439-92-1	N2
Selenium	ND	ug/L	2.0	1	04/15/22 02:00	04/19/22 06:24	7782-49-2	N2
Silver	ND	ug/L	0.50	1	04/15/22 02:00	04/19/22 06:24	7440-22-4	N2
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	1	04/19/22 09:33	04/19/22 18:35	7439-97-6	
<b>524.2 MSV</b>								
Analytical Method: EPA 524.2								
Pace Analytical Services - Indianapolis								
Benzene	ND	ug/L	0.50	1		04/14/22 18:08	71-43-2	N2
Bromobenzene	ND	ug/L	0.50	1		04/14/22 18:08	108-86-1	N2
Bromodichloromethane	8.2	ug/L	1.0	1		04/14/22 18:08	75-27-4	N2
Bromoform	ND	ug/L	1.0	1		04/14/22 18:08	75-25-2	L1,N2
Bromomethane	ND	ug/L	5.0	1		04/14/22 18:08	74-83-9	L1,N2
Carbon tetrachloride	ND	ug/L	0.50	1		04/14/22 18:08	56-23-5	N2
Chlorobenzene	ND	ug/L	0.50	1		04/14/22 18:08	108-90-7	N2
Chloroethane	ND	ug/L	0.50	1		04/14/22 18:08	75-00-3	N2
Chloroform	11.5	ug/L	1.0	1		04/14/22 18:08	67-66-3	N2
Chloromethane	ND	ug/L	1.0	1		04/14/22 18:08	74-87-3	N2
2-Chlorotoluene	ND	ug/L	1.0	1		04/14/22 18:08	95-49-8	N2
4-Chlorotoluene	ND	ug/L	0.50	1		04/14/22 18:08	106-43-4	N2
Dibromochloromethane	3.7	ug/L	1.0	1		04/14/22 18:08	124-48-1	N2
Dibromomethane	ND	ug/L	0.50	1		04/14/22 18:08	74-95-3	N2
1,2-Dichlorobenzene	ND	ug/L	0.50	1		04/14/22 18:08	95-50-1	N2
1,3-Dichlorobenzene	ND	ug/L	0.50	1		04/14/22 18:08	541-73-1	N2
1,4-Dichlorobenzene	ND	ug/L	0.50	1		04/14/22 18:08	106-46-7	N2
1,1-Dichloroethane	ND	ug/L	0.50	1		04/14/22 18:08	75-34-3	N2
1,2-Dichloroethane	ND	ug/L	0.50	1		04/14/22 18:08	107-06-2	N2
1,1-Dichloroethene	ND	ug/L	0.50	1		04/14/22 18:08	75-35-4	N2
cis-1,2-Dichloroethene	ND	ug/L	0.50	1		04/14/22 18:08	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	0.50	1		04/14/22 18:08	156-60-5	N2
1,2-Dichloropropane	ND	ug/L	0.50	1		04/14/22 18:08	78-87-5	N2
1,3-Dichloropropane	ND	ug/L	0.50	1		04/14/22 18:08	142-28-9	N2
2,2-Dichloropropane	ND	ug/L	0.50	1		04/14/22 18:08	594-20-7	N2
1,1-Dichloropropene	ND	ug/L	1.0	1		04/14/22 18:08	563-58-6	N2
cis-1,3-Dichloropropene	ND	ug/L	0.50	1		04/14/22 18:08	10061-01-5	N2
trans-1,3-Dichloropropene	ND	ug/L	0.50	1		04/14/22 18:08	10061-02-6	N2
Ethylbenzene	ND	ug/L	0.50	1		04/14/22 18:08	100-41-4	N2
Methylene Chloride	ND	ug/L	2.5	1		04/14/22 18:08	75-09-2	N2
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/14/22 18:08	1634-04-4	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

Sample: DW-20	Lab ID: 50313435001	Collected: 04/07/22 12:32	Received: 04/08/22 12:50	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2						
		Pace Analytical Services - Indianapolis						
Styrene	ND	ug/L	0.50	1		04/14/22 18:08	100-42-5	N2
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1		04/14/22 18:08	630-20-6	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/14/22 18:08	79-34-5	N2
Tetrachloroethene	ND	ug/L	0.50	1		04/14/22 18:08	127-18-4	N2
Toluene	ND	ug/L	1.0	1		04/14/22 18:08	108-88-3	N2
1,2,4-Trichlorobenzene	ND	ug/L	0.50	1		04/14/22 18:08	120-82-1	N2
1,1,1-Trichloroethane	ND	ug/L	0.50	1		04/14/22 18:08	71-55-6	N2
1,1,2-Trichloroethane	ND	ug/L	0.50	1		04/14/22 18:08	79-00-5	N2
Trichloroethene	ND	ug/L	0.50	1		04/14/22 18:08	79-01-6	N2
1,2,3-Trichloropropane	ND	ug/L	2.0	1		04/14/22 18:08	96-18-4	N2
Vinyl chloride	ND	ug/L	0.50	1		04/14/22 18:08	75-01-4	N2
Xylene (Total)	ND	ug/L	0.50	1		04/13/22 06:58	1330-20-7	N2
m&p-Xylene	ND	ug/L	0.50	1		04/14/22 18:08	179601-23-1	N2
o-Xylene	ND	ug/L	0.50	1		04/14/22 18:08	95-47-6	N2
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	94	%.	70-130	1		04/14/22 18:08	460-00-4	
Dibromofluoromethane (S)	95	%.	70-130	1		04/14/22 18:08	1868-53-7	
Toluene-d8 (S)	103	%.	70-130	1		04/14/22 18:08	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

QC Batch: 671366

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313435001

METHOD BLANK: 3091666

Matrix: Water

Associated Lab Samples: 50313435001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	04/19/22 16:54	

LABORATORY CONTROL SAMPLE: 3091667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091668 3091669

Parameter	Units	50313426001		3091669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5.2	5.1	103	102	70-130	1	20

MATRIX SPIKE SAMPLE: 3091670

Parameter	Units	50313435001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.6	111	70-130	

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**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: M20032 Muncie Phase II  
Pace Project No.: 50313435

QC Batch: 671085 Analysis Method: EPA 200.8  
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313435001

METHOD BLANK: 3090225 Matrix: Water  
Associated Lab Samples: 50313435001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/19/22 04:08	N2
Barium	ug/L	ND	1.0	04/19/22 04:08	N2
Cadmium	ug/L	ND	0.20	04/19/22 04:08	N2
Chromium	ug/L	ND	2.0	04/19/22 04:08	N2
Lead	ug/L	ND	1.0	04/19/22 04:08	N2
Selenium	ug/L	ND	2.0	04/19/22 04:08	N2
Silver	ug/L	ND	0.50	04/19/22 04:08	N2

LABORATORY CONTROL SAMPLE: 3090226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.0	98	85-115	N2
Barium	ug/L	40	38.7	97	85-115	N2
Cadmium	ug/L	40	38.9	97	85-115	N2
Chromium	ug/L	40	41.8	105	85-115	N2
Lead	ug/L	40	41.0	103	85-115	N2
Selenium	ug/L	40	39.1	98	85-115	N2
Silver	ug/L	40	40.9	102	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090227 3090228

Parameter	Units	50313422001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	41.3	41.5	101	102	70-130	1	20	N2	
Barium	ug/L	9.3	40	40	47.2	47.7	95	96	70-130	1	20	N2	
Cadmium	ug/L	ND	40	40	38.0	38.0	95	95	70-130	0	20	N2	
Chromium	ug/L	ND	40	40	38.8	39.0	95	96	70-130	0	20	N2	
Lead	ug/L	1.8	40	40	42.6	42.6	102	102	70-130	0	20	N2	
Selenium	ug/L	ND	40	40	39.3	39.9	94	96	70-130	1	20	N2	
Silver	ug/L	ND	40	40	38.5	38.8	96	97	70-130	1	20	N2	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230

Parameter	Units	50313426001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	ug/L	ND	40	40	39.9	39.5	99	98	70-130	1	20	N2	

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3090229 3090230												
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50313426001 Result	Spike Conc.	Spike Conc.	MS Result							
Barium	ug/L	532	40	40	586	592	136	150	70-130	1	20	N2,P6
Cadmium	ug/L	ND	40	40	38.4	38.2	96	95	70-130	1	20	N2
Chromium	ug/L	ND	40	40	39.9	39.5	98	98	70-130	1	20	N2
Lead	ug/L	ND	40	40	42.2	41.8	103	102	70-130	1	20	N2
Selenium	ug/L	ND	40	40	39.1	39.2	96	96	70-130	0	20	N2
Silver	ug/L	ND	40	40	39.7	39.5	99	99	70-130	1	20	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313435

QC Batch: 670792	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313435001

METHOD BLANK: 3088894 Matrix: Water

Associated Lab Samples: 50313435001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Xylene (Total)	ug/L	ND	0.50	04/13/22 03:31	N2
4-Bromofluorobenzene (S)	%.	95	70-130	04/13/22 03:31	
Dibromofluoromethane (S)	%.	95	70-130	04/13/22 03:31	
Toluene-d8 (S)	%.	105	70-130	04/13/22 03:31	

LABORATORY CONTROL SAMPLE: 3088895

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	60	67.1	112	70-130	N2
4-Bromofluorobenzene (S)	%.			95	70-130	
Dibromofluoromethane (S)	%.			98	70-130	
Toluene-d8 (S)	%.			102	70-130	

MATRIX SPIKE SAMPLE: 3088897

Parameter	Units	50313431001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	60	67.0	112	70-130	N2
4-Bromofluorobenzene (S)	%.				96	70-130	
Dibromofluoromethane (S)	%.				96	70-130	
Toluene-d8 (S)	%.				102	70-130	

SAMPLE DUPLICATE: 3088896

Parameter	Units	50313430001 Result	Dup Result	RPD	Max RPD	Qualifiers
Xylene (Total)	ug/L	ND	ND		20	N2
4-Bromofluorobenzene (S)	%.	95	94			
Dibromofluoromethane (S)	%.	96	96			
Toluene-d8 (S)	%.	106	105			

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313435

QC Batch: 671276	Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2	Analysis Description: 524.2 MSV
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50313435001

METHOD BLANK: 3091257 Matrix: Water  
Associated Lab Samples: 50313435001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,1,1-Trichloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/14/22 17:43	N2
1,1,2-Trichloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,1-Dichloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,1-Dichloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
1,1-Dichloropropene	ug/L	ND	1.0	04/14/22 17:43	N2
1,2,3-Trichloropropane	ug/L	ND	2.0	04/14/22 17:43	N2
1,2,4-Trichlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
1,2-Dichlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
1,2-Dichloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
1,2-Dichloropropane	ug/L	ND	0.50	04/14/22 17:43	N2
1,3-Dichlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
1,3-Dichloropropane	ug/L	ND	0.50	04/14/22 17:43	N2
1,4-Dichlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
2,2-Dichloropropane	ug/L	ND	0.50	04/14/22 17:43	N2
2-Chlorotoluene	ug/L	ND	1.0	04/14/22 17:43	N2
4-Chlorotoluene	ug/L	ND	0.50	04/14/22 17:43	N2
Benzene	ug/L	ND	0.50	04/14/22 17:43	N2
Bromobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
Bromodichloromethane	ug/L	ND	1.0	04/14/22 17:43	N2
Bromoform	ug/L	ND	1.0	04/14/22 17:43	N2
Bromomethane	ug/L	ND	5.0	04/14/22 17:43	N2
Carbon tetrachloride	ug/L	ND	0.50	04/14/22 17:43	N2
Chlorobenzene	ug/L	ND	0.50	04/14/22 17:43	N2
Chloroethane	ug/L	ND	0.50	04/14/22 17:43	N2
Chloroform	ug/L	ND	1.0	04/14/22 17:43	N2
Chloromethane	ug/L	ND	1.0	04/14/22 17:43	N2
cis-1,2-Dichloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
cis-1,3-Dichloropropene	ug/L	ND	0.50	04/14/22 17:43	N2
Dibromochloromethane	ug/L	ND	1.0	04/14/22 17:43	N2
Dibromomethane	ug/L	ND	0.50	04/14/22 17:43	N2
Ethylbenzene	ug/L	ND	0.50	04/14/22 17:43	N2
m&p-Xylene	ug/L	ND	0.50	04/14/22 17:43	N2
Methyl-tert-butyl ether	ug/L	ND	1.0	04/14/22 17:43	N2
Methylene Chloride	ug/L	ND	2.5	04/14/22 17:43	N2
o-Xylene	ug/L	ND	0.50	04/14/22 17:43	N2
Styrene	ug/L	ND	0.50	04/14/22 17:43	N2
Tetrachloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
Toluene	ug/L	ND	1.0	04/14/22 17:43	N2

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II  
Pace Project No.: 50313435

METHOD BLANK: 3091257 Matrix: Water  
Associated Lab Samples: 50313435001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
trans-1,3-Dichloropropene	ug/L	ND	0.50	04/14/22 17:43	N2
Trichloroethene	ug/L	ND	0.50	04/14/22 17:43	N2
Vinyl chloride	ug/L	ND	0.50	04/14/22 17:43	N2
4-Bromofluorobenzene (S)	%	96	70-130	04/14/22 17:43	
Dibromofluoromethane (S)	%	95	70-130	04/14/22 17:43	
Toluene-d8 (S)	%	107	70-130	04/14/22 17:43	

LABORATORY CONTROL SAMPLE: 3091258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.7	118	70-130	N2
1,1,1-Trichloroethane	ug/L	20	21.6	108	70-130	N2
1,1,2,2-Tetrachloroethane	ug/L	20	23.1	116	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.8	114	70-130	N2
1,1-Dichloroethane	ug/L	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	20	20.0	100	70-130	N2
1,1-Dichloropropene	ug/L	20	21.4	107	70-130	N2
1,2,3-Trichloropropane	ug/L	20	23.5	118	70-130	N2
1,2,4-Trichlorobenzene	ug/L	20	24.7	123	70-130	N2
1,2-Dichlorobenzene	ug/L	20	24.0	120	70-130	N2
1,2-Dichloroethane	ug/L	20	19.7	99	70-130	N2
1,2-Dichloropropane	ug/L	20	20.4	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	23.8	119	70-130	N2
1,3-Dichloropropane	ug/L	20	21.9	109	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.9	115	70-130	N2
2,2-Dichloropropane	ug/L	20	22.2	111	70-130	N2
2-Chlorotoluene	ug/L	20	23.3	116	70-130	N2
4-Chlorotoluene	ug/L	20	24.4	122	70-130	N2
Benzene	ug/L	20	19.4	97	70-130	N2
Bromobenzene	ug/L	20	21.1	106	70-130	N2
Bromodichloromethane	ug/L	20	20.6	103	70-130	N2
Bromoform	ug/L	20	26.2	131	70-130	L1,N2
Bromomethane	ug/L	20	29.0	145	70-130	L1,N2
Carbon tetrachloride	ug/L	20	21.8	109	70-130	N2
Chlorobenzene	ug/L	20	22.6	113	70-130	N2
Chloroethane	ug/L	20	23.3	117	70-130	N2
Chloroform	ug/L	20	18.6	93	70-130	N2
Chloromethane	ug/L	20	15.8	79	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.8	104	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	22.8	114	70-130	N2
Dibromochloromethane	ug/L	20	23.8	119	70-130	N2
Dibromomethane	ug/L	20	19.2	96	70-130	N2
Ethylbenzene	ug/L	20	22.8	114	70-130	N2

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.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

LABORATORY CONTROL SAMPLE: 3091258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
m&p-Xylene	ug/L	20	22.7	114	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.9	100	70-130	N2
Methylene Chloride	ug/L	20	18.7	93	70-130	N2
o-Xylene	ug/L	20	23.0	115	70-130	N2
Styrene	ug/L	20	23.2	116	70-130	N2
Tetrachloroethene	ug/L	20	23.6	118	70-130	N2
Toluene	ug/L	20	22.3	112	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	21.4	107	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	23.2	116	70-130	N2
Trichloroethene	ug/L	20	21.5	108	70-130	N2
Vinyl chloride	ug/L	20	22.4	112	70-130	N2
4-Bromofluorobenzene (S)	%			97	70-130	
Dibromofluoromethane (S)	%			95	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091259 3091260

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50313426001	Result	Spike Conc.	MSD Spike Conc.								
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	31.2	26.8	156	134	70-130	15	20	M1,N2	
1,1,1-Trichloroethane	ug/L	ND	20	20	25.7	23.2	128	116	70-130	10	20	N2	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	30.4	26.6	152	133	70-130	14	20	M1,N2	
1,1,2-Trichloroethane	ug/L	ND	20	20	28.8	25.3	144	126	70-130	13	20	M1,N2	
1,1-Dichloroethane	ug/L	ND	20	20	23.9	21.2	119	106	70-130	12	20	N2	
1,1-Dichloroethene	ug/L	ND	20	20	24.8	22.3	124	111	70-130	11	20	N2	
1,1-Dichloropropene	ug/L	ND	20	20	29.7	25.7	149	128	70-130	15	20	M1,N2	
1,2,3-Trichloropropane	ug/L	ND	20	20	30.2	27.2	151	136	70-130	11	20	M1,N2	
1,2,4-Trichlorobenzene	ug/L	ND	20	20	30.7	27.2	153	136	70-130	12	20	M1,N2	
1,2-Dichlorobenzene	ug/L	ND	20	20	29.4	25.8	147	129	70-130	13	20	M1,N2	
1,2-Dichloroethane	ug/L	ND	20	20	23.5	20.7	118	104	70-130	13	20	N2	
1,2-Dichloropropane	ug/L	ND	20	20	25.6	21.8	128	109	70-130	16	20	N2	
1,3-Dichlorobenzene	ug/L	ND	20	20	29.1	25.8	145	129	70-130	12	20	M1,N2	
1,3-Dichloropropane	ug/L	ND	20	20	27.8	24.1	139	121	70-130	14	20	M1,N2	
1,4-Dichlorobenzene	ug/L	ND	20	20	28.7	25.2	144	126	70-130	13	20	M1,N2	
2,2-Dichloropropane	ug/L	ND	20	20	28.2	24.3	141	121	70-130	15	20	M1,N2	
2-Chlorotoluene	ug/L	ND	20	20	28.7	25.2	143	126	70-130	13	20	M1,N2	
4-Chlorotoluene	ug/L	ND	20	20	30.3	26.9	151	134	70-130	12	20	M1,N2	
Benzene	ug/L	ND	20	20	24.4	21.4	122	107	70-130	13	20	N2	
Bromobenzene	ug/L	ND	20	20	26.4	23.2	132	116	70-130	13	20	M1,N2	
Bromodichloromethane	ug/L	ND	20	20	25.5	21.6	128	108	70-130	17	20	N2	
Bromoform	ug/L	ND	20	20	30.1	26.3	150	131	70-130	13	20	M0,N2	
Bromomethane	ug/L	ND	20	20	28.2	23.2	141	116	70-130	20	20	M0,N2	
Carbon tetrachloride	ug/L	ND	20	20	27.7	24.5	138	122	70-130	12	20	M1,N2	
Chlorobenzene	ug/L	ND	20	20	28.3	24.7	141	123	70-130	14	20	M1,N2	
Chloroethane	ug/L	ND	20	20	27.4	23.3	137	116	70-130	16	20	M1,N2	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091259												3091260	
Parameter	Units	50313426001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		
Chloroform	ug/L	ND	20	20	20	22.1	18.9	111	95	70-130	16	20 N2	
Chloromethane	ug/L	ND	20	20	20	16.1	14.8	81	74	70-130	9	20 N2	
cis-1,2-Dichloroethene	ug/L	ND	20	20	20	25.4	22.0	127	110	70-130	14	20 N2	
cis-1,3-Dichloropropene	ug/L	ND	20	20	20	28.5	24.1	142	121	70-130	17	20 M1,N2	
Dibromochloromethane	ug/L	ND	20	20	20	29.4	25.5	147	128	70-130	14	20 M1,N2	
Dibromomethane	ug/L	ND	20	20	20	23.8	20.3	119	102	70-130	16	20 N2	
Ethylbenzene	ug/L	ND	20	20	20	28.2	25.0	141	125	70-130	12	20 M1,N2	
m&p-Xylene	ug/L	ND	20	20	20	58.0	50.9	290	255	70-130	13	20 M1,N2	
Methyl-tert-butyl ether	ug/L	ND	20	20	20	24.1	21.5	120	108	70-130	11	20 N2	
Methylene Chloride	ug/L	ND	20	20	20	20.7	18.6	104	93	70-130	11	20 N2	
o-Xylene	ug/L	ND	20	20	20	29.2	24.8	146	124	70-130	16	20 M1,N2	
Styrene	ug/L	ND	20	20	20	28.8	24.7	144	124	70-130	15	20 M1,N2	
Tetrachloroethene	ug/L	ND	20	20	20	29.1	25.8	146	129	70-130	12	20 M1,N2	
Toluene	ug/L	ND	20	20	20	27.9	24.5	140	123	70-130	13	20 M1,N2	
trans-1,2-Dichloroethene	ug/L	ND	20	20	20	25.7	22.9	128	115	70-130	11	20 N2	
trans-1,3-Dichloropropene	ug/L	ND	20	20	20	27.6	24.5	138	123	70-130	12	20 M1,N2	
Trichloroethene	ug/L	ND	20	20	20	26.1	23.2	130	116	70-130	12	20 N2	
Vinyl chloride	ug/L	ND	20	20	20	21.0	18.7	105	94	70-130	12	20 N2	
4-Bromofluorobenzene (S)	%							95	96	70-130			
Dibromofluoromethane (S)	%							92	93	70-130			
Toluene-d8 (S)	%							103	104	70-130			

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: M20032 Muncie Phase II

Pace Project No.: 50313435

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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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- 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.
- N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
- P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: M20032 Muncie Phase II

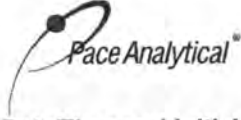
Pace Project No.: 50313435

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50313435001	DW-20	EPA 200.8	671085	EPA 200.8	671359
50313435001	DW-20	EPA 245.1	671366	EPA 245.1	671891
50313435001	DW-20	EPA 524.2	670792		
50313435001	DW-20	EPA 524.2	671276		

### REPORT OF LABORATORY ANALYSIS

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## SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 48-22 16:33

1. Courier:  FED EX  UPS  CLIENT  PACE  USPS  OTHER \_\_\_\_\_
2. Custody Seal on Cooler/Box Present:  Yes  No  
 (If yes) Seals Intact:  Yes  No (leave blank if no seals were present)
3. Thermometer: 1 2 3 4 5 6 A B C D E F
4. Cooler Temperature: 0.9/0.7 0.2/0.0 0.3/0.1  
 Temp should be above freezing to 6°C (Initial/Corrected)

5. Packing Material:  Bubble Wrap  Bubble Bags  
 None  Other \_\_\_\_\_
6. Ice Type:  Wet  Blue  None
7. If temp. is over 6°C or under 0°C, was the PM notified?:  Yes  No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base pres. Have been CHECKED?: exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓	Circle: <u>HNO3 (&lt;2)</u> H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Custody Signatures Present?	✓		Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Containers Intact?:	✓		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Present?	✓	✗	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?		✓	✗

COMMENTS: Trip blank received not on COC RC 48-22

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Sample Container Count

SBS  
DI  
MeOH  
(only)  
BK  
Kit

\*\* Place a RED dot on containers that are out of conformance \*\*

COC Line Item	WGJU	R	DG9H	DG9P	VOA VIAL HS (>6mm)	VG9U	DG9T	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit	Matrix	HNO3/H2SO4 pH <2	NaOH/ZNAc pH >9	NaOH pH >10
1				3			3												2	1							WT	✓		
2																			1											
3																			1											
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic / Misc.			
DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic	Syringe Kit LL Cr+6 sampling kit	
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac	AF	Air Filter
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic	C	Air Cassettes
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic	R	Terracore kit
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic	SP5T	120mL Coliform Na Thiosulfate
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	U	Summa Can
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac	ZPLC	Ziploc Bag
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic	WT	Water
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered	NAL	OL Non-aqueous liquid Oil
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic	WP	Wipe
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic		
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic		

**Report Prepared for:**

Luke Johnstone  
Mundell And Associates  
110 South Downey Avenue  
Indianapolis IN 46219

**REPORT OF  
LABORATORY  
ANALYSIS  
FOR PFAAs**

**Report Prepared Date:**

April 18, 2022

**Report Information:**

**Pace Project #: 10604141**  
**Sample Receipt Date: 04/12/2022**  
**Client Project #: M20032 Muncie Phase II**  
**Client Sub PO #: N/A**  
**State Cert #: N/A**

**Invoicing & Reporting Options:**

The report provided has been invoiced as a Level 2 PFAA Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Kirsten Hogberg, your Pace Project Manager.

**This report has been reviewed by:**



April 22, 2022

Kirsten Hogberg, Project Manager  
(612) 607-6407  
(612) 607-6444 (fax)  
kirsten.hogberg@pacelabs.com



**Report of Laboratory Analysis**

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The results relate only to the samples included in this report.

## **DISCUSSION**

This report presents the results from the analyses performed on three samples submitted by a representative of Mundell And Associates. The samples were analyzed for eighteen perfluorinated compounds using USEPA Method 537.1 for PFAS drinking water. Reporting limits were set to the quantitation limits.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank was free of the target perfluorinated compounds at the reporting limits. This indicates that the sample processing procedures did not significantly contribute to the analyte content determined for the sample material.

Laboratory spike samples were also prepared with the sample batch using clean reference matrix that had been fortified with native standards. The recovery results were within the method limits. The RPDs (relative percent differences) between one designated spike and its duplicate were within the method limits. A matrix spike was prepared with the sample batch using sample material from a separate project; results from that analysis will be provided upon request.

The recoveries of the isotopically-labeled surrogate standards in the sample extracts were within the target ranges specified in the method.

Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

## Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio-DW	41244
Georgia	959	Ohio-VAP (170	CL101
Hawaii	MN00064	Ohio-VAP (180	CL110
Idaho	MN00064	Oklahoma	9507
Illinois	200011	Oregon- rimary	MN300001
Indiana	C-MN-01	Oregon-Second	MN200001
Iowa	368	Pennsylvania	68-00563
Kansas	E-10167	Puerto Rico	MN00064
Kentucky-DW	90062	South Carolina	74003
Kentucky-WW	90062	Tennessee	TN02818
Louisiana-DEQ	AI-84596	Texas	T104704192
Louisiana-DW	MN00064	Utah	MN00064
Maine	MN00064	Vermont	VT-027053137
Maryland	322	Virginia	460163
Michigan	9909	Washington	C486
Minnesota	027-053-137	West Virginia-D	382
Minnesota-Ag	via MN 027-053	West Virginia-D	9952C
Minnesota-Petr	1240	Wisconsin	999407970
Mississippi	MN00064	Wyoming-UST	via A2LA 2926.

## REPORT OF LABORATORY ANALYSIS

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# **Appendix A**

## Sample Management

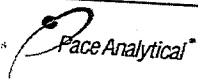


## Sample ID Cross Reference

<u>Client Sample ID</u>	<u>Pace Sample ID</u>	<u>Date Received</u>	<u>Sample Type</u>
DW-20	10604141001	04/12/2022	Drinking Water
DW-20 Field Blank	10604141002	04/12/2022	Drinking Water
Trip Blank	10604141003	04/12/2022	Drinking Water

## REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY Analytical Request Document

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>  
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: Mundell and Associates, Inc.  
Address: 110 S Downey Ave, Indianapolis, IN 46219  
Report To: Luke Johnstone  
Copy To:

Billing Information:  
110 S Downey Ave, Indianapolis, IN 46219  
Email To: Ljohnstone@mundellassociates.com

Customer Project Name/Number:  
M20032 Muncie Phase II

Site Collection Info/Address:  
3701 S Hoyt Ave  
Muncie, Indiana  
State: IN County/City: Muncie Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET

Phone: 317-630-9060  
Email: Ljohnstone@mundellassociates.com

Site/Facility ID #:  
Compliance Monitoring?  
[ ] Yes [ ] No

Collected By (print):  
Luke Johnstone

Purchase Order #:  
Quote #:  
Turnaround Date Required:  
DW PWS ID #:  
DW Location Code:  
Immediately Packed on Ice:  
[x] Yes [ ] No

Sample Disposal:  
[x] Dispose as appropriate  
[ ] Return  
[ ] Archive:  
[ ] Hold:

Rush: (Expedite Charges Apply)  
[ ] Same Day [ ] Next Day  
[ ] 2 Day [ ] 3 Day  
[ ] 4 Day [ ] 5 Day  
Field Filtered (if applicable):  
[ ] Yes [x] No  
Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)
			Date	Time	Date	Time			
DW-20	DW/GW	Grab	4/7	12:32				7	G/P
DW-20 Field Blank Trip blank 4/11/22 TMS			4/7	12:32				1	P

Analyses	1	3	8	0
Total RCRA 8 Metals via EPA 200.8 (and 245.1 for hg)	X	X		
VOC's full list via EPA 524.2	X	X		
PCB via EPA 505			X	
PFAS via EPA 537.1			X	

*Direct Ship for PFAS 4/11/22 TMS to Pace MN*

Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY:  
Lab Sample # / Comments:  
*see SCUR*  
001  
002  
003

## WO#: 10604141



Customer Remarks / Special Conditions / Possible Hazards:  
VOC full list, Total RCRA 8 Metals, PFAS  
All sampled via drinking water methods

Type of Ice Used:  Wet  Blue  Dry  None  
Packing Material Used:  
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A  
Lab Tracking #:  
Samples received via:  FEDEX  UPS  Client  Courier  Pace Courier

LAB Sample Temperature Info:  
Temp Blank Received:  Y  N  NA  
Therm ID#: T2  
Cooler 1 Temp Upon Receipt: 1.8 °C  
Cooler 1 Therm Corr. Factor: 0.0 °C  
Cooler 1 Corrected Temp: 1.8 °C  
Comments:

Relinquished by/Company (Signature):  
*[Signature]*  
Date/Time: 4/8/22 11:15  
Relinquished by/Company (Signature):  
*[Signature]*  
Date/Time: 4/11/22  
Relinquished by/Company (Signature):  
*[Signature]*  
Date/Time: 4/11/22

Received by/Company (Signature):  
*[Signature]*  
Date/Time: 4/8/22 11:15  
Received by/Company (Signature):  
*[Signature]*  
Date/Time: 4/11/22 12:50  
Received by/Company (Signature):  
*[Signature]*  
Date/Time: 4-12-22 8:50

MTJL LAB USE ONLY  
Table #:  
Acctnum:  
Template:  
Prelogin:  
PM:  
PB:

*see SCUR*  
Trip Blank Received: Y N NA  
HCL MeOH TSP Other  
Non Conformance(s): YES / NO  
Page: of:

Report No.: 10604141\_EPA537.1\_DFR







Document Name: <b>Sample Condition Upon Receipt (SCUR)</b>	Document Revised: <b>06Jan2022</b>
Document No.: <b>ENV-FRM-MIN4-0150 Rev.04</b>	Page 1 of 1
Pace Analytical Services - Minneapolis	

**Sample Condition Upon Receipt**

Client Name: **Mundell & Associates Inc.**

Project #:

**WO#: 10604141**  
 PM: KNH Due Date: 05/03/22  
 CLIENT: Mundell

Courier:  Fed Ex  UPS  USPS  Client  
 Pace  SpeeDee  Commercial

Tracking Number: **570156846330** See Exceptions   
 ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present?  Yes  No  
 Packing Material:  Bubble Wrap  Bubble Bags  None  Other: **Plastic Bag**  
 Thermometer:  T1(0461)  T2(1336)  T3(0459)  T4(0254)  
 T5(0489)  01339252/1710  122639816  140792808

Seals Intact?  Yes  No  
 Biological Tissue Frozen?  Yes  No  N/A  
 Temp Blank?  Yes  No  
 Type of Ice:  Wet  Blue  None  Dry  Melted

Did Samples Originate in West Virginia?  Yes  No  
 Were All Container Temps Taken?  Yes  No  N/A  
 Temp should be above freezing to 6°C Cooler Temp Read w/temp blank: **1.8** °C  
 Correction Factor: **True** Cooler Temp Corrected w/temp blank: **1.8** °C  
 Average Corrected Temp (no temp blank only): \_\_\_\_\_ °C  See Exceptions ENV-FRM-MIN4-0142  1 Container

USDA Regulated Soil: ( N/A  water) sample/Other: \_\_\_\_\_  
 Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)?  Yes  No  
 Date/Initials of Person Examining Contents: **CSM4-12-22**  
 Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

If Yes to either question, fill out a Regulated Soil Checklist ENV-FRM-MIN4-0154 and include with SCUR/COC paperwork.

Location (check one): <input type="checkbox"/> Duluth <input checked="" type="checkbox"/> Minneapolis <input type="checkbox"/> Virginia	COMMENTS:
Chain of Custody Present and Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Sampler Name and/or Signature on COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	4.
Short Hold Time Analysis (<72 hr)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. If Fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8hr, <24 hrs, <input type="checkbox"/> >24 hrs
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. <input type="checkbox"/> Fecal Coliform <input type="checkbox"/> HPC <input type="checkbox"/> Total Coliform/E coli <input type="checkbox"/> BOD/cBOD <input type="checkbox"/> Hex Chrome <input type="checkbox"/> Turbidity <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Orthophos <input type="checkbox"/> Other
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. <b>Received 2 containers for Sample col, received DW-20 Field Blank + Trip blank</b>
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Is sediment visible in the dissolved container? <input type="checkbox"/> Yes <input type="checkbox"/> No
Field Filtered Volume Received for Dissolved Tests? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. If no, write ID/ Date/Time on Container Below: <input type="checkbox"/> See Exception ENV-FRM-MIN4-0142
Is sufficient information available to reconcile the samples to the COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Sample #
Matrix: <input checked="" type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other-	<input type="checkbox"/> NaOH <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> Zinc Acetate
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Positive for Res. <input type="checkbox"/> Yes <input type="checkbox"/> No
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Res. Chlorine <input type="checkbox"/> Yes <input type="checkbox"/> No
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin (PFAS) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	pH Paper Lot# <input type="checkbox"/> See Exception ENV-FRM-MIN4-0142
Headspace in Methyl Mercury Container? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Extra labels present on soil VOA or WIDRO containers? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Headspace in VOA Vials (greater than 6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. <input type="checkbox"/> See Exception ENV-FRM-MIN4-0140
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Pace Trip Blank Lot # (if purchased):
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Field Data Required? <input type="checkbox"/> Yes <input type="checkbox"/> No

**CLIENT NOTIFICATION/RESOLUTION**

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

Project Manager Review: Kirsten Hogberg

Date: 4/12/2022

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: CSM (7)

## Reporting Flags

- A = Reporting Limit based on signal to noise (EDL)
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- \* = See Discussion

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc.

# **Appendix B**

## Sample Analysis Summary



**EPA Method 537.1**  
Sample Analysis Summary

Client's Sample ID	DW-20	Date Extracted	04/14/2022
Lab Sample ID	10604141001	Total Amount Extracted	252 mL
Filename	A220415B_043	ICAL ID	220415A03
Matrix	Drinking_Water	Starting CCal	A220415B_035
Collected	04/07/2022	Ending CCal	A220415B_046
Received	04/12/2022	Method Blank Filename	A220415B_029

Compound	Concentration (ng/L)	PQL (ng/L)	MDL (ng/L)	Dilution	Analyzed	CAS No.	Qual.
HFPO-DA	ND	2.0	0.57	1	04/15/2022 19:24	13252-13-6	
NEtFOSAA	ND	2.0	0.60	1	04/15/2022 19:24	2991-50-6	
NMeFOSAA	ND	2.0	0.62	1	04/15/2022 19:24	2355-31-9	
PFBS	ND	1.7	0.47	1	04/15/2022 19:24	375-73-5	
PFDA	ND	2.0	0.35	1	04/15/2022 19:24	335-76-2	
PFDOA	ND	2.0	0.31	1	04/15/2022 19:24	307-55-1	
PFHpA	ND	2.0	0.92	1	04/15/2022 19:24	375-85-9	
PFHxS	ND	1.8	0.47	1	04/15/2022 19:24	355-46-4	
PFHxA	ND	2.0	0.59	1	04/15/2022 19:24	307-24-4	
PFNA	ND	2.0	0.54	1	04/15/2022 19:24	375-95-1	
PFOS	ND	1.8	0.43	1	04/15/2022 19:24	1763-23-1	
PFOA	ND	2.0	0.49	1	04/15/2022 19:24	335-67-1	
PFTDA	ND	2.0	0.64	1	04/15/2022 19:24	376-06-7	
PFTTrDA	ND	2.0	0.63	1	04/15/2022 19:24	72629-94-8	
PFUnDA	ND	2.0	0.48	1	04/15/2022 19:24	2058-94-8	
11-CI-PF3OUdS	ND	1.9	0.61	1	04/15/2022 19:24	763051-92-9	
9-CI-PF3ON	ND	1.9	0.49	1	04/15/2022 19:24	756426-58-1	
DONA	ND	1.9	0.62	1	04/15/2022 19:24	919005-14-4	

**Surrogate Standards**

SS Compound	Spiked	Found	%Recovery	Limits	Pass/Fail
13C2_PFHxA	2.0	1.7	83	70 - 130	Pass
13C2_PFDA	2.0	1.9	96	70 - 130	Pass
d5-EtFOSAA	8.0	7.2	89	70 - 130	Pass
13C3_HFPO-DA	2.0	1.6	81	70 - 130	Pass

**Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Pass/Fail	Area
13C2_PFOA	7.94793151	8.24538185	104	50-150	Pass	1177571
d3-MeFOSAA	31.7917260	39.2465698	123	50-150	Pass	1941254
13C4_PFOS	22.8105634	25.5104240	112	50-150	Pass	2495344



**EPA Method 537.1**  
Sample Analysis Summary

Client's Sample ID	DW-20 Field Blank	Date Extracted	04/14/2022
Lab Sample ID	10604141002	Total Amount Extracted	253 mL
Filename	A220415B_044	ICAL ID	220415A03
Matrix	Drinking_Water	Starting CCal	A220415B_035
Collected	04/07/2022	Ending CCal	A220415B_046
Received	04/12/2022	Method Blank Filename	A220415B_029

Compound	Concentration (ng/L)	PQL (ng/L)	MDL (ng/L)	Dilution	Analyzed	CAS No.	Qual.
HFPO-DA	ND	2.0	0.57	1	04/15/2022 19:32	13252-13-6	
NEtFOSAA	ND	2.0	0.60	1	04/15/2022 19:32	2991-50-6	
NMeFOSAA	ND	2.0	0.62	1	04/15/2022 19:32	2355-31-9	
PFBS	ND	1.7	0.47	1	04/15/2022 19:32	375-73-5	
PFDA	ND	2.0	0.35	1	04/15/2022 19:32	335-76-2	
PFDOA	ND	2.0	0.31	1	04/15/2022 19:32	307-55-1	
PFHpA	ND	2.0	0.92	1	04/15/2022 19:32	375-85-9	
PFHxS	ND	1.8	0.47	1	04/15/2022 19:32	355-46-4	
PFHxA	ND	2.0	0.59	1	04/15/2022 19:32	307-24-4	
PFNA	ND	2.0	0.54	1	04/15/2022 19:32	375-95-1	
PFOS	ND	1.8	0.43	1	04/15/2022 19:32	1763-23-1	
PFOA	ND	2.0	0.49	1	04/15/2022 19:32	335-67-1	
PFTDA	ND	2.0	0.63	1	04/15/2022 19:32	376-06-7	
PFTTrDA	ND	2.0	0.63	1	04/15/2022 19:32	72629-94-8	
PFUnDA	ND	2.0	0.48	1	04/15/2022 19:32	2058-94-8	
11-CI-PF3OUdS	ND	1.9	0.60	1	04/15/2022 19:32	763051-92-9	
9-CI-PF3ON	ND	1.9	0.49	1	04/15/2022 19:32	756426-58-1	
DONA	ND	1.9	0.62	1	04/15/2022 19:32	919005-14-4	

**Surrogate Standards**

SS Compound	Spiked	Found	%Recovery	Limits	Pass/Fail
13C2_PFHxA	2.0	1.9	96	70 - 130	Pass
13C2_PFDA	2.0	1.8	90	70 - 130	Pass
d5-EtFOSAA	8.0	6.8	85	70 - 130	Pass
13C3_HFPO-DA	2.0	1.7	86	70 - 130	Pass

**Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Pass/Fail	Area
13C2_PFOA	7.91665033	8.22467431	104	50-150	Pass	1179255
d3-MeFOSAA	31.6666013	37.5087578	118	50-150	Pass	1862628
13C4_PFOS	22.7207864	25.6622236	113	50-150	Pass	2520111



**EPA Method 537.1**  
Sample Analysis Summary

Client's Sample ID	Trip Blank	Date Extracted	04/14/2022
Lab Sample ID	10604141003	Total Amount Extracted	259 mL
Filename	A220415B_045	ICAL ID	220415A03
Matrix	Drinking_Water	Starting CCal	A220415B_035
Collected	N/A	Ending CCal	A220415B_046
Received	04/12/2022	Method Blank Filename	A220415B_029

Compound	Concentration (ng/L)	PQL (ng/L)	MDL (ng/L)	Dilution	Analyzed	CAS No.	Qual.
HFPO-DA	ND	1.9	0.55	1	04/15/2022 19:40	13252-13-6	
NEtFOSAA	ND	1.9	0.58	1	04/15/2022 19:40	2991-50-6	
NMeFOSAA	ND	1.9	0.60	1	04/15/2022 19:40	2355-31-9	
PFBS	ND	1.7	0.45	1	04/15/2022 19:40	375-73-5	
PFDA	ND	1.9	0.34	1	04/15/2022 19:40	335-76-2	
PFDOA	ND	1.9	0.30	1	04/15/2022 19:40	307-55-1	
PFHpA	ND	1.9	0.89	1	04/15/2022 19:40	375-85-9	
PFHxS	ND	1.8	0.46	1	04/15/2022 19:40	355-46-4	
PFHxA	ND	1.9	0.57	1	04/15/2022 19:40	307-24-4	
PFNA	ND	1.9	0.53	1	04/15/2022 19:40	375-95-1	
PFOS	ND	1.8	0.42	1	04/15/2022 19:40	1763-23-1	
PFOA	ND	1.9	0.47	1	04/15/2022 19:40	335-67-1	
PFTDA	ND	1.9	0.62	1	04/15/2022 19:40	376-06-7	
PFTTrDA	ND	1.9	0.62	1	04/15/2022 19:40	72629-94-8	
PFUnDA	ND	1.9	0.47	1	04/15/2022 19:40	2058-94-8	
11-CI-PF3OUdS	ND	1.8	0.59	1	04/15/2022 19:40	763051-92-9	
9-CI-PF3ON	ND	1.8	0.48	1	04/15/2022 19:40	756426-58-1	
DONA	ND	1.8	0.60	1	04/15/2022 19:40	919005-14-4	

**Surrogate Standards**

SS Compound	Spiked	Found	%Recovery	Limits	Pass/Fail
13C2_PFHxA	2.0	2.0	99	70 - 130	Pass
13C2_PFDA	2.0	2.0	98	70 - 130	Pass
d5-EtFOSAA	8.0	7.1	88	70 - 130	Pass
13C3_HFPO-DA	2.0	1.8	92	70 - 130	Pass

**Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Pass/Fail	Area
13C2_PFOA	7.71141420	7.96787404	103	50-150	Pass	1172840
d3-MeFOSAA	30.8456568	37.1843008	121	50-150	Pass	1895660
13C4_PFOS	22.1317587	25.9270158	117	50-150	Pass	2613879



### EPA Method 537.1 Blank Analysis Summary

Lab Sample ID	BLANK-98070	Total Amount Extracted	250 mL
Filename	A220415B_029	ICAL ID	220415A03
Matrix	Water	Starting CCal	A220415B_024
Date Extracted	04/14/2022	Ending CCal	A220415B_035

Compound	Concentration (ng/L)	PQL (ng/L)	MDL (ng/L)	Dilution	Analyzed	CAS No.	Qual.
HFPO-DA	ND	2.0	0.57	1	04/15/2022 17:34	13252-13-6	
NEtFOSAA	ND	2.0	0.60	1	04/15/2022 17:34	2991-50-6	
NMeFOSAA	ND	2.0	0.63	1	04/15/2022 17:34	2355-31-9	
PFBS	ND	1.8	0.47	1	04/15/2022 17:34	375-73-5	
PFDA	ND	2.0	0.35	1	04/15/2022 17:34	335-76-2	
PFDOA	ND	2.0	0.32	1	04/15/2022 17:34	307-55-1	
PFHpA	ND	2.0	0.93	1	04/15/2022 17:34	375-85-9	
PFHxS	ND	1.8	0.47	1	04/15/2022 17:34	355-46-4	
PFHxA	ND	2.0	0.59	1	04/15/2022 17:34	307-24-4	
PFNA	ND	2.0	0.55	1	04/15/2022 17:34	375-95-1	
PFOS	ND	1.8	0.43	1	04/15/2022 17:34	1763-23-1	
PFOA	ND	2.0	0.49	1	04/15/2022 17:34	335-67-1	
PFTDA	ND	2.0	0.64	1	04/15/2022 17:34	376-06-7	
PFTTrDA	ND	2.0	0.64	1	04/15/2022 17:34	72629-94-8	
PFUnDA	ND	2.0	0.49	1	04/15/2022 17:34	2058-94-8	
11-CI-PF3OUdS	ND	1.9	0.61	1	04/15/2022 17:34	763051-92-9	
9-CI-PF3ON	ND	1.9	0.49	1	04/15/2022 17:34	756426-58-1	
DONA	ND	1.9	0.62	1	04/15/2022 17:34	919005-14-4	

#### Surrogate Standards

SS Compound	Spiked	Found	%Recovery	Limits	Pass/Fail
13C2_PFHxA	2.0	1.8	90	70 - 130	Pass
13C2_PFDA	2.0	1.8	91	70 - 130	Pass
d5-EtFOSAA	8.0	6.5	81	70 - 130	Pass
13C3_HFPO-DA	2.0	1.6	82	70 - 130	Pass

#### Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Pass/Fail	Area
13C2_PFOA	8	8.72576454	109	50-150	Pass	1238066
d3-MeFOSAA	32	37.2919093	117	50-150	Pass	1832565
13C4_PFOS	22.96	25.3012119	110	50-150	Pass	2458772



**EPA Method 537.1 Laboratory Control Sample (LCS)**

LCS Lab Sample ID	LCS-98071	Matrix	Water
LCS Filename	A220415B_030	Dilution	1
Total Amount Extracted	250mL	Extracted	04/14/2022
ICAL ID	220415A03	Analyzed	04/15/2022 17:41
Start CCal Filename	A220415B_024	Injected By	QL
End CCal Filename	A220415B_035		
Method Blank Filename	A220415B_029		

Compound	Spiked (ng/L)	Recovered (ng/L)	Recovery %	Limits
HFPO-DA	2.0	2.1	104	50.0 - 150.0
NEtFOSAA	2.0	1.9 J	96	50.0 - 150.0
NMeFOSAA	2.0	1.9 J	93	50.0 - 150.0
PFBS	1.8	2.0	116	50.0 - 150.0
PFDA	2.0	2.2	111	50.0 - 150.0
PFDOA	2.0	2.2	110	50.0 - 150.0
PFHpA	2.0	2.3	114	50.0 - 150.0
PFHxS	1.8	1.9	104	50.0 - 150.0
PFHxA	2.0	2.3	117	50.0 - 150.0
PFNA	2.0	2.4	119	50.0 - 150.0
PFOS	1.8	2.0	107	50.0 - 150.0
PFOA	2.0	2.1	107	50.0 - 150.0
PFTDA	2.0	2.3	116	50.0 - 150.0
PFTTrDA	2.0	2.2	108	50.0 - 150.0
PFUnDA	2.0	2.1	107	50.0 - 150.0
11-Cl-PF3OUdS	1.9	2.0	107	50.0 - 150.0
9-Cl-PF3ON	1.9	2.0	108	50.0 - 150.0
DONA	1.9	2.1	111	50.0 - 150.0

**Surrogate Standards**

SS Compound	Spiked	Found	%Recovery	Limits	Pass/Fail
13C2_PFHxA	2.0	1.9	96	70 - 130	Pass
13C2_PFDA	2.0	2.0	99	70 - 130	Pass
d5-EtFOSAA	8.0	7.0	87	70 - 130	Pass
13C3_HFPO-DA	2.0	1.8	90	70 - 130	Pass

**Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Pass/Fail	Area
13C2_PFOA	8	8.23660273	103	50-150	Pass	1168661
d3-MeFOSAA	32	35.5559892	111	50-150	Pass	1747260
13C4_PFOS	22.96	24.8629449	108	50-150	Pass	2416181





**EPA Method 537.1 Laboratory Control Sample (LCS)**

LCS Lab Sample ID	LCS-98072	Matrix	Water
LCS Filename	A220415B_031	Dilution	1
Total Amount Extracted	250mL	Extracted	04/14/2022
ICAL ID	220415A03	Analyzed	04/15/2022 17:49
Start CCal Filename	A220415B_024	Injected By	QL
End CCal Filename	A220415B_035		
Method Blank Filename	A220415B_029		

Compound	Spiked (ng/L)	Recovered (ng/L)	Recovery %	Limits
HFPO-DA	40	39	97	70.0 - 130.0
NEtFOSAA	40	38	94	70.0 - 130.0
NMeFOSAA	40	37	91	70.0 - 130.0
PFBS	36	36	102	70.0 - 130.0
PFDA	40	43	107	70.0 - 130.0
PFDOA	40	43	109	70.0 - 130.0
PFHpA	40	41	102	70.0 - 130.0
PFHxS	36	39	108	70.0 - 130.0
PFHxA	40	43	108	70.0 - 130.0
PFNA	40	43	107	70.0 - 130.0
PFOS	37	40	107	70.0 - 130.0
PFOA	40	39	98	70.0 - 130.0
PFTDA	40	45	113	70.0 - 130.0
PFTTrDA	40	42	106	70.0 - 130.0
PFUnDA	40	42	104	70.0 - 130.0
11-Cl-PF3OUdS	37	36	98	70.0 - 130.0
9-Cl-PF3ON	38	42	112	70.0 - 130.0
DONA	38	38	101	70.0 - 130.0

**Surrogate Standards**

SS Compound	Spiked	Found	%Recovery	Limits	Pass/Fail
13C2_PFHxA	2.0	2.0	101	70 - 130	Pass
13C2_PFDA	2.0	2.0	102	70 - 130	Pass
d5-EtFOSAA	8.0	7.2	90	70 - 130	Pass
13C3_HFPO-DA	2.0	1.9	94	70 - 130	Pass

**Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Pass/Fail	Area
13C2_PFOA	8	7.78863884	97	50-150	Pass	1105101
d3-MeFOSAA	32	32.6015762	102	50-150	Pass	1602077
13C4_PFOS	22.96	23.2536691	101	50-150	Pass	2259792



**EPA Method 537.1 Laboratory Control Sample Duplicate (LCSD)**

LCSD Lab Sample ID	LCSD-98073	LCS Filename	A220415B_031
LCSD Filename	A220415B_032	Matrix	Water
Total Amount Extracted	250mL	Dilution	1
ICAL ID	220415A03	Extracted	04/14/2022
Start CCal Filename	A220415B_024	Analyzed	04/15/2022 17:57
End CCal Filename	A220415B_035	Injected By	QL
Method Blank Filename	A220415B_029		

Compound	Spiked (ng/L)	Recovered (ng/L)	Recovery %	Recovery Limits	RPD %
HFPO-DA	40	37	92	70.0 - 130.0	5
NEtFOSAA	40	36	89	70.0 - 130.0	5
NMeFOSAA	40	36	91	70.0 - 130.0	1
PFBS	36	37	104	70.0 - 130.0	3
PFDA	40	37	93	70.0 - 130.0	14
PFDOA	40	40	100	70.0 - 130.0	8
PFHpA	40	37	93	70.0 - 130.0	9
PFHxS	36	36	99	70.0 - 130.0	9
PFHxA	40	40	100	70.0 - 130.0	7
PFNA	40	40	100	70.0 - 130.0	7
PFOS	37	41	110	70.0 - 130.0	3
PFOA	40	38	96	70.0 - 130.0	2
PFTDA	40	41	102	70.0 - 130.0	10
PFTTrDA	40	39	99	70.0 - 130.0	7
PFUnDA	40	37	94	70.0 - 130.0	11
11-Cl-PF3OUdS	37	36	96	70.0 - 130.0	2
9-Cl-PF3ON	38	41	108	70.0 - 130.0	4
DONA	38	37	98	70.0 - 130.0	3

**Surrogate Standards**

SS Compound	Spiked	Found	%Recovery	Limits	Pass/Fail
13C2_PFHxA	2.0	1.9	94	70 - 130	Pass
13C2_PFDA	2.0	1.8	89	70 - 130	Pass
d5-EtFOSAA	8.0	6.9	87	70 - 130	Pass
13C3_HFPO-DA	2.0	1.7	87	70 - 130	Pass

**Internal Standards**

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Pass/Fail	Area
13C2_PFOA	8	8.64347677	108	50-150	Pass	1226391
d3-MeFOSAA	32	35.2514215	110	50-150	Pass	1732294
13C4_PFOS	22.96	24.8408183	108	50-150	Pass	2414031

## **APPENDIX B**

### **XRF RAW DATA OUTPUT**



Method : Cal Check  
Daily ID : 1C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 82275

Slope : 0.0200013

Offset : -0.015038

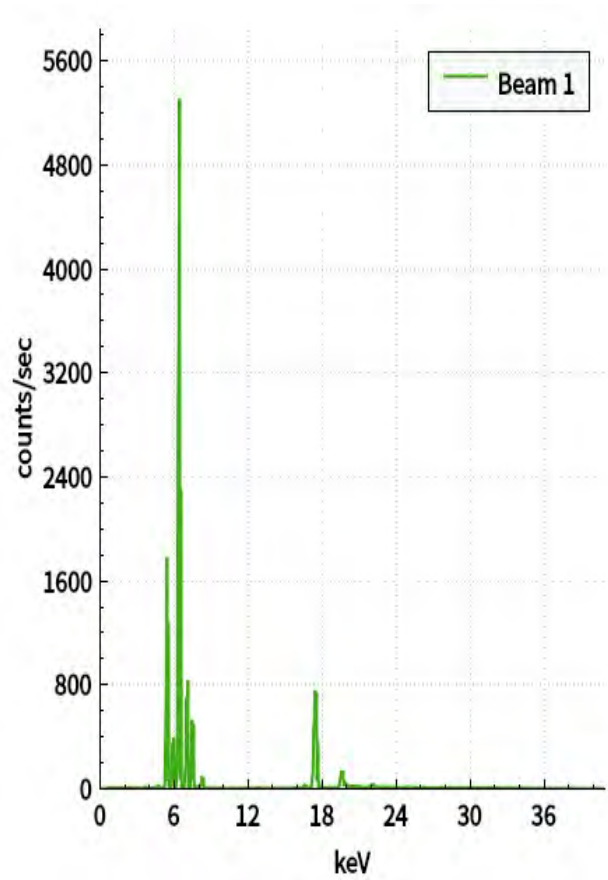
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 2

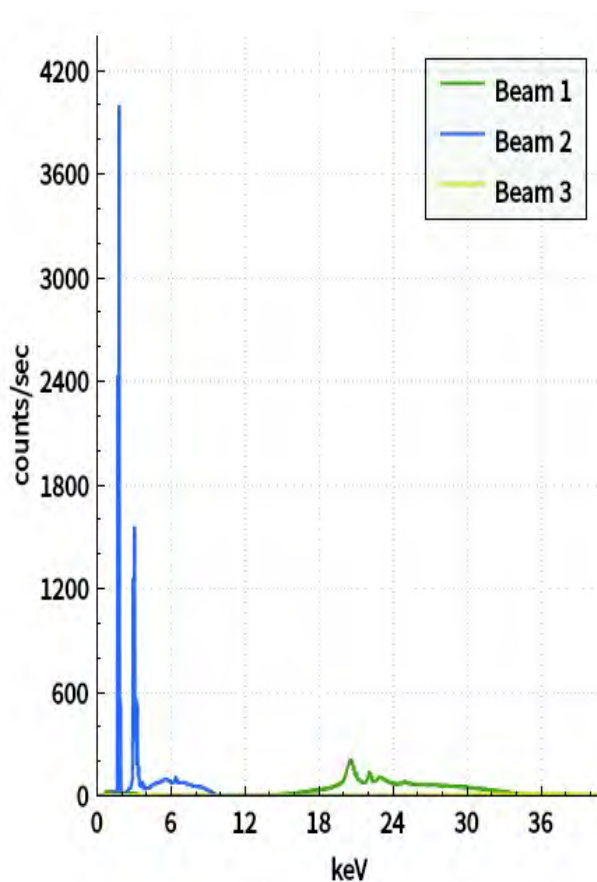
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Cr	ND	<93
As	ND	<6
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<53
Ba	ND	<1400
Hg	ND	<21
Pb	ND	<8

Spectrum



Notes

info: blank1

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 3

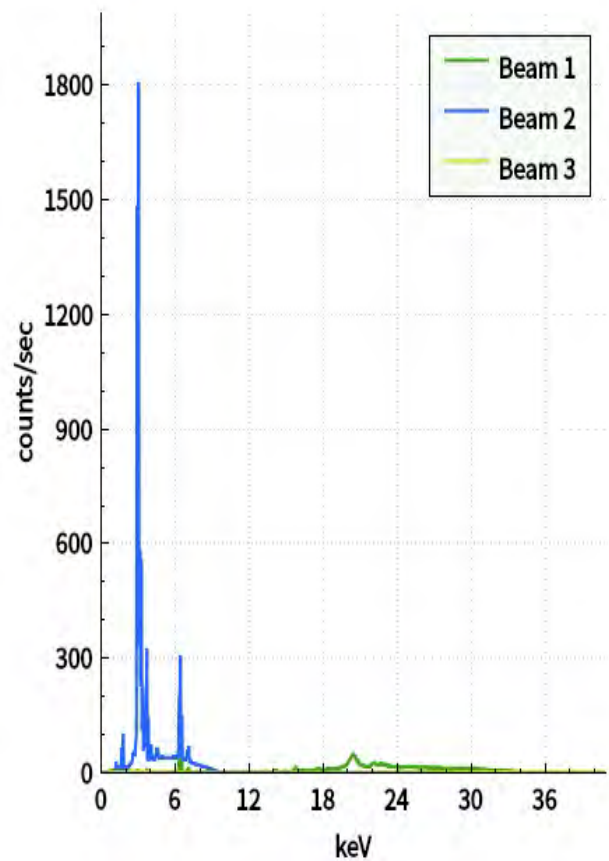
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	10	9
Ba	53	25
El	PPM	+/- 3σ
Cr	ND	<260
As	ND	<20
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<55
Pb	ND	<25

Spectrum



Notes

info: E1

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 4

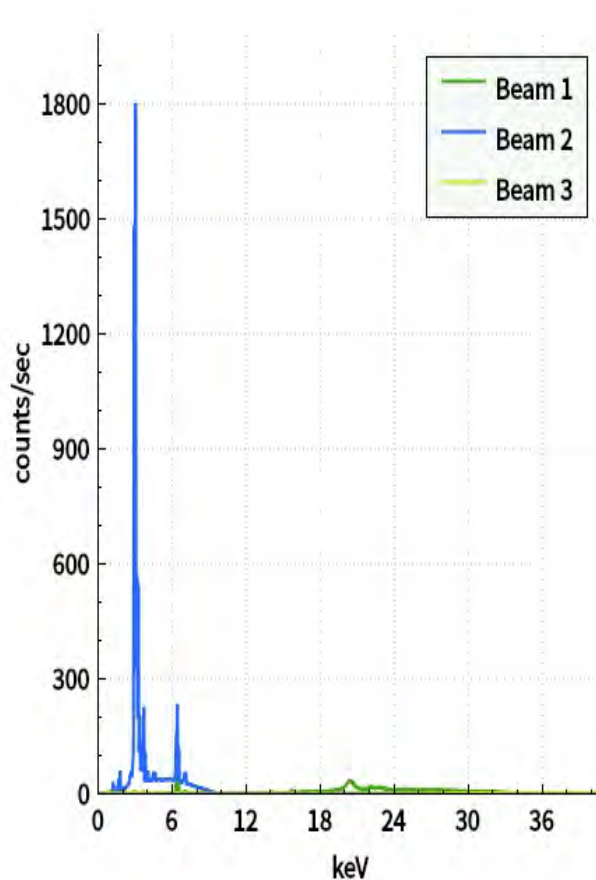
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	40	22
El	PPM	+/- 3σ
Cr	ND	<390
As	ND	<29
Se	ND	<18
Ag	ND	<0.1
Cd	ND	<140
Hg	ND	<84
Pb	ND	<33

Spectrum



Notes

info: E2

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 5

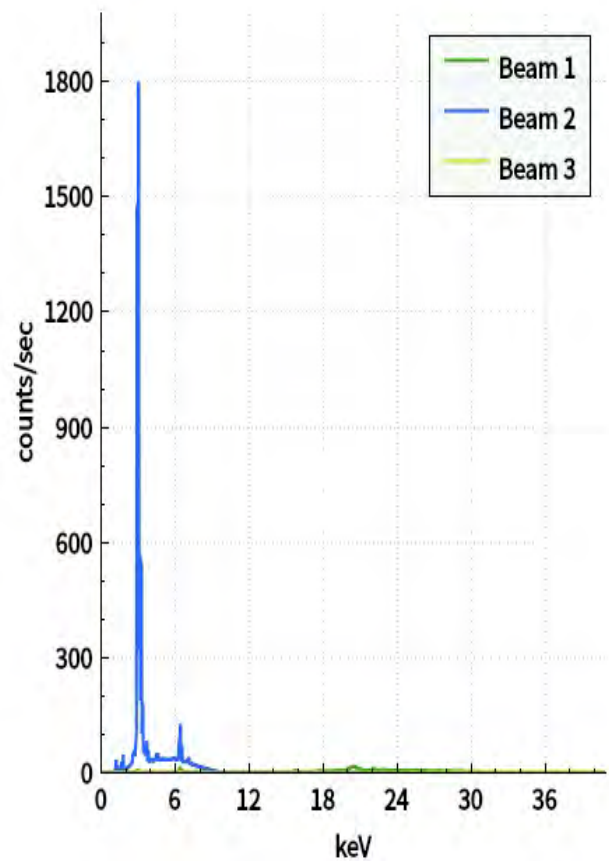
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	43	19
El	PPM	+/- 3σ
Cr	ND	<810
As	ND	<63
Se	ND	<47
Ag	ND	<0.1
Cd	ND	<260
Hg	ND	<220
Pb	ND	<77

Spectrum



Notes

info: E3

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)  
Daily ID : 6

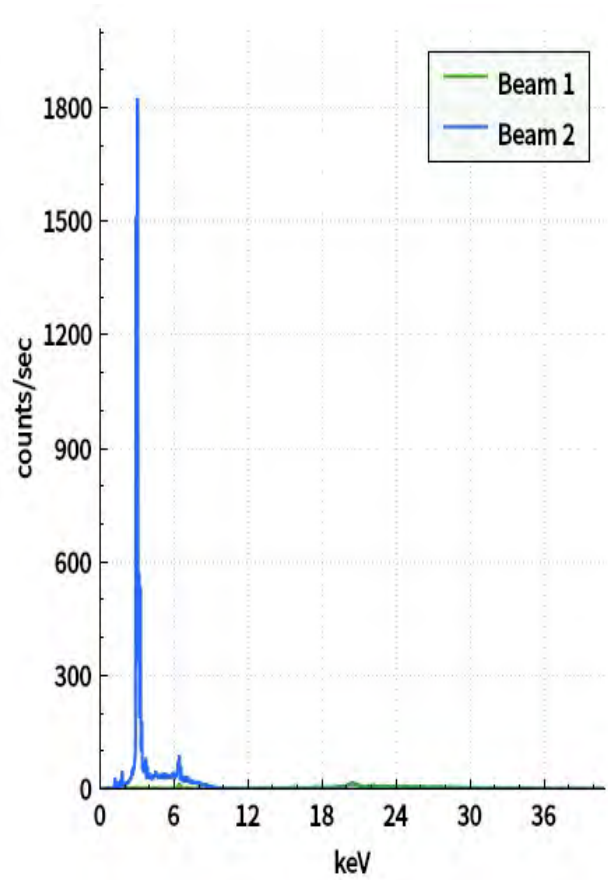
Chemistry

Elapsed Time : 12.3 s

Elapsed time: 12.3s

El	PPM	+/- 3σ
Cr	ND	<870
As	ND	<75
Se	ND	<53
Ag	ND	<0.1
Cd	ND	<300
Ba	ND	<23000
Hg	ND	<240
Pb	ND	<93

Spectrum



Notes

info: E4

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Chemistry

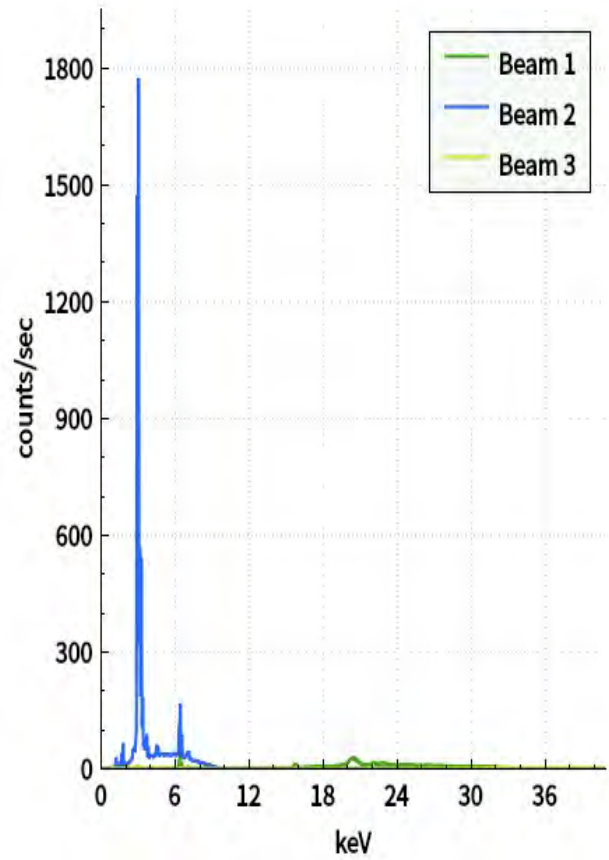
Method : Geochem(3-Beam)  
Daily ID : 7

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	18	13
Ba	56	20
El	PPM	+/- 3σ
Cr	ND	<410
As	ND	<33
Ag	ND	<0.1
Cd	ND	<160
Hg	ND	<100
Pb	ND	<42

Spectrum



Notes

info: E4

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 8

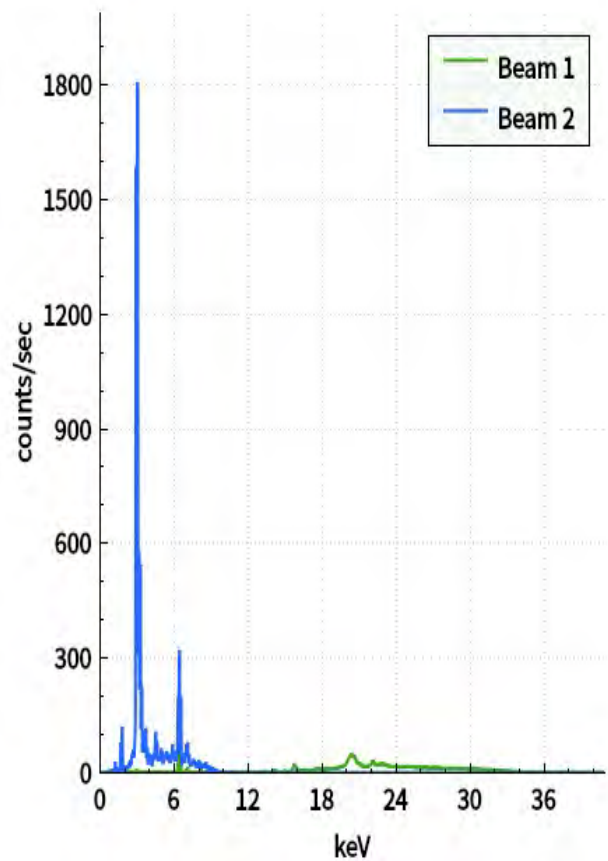
Chemistry

Elapsed Time : 10.8 s

Elapsed time: 10.8s

El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<21
Se	ND	<15
Ag	ND	<0.1
Cd	ND	<110
Ba	ND	<7300
Hg	ND	<61
Pb	ND	<25

Spectrum



Notes

info: E5

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 9

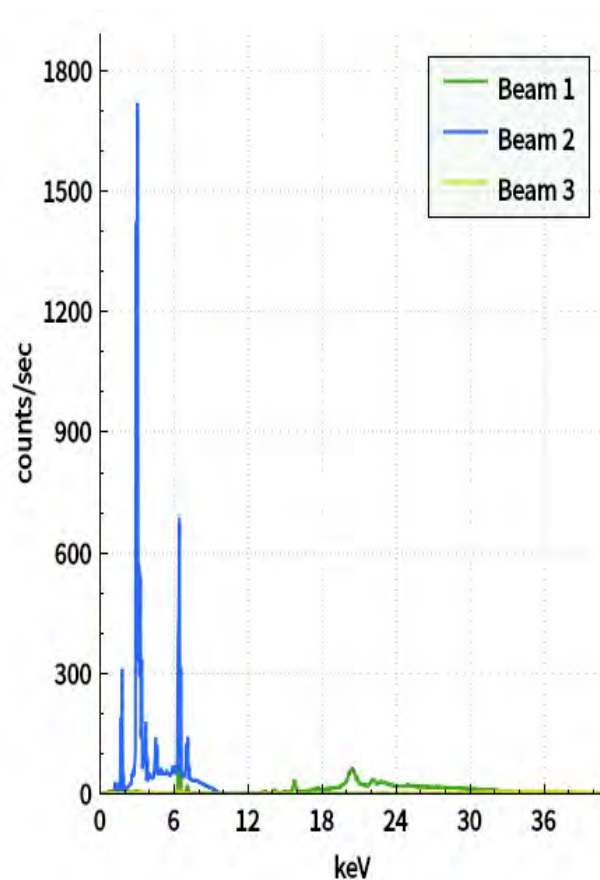
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	14	11
Ba	173	42
Pb	13	12
El	PPM	+/- 3σ
Cr	ND	<220
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<88
Hg	ND	<46

Spectrum



Notes

info: E5

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 10

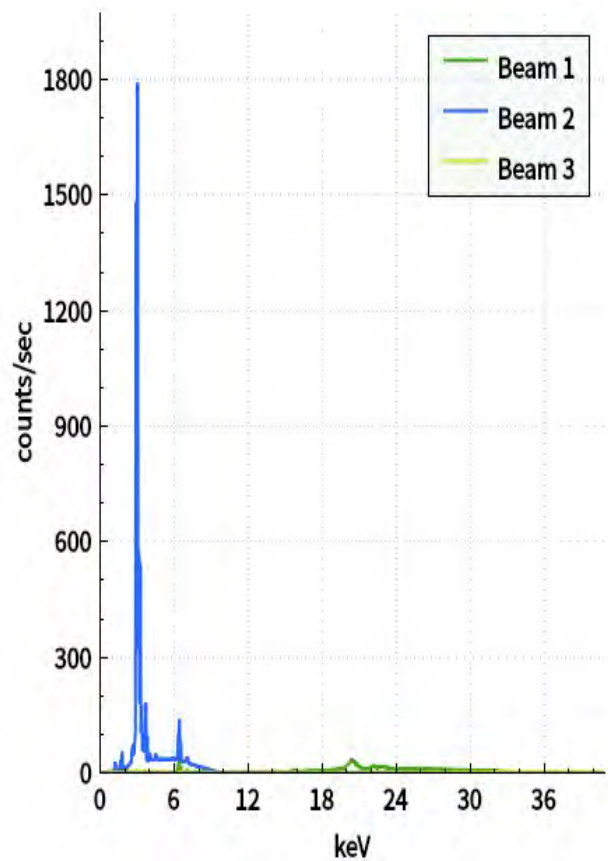
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	17	12
Ba	27	17
Pb	90	30
El	PPM	+/- 3σ
Cr	ND	<360
As	ND	<43
Ag	ND	<0.1
Cd	ND	<140
Hg	ND	<78

Spectrum



Notes

info: E6

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 11

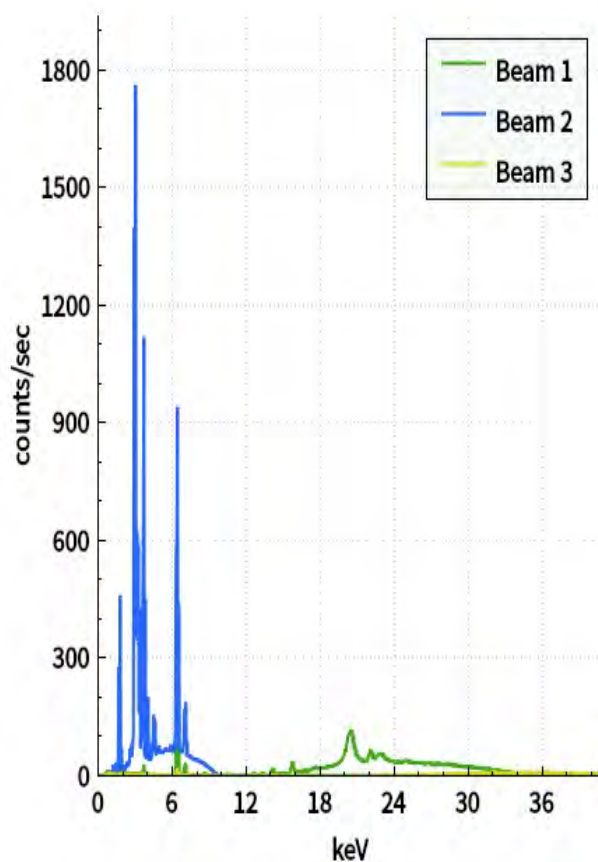
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	213	56
Pb	75	12
El	PPM	+/- 3σ
Cr	ND	<140
As	ND	<18
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<65
Hg	ND	<28

Spectrum



Notes

info: E7

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 12

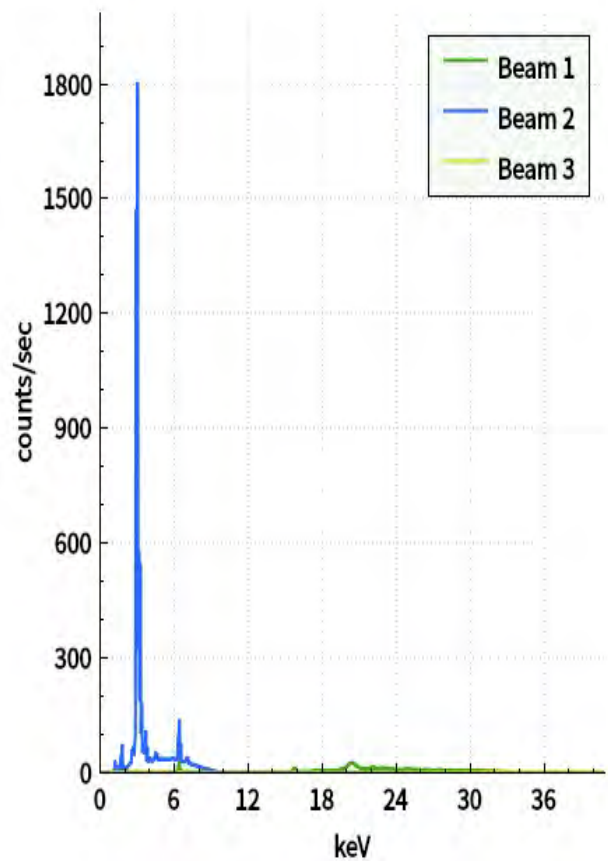
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	19	15
Ba	35	19
El	PPM	+/- 3σ
Cr	ND	<470
As	ND	<38
Ag	ND	<0.1
Cd	ND	<160
Hg	ND	<100
Pb	ND	<48

Spectrum



Notes

info: E8

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 13

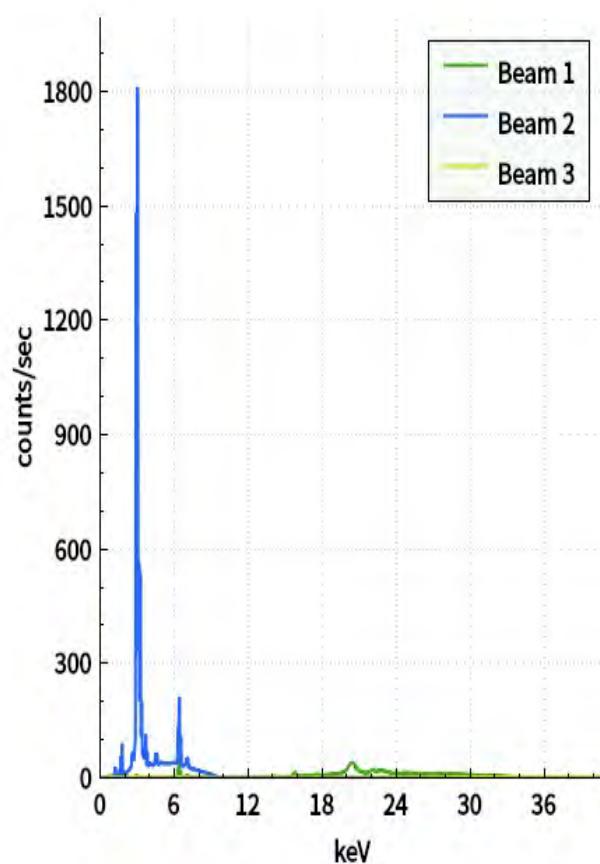
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	50	22
Pb	20	18
El	PPM	+/- 3σ
Cr	ND	<320
As	ND	<26
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<69

Spectrum



Notes

info: E9

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 14

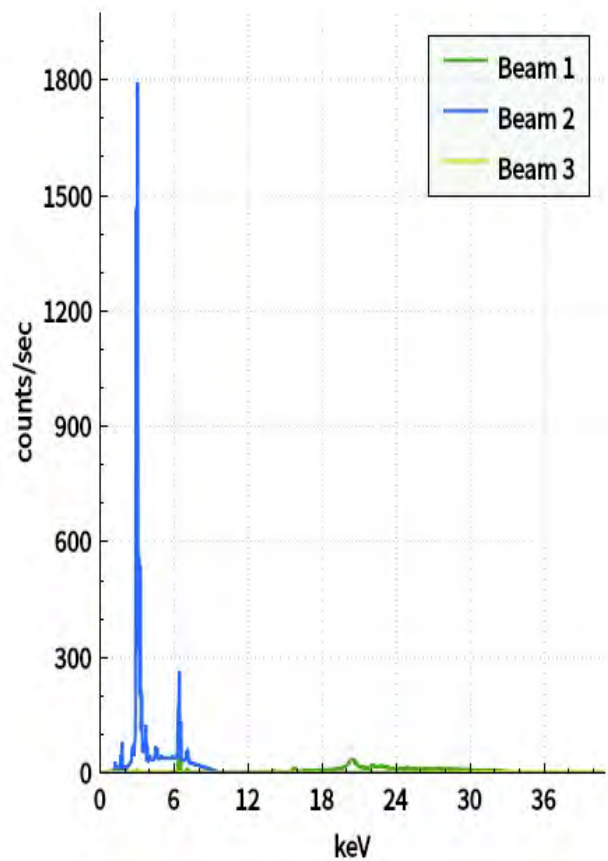
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	14	10
Ba	48	23
El	PPM	+/- 3σ
Cr	ND	<310
As	ND	<27
Ag	ND	<0.1
Cd	ND	<130
Hg	ND	<67
Pb	ND	<34

Spectrum



Notes

info: E10

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 15

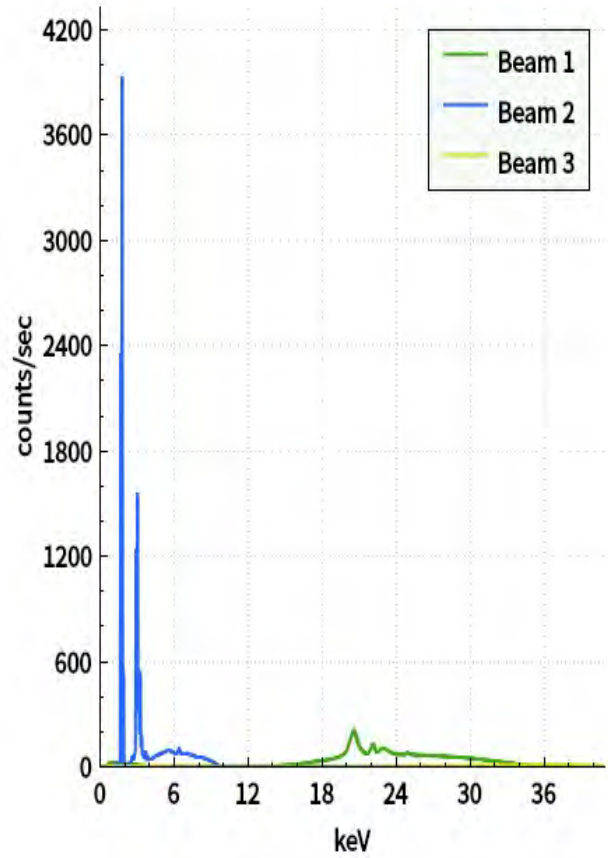
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	3	3
Ba	77	68
El	PPM	+/- 3σ
Cr	ND	<94
As	ND	<6
Ag	ND	<0.1
Cd	ND	<53
Hg	ND	<21
Pb	ND	<8

Spectrum



Notes

info:

Blank 1

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 16

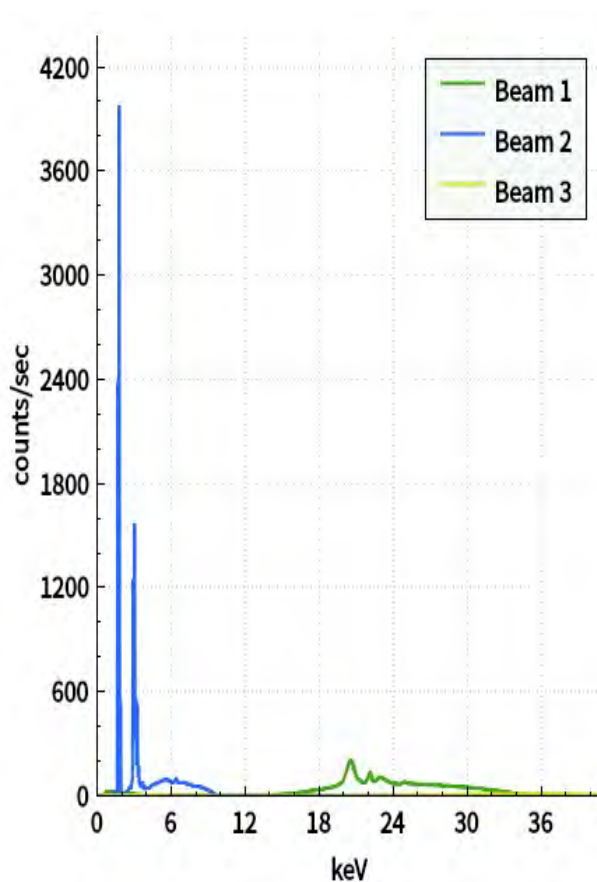
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Cd	34	27
Ba	87	68
El	PPM	+/- 3σ
Cr	ND	<90
As	ND	<6
Se	ND	<5
Ag	ND	<0.1
Hg	ND	<21
Pb	ND	<8

Spectrum



Notes

info:

Blank 2

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Cal Check  
Daily ID : 17C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 86640

Slope : 0.0199988

Offset : -0.014664

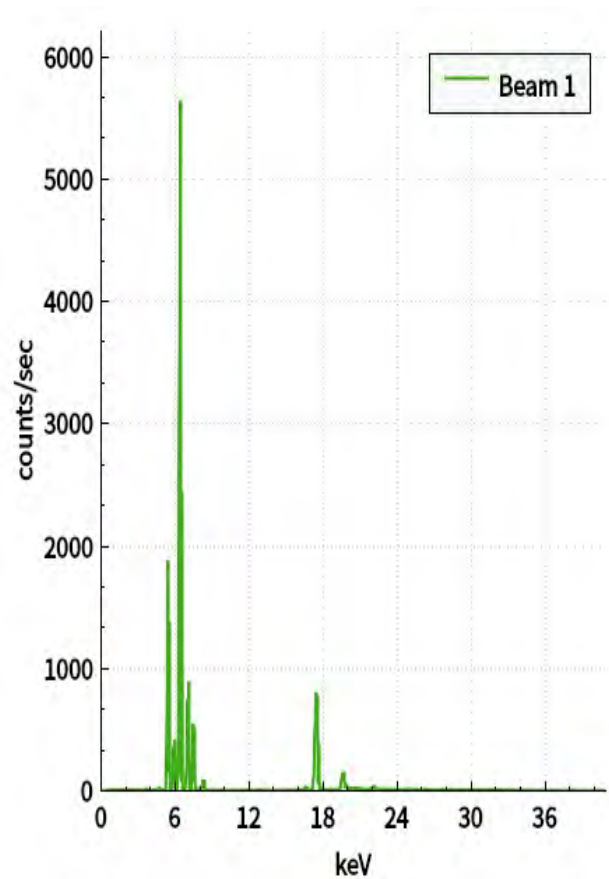
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 18

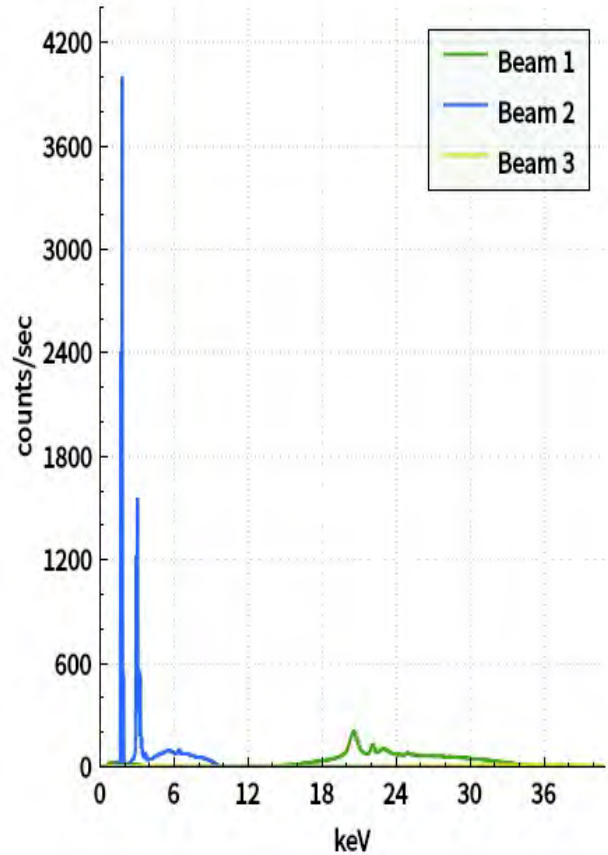
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	89	69
El	PPM	+/- 3σ
Cr	ND	<96
As	ND	<6
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<53
Hg	ND	<20
Pb	ND	<8

Spectrum



Notes

info:

Blank 3

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 19

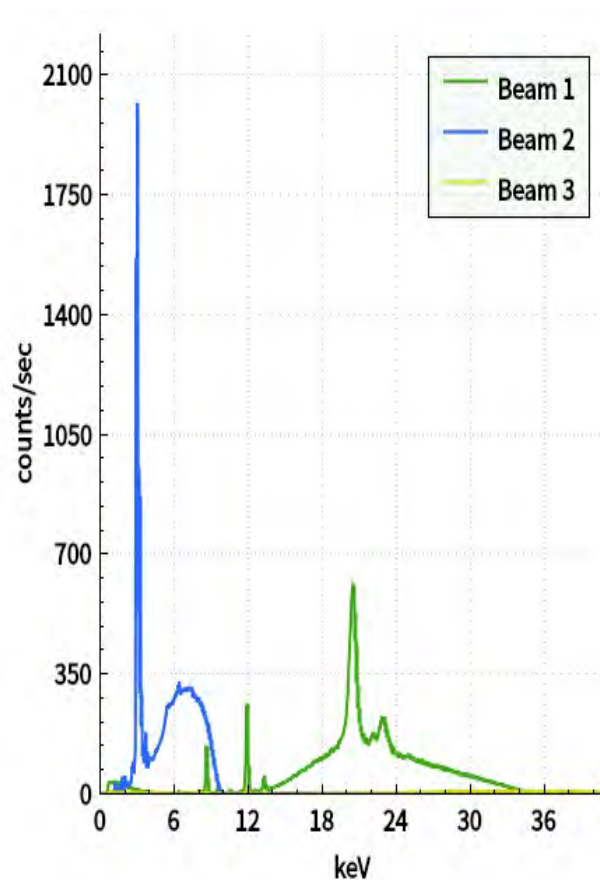
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	8	3
Se	3	2
Ba	49	33
Pb	16	3
El	PPM	+/- 3σ
Cr	ND	<41
Ag	ND	<0.1
Cd	ND	<26
Hg	ND	<11

Spectrum



Notes

info: Blank 4

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 20

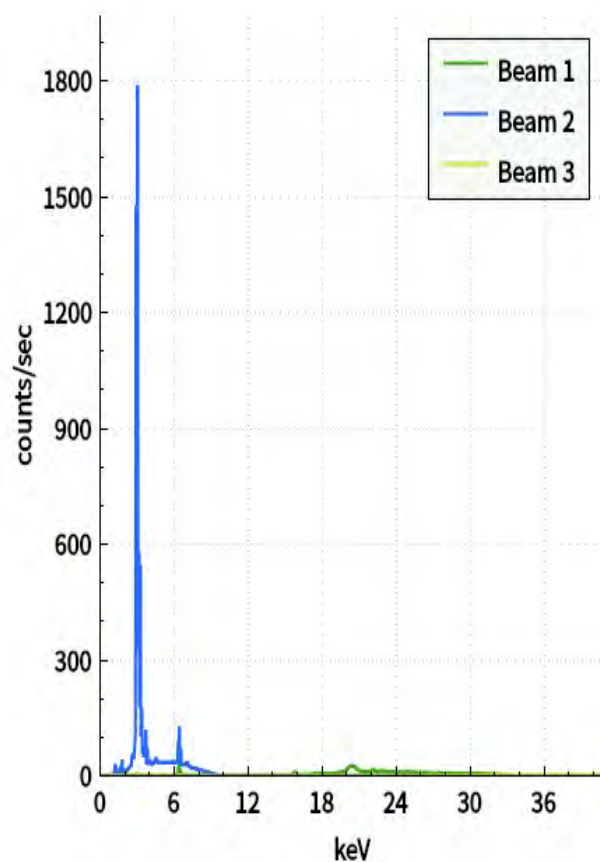
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	21	15
Pb	36	28
El	PPM	+/- 3σ
Cr	ND	<450
As	ND	<42
Se	ND	<25
Ag	ND	<0.1
Cd	ND	<160
Hg	ND	<120

Spectrum



Notes

info: E11

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 21

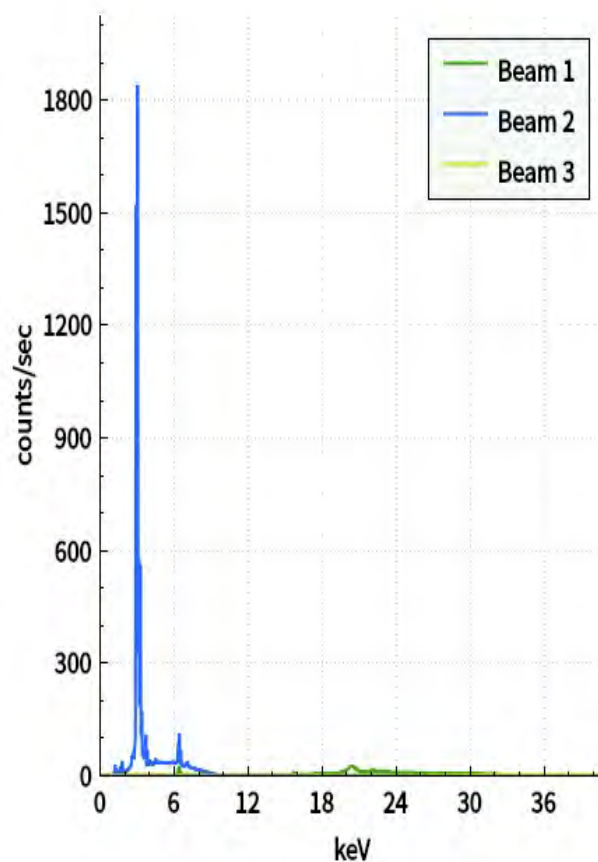
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	18	14
Ba	18	15
El	PPM	+/- 3σ
Cr	ND	<450
As	ND	<41
Ag	ND	<0.1
Cd	ND	<170
Hg	ND	<100
Pb	ND	<49

Spectrum



Notes

info: Dup. 1

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 22

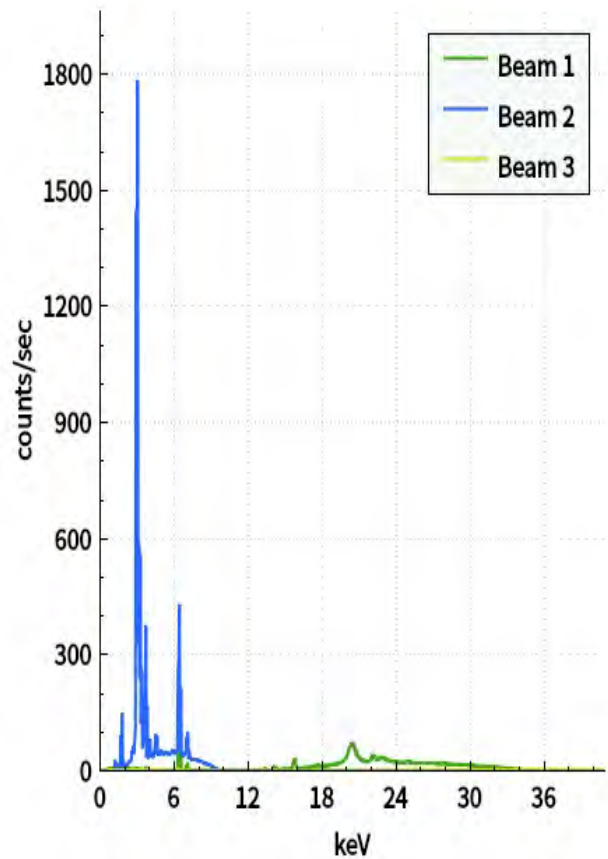
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	73	28
Pb	48	14
El	PPM	+/- 3σ
Cr	ND	<200
As	ND	<21
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<85
Hg	ND	<39

Spectrum



Notes

info: Dup. 2

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 23

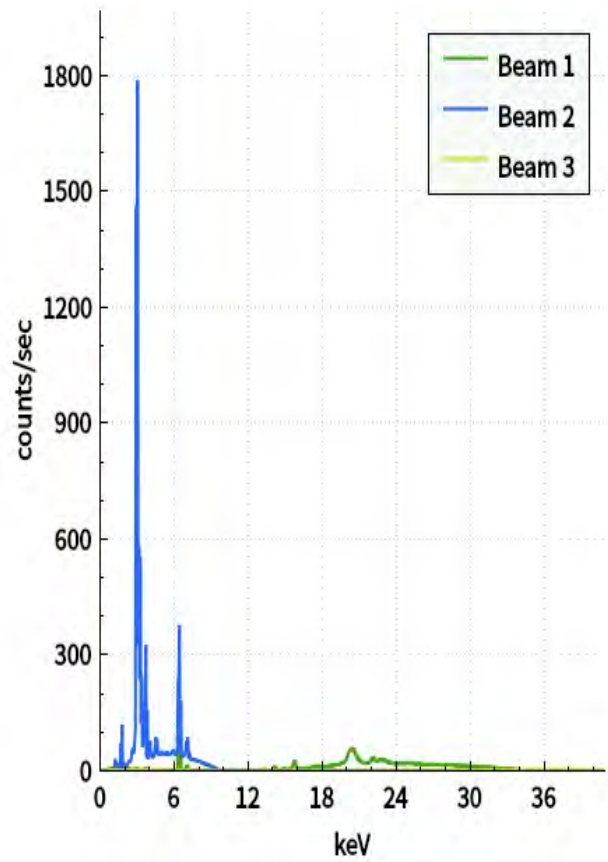
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	76	28
Pb	51	16
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<23
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<92
Hg	ND	<48

Spectrum



Notes

info: Dup. 3

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 24

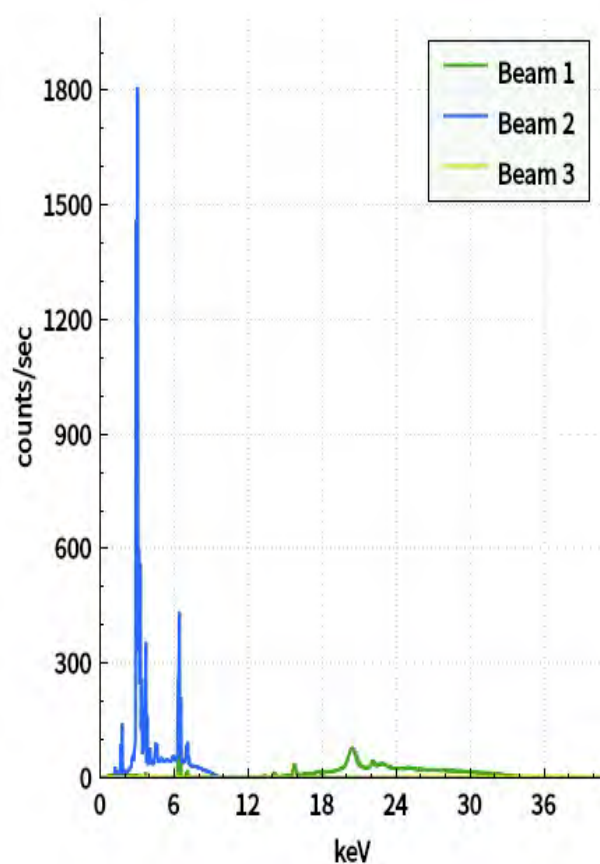
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	81	28
Pb	43	13
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<19
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<78
Hg	ND	<39

Spectrum



Notes

info: Dup. 4

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 25

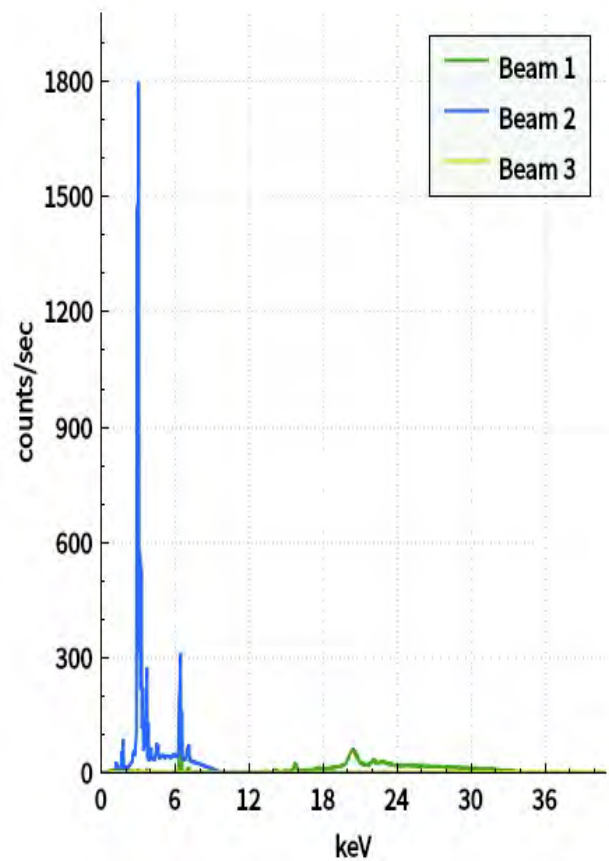
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	70	25
Pb	44	15
El	PPM	+/- 3σ
Cr	ND	<190
As	ND	<22
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<92
Hg	ND	<48

Spectrum



Notes

info:

Dup. 5

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 26

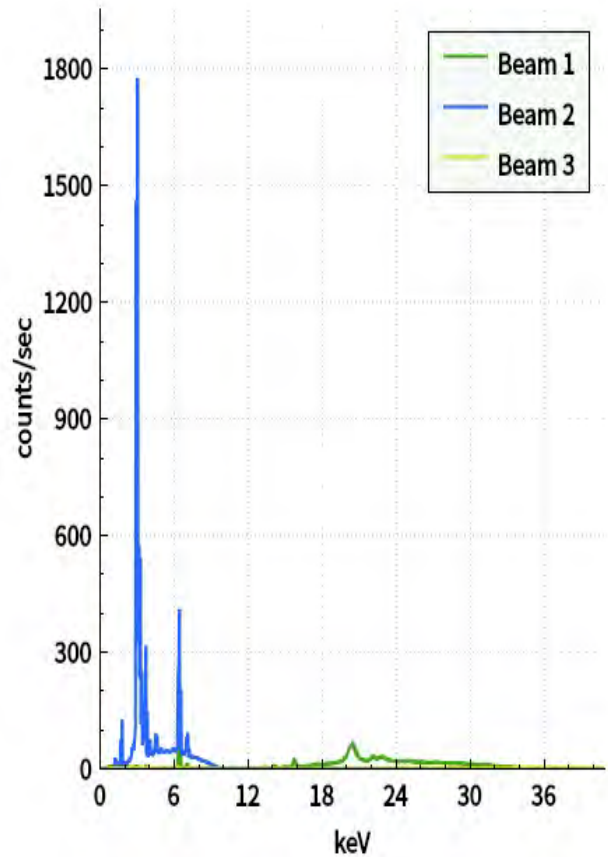
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	76	29
Pb	28	13
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<20
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<89
Hg	ND	<44

Spectrum



Notes

info: Dup. 6

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 27

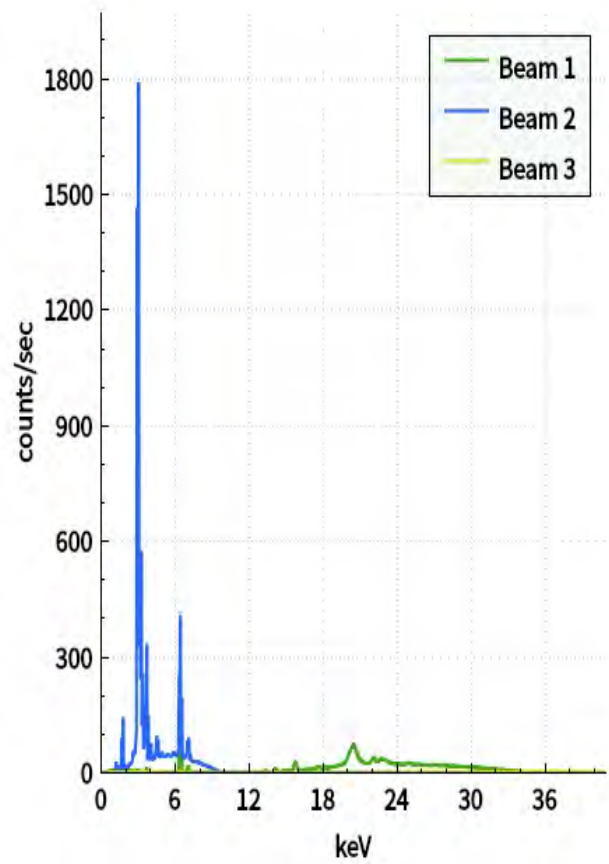
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	82	28
Pb	53	14
El	PPM	+/- 3σ
Cr	ND	<190
As	ND	<21
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<84
Hg	ND	<39

Spectrum



Notes

info: Dup. 7

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 28

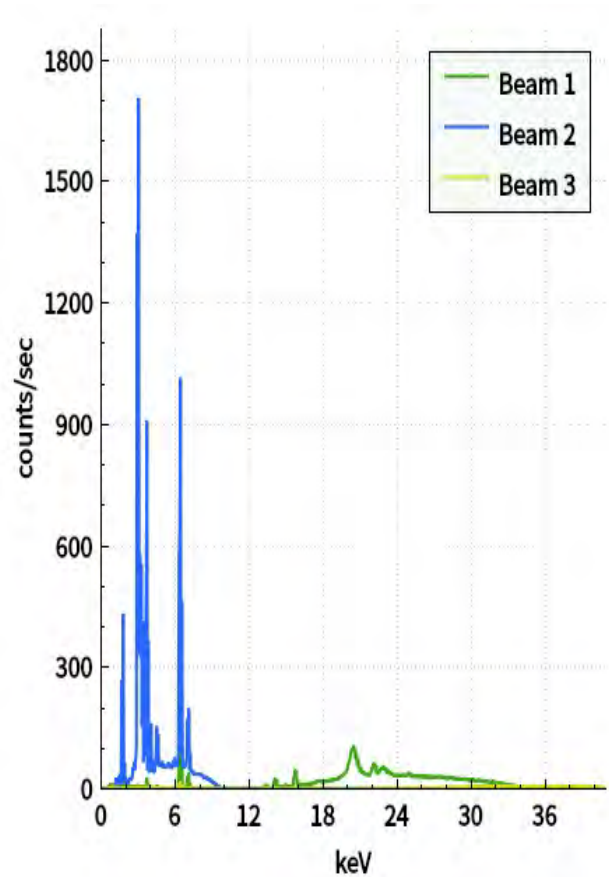
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	10	8
Ba	210	51
Pb	24	9
El	PPM	+/- 3σ
Cr	ND	<160
Se	ND	<8
Ag	ND	<0.1
Cd	ND	<67
Hg	ND	<30

Spectrum



Notes

info: E12

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 29

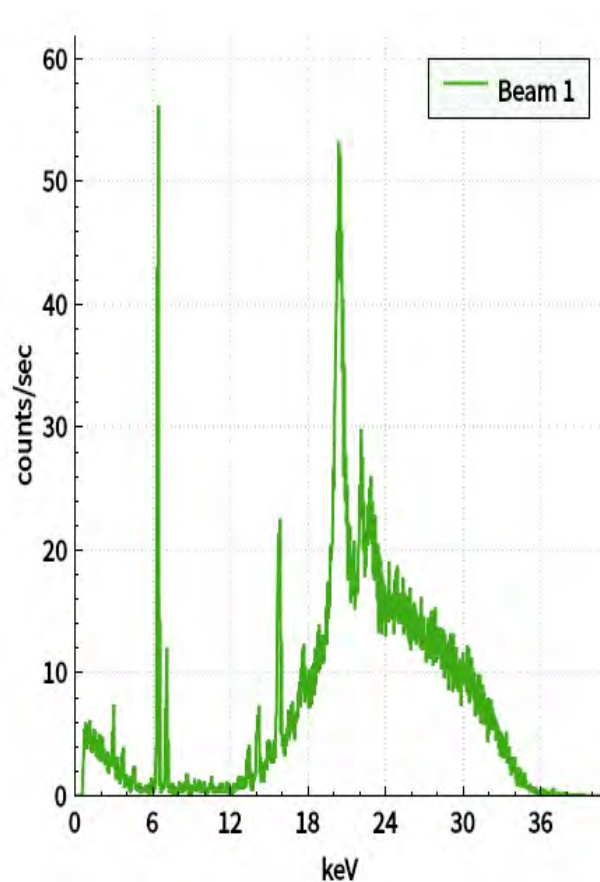
Chemistry

Elapsed Time : 10 s

Elapsed time: 10.0s

El	PPM	+/- 3σ
Se	15	8
Pb	20	15
El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<23
Ag	ND	<0.1
Cd	ND	<110
Ba	ND	<7200
Hg	ND	<61

Spectrum



Notes

info: E13

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 30

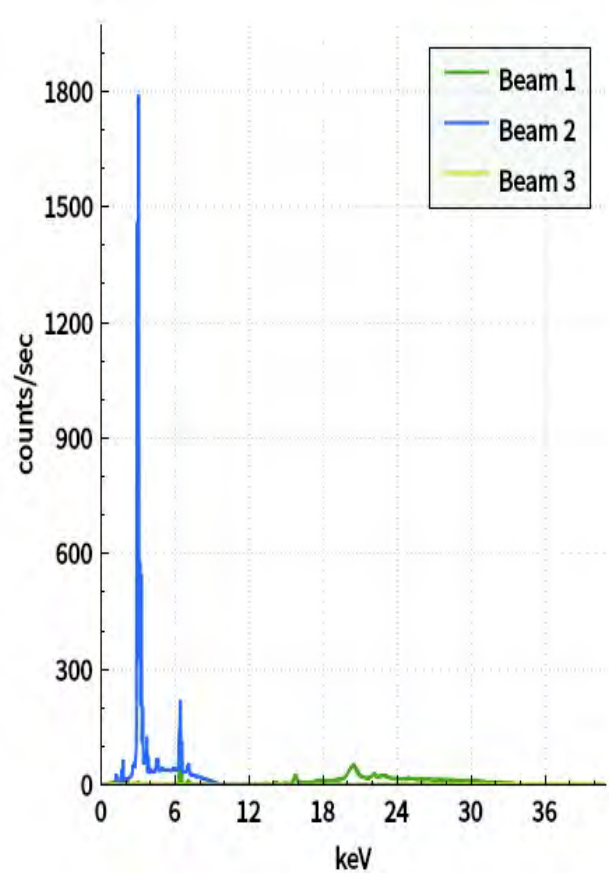
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	36	19
Pb	30	16
El	PPM	+/- 3σ
Cr	ND	<270
As	ND	<23
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<58

Spectrum



Notes

info: E13

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 31

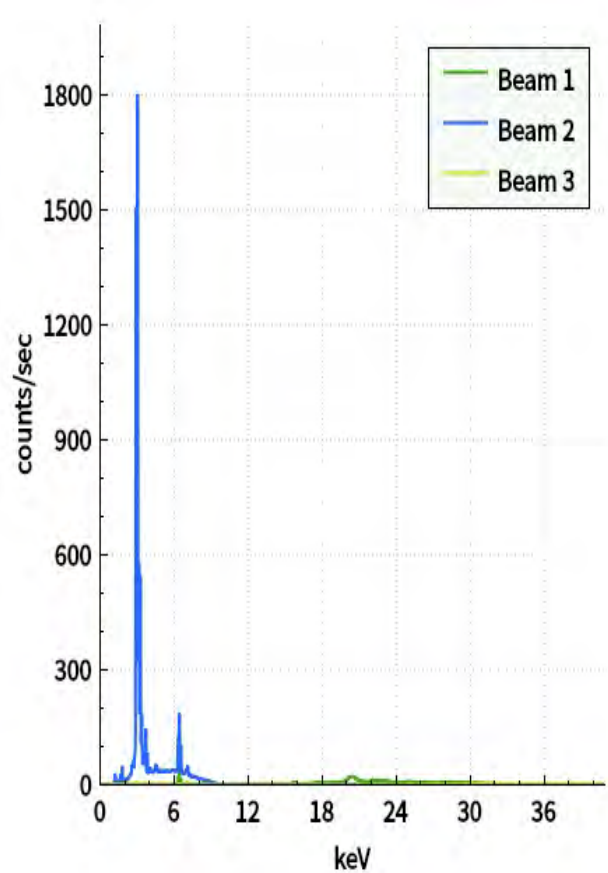
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	34	21
El	PPM	+/- 3σ
Cr	ND	<540
As	ND	<45
Se	ND	<32
Ag	ND	<0.1
Cd	ND	<180
Hg	ND	<140
Pb	ND	<56

Spectrum



Notes

info: E14

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 32

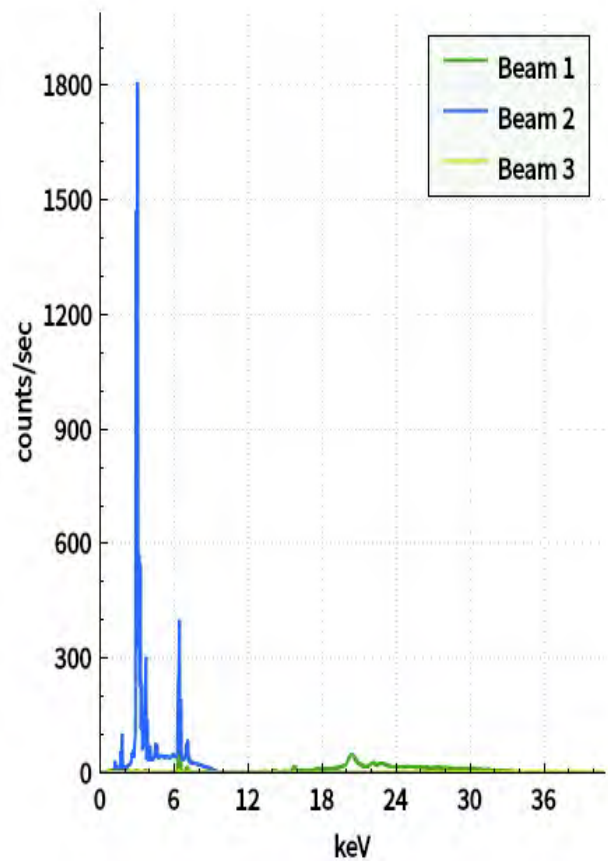
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	88	30
Pb	20	15
El	PPM	+/- 3σ
Cr	ND	<260
As	ND	<23
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<55

Spectrum



Notes

info: Dup. 8

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 33

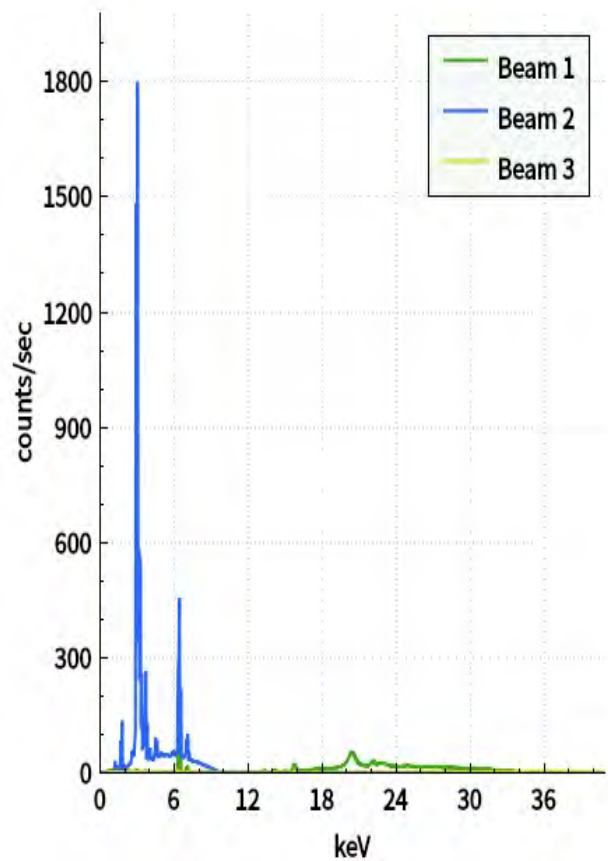
Chemistry

Elapsed Time : 46.6 s

Elapsed time: 46.6s

El	PPM	+/- 3σ
Ba	106	33
Pb	18	14
El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<21
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<98
Hg	ND	<51

Spectrum



Notes

info: E15

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 34

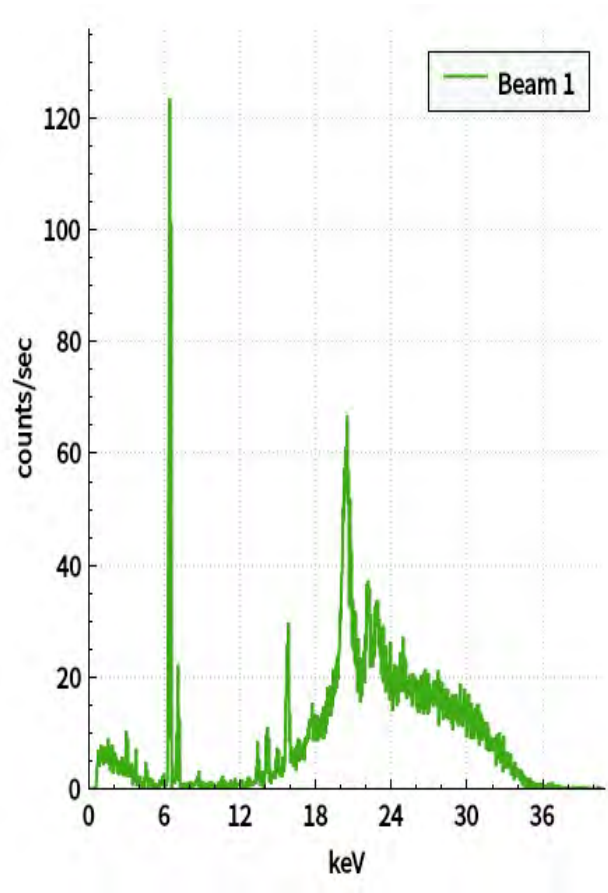
Chemistry

Elapsed Time : 4.62 s

Elapsed time: 4.6s

El	PPM	+/- 3σ
Se	14	8
El	PPM	+/- 3σ
Cr	ND	<320
As	ND	<28
Ag	ND	<0.1
Cd	ND	<140
Ba	ND	<9100
Hg	ND	<65
Pb	ND	<31

Spectrum



Notes

info: E15

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 35

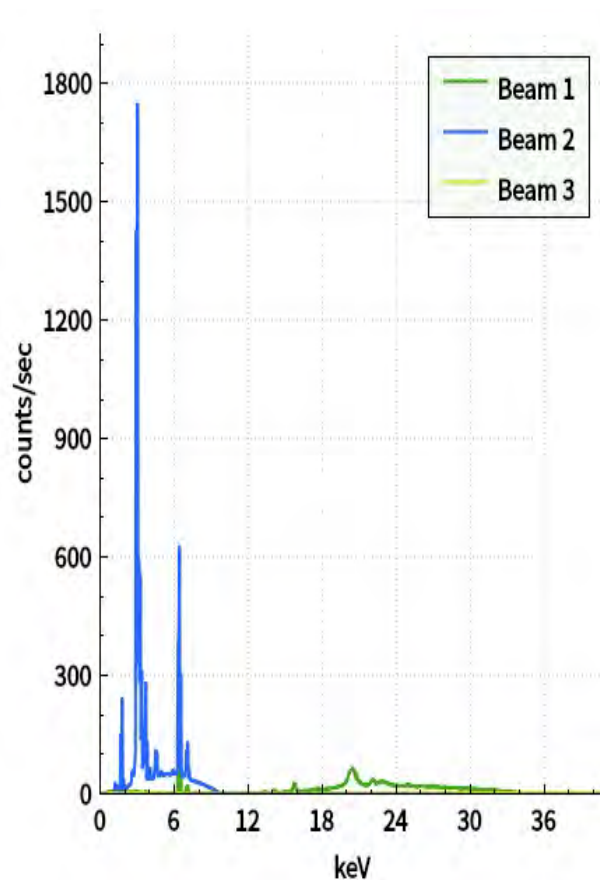
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	77	27
Pb	21	12
El	PPM	+/- 3σ
Cr	ND	<200
As	ND	<19
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<88
Hg	ND	<45

Spectrum



Notes

info: E15

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Cal Check

Daily ID : 36C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 89272

Slope : 0.0200012

Offset : -0.0149895

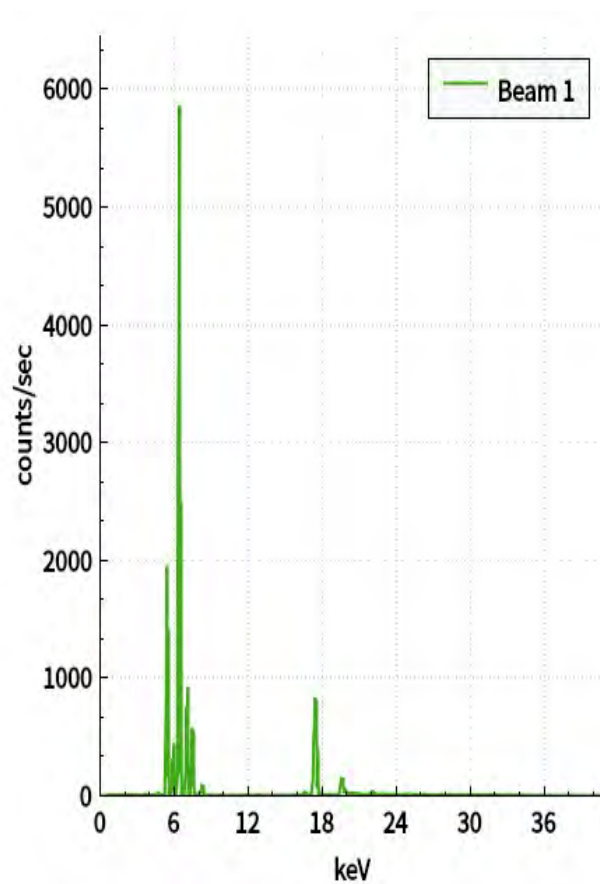
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 37

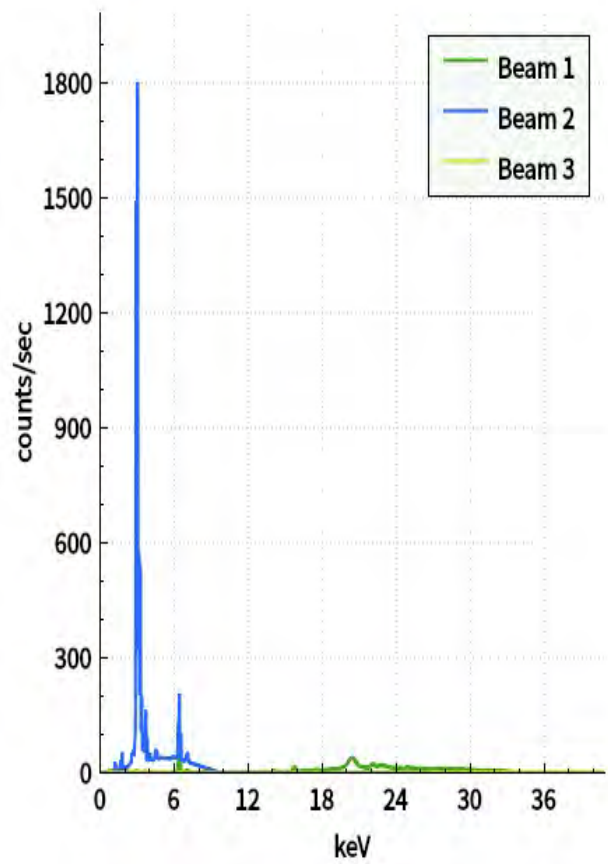
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	51	21
Pb	48	21
El	PPM	+/- 3σ
Cr	ND	<300
As	ND	<31
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<72

Spectrum



Notes

info: E16

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 38

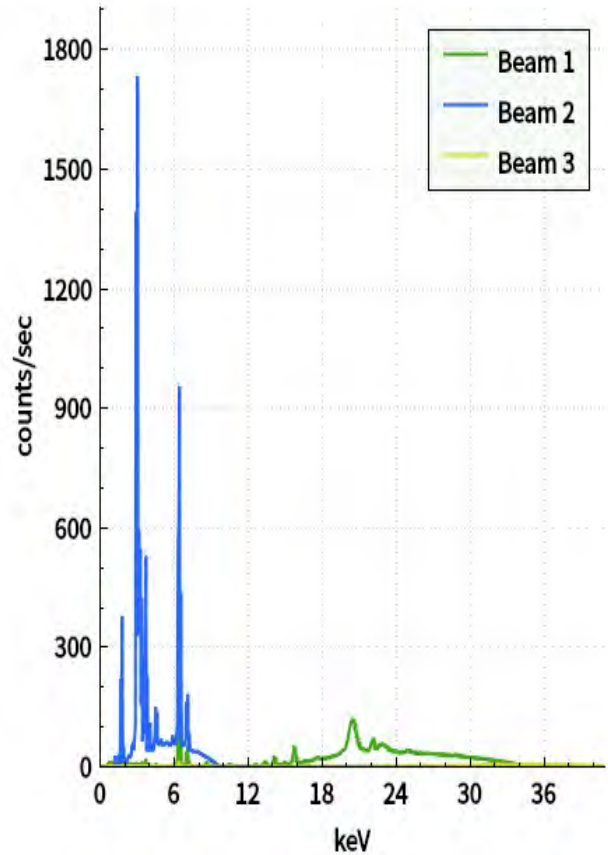
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	13	10
Ba	158	40
Pb	65	11
El	PPM	+/- 3σ
Cr	ND	<130
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<61
Hg	ND	<26

Spectrum



Notes

info: E17

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 39

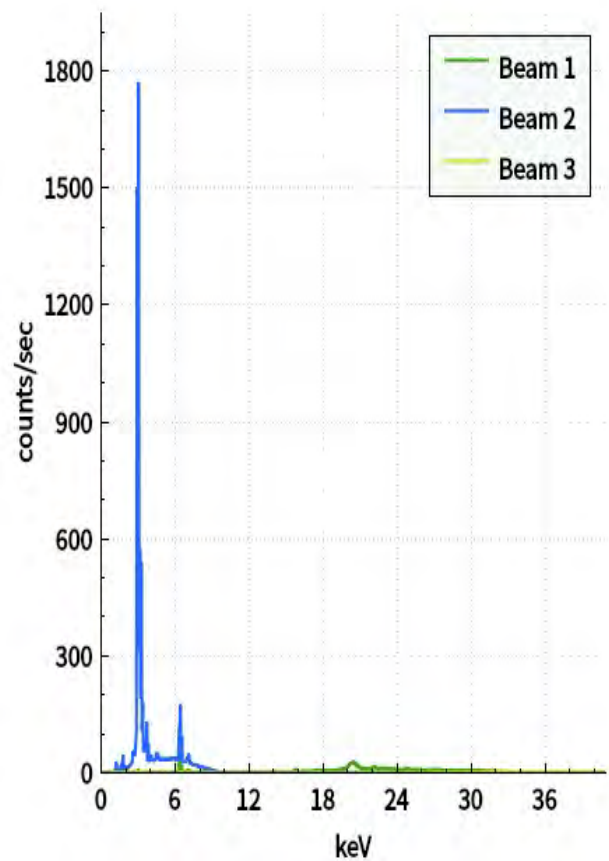
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	33	17
Pb	48	30
El	PPM	+/- 3σ
Cr	ND	<420
As	ND	<43
Se	ND	<23
Ag	ND	<0.1
Cd	ND	<160
Hg	ND	<94

Spectrum



Notes

info: E18

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 40

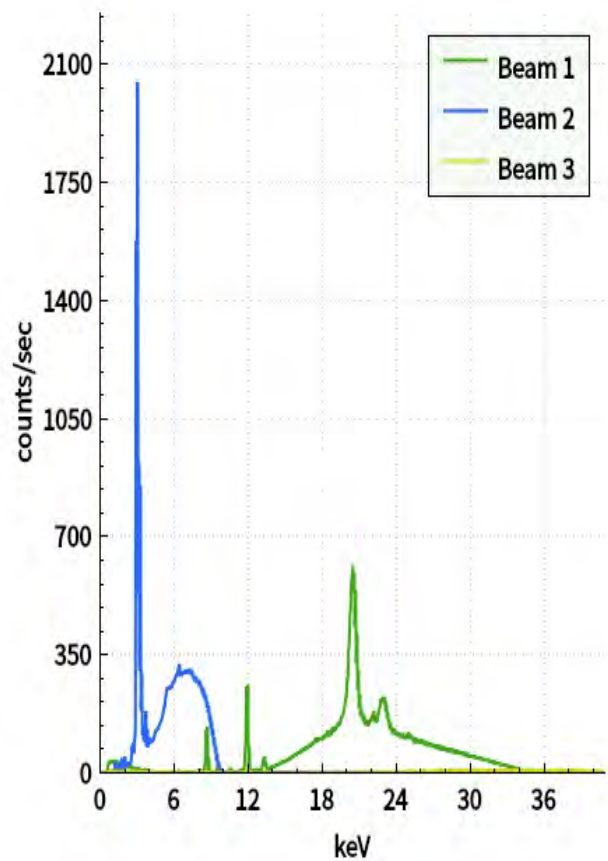
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	8	3
Se	3	2
Pb	15	3
El	PPM	+/- 3σ
Cr	ND	<42
Ag	ND	<0.1
Cd	ND	<26
Ba	ND	<1400
Hg	ND	<12

Spectrum



Notes

info: Blank 9

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 41

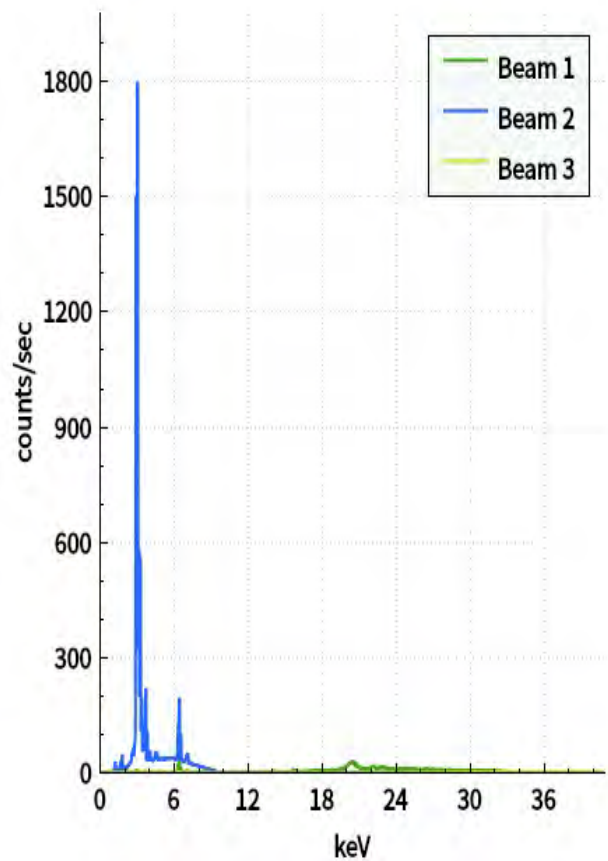
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	41	20
Pb	30	25
El	PPM	+/- 3σ
Cr	ND	<480
As	ND	<35
Se	ND	<22
Ag	ND	<0.1
Cd	ND	<150
Hg	ND	<110

Spectrum



Notes

info: E19

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 42

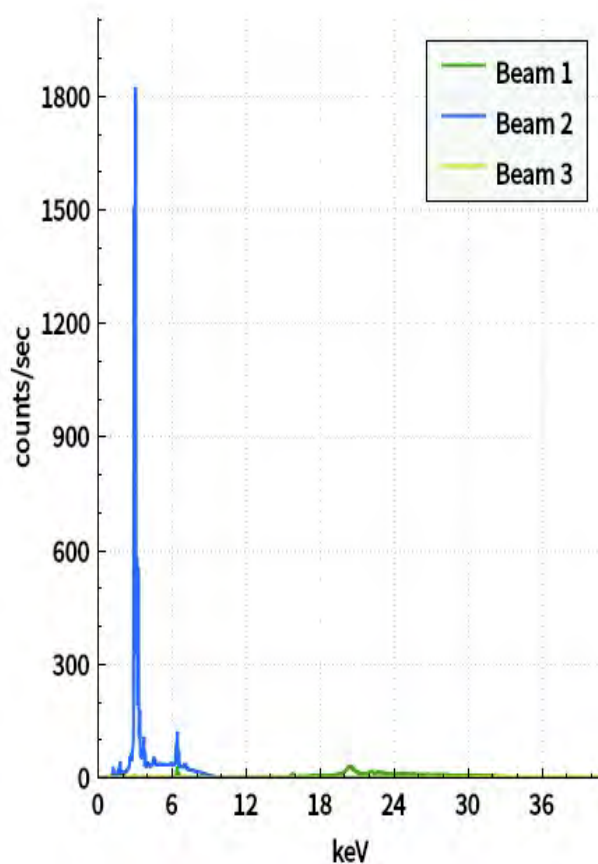
Elapsed Time : 50 s

Chemistry

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	39	17
Pb	78	30
El	PPM	+/- 3σ
Cr	ND	<430
As	ND	<45
Se	ND	<22
Ag	ND	<0.1
Cd	ND	<150
Hg	ND	<100

Spectrum



Notes

info: E20

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 43

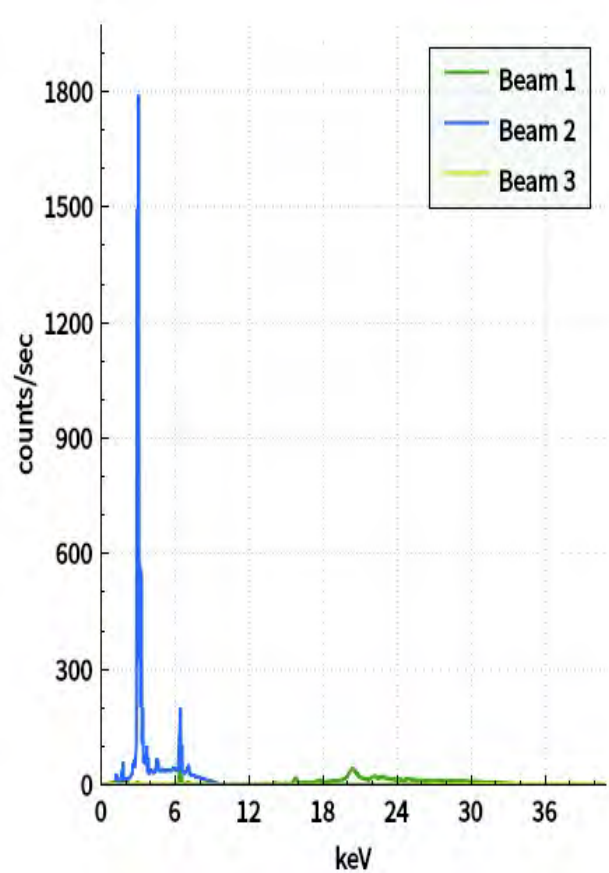
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	59	21
Pb	43	20
El	PPM	+/- 3σ
Cr	ND	<260
As	ND	<32
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<67

Spectrum



Notes

info: E21

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 44

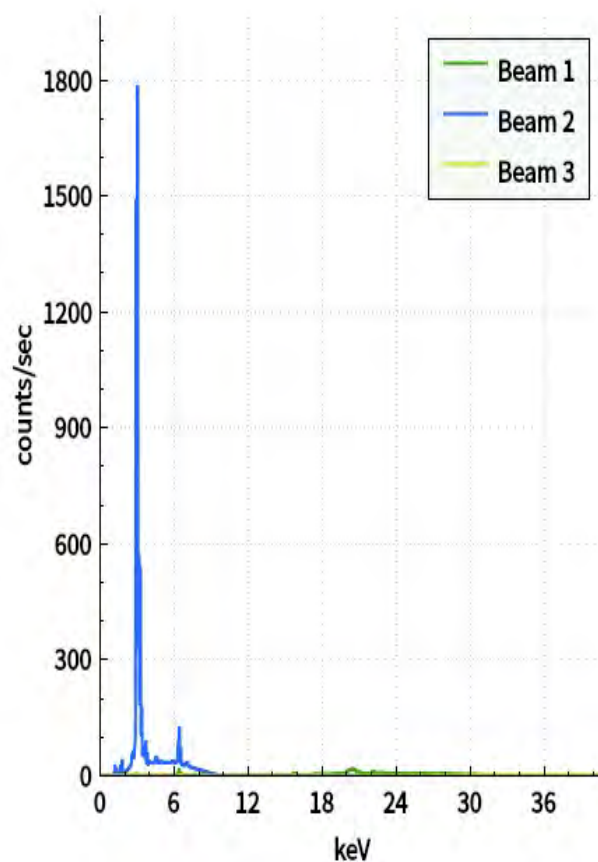
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	34	18
El	PPM	+/- 3σ
Cr	ND	<860
As	ND	<58
Se	ND	<42
Ag	ND	<0.1
Cd	ND	<240
Hg	ND	<180
Pb	ND	<73

Spectrum



Notes

info: E22

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 45

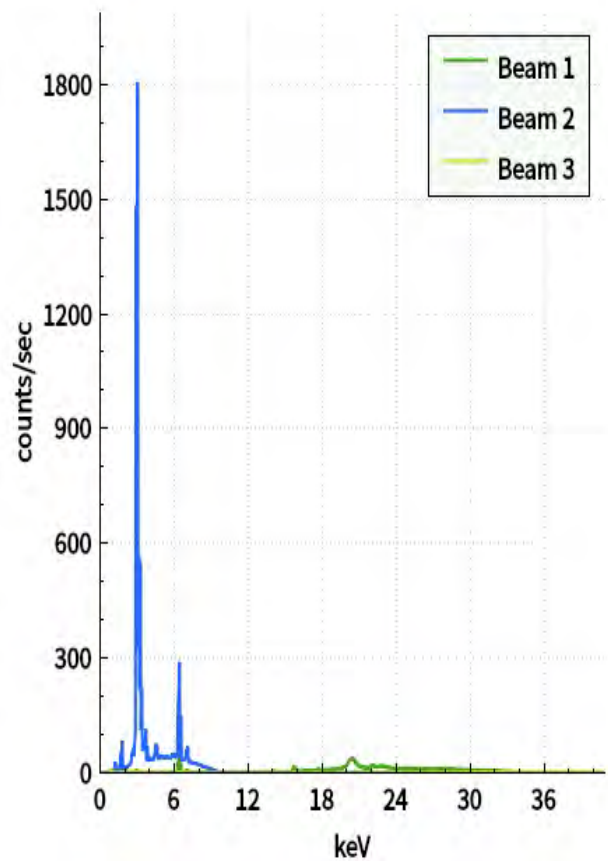
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	62	22
Pb	22	20
El	PPM	+/- 3σ
Cr	ND	<360
As	ND	<30
Se	ND	<19
Ag	ND	<0.1
Cd	ND	<130
Hg	ND	<74

Spectrum



Notes

info: E23

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 46

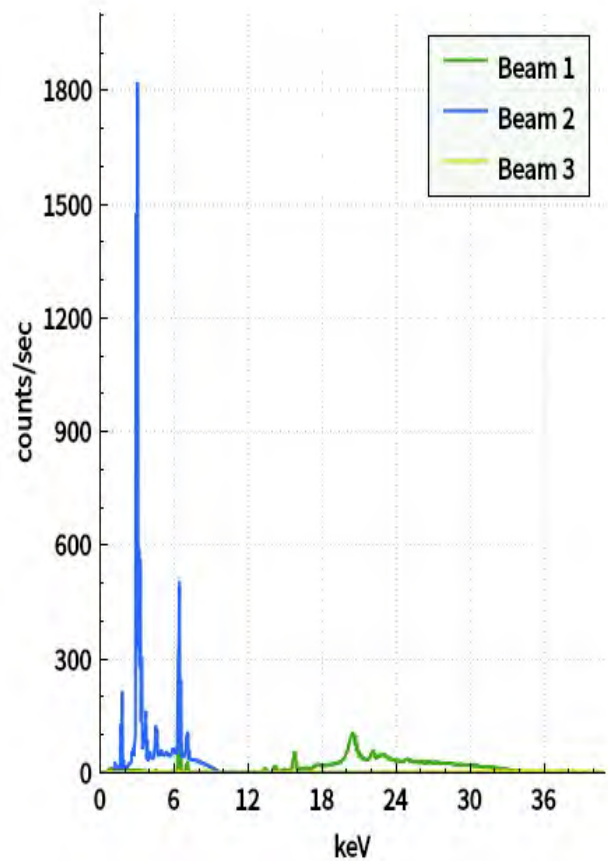
Chemistry

Elapsed Time : 36.1 s

Elapsed time: 36.1s

El	PPM	+/- 3σ
Ba	138	57
Pb	30	10
El	PPM	+/- 3σ
Cr	ND	<150
As	ND	<15
Se	ND	<8
Ag	ND	<0.1
Cd	ND	<67
Hg	ND	<29

Spectrum



Notes

info: E24

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 47

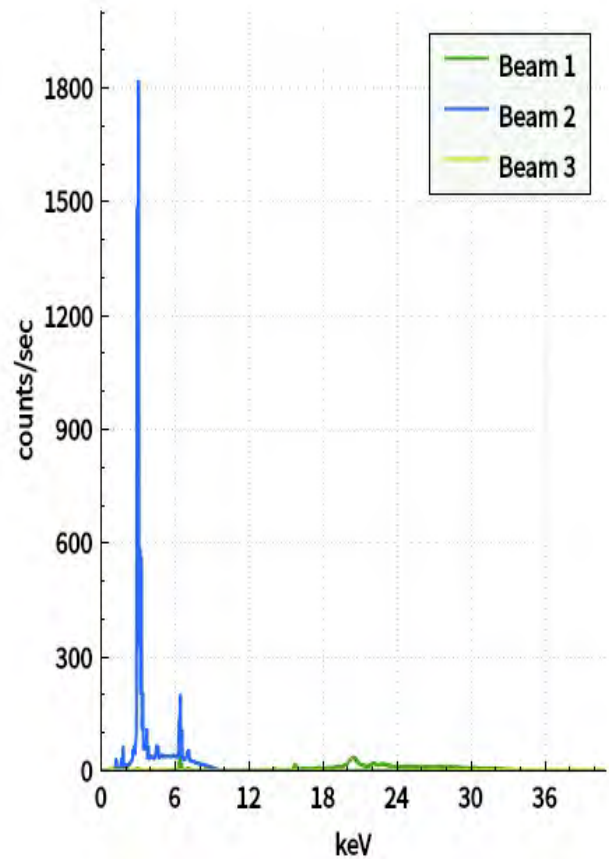
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	11	11
Ba	58	22
Pb	23	20
El	PPM	+/- 3σ
Cr	ND	<360
As	ND	<30
Ag	ND	<0.1
Cd	ND	<130
Hg	ND	<79

Spectrum



Notes

info: E24

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 48

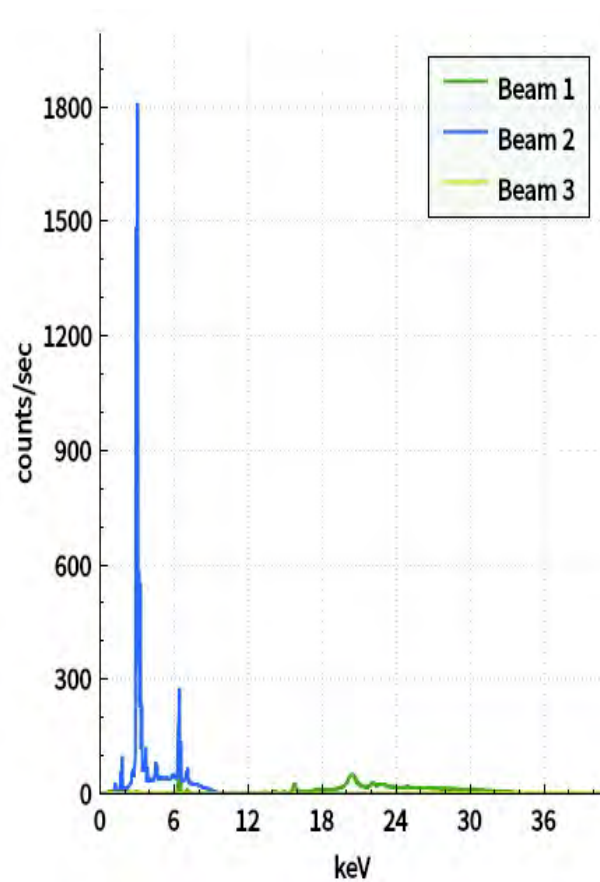
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	79	24
Pb	33	16
El	PPM	+/- 3σ
Cr	ND	<260
As	ND	<23
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<57

Spectrum



Notes

info: E25

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Chemistry

Method : Cal Check  
Daily ID : 49C

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 85441

Slope : 0.0200017

Offset : -0.0154023

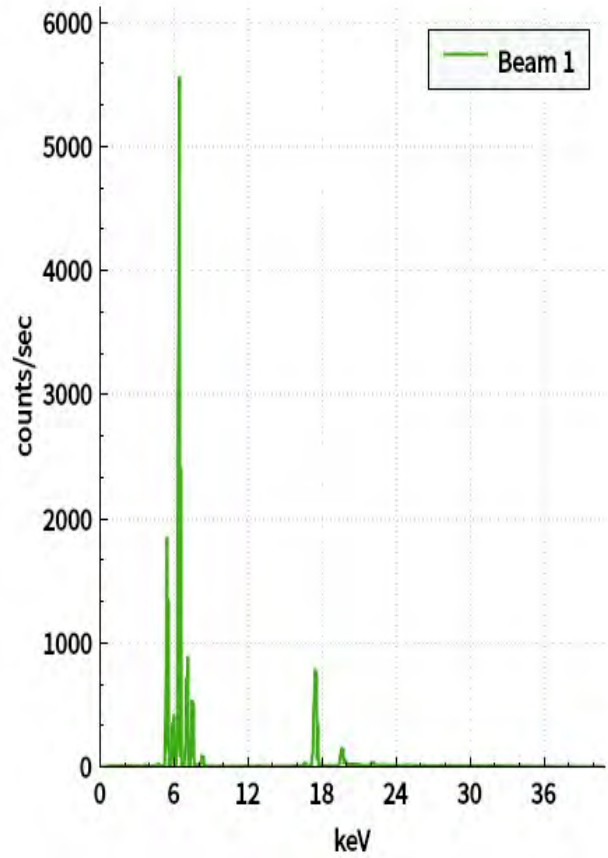
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 50

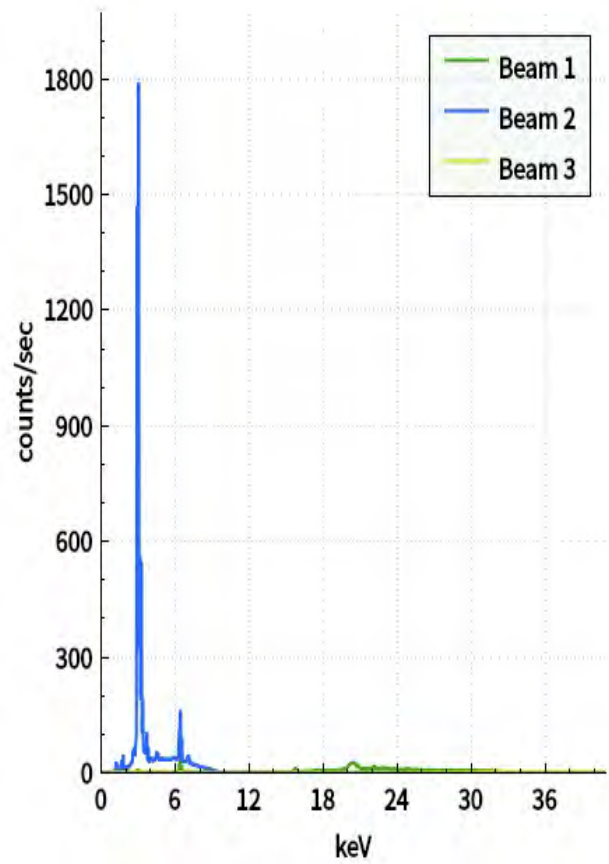
Chemistry

Elapsed Time : 48.7 s

Elapsed time: 48.7s

El	PPM	+/- 3σ
Ba	48	19
Pb	29	28
El	PPM	+/- 3σ
Cr	ND	<450
As	ND	<40
Se	ND	<29
Ag	ND	<0.1
Cd	ND	<170
Hg	ND	<120

Spectrum



Notes

info: E26

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 51

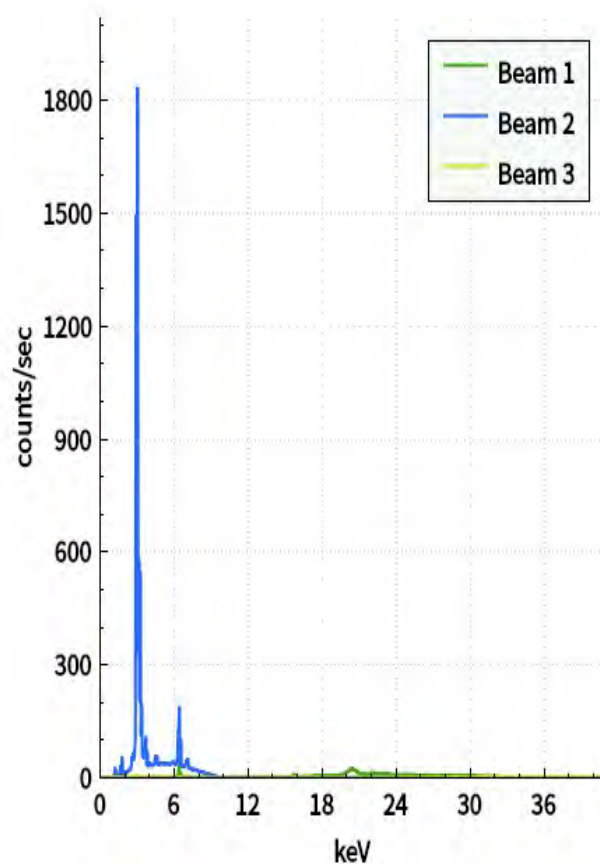
Chemistry

Elapsed Time : 41.8 s

Elapsed time: 41.8s

El	PPM	+/- 3σ
Ba	52	27
El	PPM	+/- 3σ
Cr	ND	<510
As	ND	<44
Se	ND	<28
Ag	ND	<0.1
Cd	ND	<180
Hg	ND	<110
Pb	ND	<49

Spectrum



Notes

info: E26

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 52

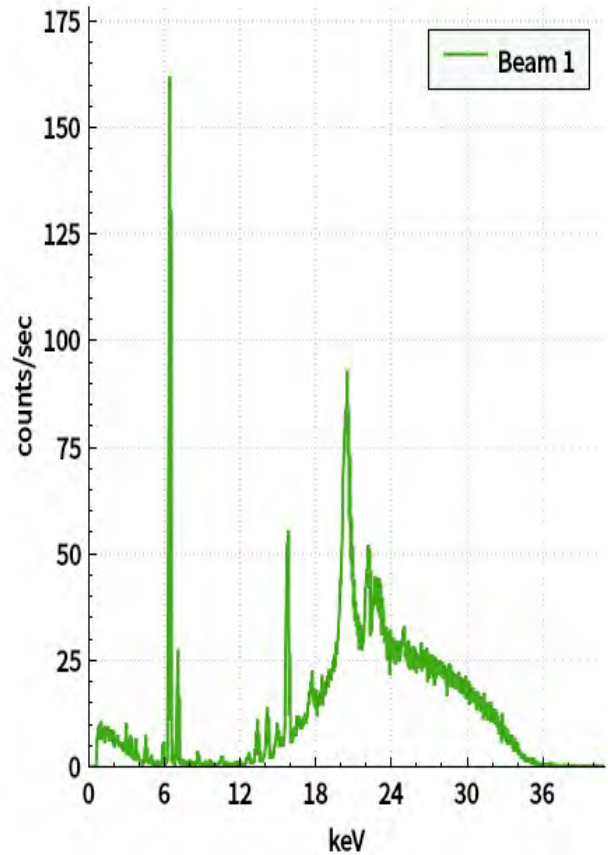
Chemistry

Elapsed Time : 9.78 s

Elapsed time: 9.8s

El	PPM	+/- 3σ
Pb	31	11
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<16
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<75
Ba	ND	<5100
Hg	ND	<34

Spectrum



Notes

info: E27

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 53

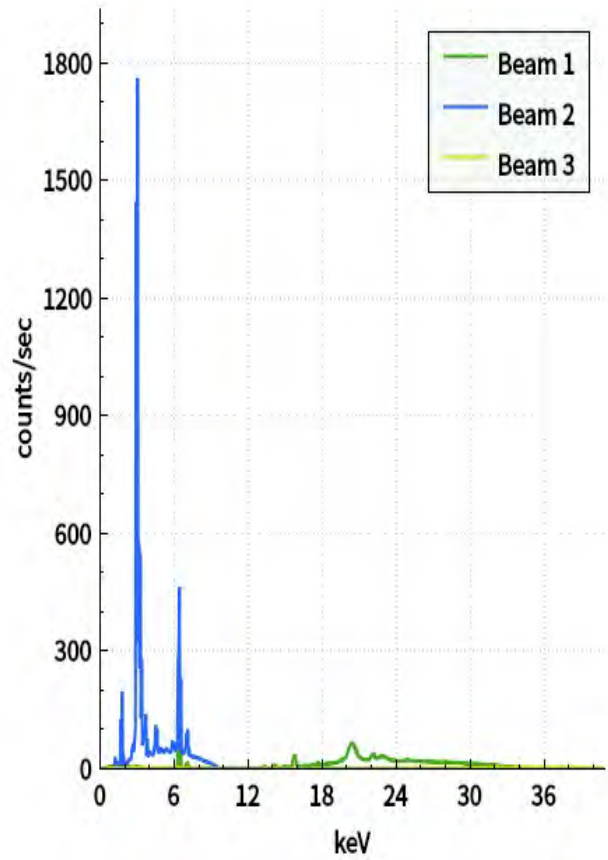
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	7	6
Ba	112	32
Pb	26	13
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<18
Ag	ND	<0.1
Cd	ND	<87
Hg	ND	<45

Spectrum



Notes

info: E27

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 54

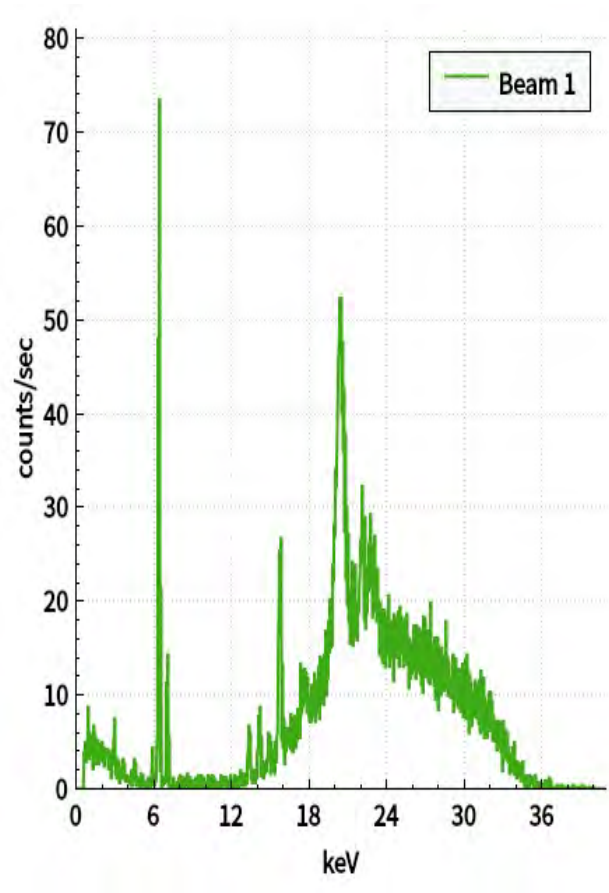
Chemistry

Elapsed Time : 4.21 s

Elapsed time: 4.2s

El	PPM	+/- 3σ
Cr	ND	<350
As	ND	<32
Se	ND	<19
Ag	ND	<0.1
Cd	ND	<160
Ba	ND	<10000
Hg	ND	<77
Pb	ND	<40

Spectrum



Notes

info: E28

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 55

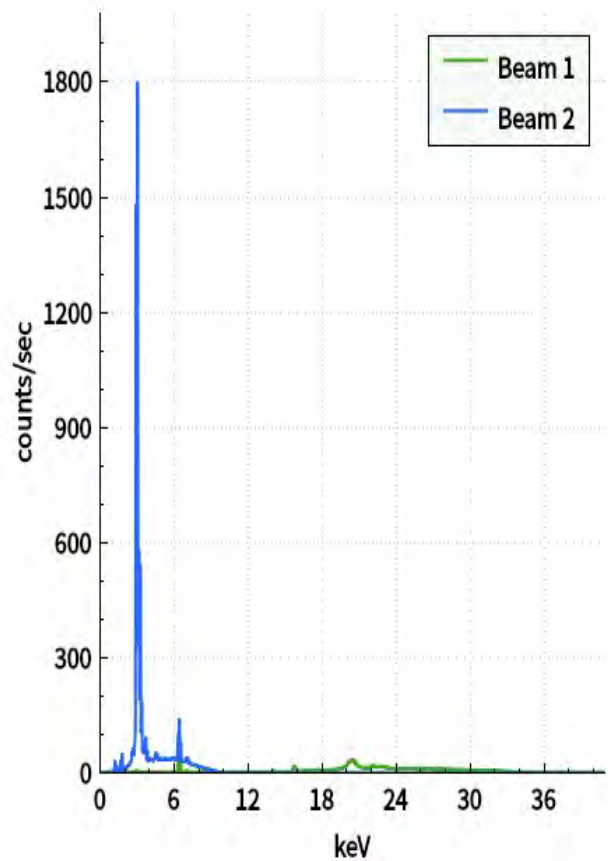
Chemistry

Elapsed Time : 26.7 s

Elapsed time: 26.7s

El	PPM	+/- 3σ
Se	15	11
El	PPM	+/- 3σ
Cr	ND	<330
As	ND	<29
Ag	ND	<0.1
Cd	ND	<140
Ba	ND	<9000
Hg	ND	<73
Pb	ND	<35

Spectrum



Notes

info: E28

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 56

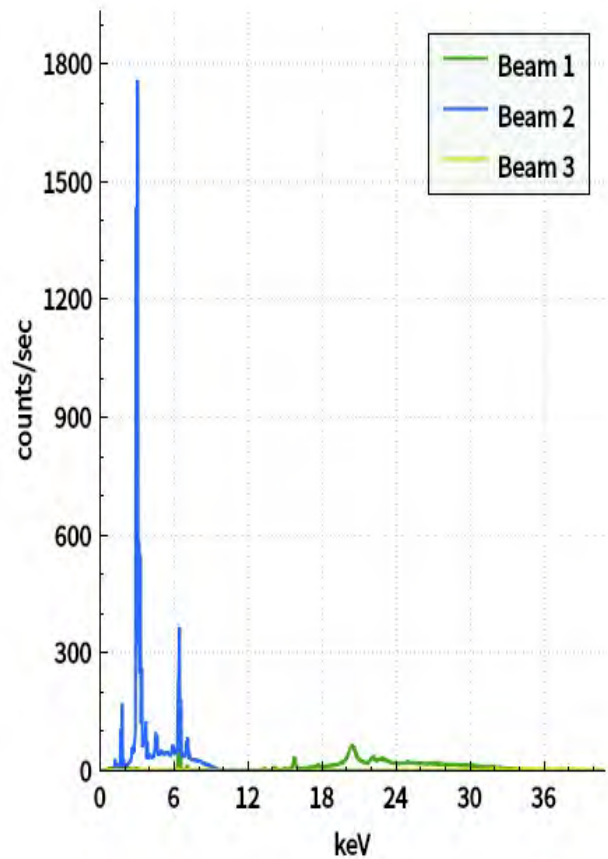
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	7	6
Ba	124	33
Pb	21	13
El	PPM	+/- 3σ
Cr	ND	<200
As	ND	<19
Ag	ND	<0.1
Cd	ND	<90
Hg	ND	<44

Spectrum



Notes

info: E28

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

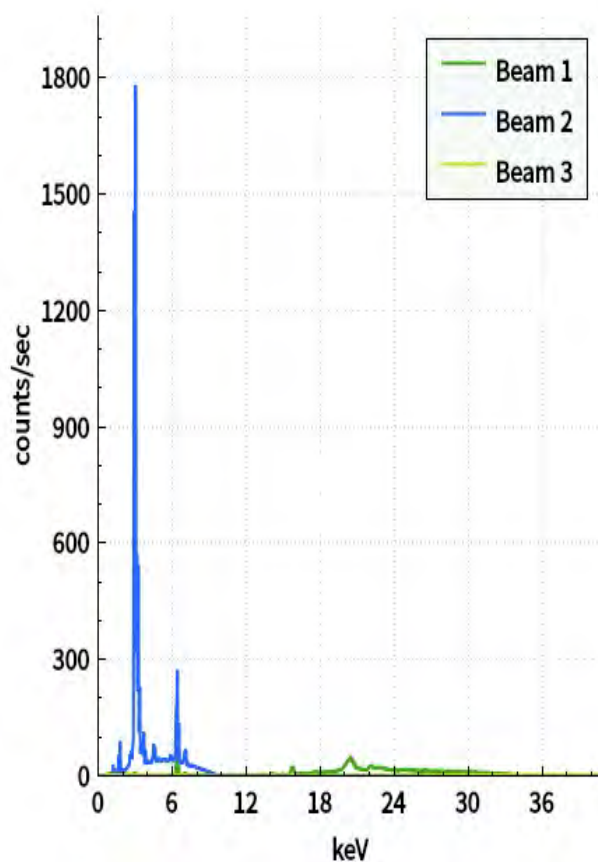
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	83	29
Pb	17	16
El	PPM	+/- 3σ
Cr	ND	<270
As	ND	<23
Se	ND	<15
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<58

Spectrum



Notes

info: E29

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 58

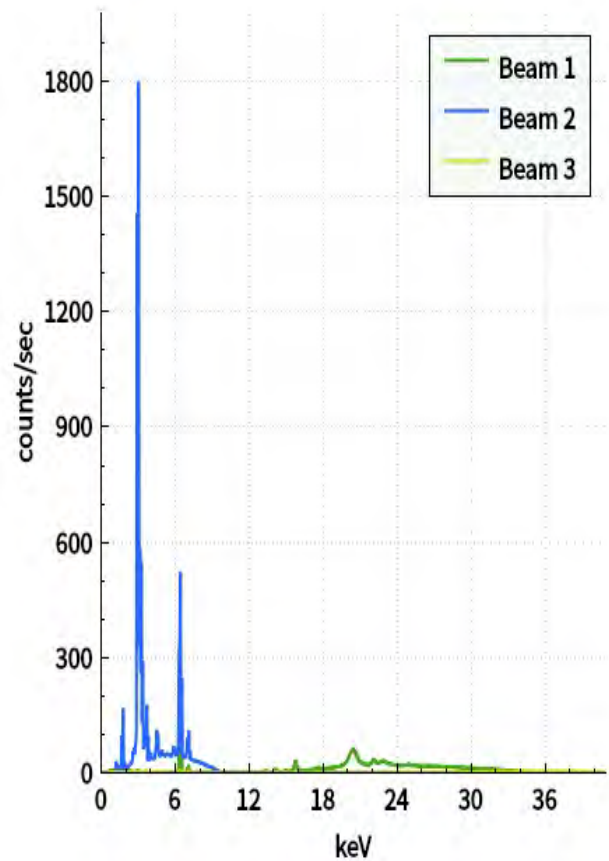
Chemistry

Elapsed Time : 43.7 s

Elapsed time: 43.7s

El	PPM	+/- 3σ
As	11	11
Ba	118	40
Pb	13	12
El	PPM	+/- 3σ
Cr	ND	<220
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<91
Hg	ND	<46

Spectrum



Notes

info: E30

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 59

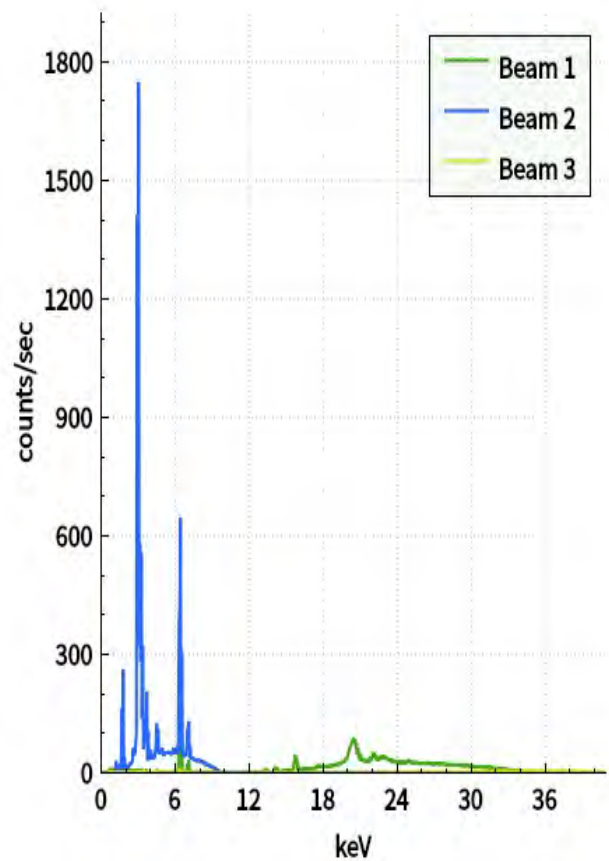
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	5	5
Ba	115	34
Pb	17	10
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<15
Ag	ND	<0.1
Cd	ND	<74
Hg	ND	<33

Spectrum



Notes

info: E30

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 60

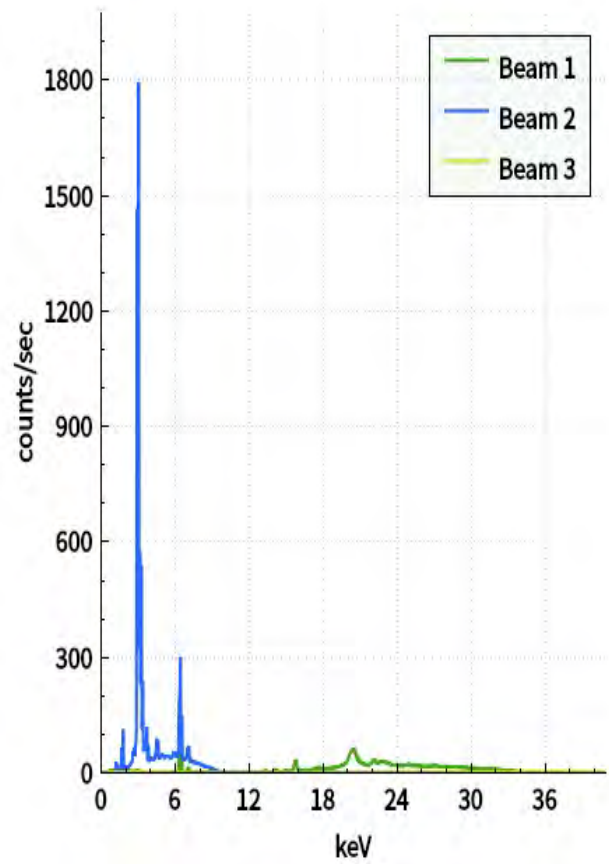
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	78	29
Pb	23	13
El	PPM	+/- 3σ
Cr	ND	<200
As	ND	<20
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<92
Hg	ND	<48

Spectrum



Notes

info: E31

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 61

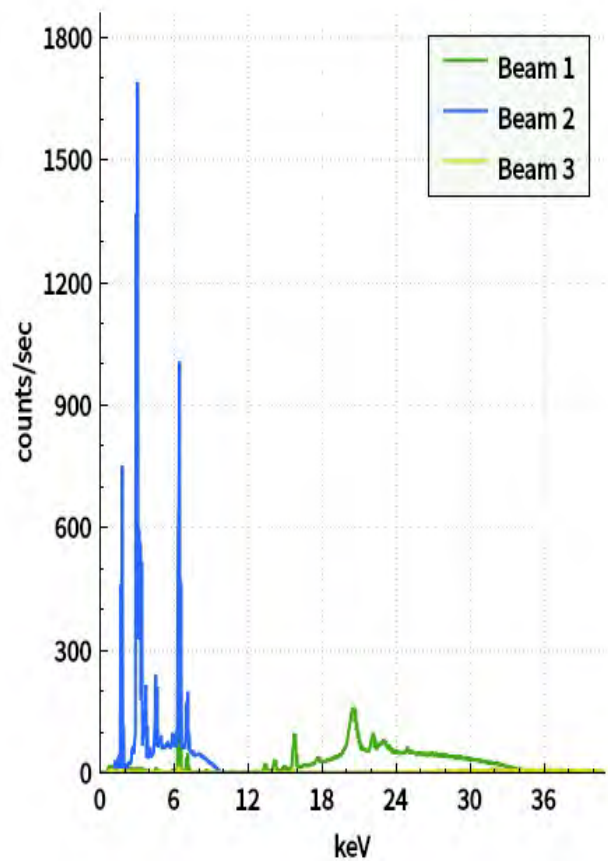
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	6	6
Ba	280	51
Pb	21	7
El	PPM	+/- 3σ
Cr	ND	<120
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<53
Hg	ND	<22

Spectrum



Notes

info: E32

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 62

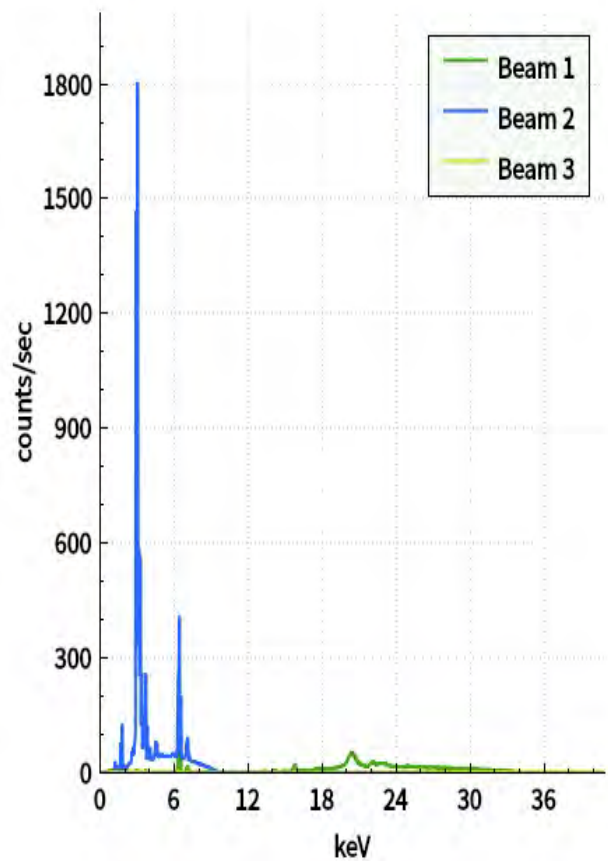
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	80	28
Pb	90	21
El	PPM	+/- 3σ
Cr	ND	<260
As	ND	<30
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<97
Hg	ND	<48

Spectrum



Notes

info: E33

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 63

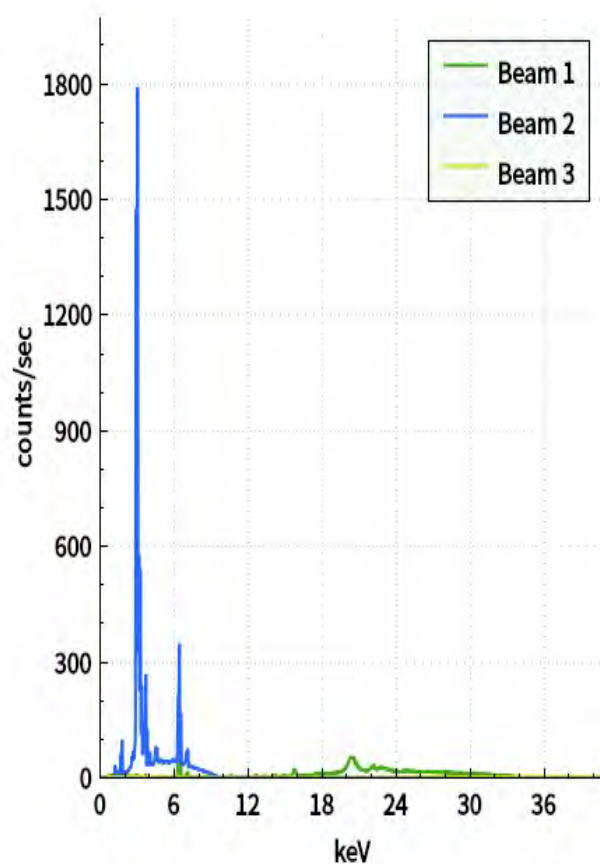
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	71	26
Pb	206	28
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<40
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<97
Hg	ND	<52

Spectrum



Notes

info: E34

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 64

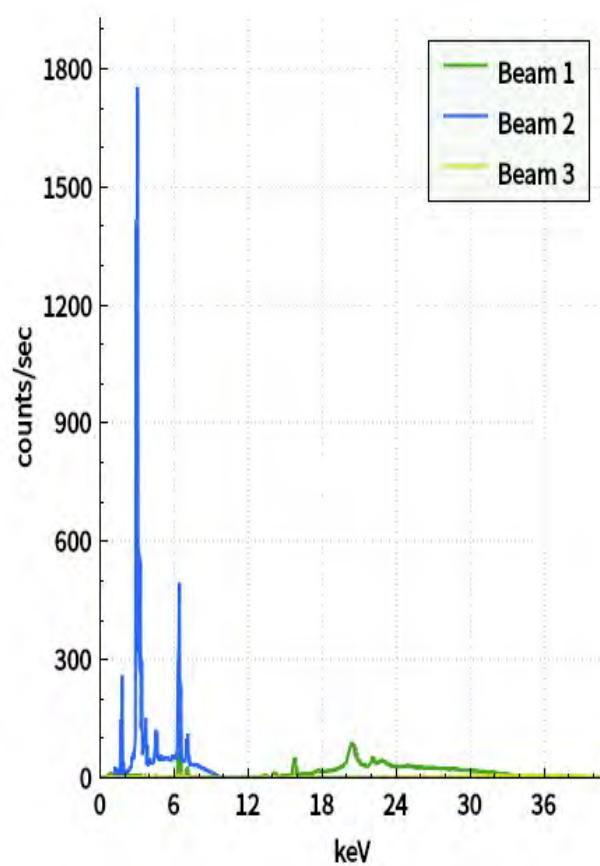
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	170	38
Pb	30	11
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<16
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<74
Hg	ND	<36

Spectrum



Notes

info: E35

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 65

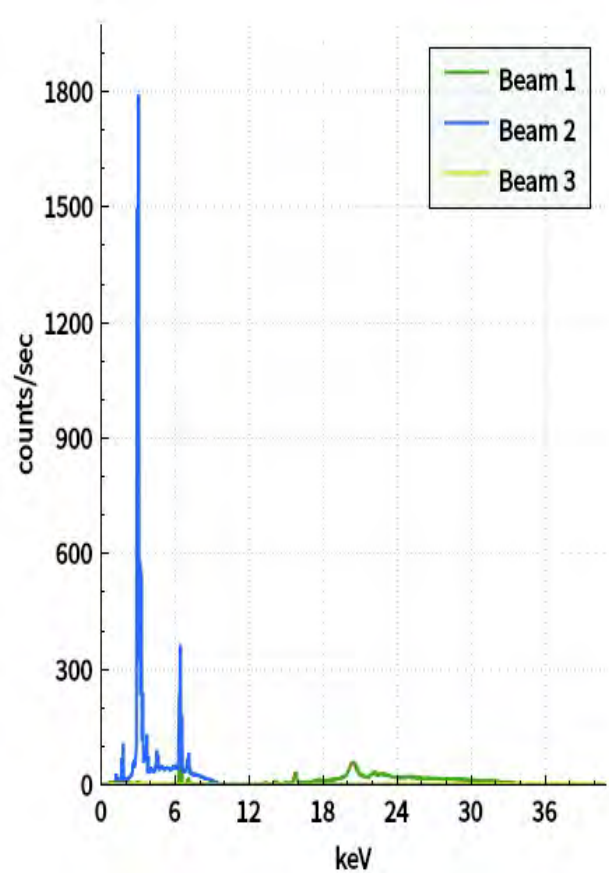
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	75	26
Pb	74	18
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<26
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<93
Hg	ND	<50

Spectrum



Notes

info: E36

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 66

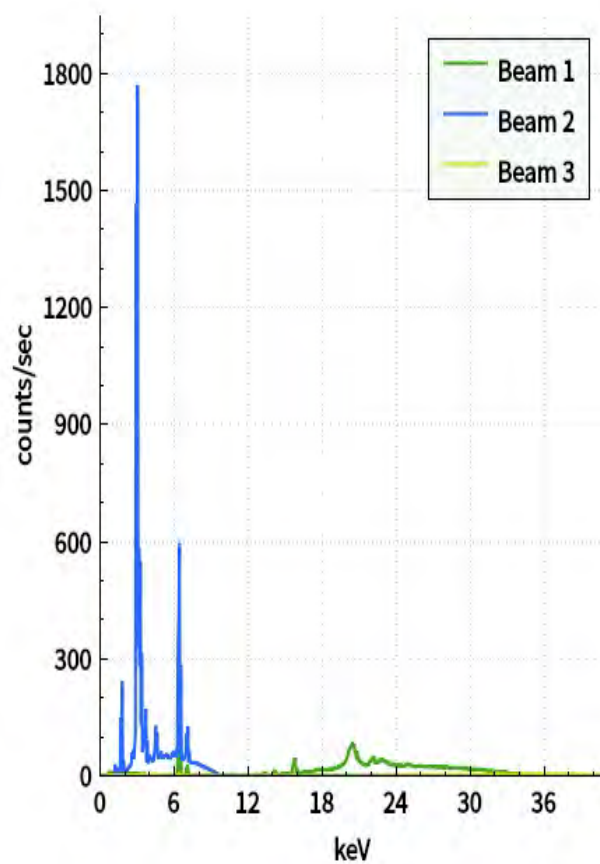
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	5	5
Ba	123	34
Pb	61	14
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<21
Ag	ND	<0.1
Cd	ND	<77
Hg	ND	<37

Spectrum



Notes

info: Dup. 9

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 67

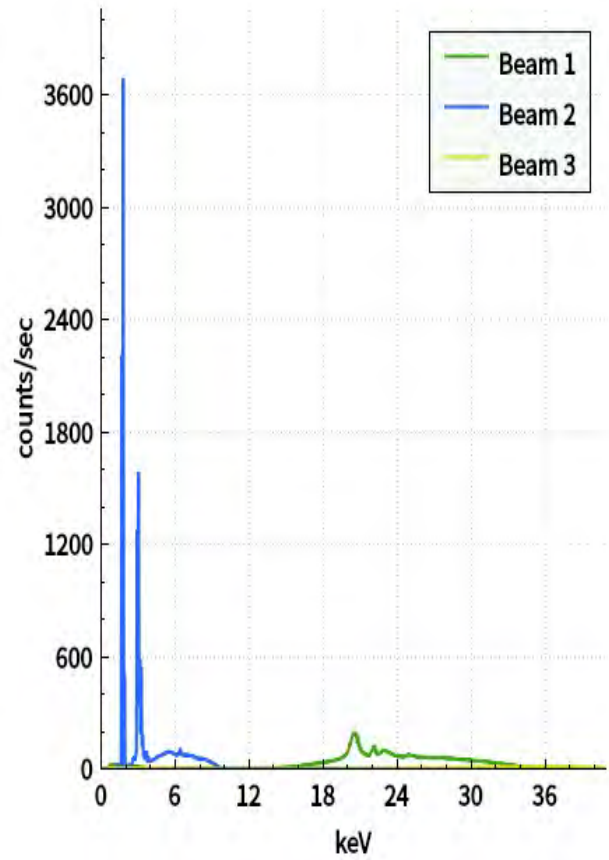
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	3	3
Ba	69	67
El	PPM	+/- 3σ
Cr	ND	<93
As	ND	<6
Ag	ND	<0.1
Cd	ND	<54
Hg	ND	<21
Pb	ND	<8

Spectrum



Notes

info: Blank 10

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 68

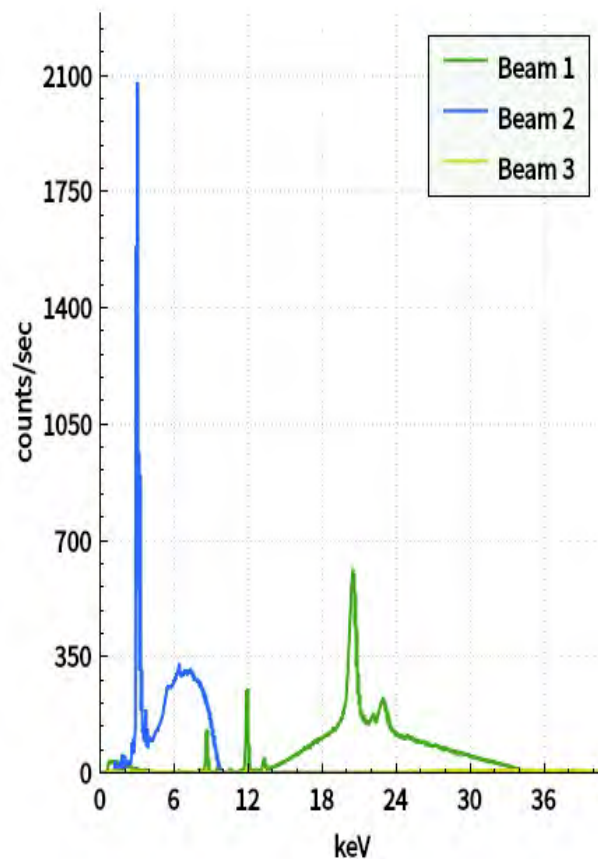
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	7	3
Se	2	2
Ba	35	33
Pb	16	3
El	PPM	+/- 3σ
Cr	ND	<42
Ag	ND	<0.1
Cd	ND	<26
Hg	ND	<11

Spectrum



Notes

info: Blank 11

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 69

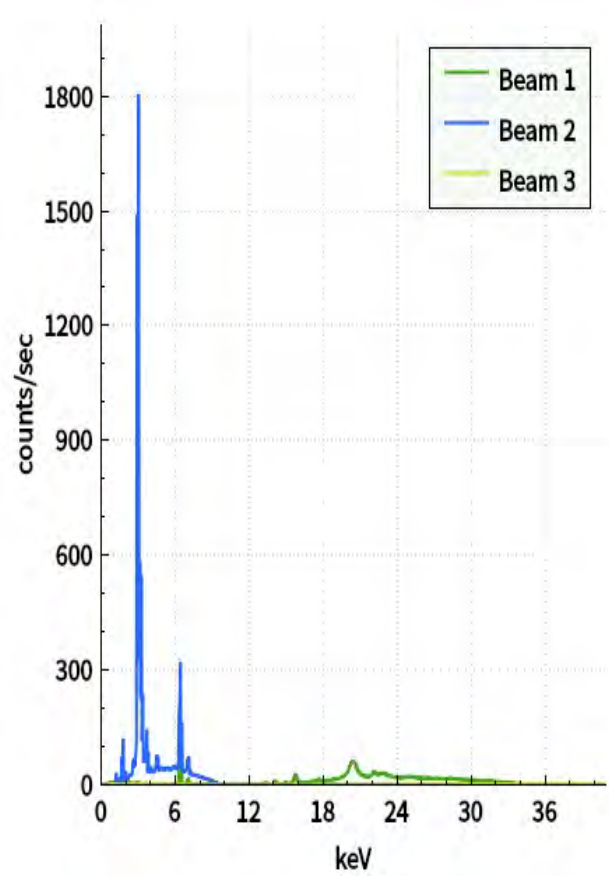
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	66	25
Pb	21	13
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<18
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<90
Hg	ND	<46

Spectrum



Notes

info: E37

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)  
Daily ID : 70

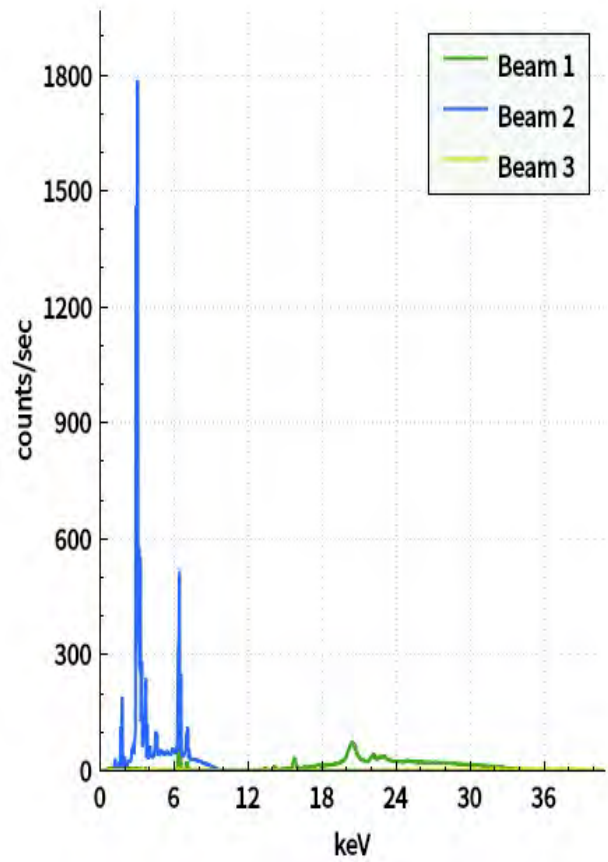
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	120	34
Pb	22	11
El	PPM	+/- 3σ
Cr	ND	<200
As	ND	<17
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<80
Hg	ND	<38

Spectrum



Notes

info: E38

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 71

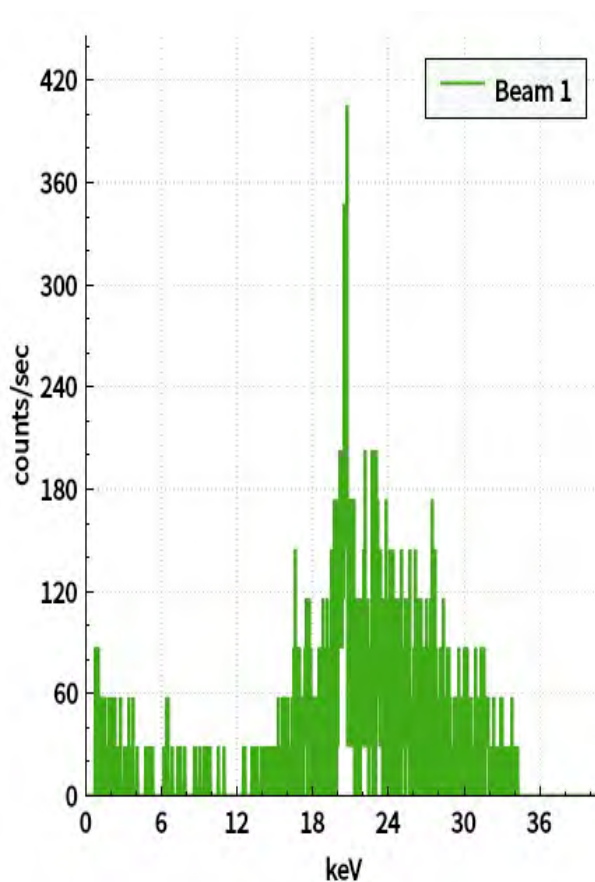
Chemistry

Elapsed Time : 0.0766 s

Elapsed time: 0.1s

El	PPM	+/- 3σ
Cr	ND	<1300
As	ND	<120
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<610
Ba	ND	<62000
Hg	ND	<130
Pb	ND	<180

Spectrum



Notes

info: E38

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 72

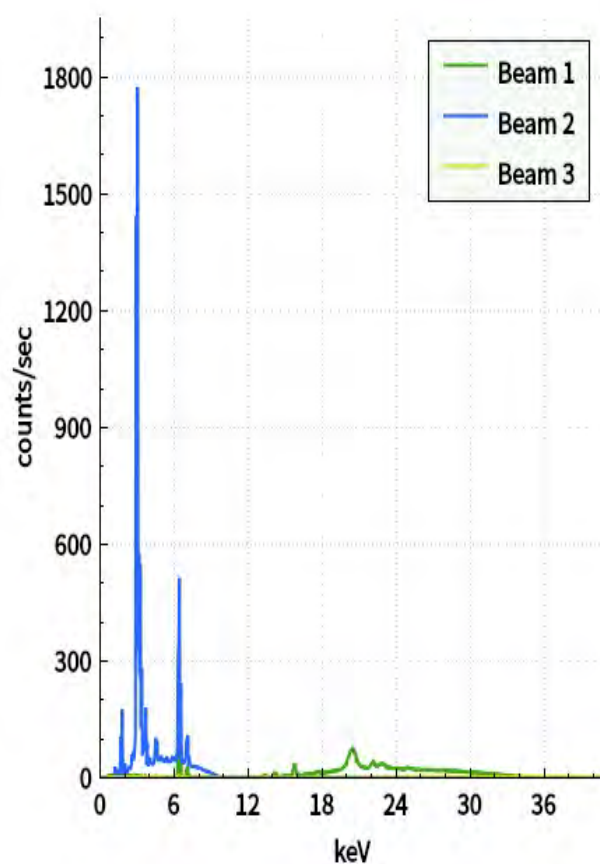
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	94	29
Pb	31	12
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<18
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<78
Hg	ND	<40

Spectrum



Notes

info: E39

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 73

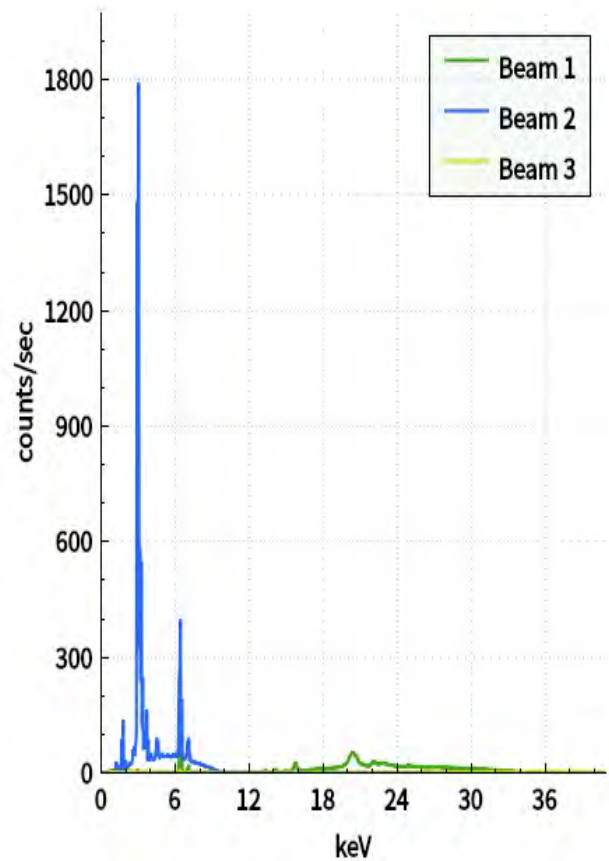
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	101	30
Pb	31	15
El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<22
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<96
Hg	ND	<50

Spectrum



Notes

info: E40

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 74

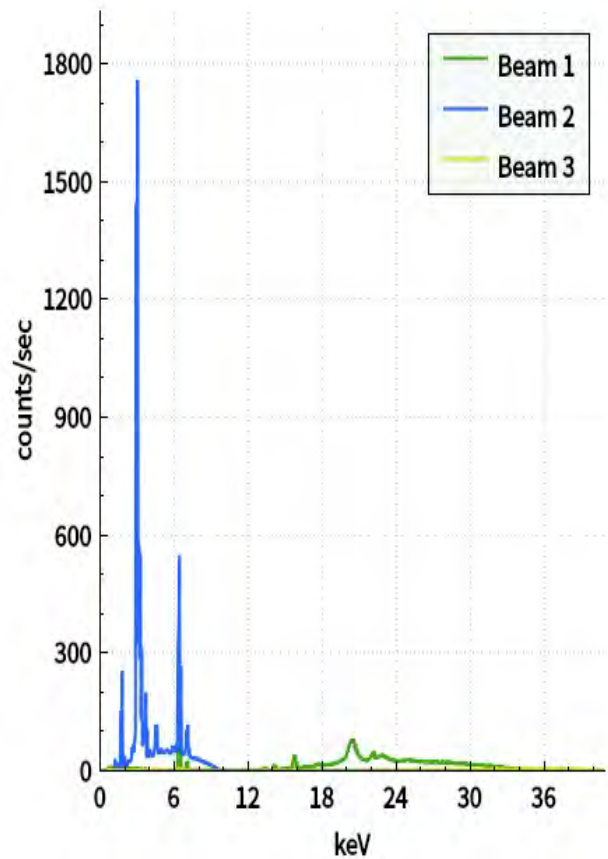
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	142	36
Pb	51	13
El	PPM	+/- 3σ
Cr	ND	<180
As	ND	<19
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<77
Hg	ND	<41

Spectrum



Notes

info: E41

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 75

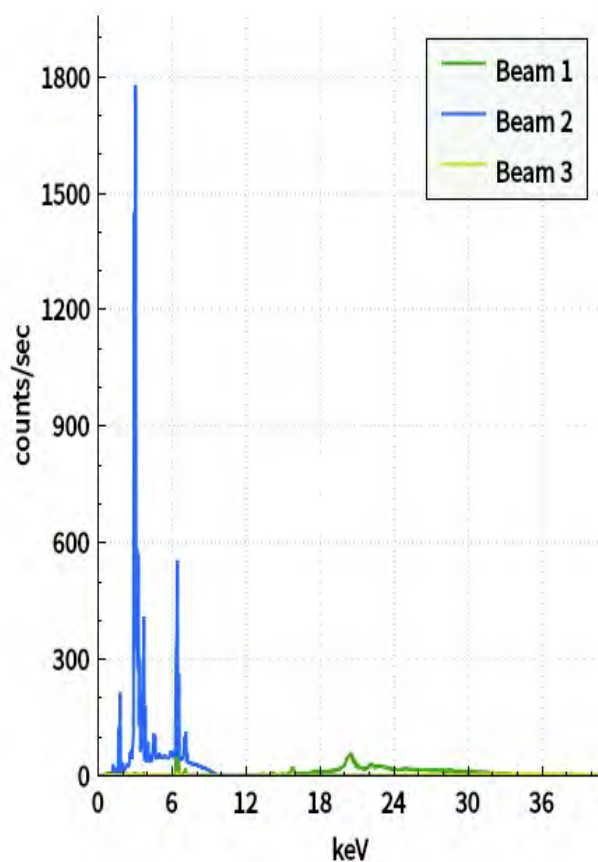
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	131	38
Pb	50	17
El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<24
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<97
Hg	ND	<55

Spectrum



Notes

info: E42

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 76

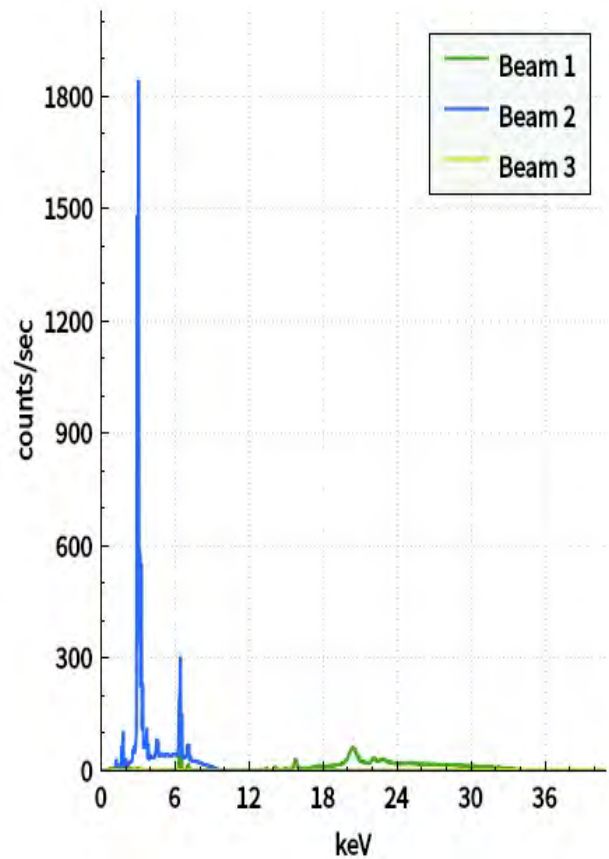
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	69	24
Pb	29	14
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<20
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<91
Hg	ND	<45

Spectrum



Notes

info: E43

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 77

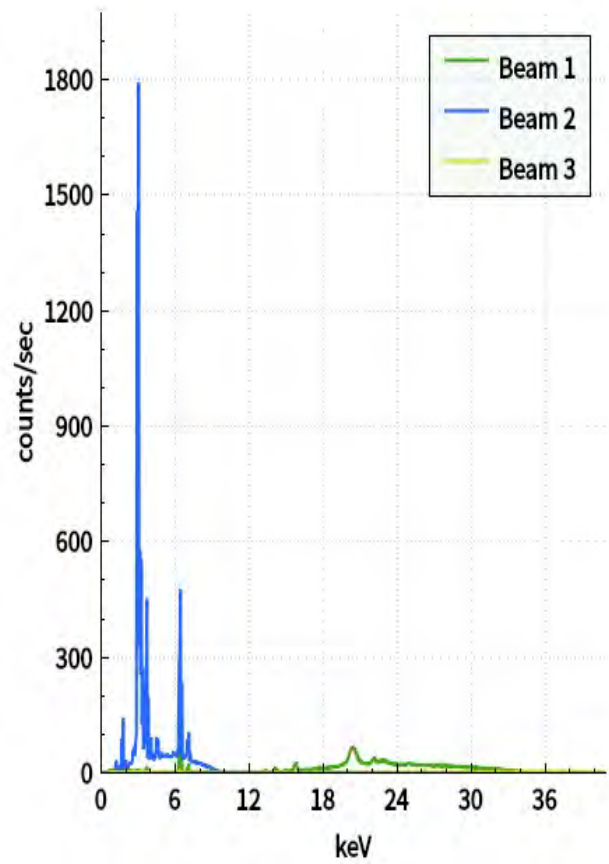
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	60	31
Pb	31	13
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<19
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<88
Hg	ND	<47

Spectrum



Notes

info: E44

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Cal Check  
Daily ID : 78C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 83278

Slope : 0.0199995

Offset : -0.0149676

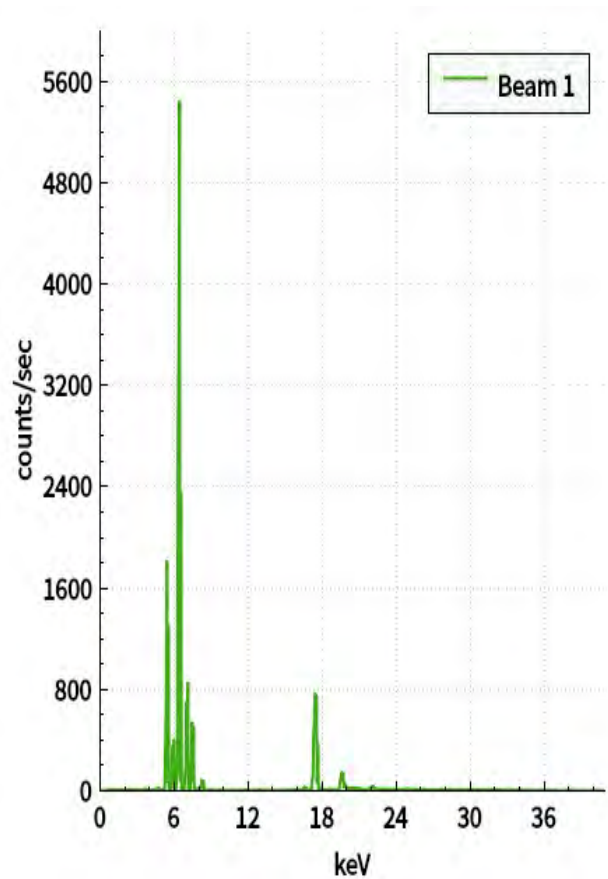
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Cal Check  
Daily ID : 1C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 86910

Slope : 0.0200026

Offset : -0.0151887

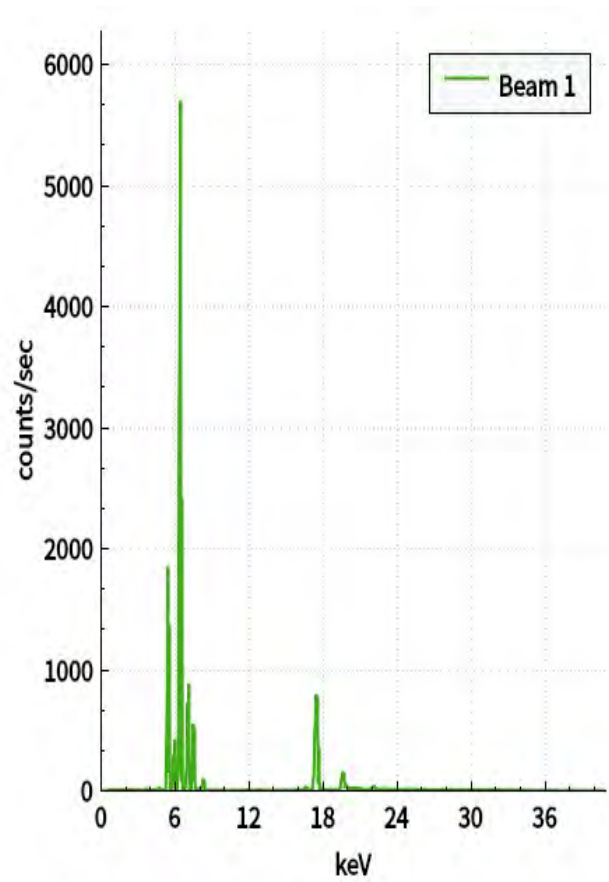
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 2

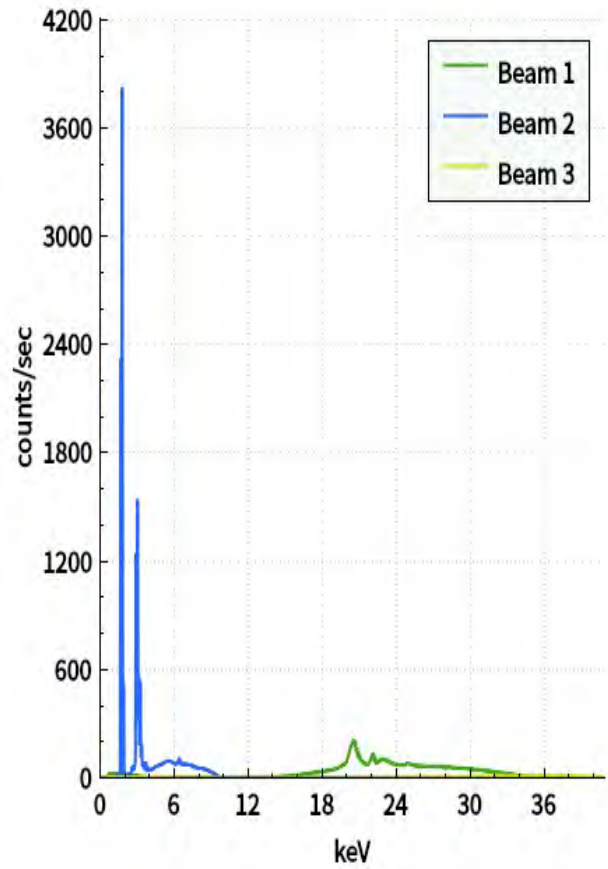
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	4	3
Ba	68	68
El	PPM	+/- 3σ
Cr	ND	<96
As	ND	<6
Ag	ND	<0.1
Cd	ND	<54
Hg	ND	<20
Pb	ND	<8

Spectrum



Notes

info: Blank 12

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 3

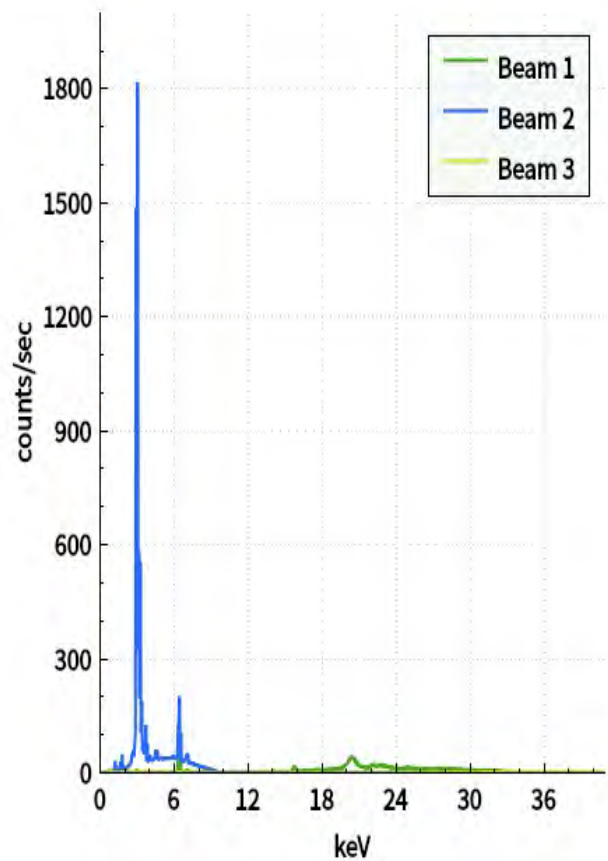
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	36	18
Pb	89	24
El	PPM	+/- 3σ
Cr	ND	<300
As	ND	<33
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<62

Spectrum



Notes

info: E45

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 4

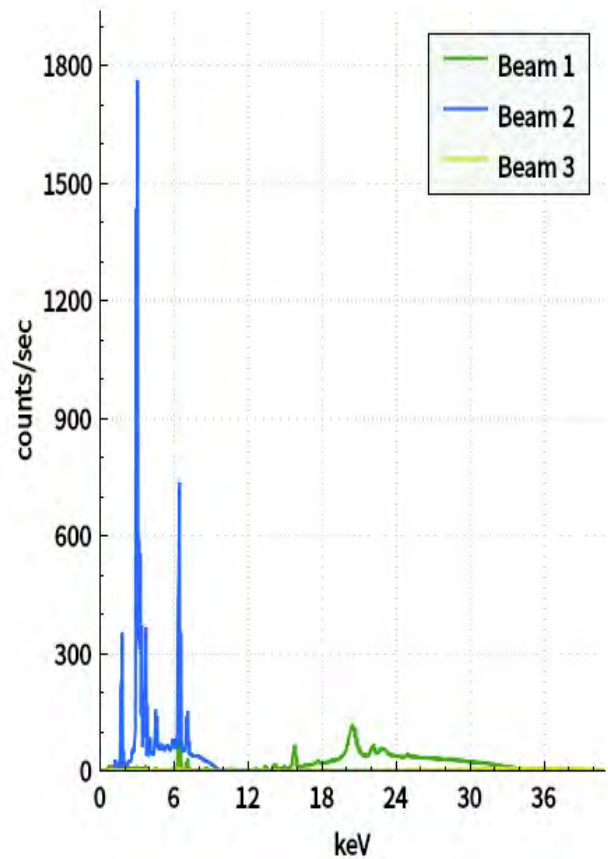
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	164	39
Pb	65	11
El	PPM	+/- 3σ
Cr	ND	<130
As	ND	<17
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<63
Hg	ND	<28

Spectrum



Notes

info: E46

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 5

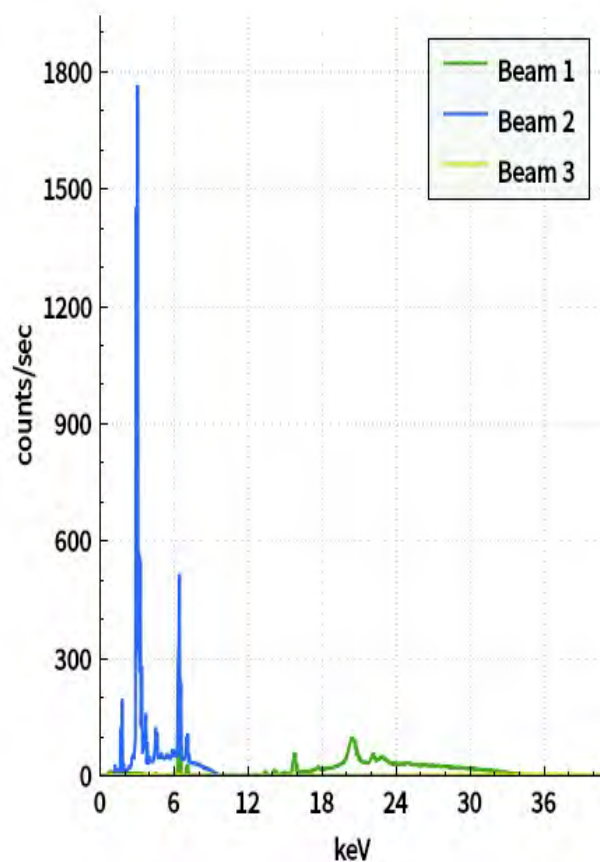
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	116	30
Pb	40	11
El	PPM	+/- 3σ
Cr	ND	<150
As	ND	<16
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<70
Hg	ND	<30

Spectrum



Notes

info: E47

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 6

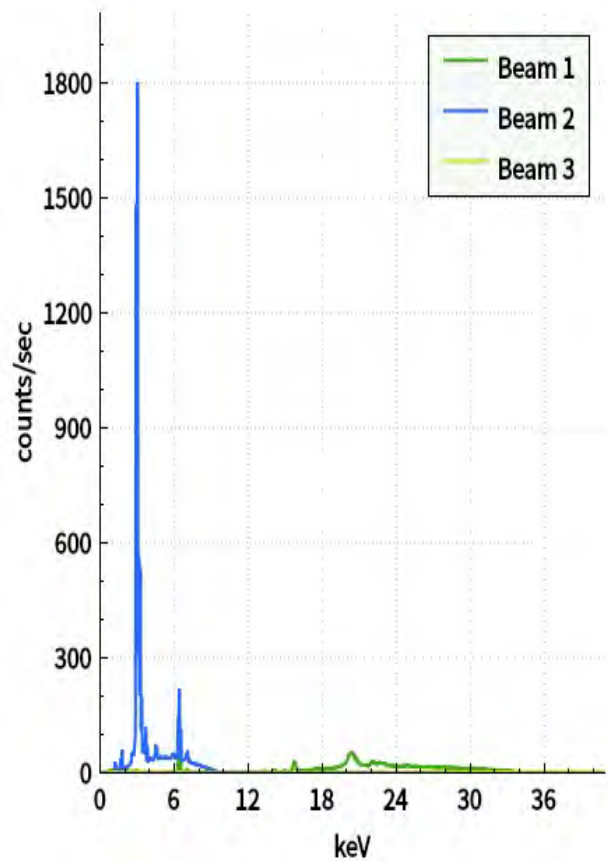
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	49	21
Pb	28	15
El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<22
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<49

Spectrum



Notes

info: Test E47S

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 7

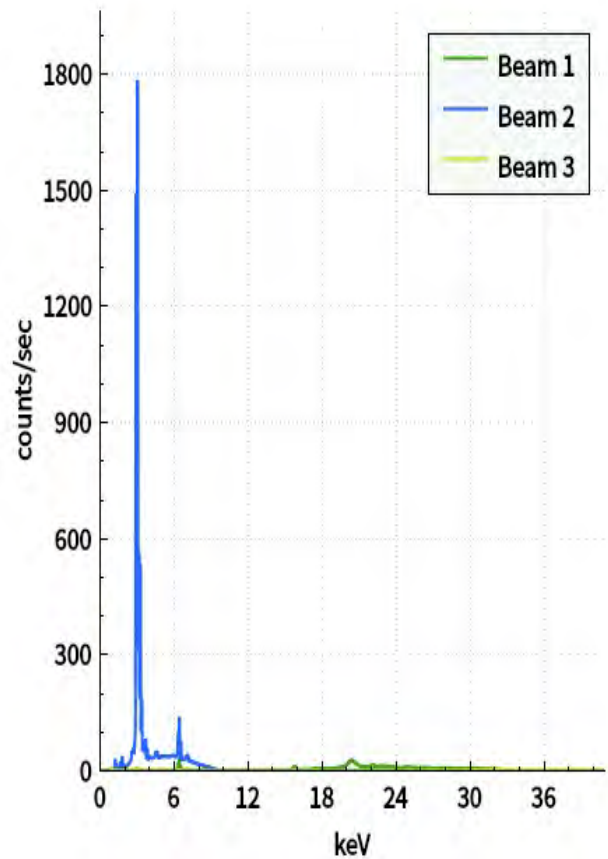
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	38	18
Pb	31	27
El	PPM	+/- 3σ
Cr	ND	<440
As	ND	<40
Se	ND	<24
Ag	ND	<0.1
Cd	ND	<160
Hg	ND	<90

Spectrum



Notes

info: E48

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 8

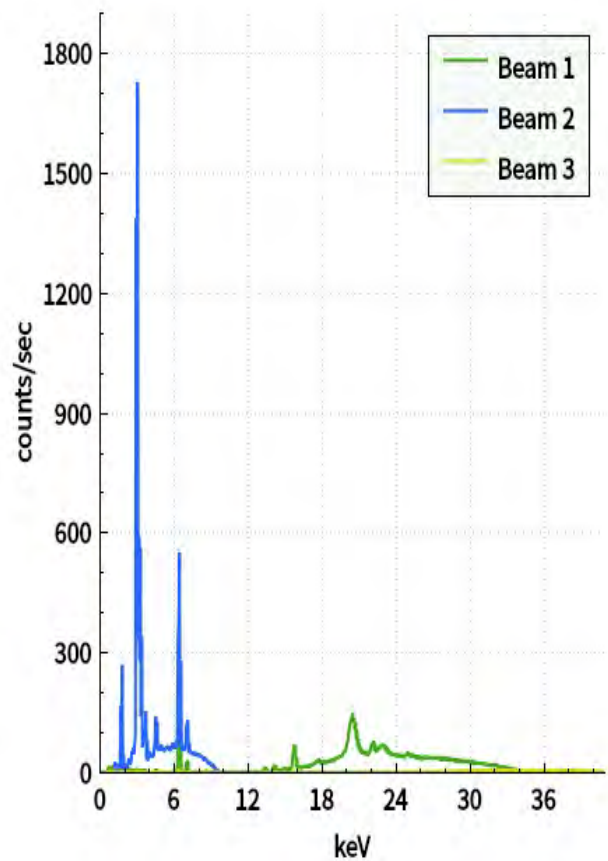
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	8	6
Ba	165	38
Pb	16	7
El	PPM	+/- 3σ
Cr	ND	<120
Se	ND	<6
Ag	ND	<0.1
Cd	ND	<57
Hg	ND	<23

Spectrum



Notes

info: E49

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 9

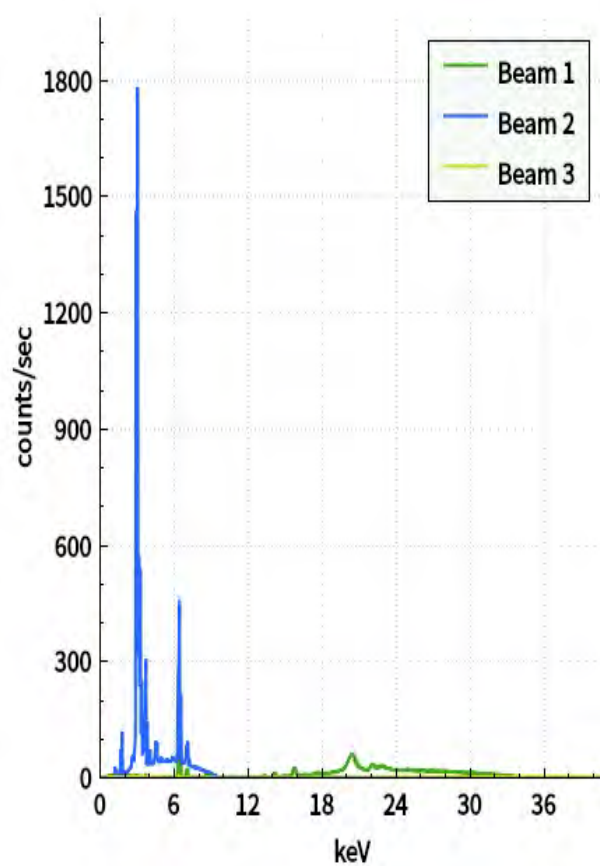
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	115	32
Pb	67	17
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<25
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<89
Hg	ND	<43

Spectrum



Notes

info: E50

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 10

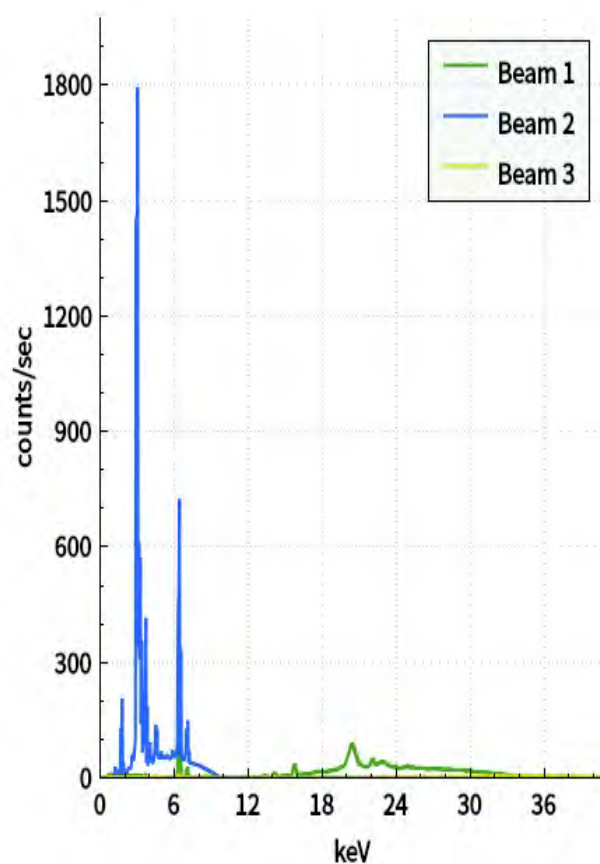
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	144	38
Pb	38	12
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<18
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<74
Hg	ND	<38

Spectrum



Notes

info: E51

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 11

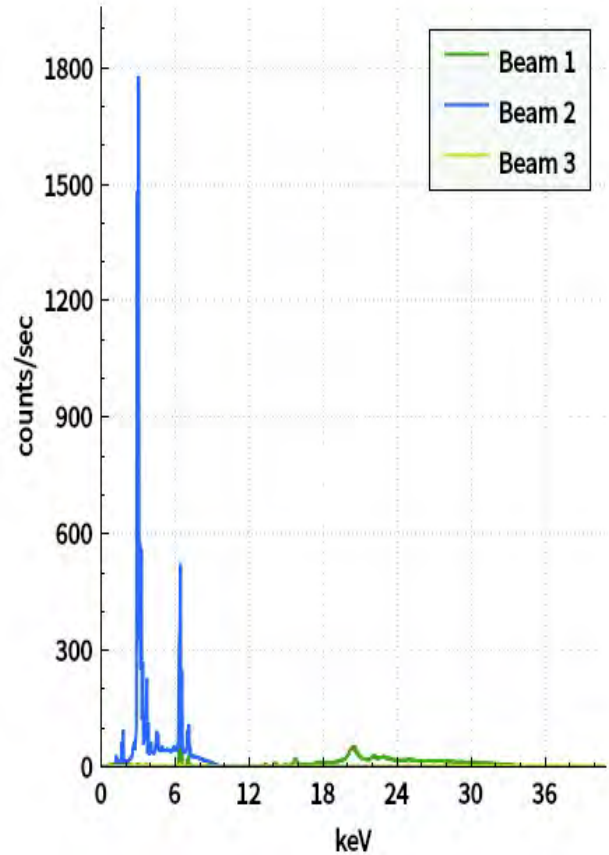
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	108	32
Pb	52	18
El	PPM	+/- 3σ
Cr	ND	<260
As	ND	<25
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<97
Hg	ND	<53

Spectrum



Notes

info: E52

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 12

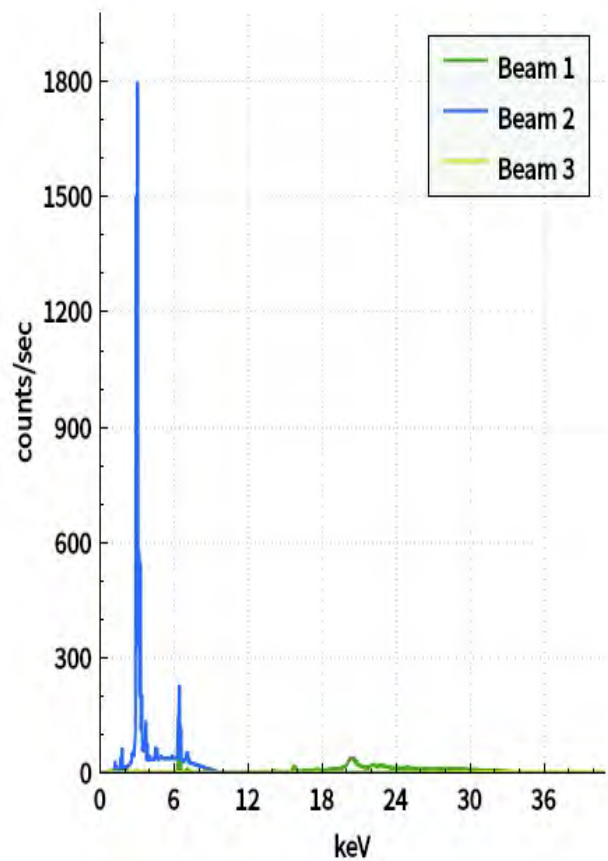
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	53	22
Pb	90	25
El	PPM	+/- 3σ
Cr	ND	<300
As	ND	<39
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<69

Spectrum



Notes

info: E53

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 13

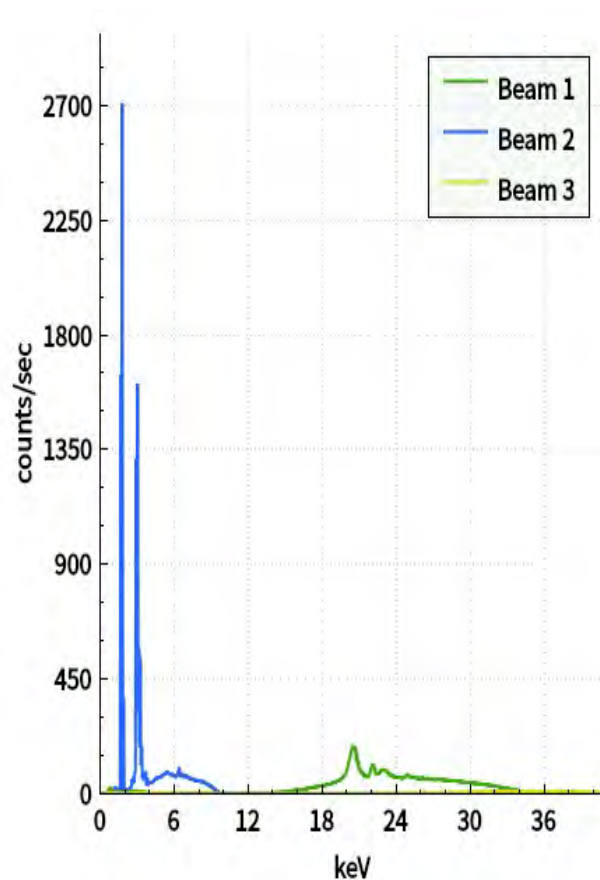
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Cr	ND	<97
As	ND	<6
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<55
Ba	ND	<1500
Hg	ND	<22
Pb	ND	<8

Spectrum



Notes

info: Blank 13

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 14

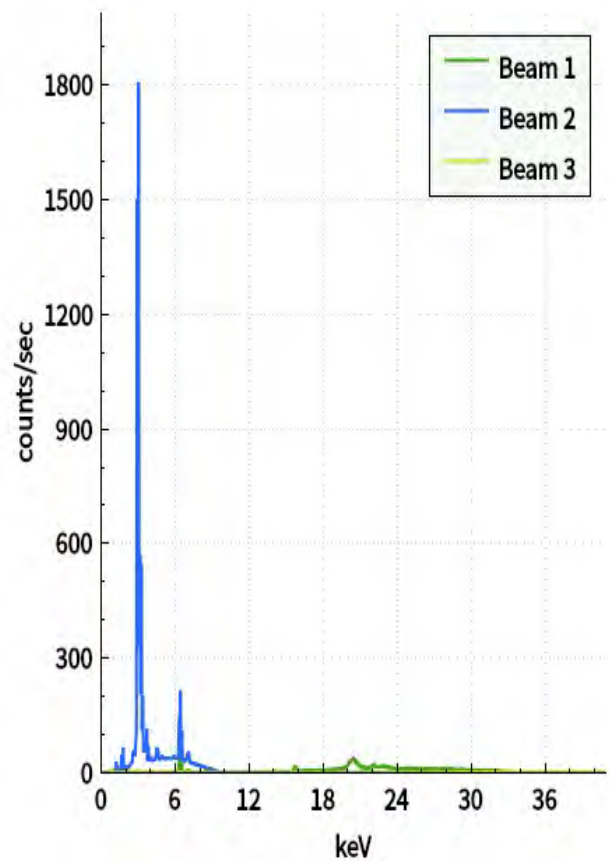
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ag	3	2
Ba	57	22
Pb	59	24
El	PPM	+/- 3σ
Cr	ND	<300
As	ND	<35
Se	ND	<18
Cd	ND	<130
Hg	ND	<74

Spectrum



Notes

info: E54

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 15

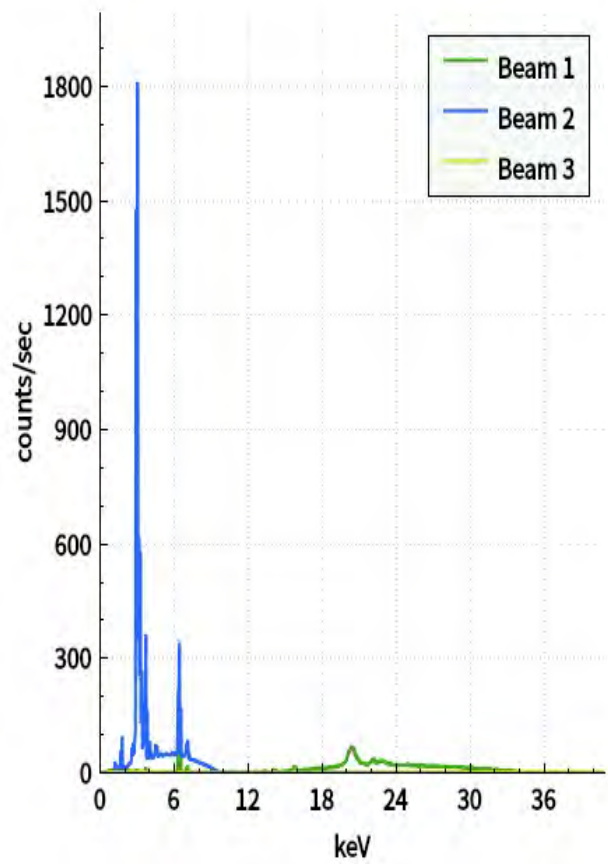
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	70	26
Pb	90	18
El	PPM	+/- 3σ
Cr	ND	<190
As	ND	<26
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<86
Hg	ND	<40

Spectrum



Notes

info: E55

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 16

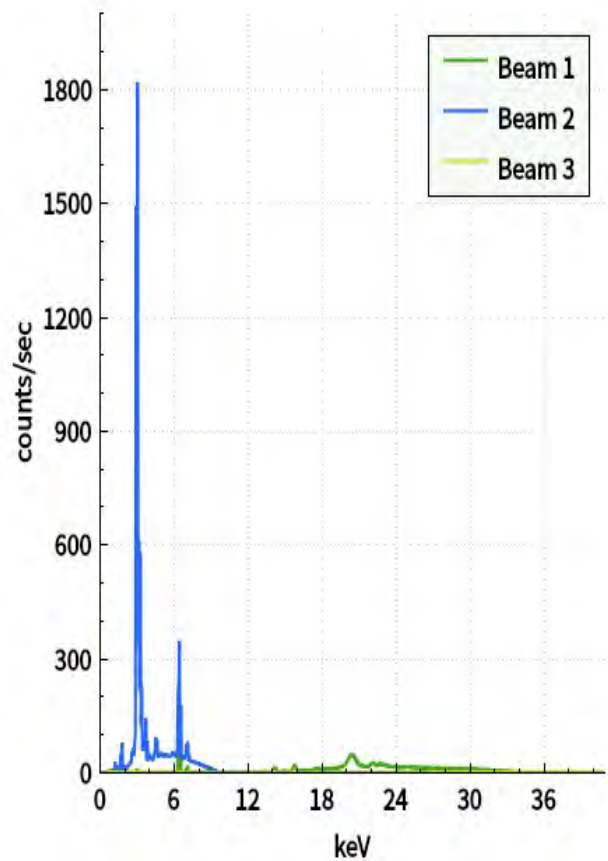
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ag	3	3
Ba	112	27
Pb	114	23
El	PPM	+/- 3σ
Cr	ND	<290
As	ND	<35
Se	ND	<14
Cd	ND	<100
Hg	ND	<55

Spectrum



Notes

info: E56

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 17

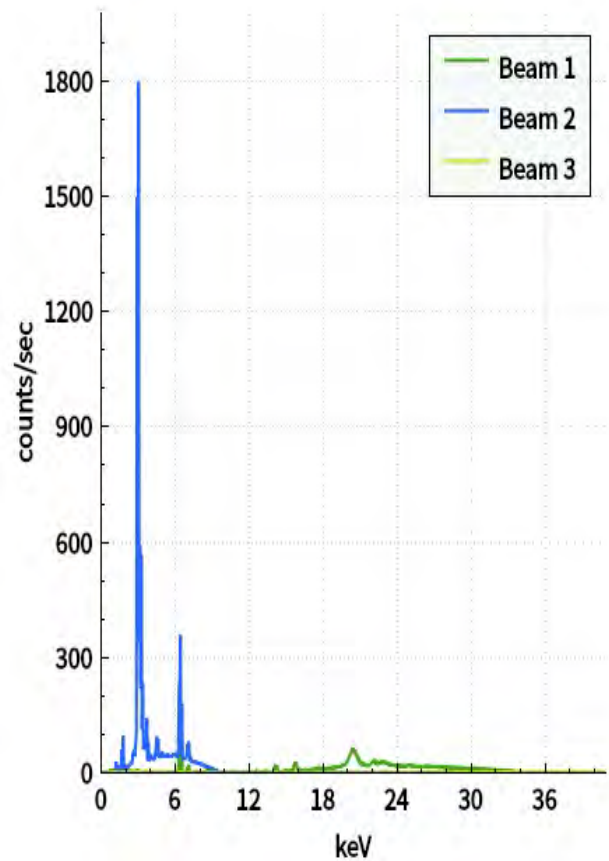
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	80	23
Pb	123	21
El	PPM	+/- 3σ
Cr	ND	<220
As	ND	<31
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<89
Hg	ND	<45

Spectrum



Notes

info:

Dup. 10

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 18

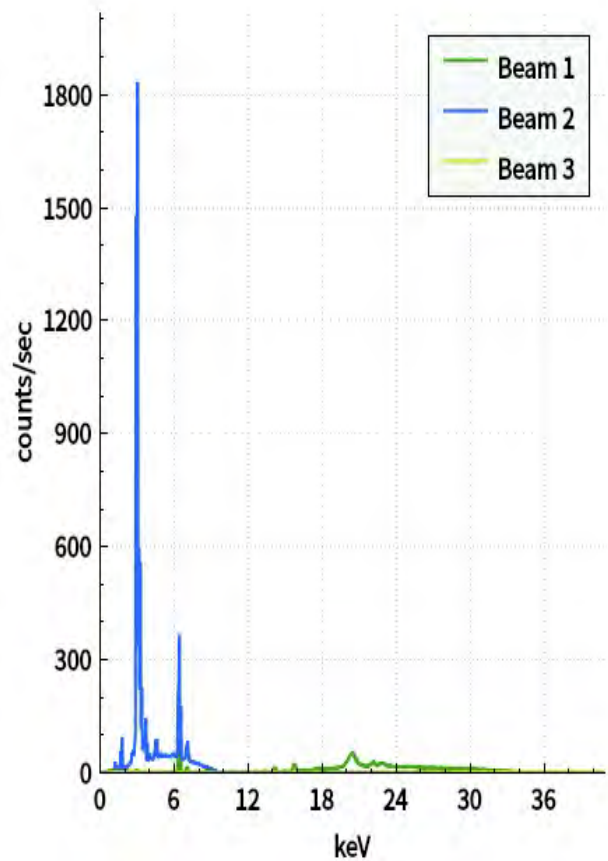
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ag	4	3
Ba	83	25
Pb	128	24
El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<35
Se	ND	<13
Cd	ND	<100
Hg	ND	<55

Spectrum



Notes

info:

Dup. 11

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 19

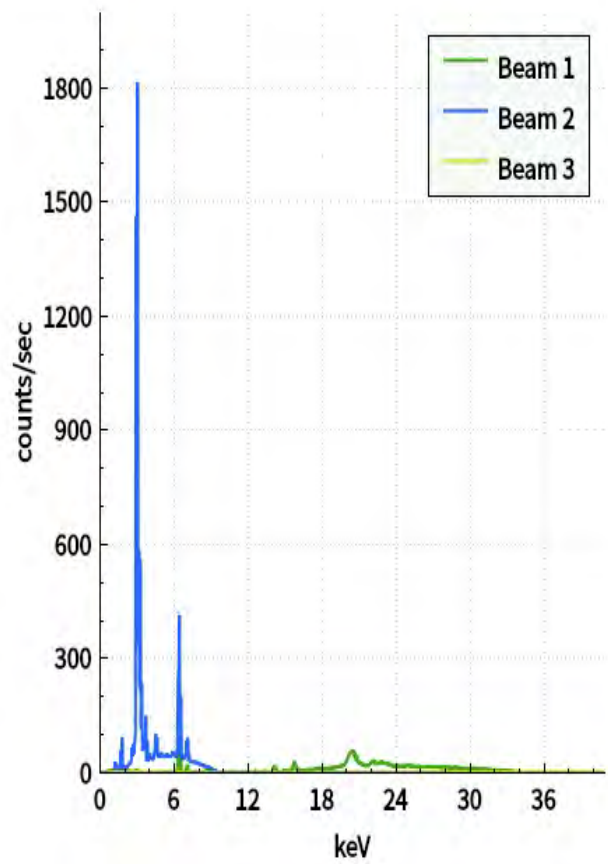
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	86	26
Pb	116	21
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<31
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<90
Hg	ND	<51

Spectrum



Notes

info:

Dup. 12

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 20

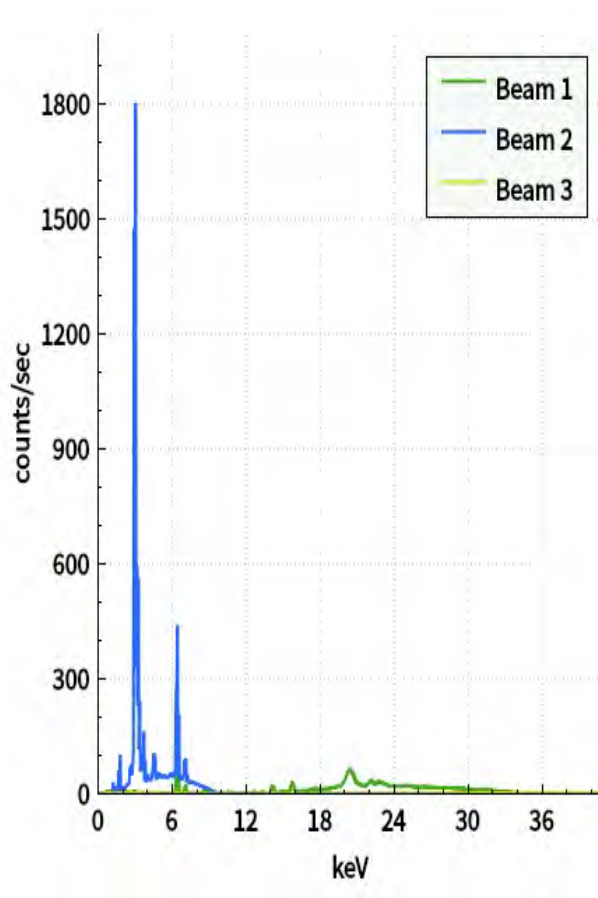
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	99	25
Pb	127	20
El	PPM	+/- 3σ
Cr	ND	<220
As	ND	<30
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<85
Hg	ND	<46

Spectrum



Notes

info: Dup. 13

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 21

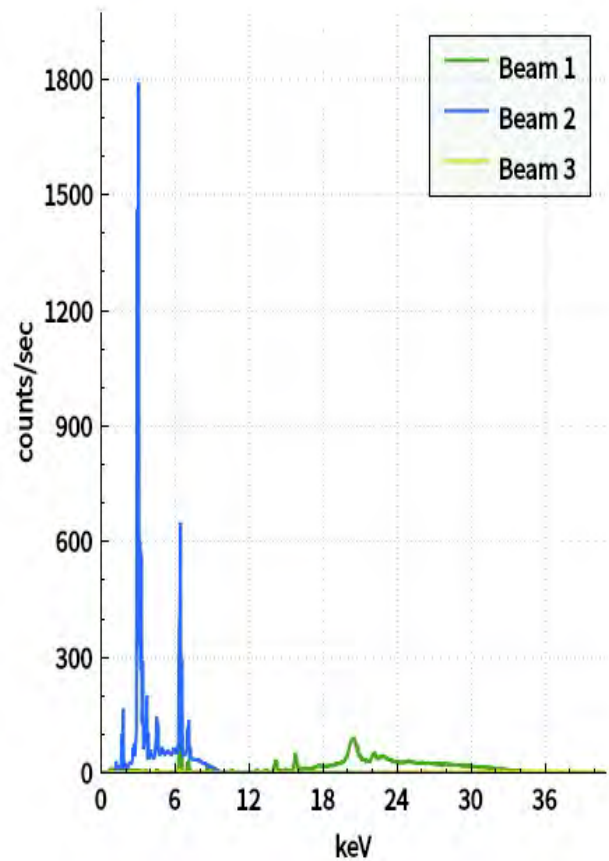
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	158	32
Pb	131	17
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<24
Se	ND	<8
Ag	ND	<0.1
Cd	ND	<68
Hg	ND	<34

Spectrum



Notes

info:

Dup. 14

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 22

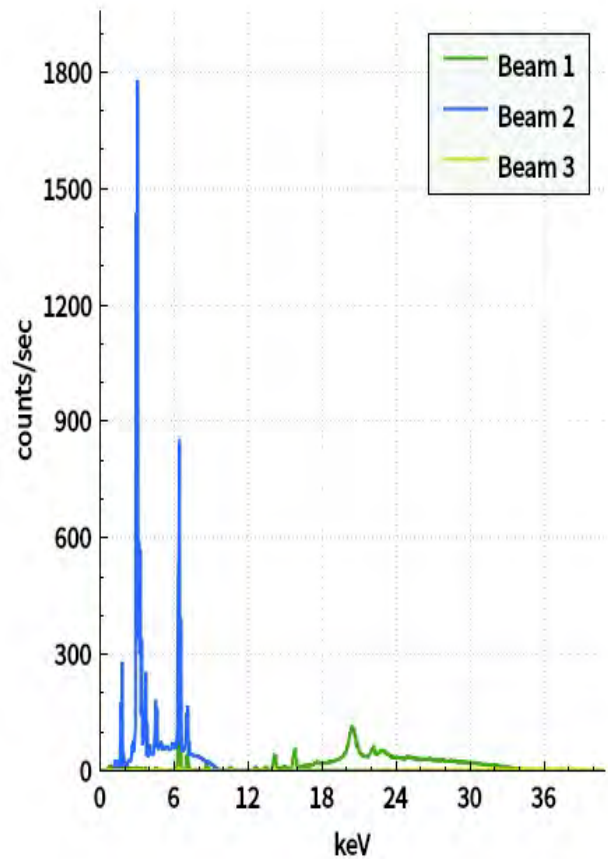
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	15	14
Ba	161	36
Pb	140	16
El	PPM	+/- 3σ
Cr	ND	<140
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<62
Hg	ND	<30

Spectrum



Notes

info: Dup. 15

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 23

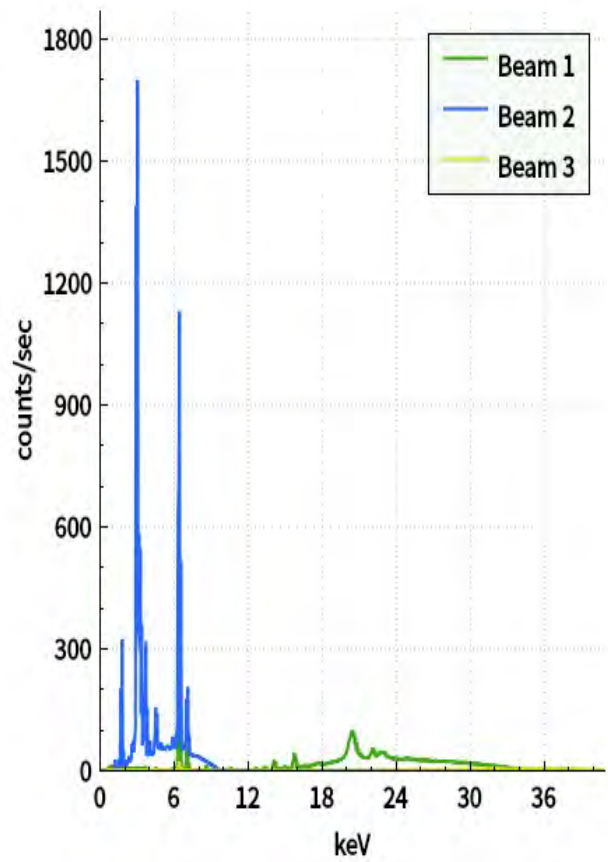
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	172	44
Pb	115	16
El	PPM	+/- 3σ
Cr	ND	<160
As	ND	<21
Se	ND	<8
Ag	ND	<0.1
Cd	ND	<65
Hg	ND	<33

Spectrum



Notes

info: E57

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 24

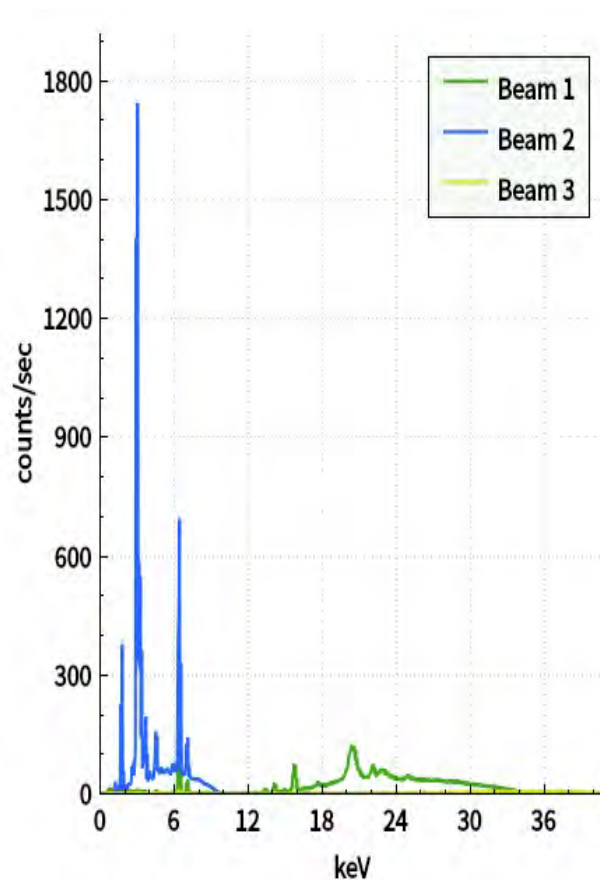
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	162	42
Pb	24	8
El	PPM	+/- 3σ
Cr	ND	<140
As	ND	<13
Se	ND	<6
Ag	ND	<0.1
Cd	ND	<61
Hg	ND	<28

Spectrum



Notes

info: E58

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 25

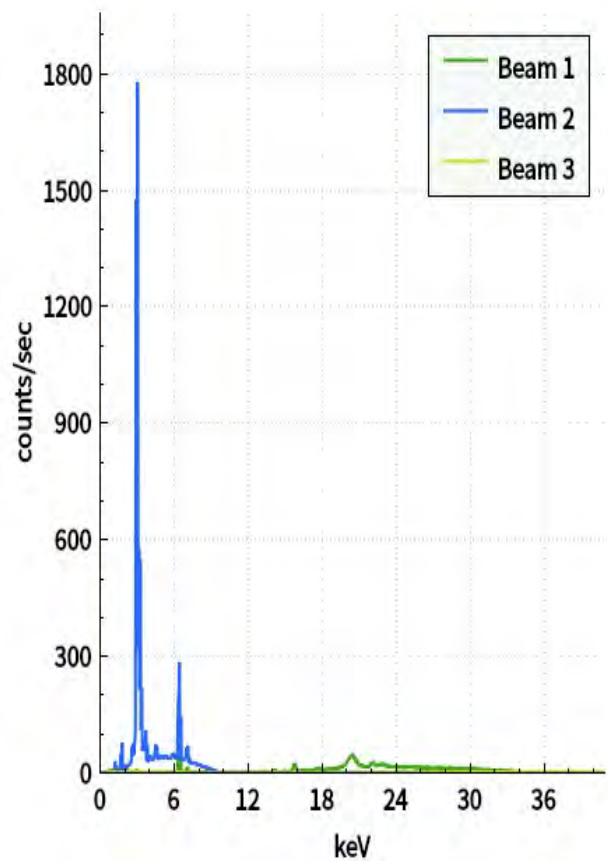
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	10	8
Ba	58	24
Pb	36	18
El	PPM	+/- 3σ
Cr	ND	<280
As	ND	<27
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<60

Spectrum



Notes

info: E59

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 26

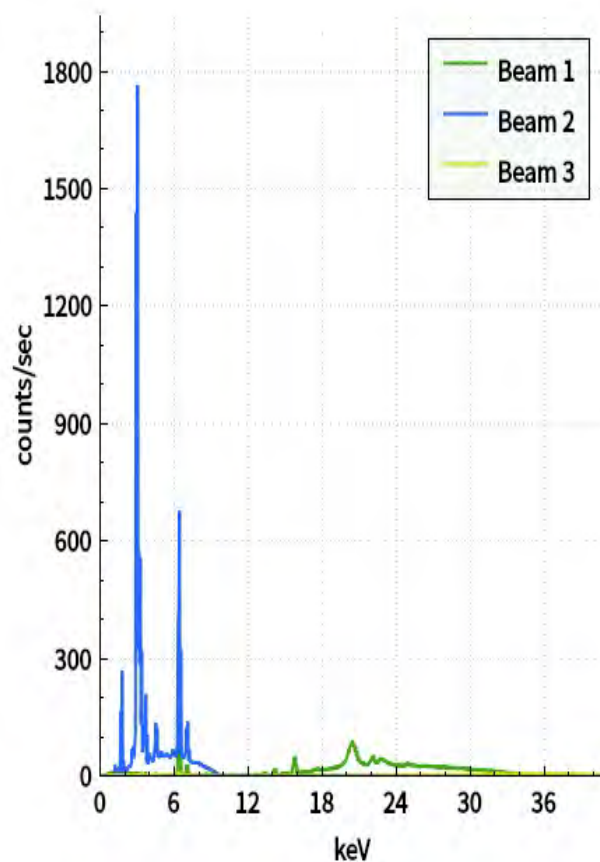
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	156	37
Pb	55	13
El	PPM	+/- 3σ
Cr	ND	<160
As	ND	<19
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<73
Hg	ND	<34

Spectrum



Notes

info: E60

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 27

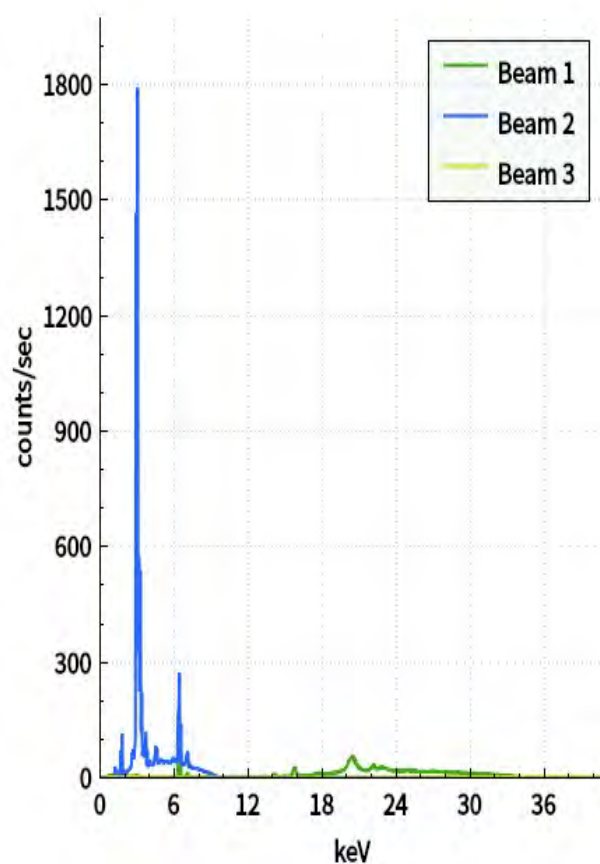
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	85	25
Pb	41	16
El	PPM	+/- 3σ
Cr	ND	<220
As	ND	<24
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<57

Spectrum



Notes

info: E61

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 28

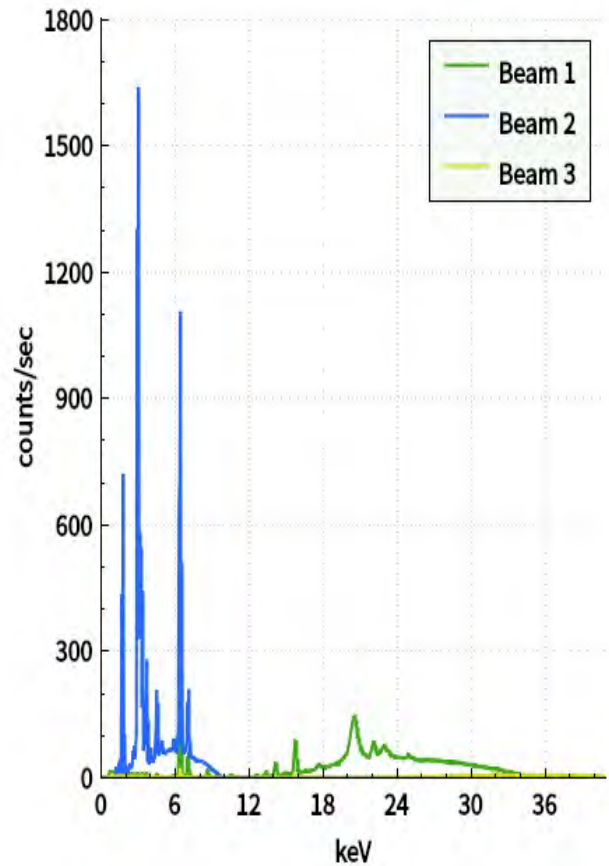
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	256	52
Pb	73	11
El	PPM	+/- 3σ
Cr	ND	<130
As	ND	<15
Se	ND	<6
Ag	ND	<0.1
Cd	ND	<57
Hg	ND	<25

Spectrum



Notes

info: E62

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 29

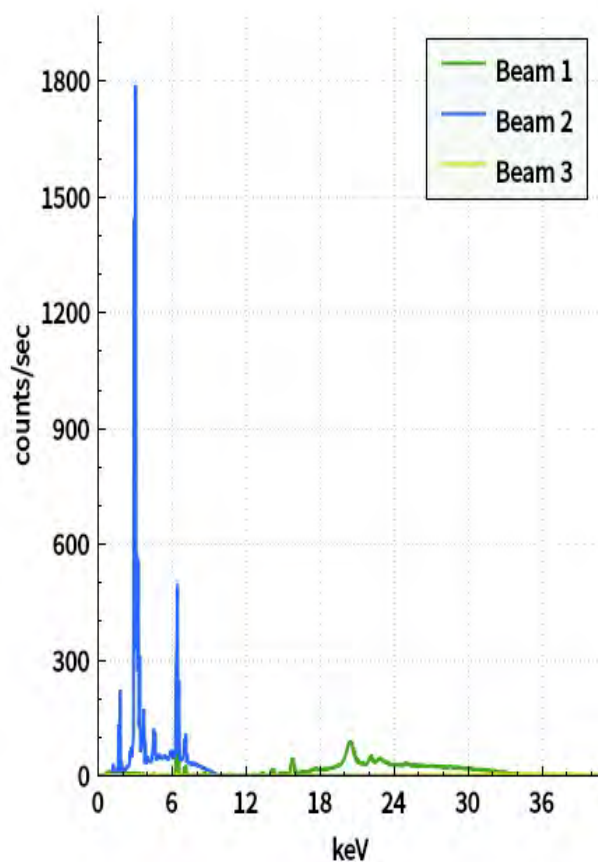
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	5	5
Ba	146	33
Pb	61	13
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<20
Ag	ND	<0.1
Cd	ND	<73
Hg	ND	<34

Spectrum



Notes

info: E63

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 30

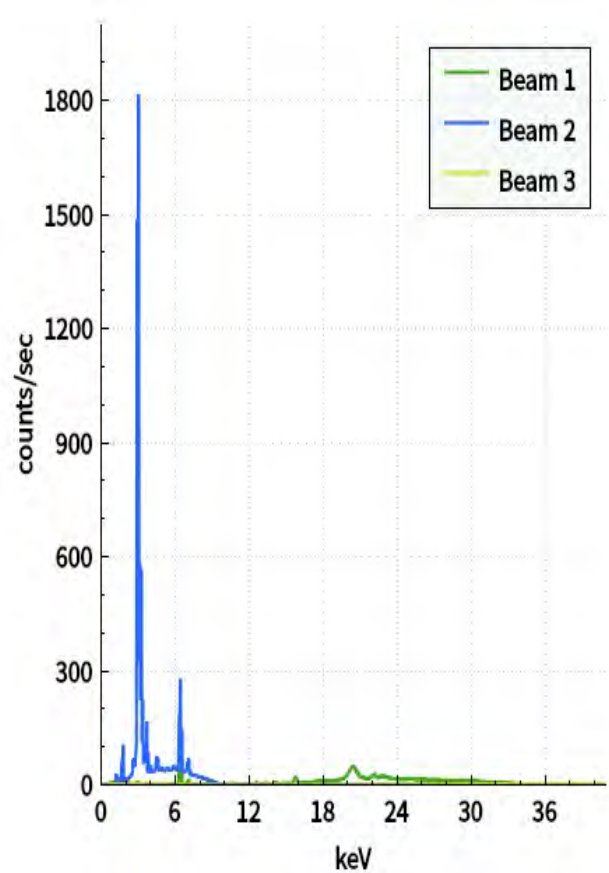
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	59	24
Pb	208	30
El	PPM	+/- 3σ
Cr	ND	<280
As	ND	<43
Se	ND	<15
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<64

Spectrum



Notes

info: E64

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 31

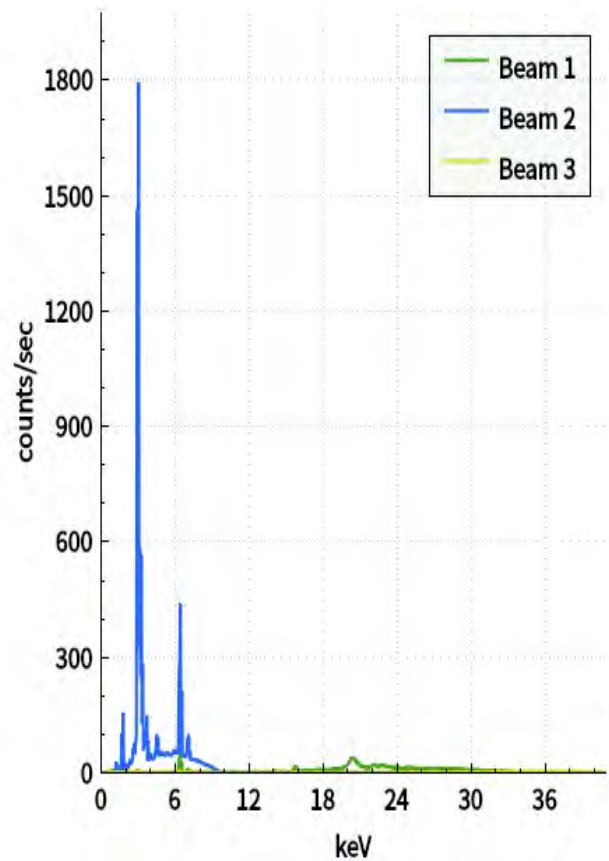
Chemistry

Elapsed Time : 34.2 s

Elapsed time: 34.2s

El	PPM	+/- 3σ
Ba	196	78
Pb	189	34
El	PPM	+/- 3σ
Cr	ND	<310
As	ND	<48
Se	ND	<17
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<77

Spectrum



Notes

info: E65

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 32

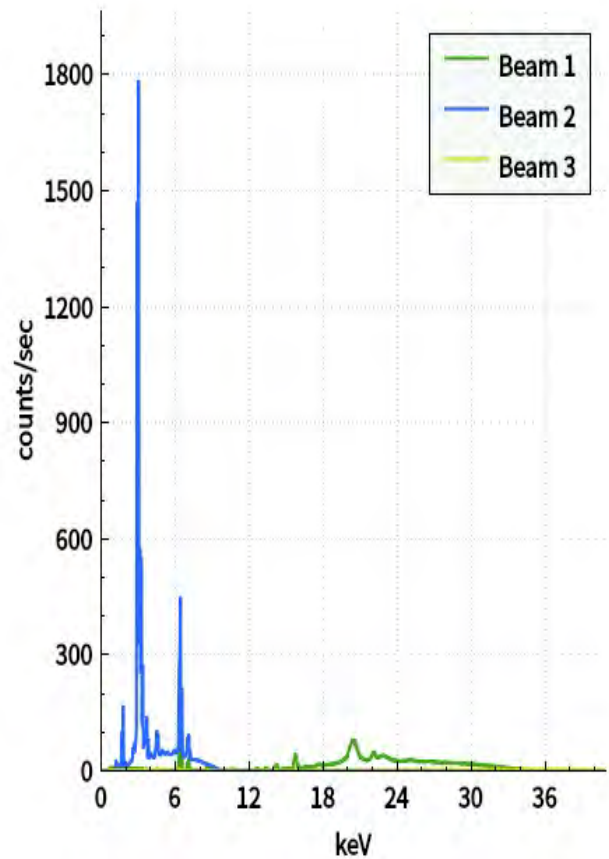
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	128	31
Pb	131	18
El	PPM	+/- 3σ
Cr	ND	<190
As	ND	<26
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<75
Hg	ND	<38

Spectrum



Notes

info: E65

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 33

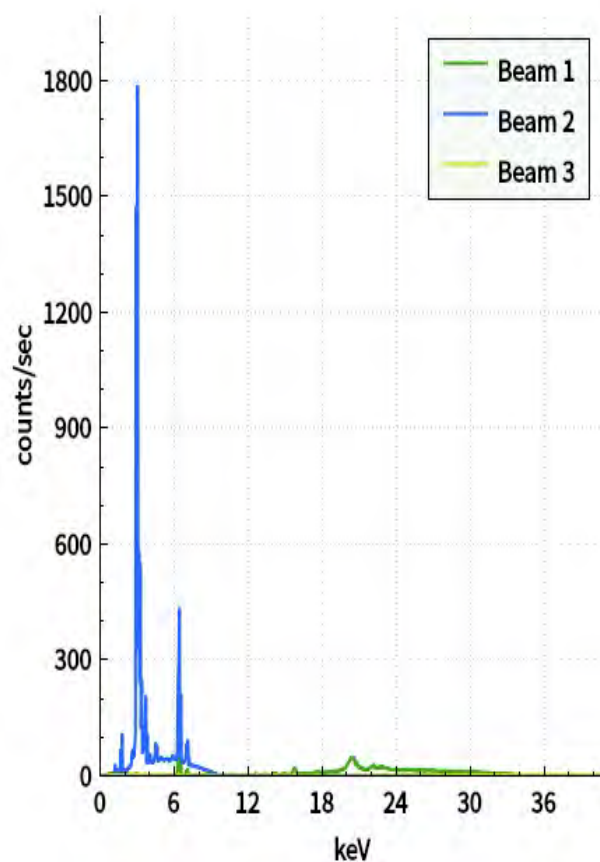
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ag	3	3
Ba	105	29
Pb	183	29
El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<41
Se	ND	<14
Cd	ND	<100
Hg	ND	<61

Spectrum



Notes

info: E66

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 34

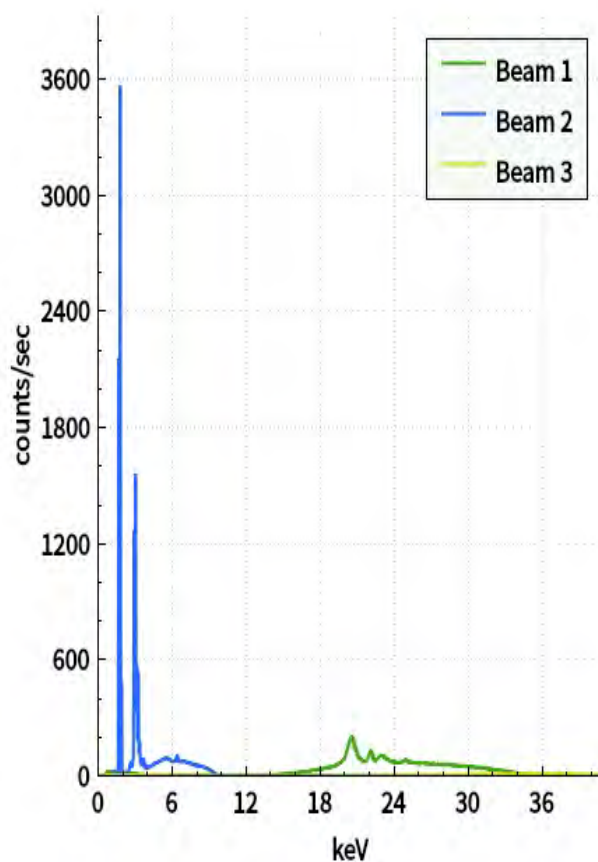
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	4	3
El	PPM	+/- 3σ
Cr	ND	<96
As	ND	<6
Ag	ND	<0.1
Cd	ND	<54
Ba	ND	<1400
Hg	ND	<19
Pb	ND	<8

Spectrum



Notes

info: Blank 14

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 35

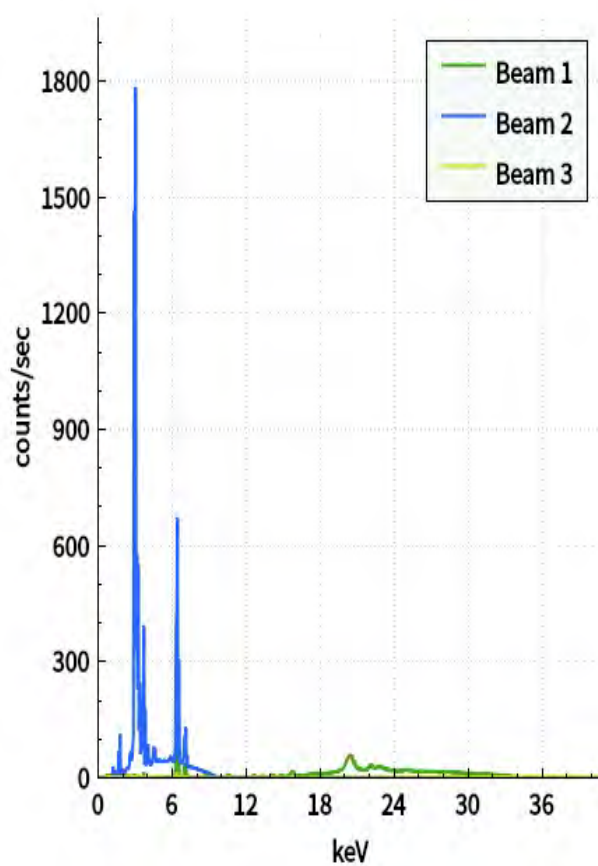
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	39	25
Ba	86	31
Pb	227	28
El	PPM	+/- 3σ
Cr	ND	<230
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<87
Hg	ND	<47

Spectrum



Notes

info: E67

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Cal Check  
Daily ID : 36C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 82085

Slope : 0.02

Offset : -0.0149037

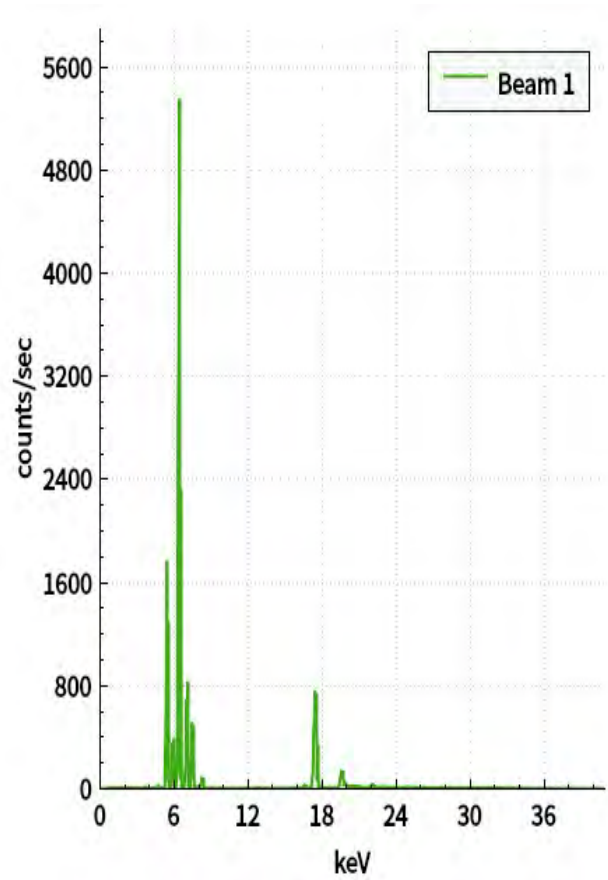
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 37

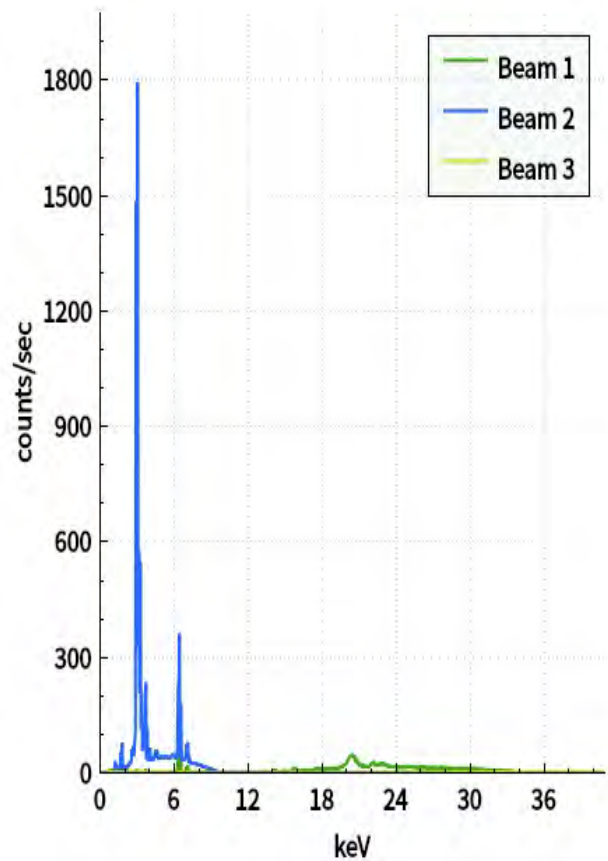
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	57	23
Pb	88	22
El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<31
Se	ND	<14
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<58

Spectrum



Notes

info: E68

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 38

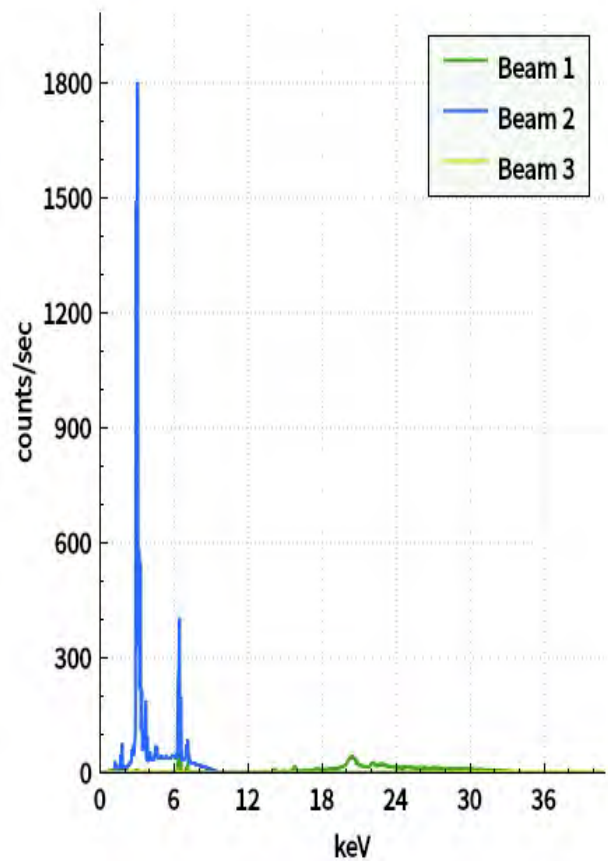
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	62	24
Pb	110	25
El	PPM	+/- 3σ
Cr	ND	<280
As	ND	<36
Se	ND	<15
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<63

Spectrum



Notes

info: E69

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 39

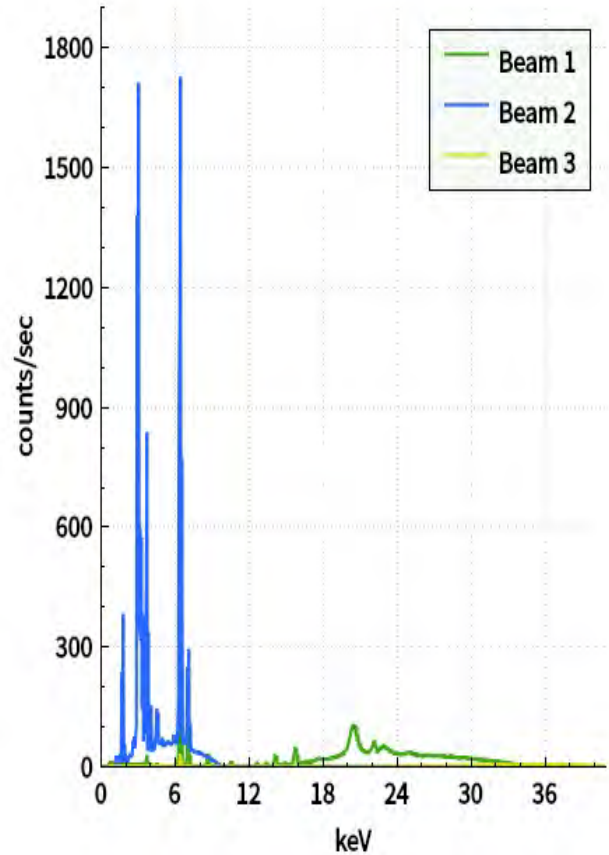
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	32	15
Ba	199	50
Pb	145	16
El	PPM	+/- 3σ
Cr	ND	<140
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<58
Hg	ND	<30

Spectrum



Notes

info: E70

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Cal Check  
Daily ID : 40C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 83608

Slope : 0.0200012

Offset : -0.0150525

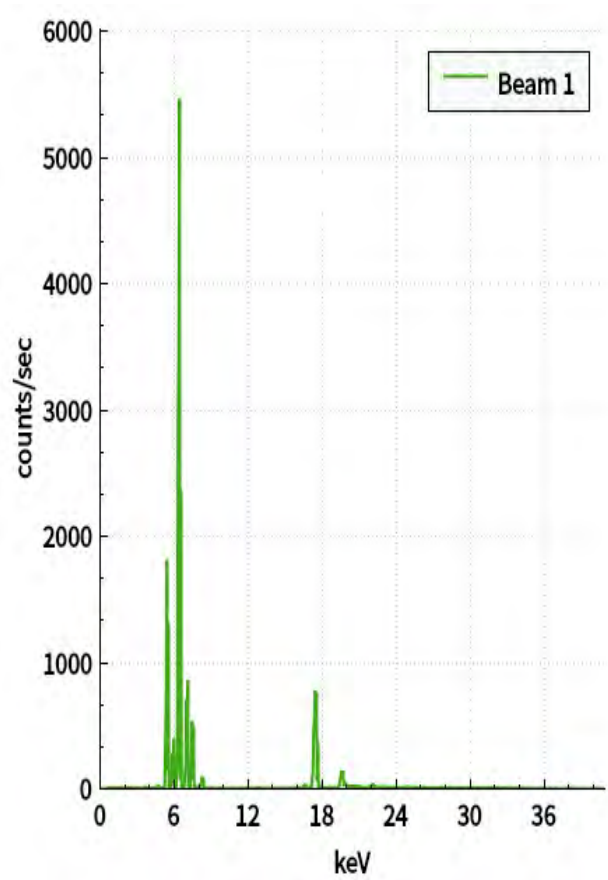
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 41

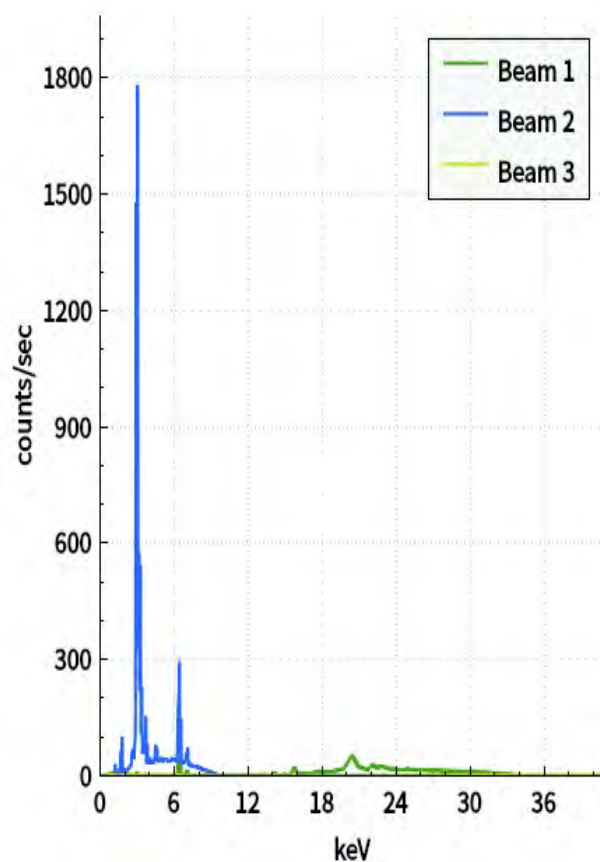
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	64	23
Pb	27	15
El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<23
Se	ND	<14
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<57

Spectrum



Notes

info: E71

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

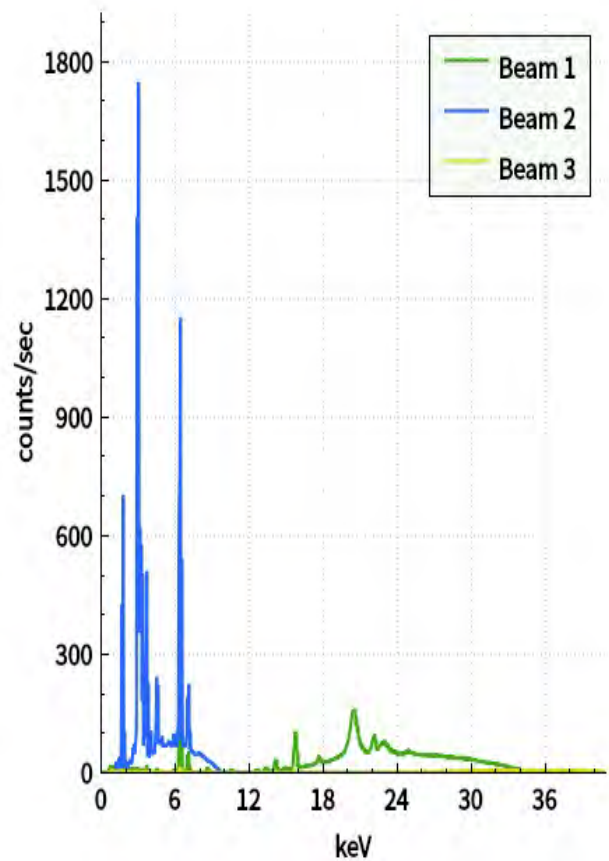
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	210	49
Pb	85	11
El	PPM	+/- 3σ
Cr	ND	<120
As	ND	<16
Se	ND	<6
Ag	ND	<0.1
Cd	ND	<53
Hg	ND	<23

Spectrum



Notes

info: E72S

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

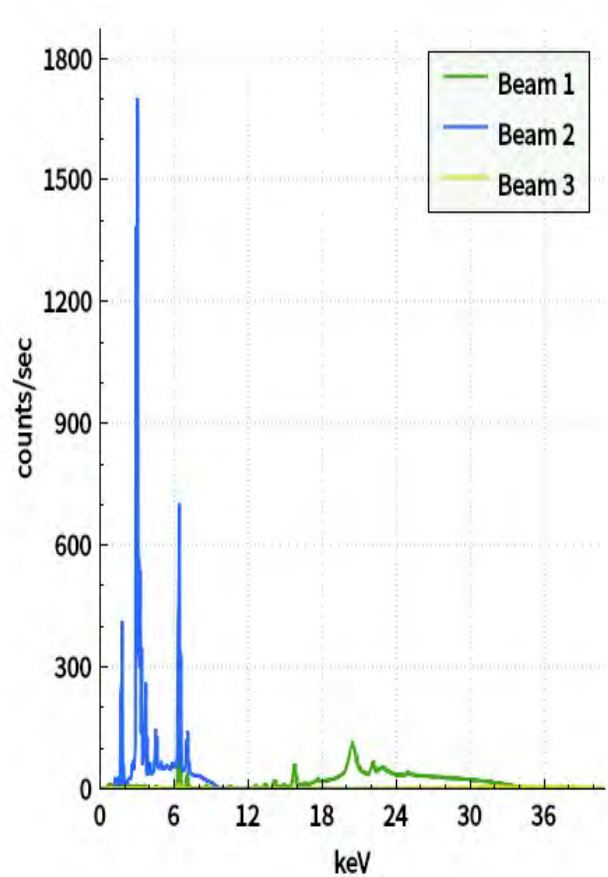
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	167	39
Pb	111	14
El	PPM	+/- 3σ
Cr	ND	<140
As	ND	<21
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<64
Hg	ND	<30

Spectrum



Notes

info: E72

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 44

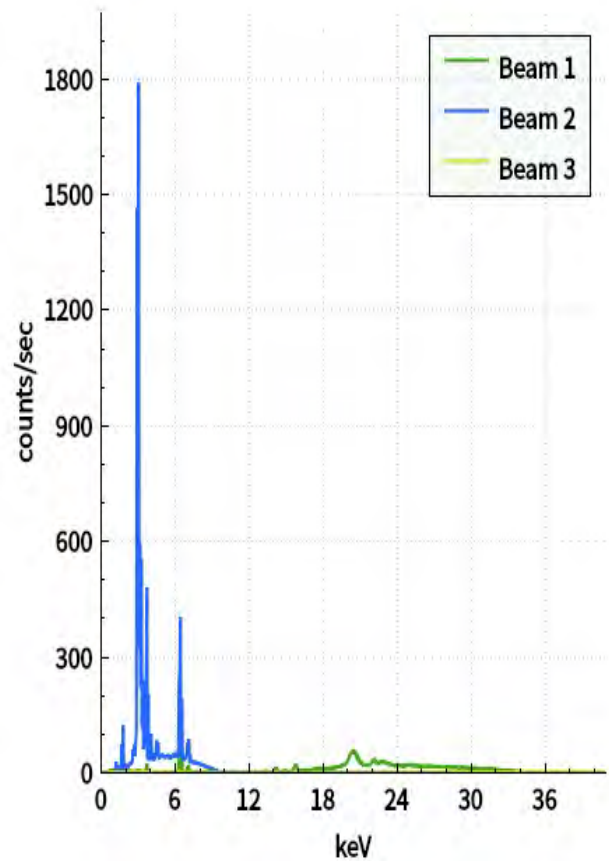
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	18	17
Ba	59	28
Pb	92	19
El	PPM	+/- 3σ
Cr	ND	<240
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<92
Hg	ND	<50

Spectrum



Notes

info: E73

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 45

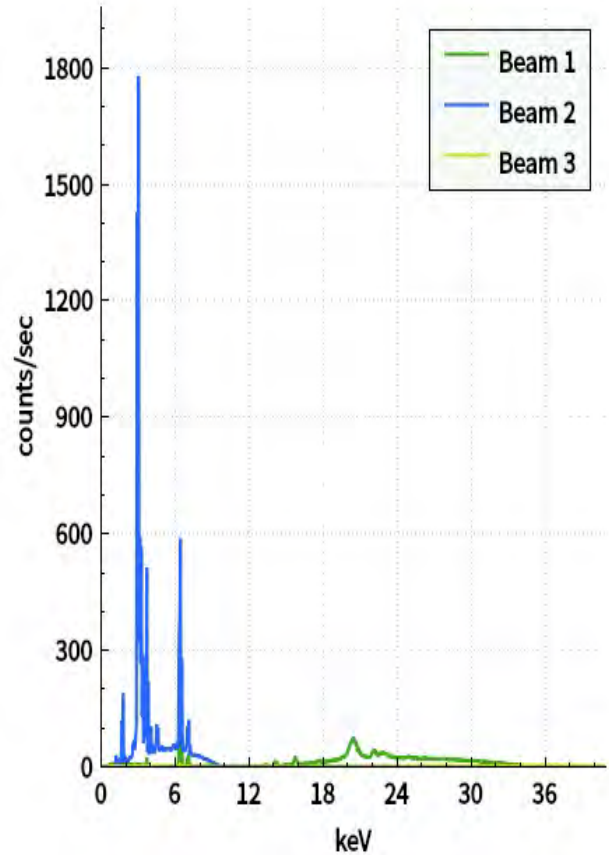
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	83	31
Pb	52	14
El	PPM	+/- 3σ
Cr	ND	<180
As	ND	<21
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<80
Hg	ND	<41

Spectrum



Notes

info: E74

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Cal Check  
Daily ID : 46C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 86622

Slope : 0.0200008

Offset : -0.0152261

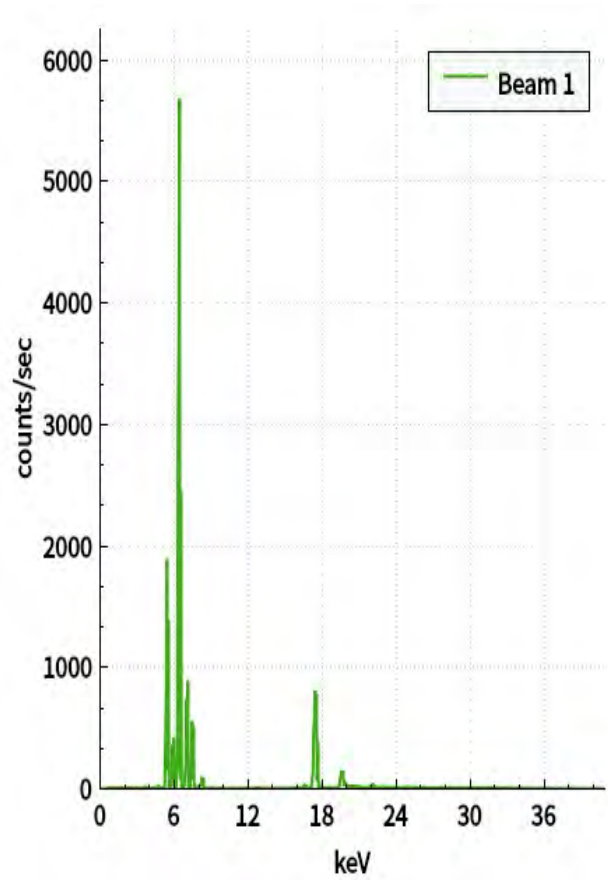
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 47

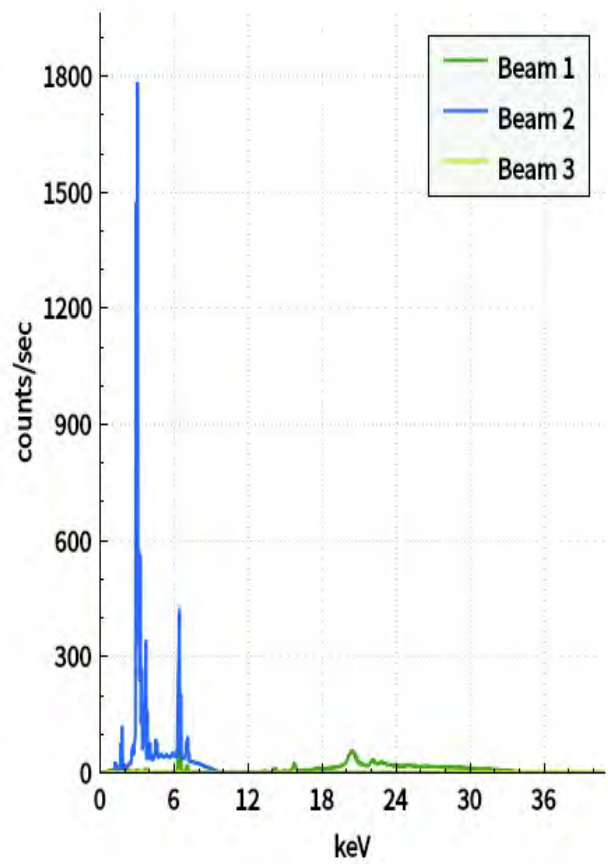
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	70	28
Pb	16	13
El	PPM	+/- 3σ
Cr	ND	<230
As	ND	<19
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<92
Hg	ND	<46

Spectrum



Notes

info: E75

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 48

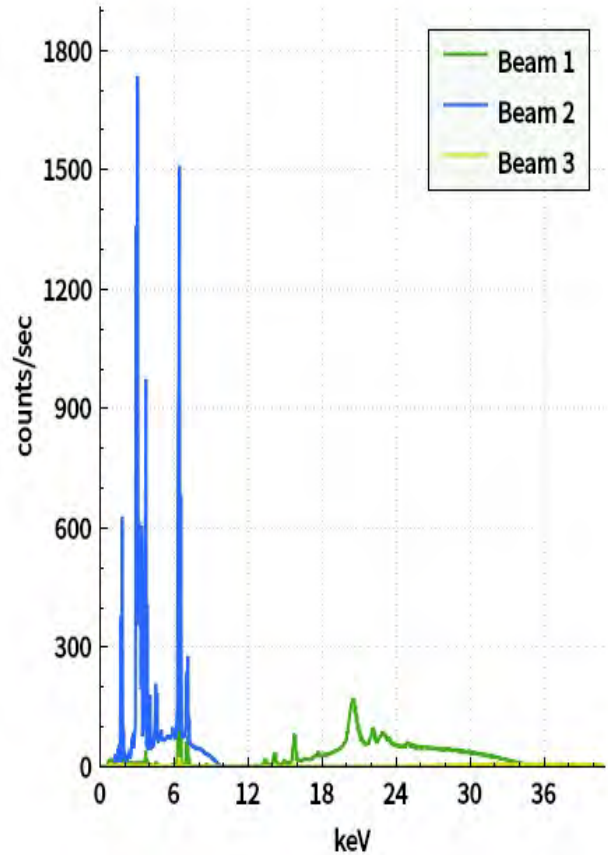
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ag	7	6
Ba	248	53
Pb	14	6
El	PPM	+/- 3σ
Cr	ND	<110
As	ND	<9
Se	ND	<5
Cd	ND	<51
Hg	ND	<22

Spectrum



Notes

info: E76

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 49

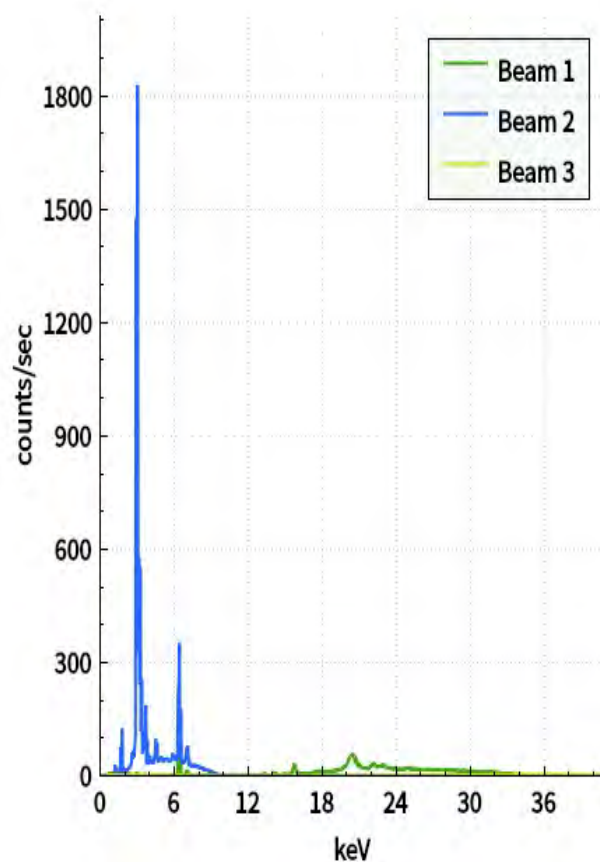
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	7	6
Ba	78	29
Pb	35	15
El	PPM	+/- 3σ
Cr	ND	<230
As	ND	<23
Ag	ND	<0.1
Cd	ND	<97
Hg	ND	<47

Spectrum



Notes

info: E77

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Cal Check  
Daily ID : 50C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 82775

Slope : 0.0200004

Offset : -0.0151143

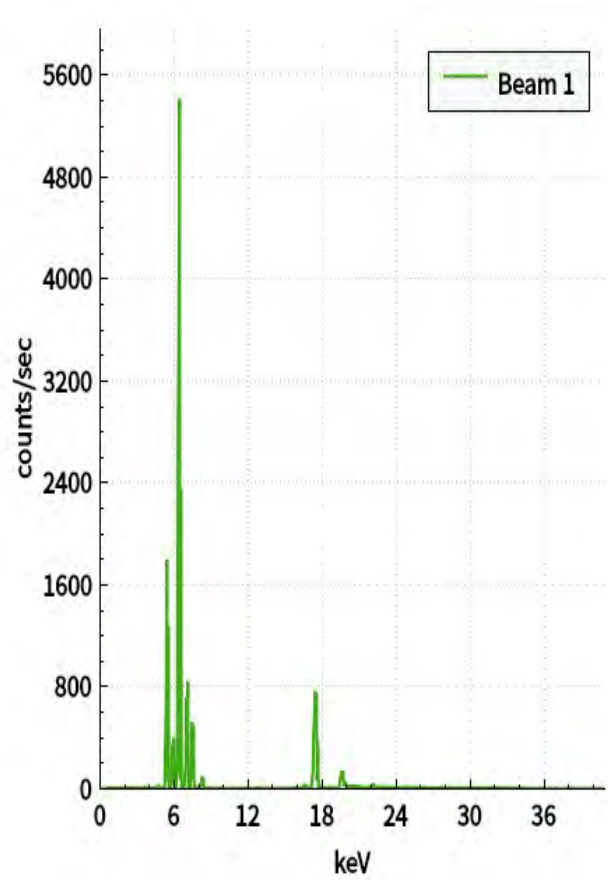
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 51

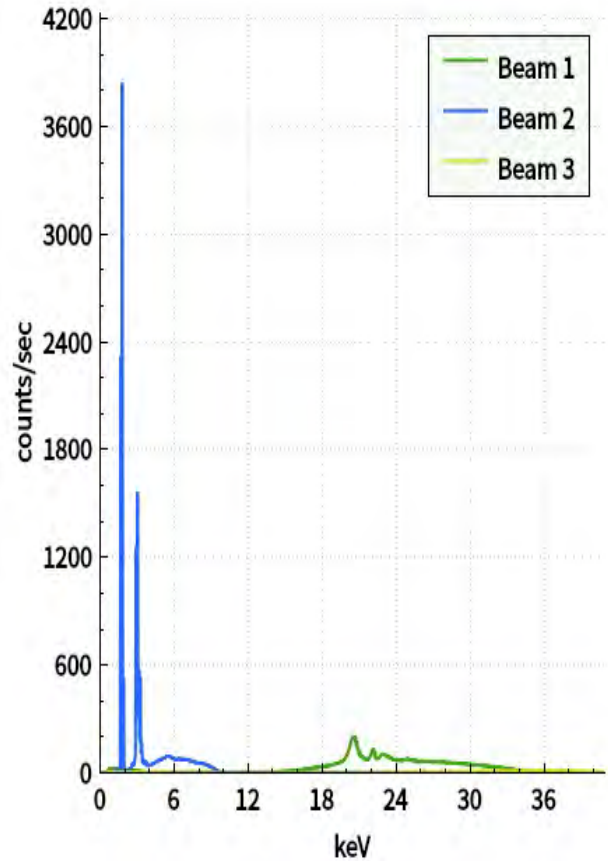
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	3	3
El	PPM	+/- 3σ
Cr	ND	<96
As	ND	<6
Ag	ND	<0.1
Cd	ND	<54
Ba	ND	<1400
Hg	ND	<21
Pb	ND	<8

Spectrum



Notes

info: Blank 15

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 52

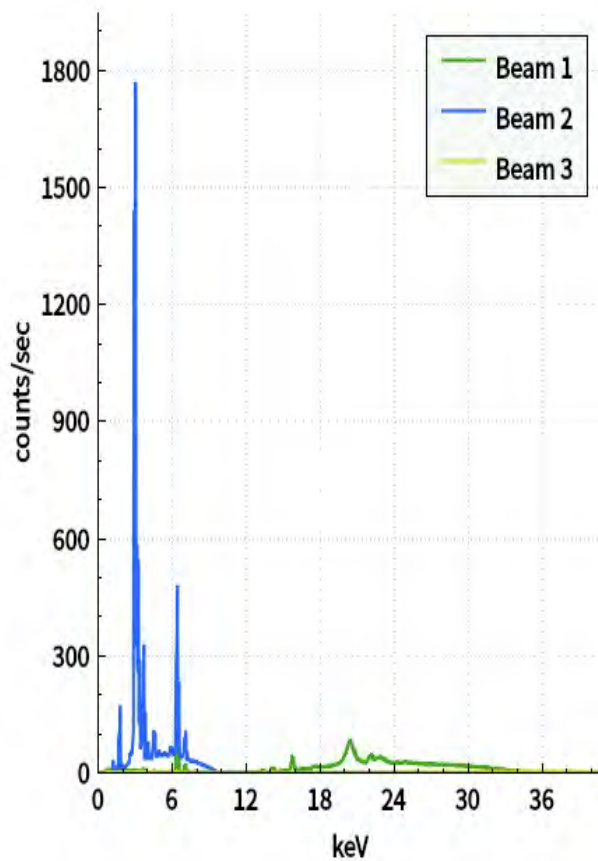
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	11	10
Ba	132	31
Pb	20	11
El	PPM	+/- 3σ
Cr	ND	<170
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<78
Hg	ND	<40

Spectrum



Notes

info: E77

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 53

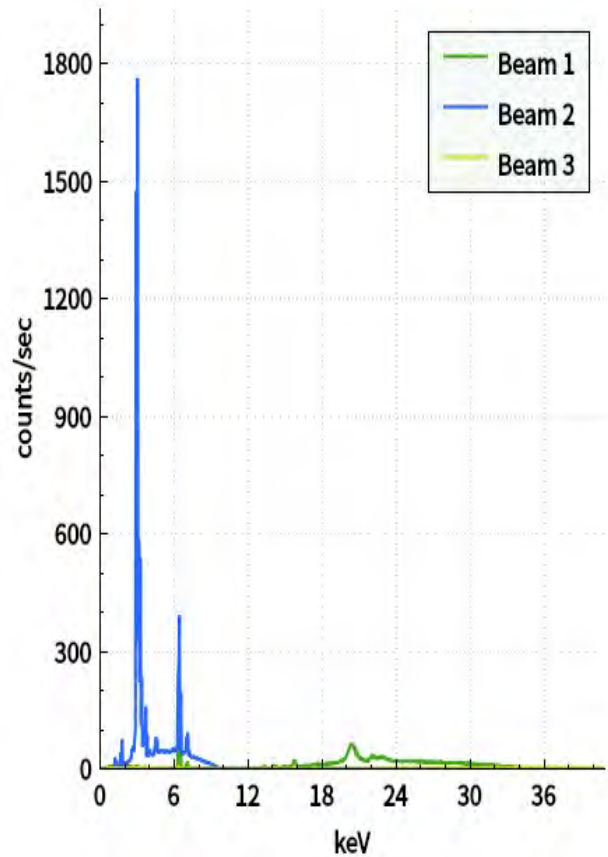
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	67	26
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<18
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<89
Hg	ND	<44
Pb	ND	<20

Spectrum



Notes

info: E78

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 54

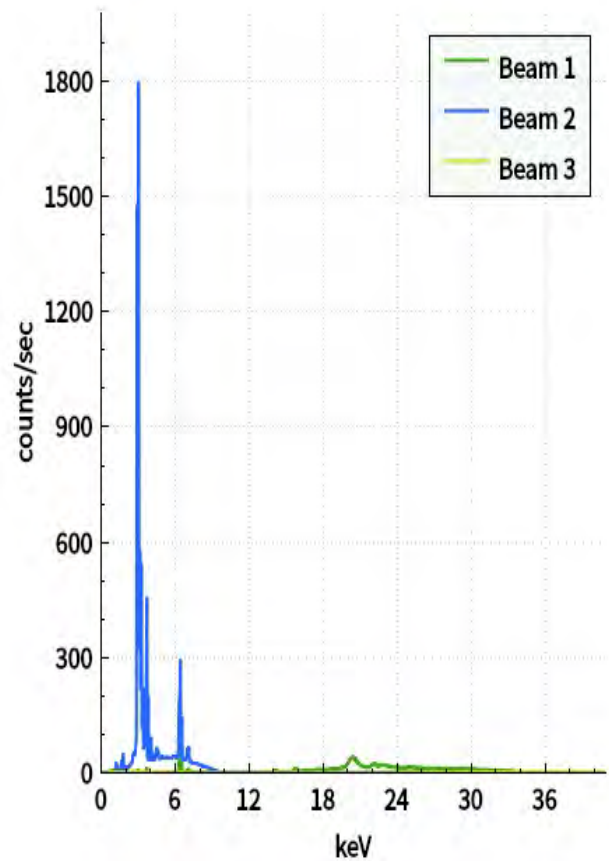
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	61	26
El	PPM	+/- 3σ
Cr	ND	<280
As	ND	<22
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<68
Pb	ND	<27

Spectrum



Notes

info: E79

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 55

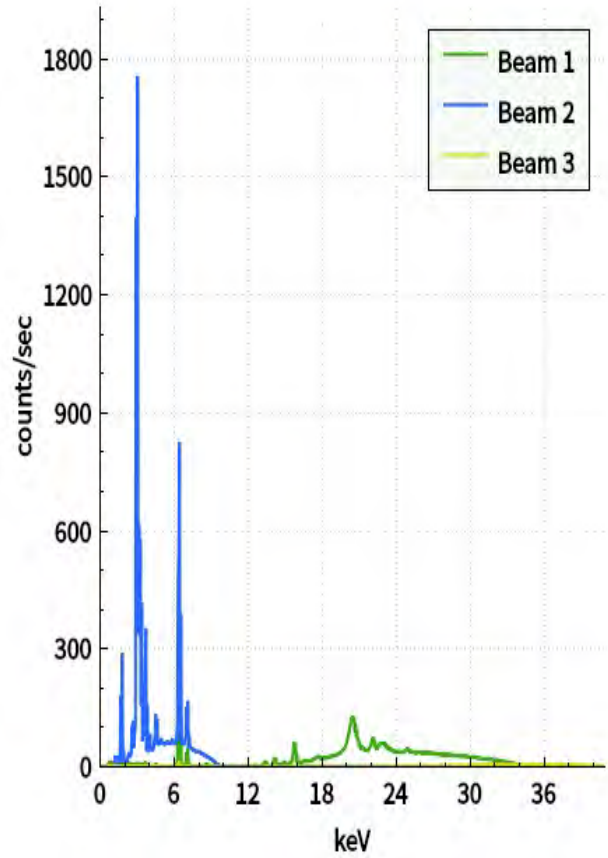
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	185	39
Pb	40	9
El	PPM	+/- 3σ
Cr	ND	<140
As	ND	<14
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<60
Hg	ND	<25

Spectrum



Notes

info: E80

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 56

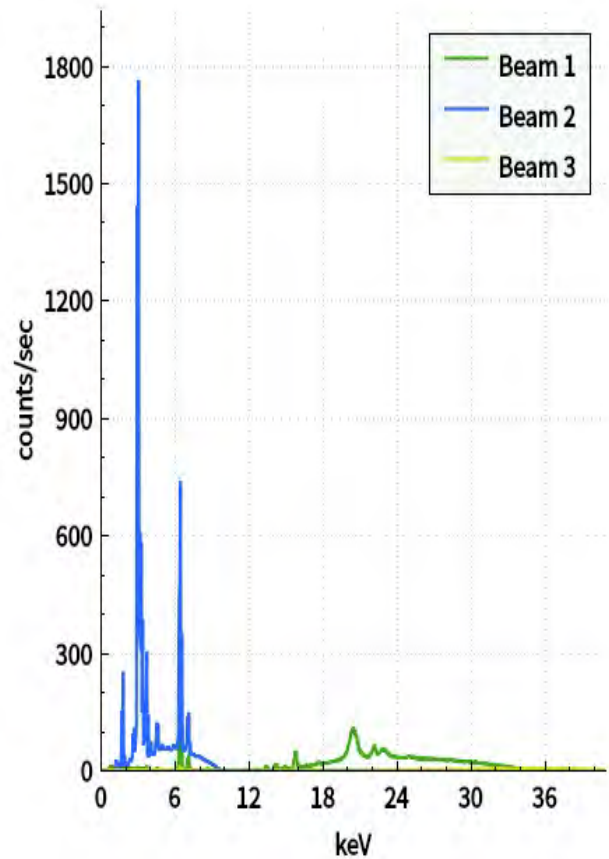
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	127	37
Pb	37	10
El	PPM	+/- 3σ
Cr	ND	<140
As	ND	<15
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<64
Hg	ND	<30

Spectrum



Notes

info:

Dup. 16

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 57

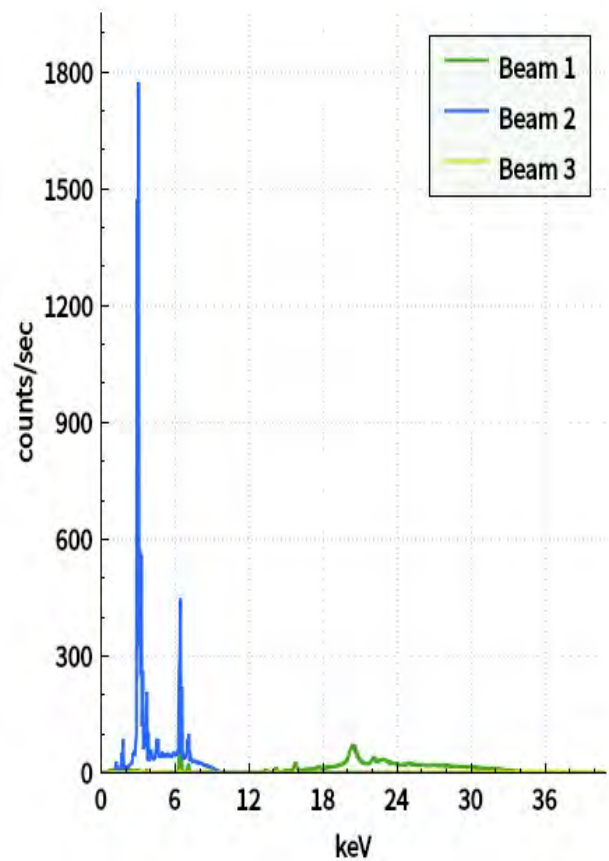
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	99	28
Pb	28	12
El	PPM	+/- 3σ
Cr	ND	<190
As	ND	<18
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<83
Hg	ND	<40

Spectrum



Notes

info: E81

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

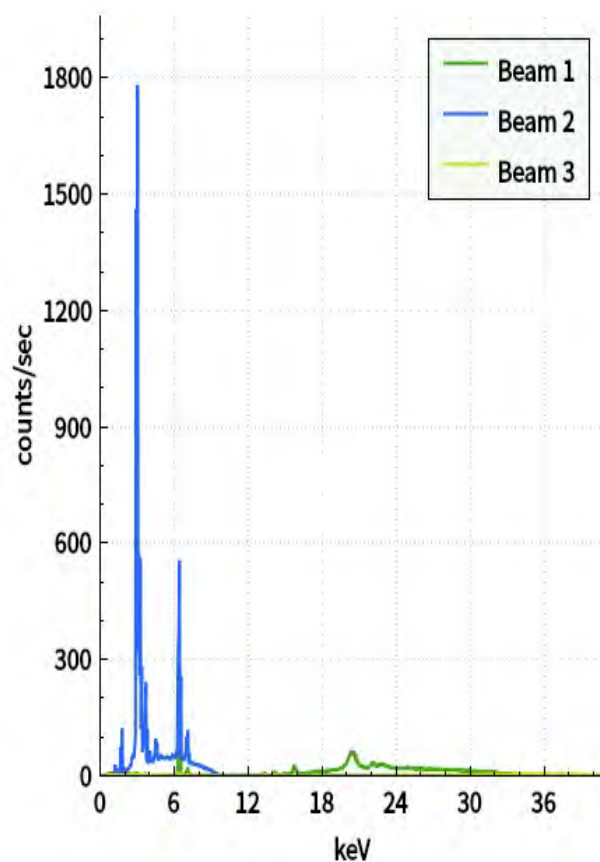
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	83	33
Pb	23	13
El	PPM	+/- 3σ
Cr	ND	<200
As	ND	<19
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<89
Hg	ND	<46

Spectrum



Notes

info: E82

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 59

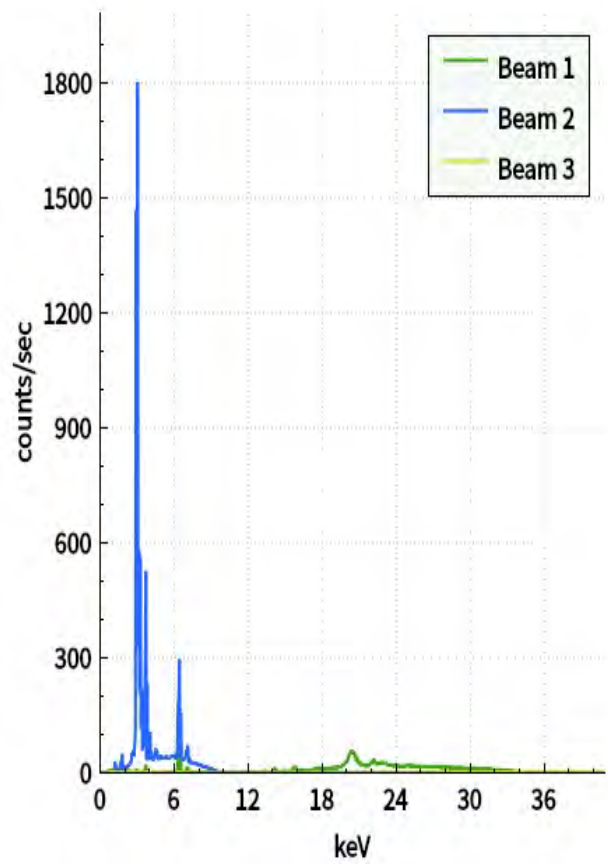
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	47	24
Pb	80	19
El	PPM	+/- 3σ
Cr	ND	<220
As	ND	<28
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<96
Hg	ND	<51

Spectrum



Notes

info: A14X

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 60

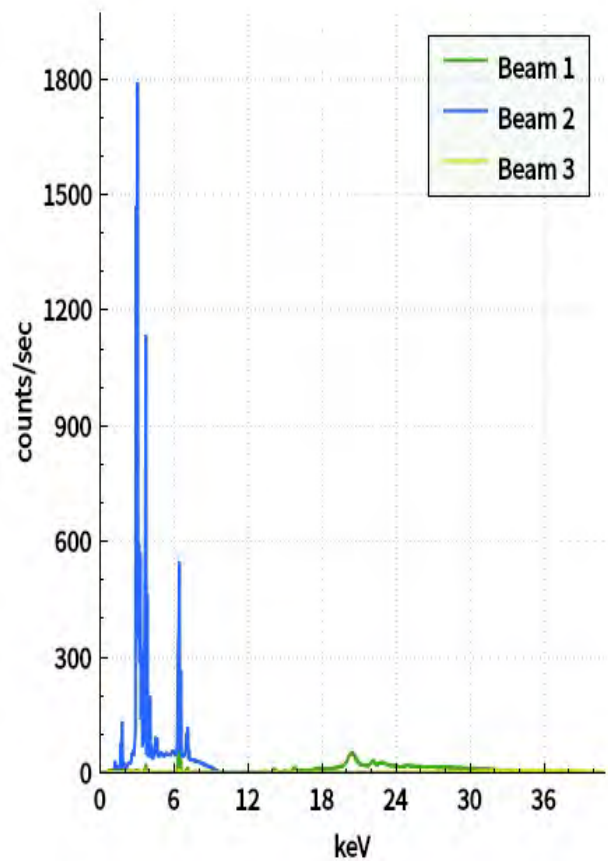
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	137	43
Pb	59	18
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<27
Se	ND	<14
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<52

Spectrum



Notes

info: A15X

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 61

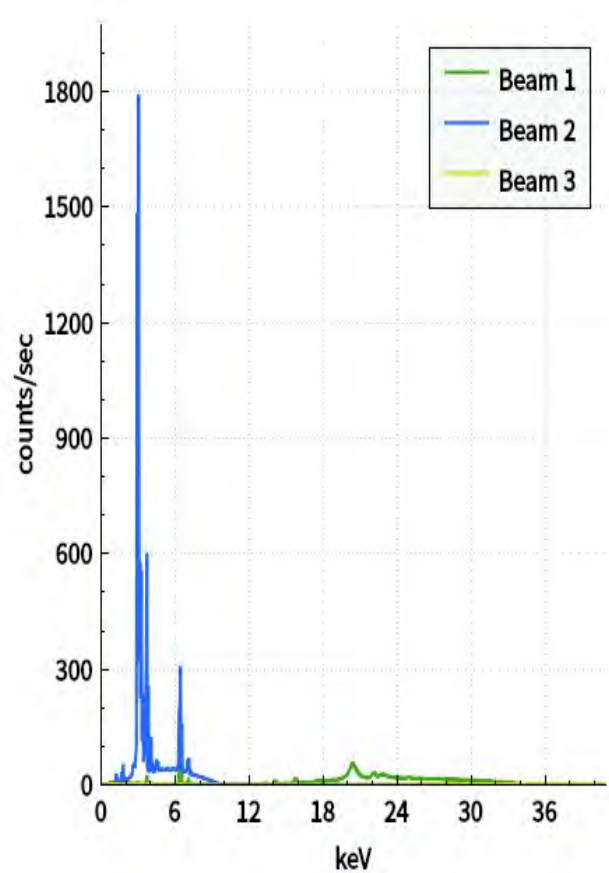
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	8	8
Ba	55	24
Pb	30	15
El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<22
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<57

Spectrum



Notes

info: A16

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 62

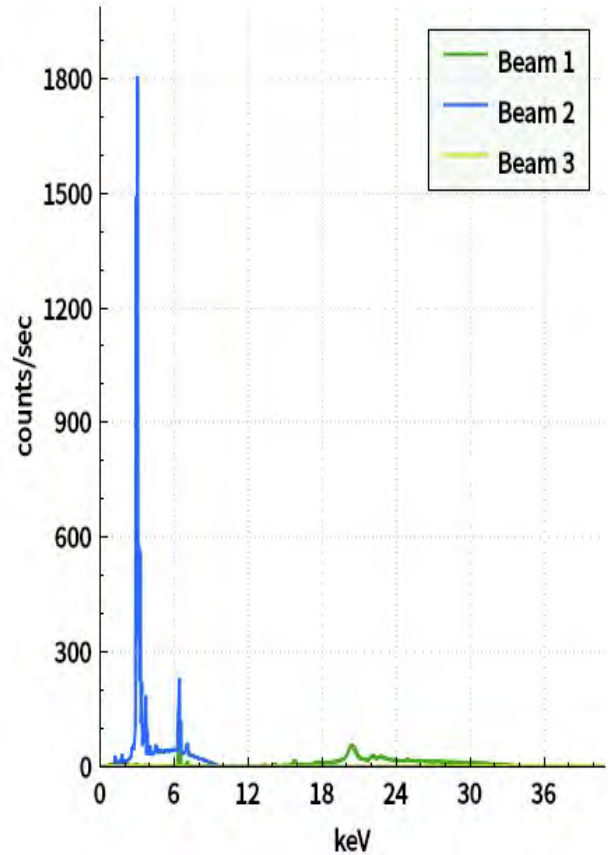
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	44	20
Pb	19	14
El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<20
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<97
Hg	ND	<56

Spectrum



Notes

info: A17

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 63

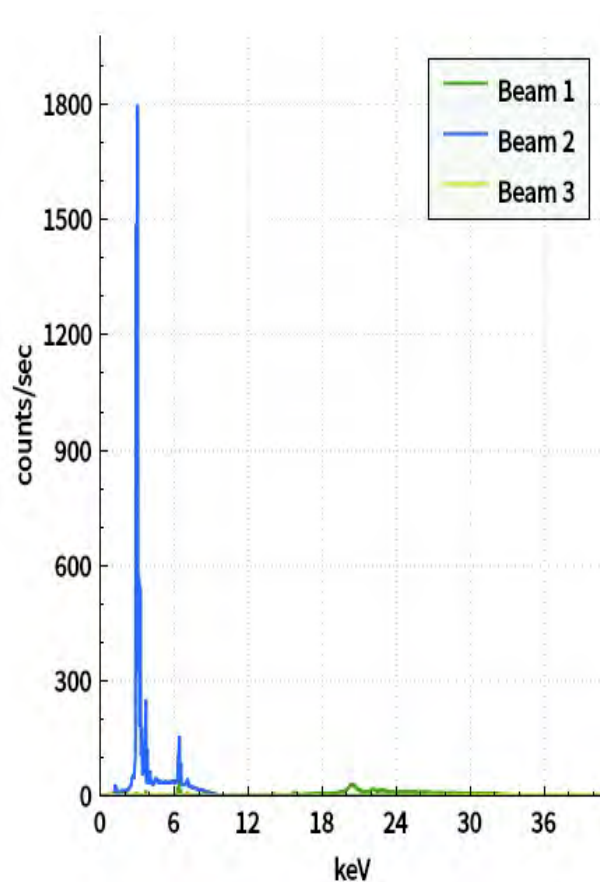
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	46	18
El	PPM	+/- 3σ
Cr	ND	<420
As	ND	<33
Se	ND	<22
Ag	ND	<0.1
Cd	ND	<150
Hg	ND	<97
Pb	ND	<39

Spectrum



Notes

info: A18

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)  
Daily ID : 64

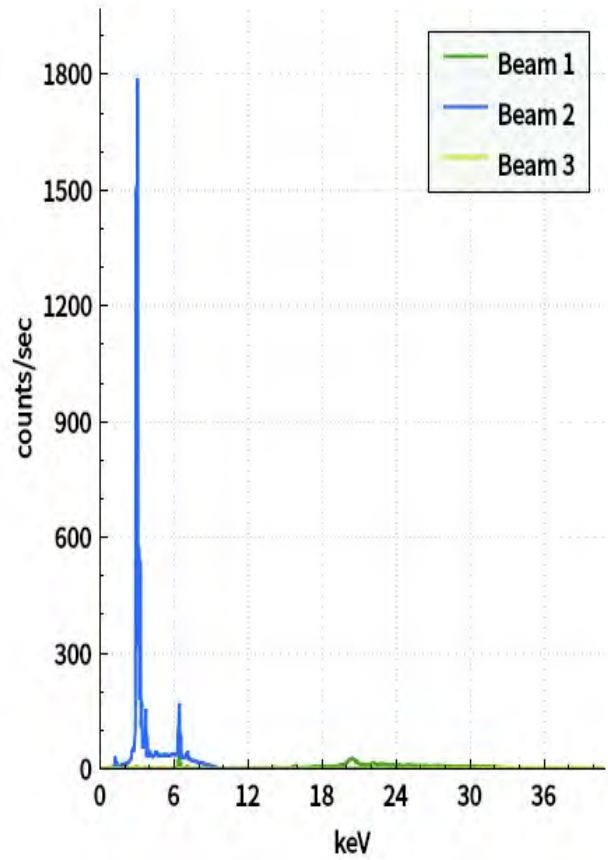
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	33	18
El	PPM	+/- 3σ
Cr	ND	<420
As	ND	<35
Se	ND	<24
Ag	ND	<0.1
Cd	ND	<160
Hg	ND	<100
Pb	ND	<41

Spectrum



Notes

info: A19

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 65

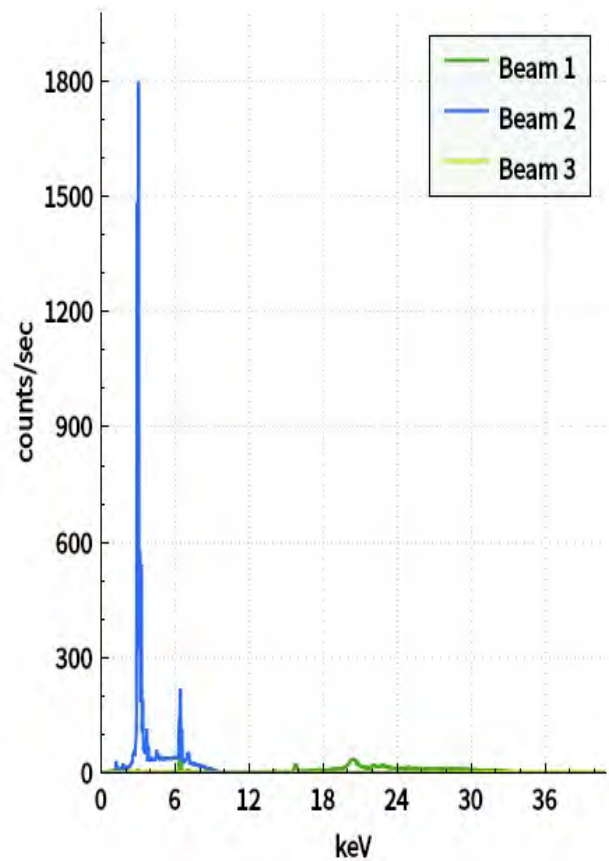
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	44	17
El	PPM	+/- 3σ
Cr	ND	<360
As	ND	<26
Se	ND	<18
Ag	ND	<0.1
Cd	ND	<130
Hg	ND	<78
Pb	ND	<32

Spectrum



Notes

info: A20

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Cal Check  
Daily ID : 1C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 85529

Slope : 0.0200016

Offset : -0.014745

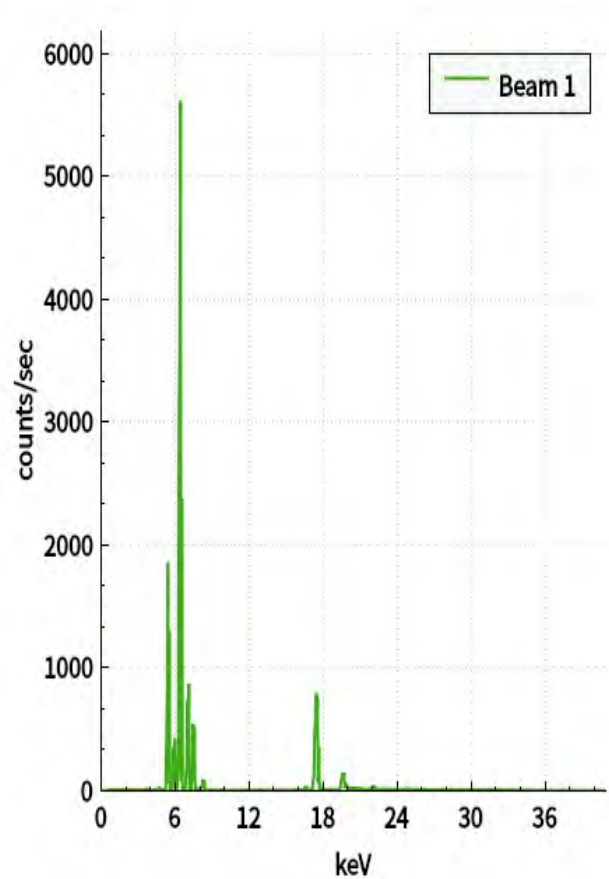
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 2

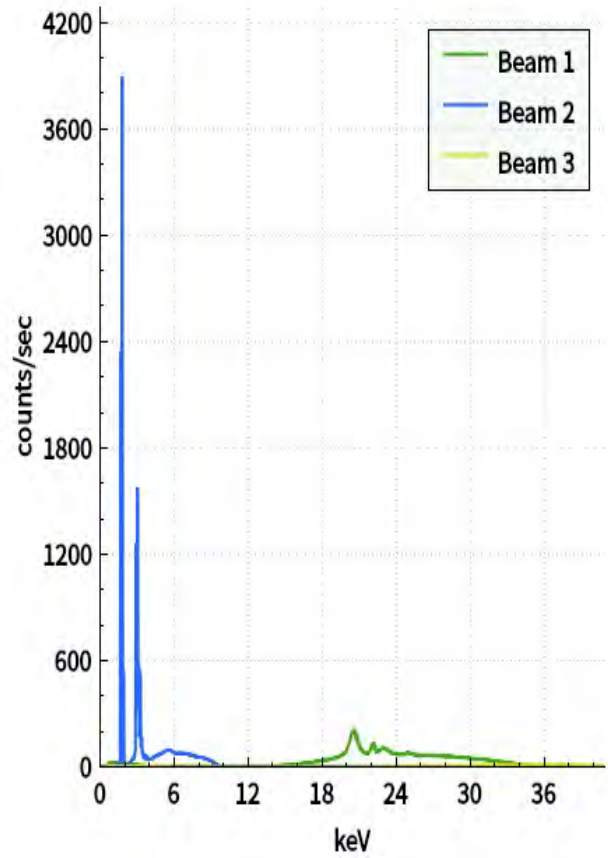
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	4	3
Ba	86	69
El	PPM	+/- 3σ
Cr	ND	<95
As	ND	<6
Ag	ND	<0.1
Cd	ND	<54
Hg	ND	<21
Pb	ND	<8

Spectrum



Notes

info: Blank 16

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 3

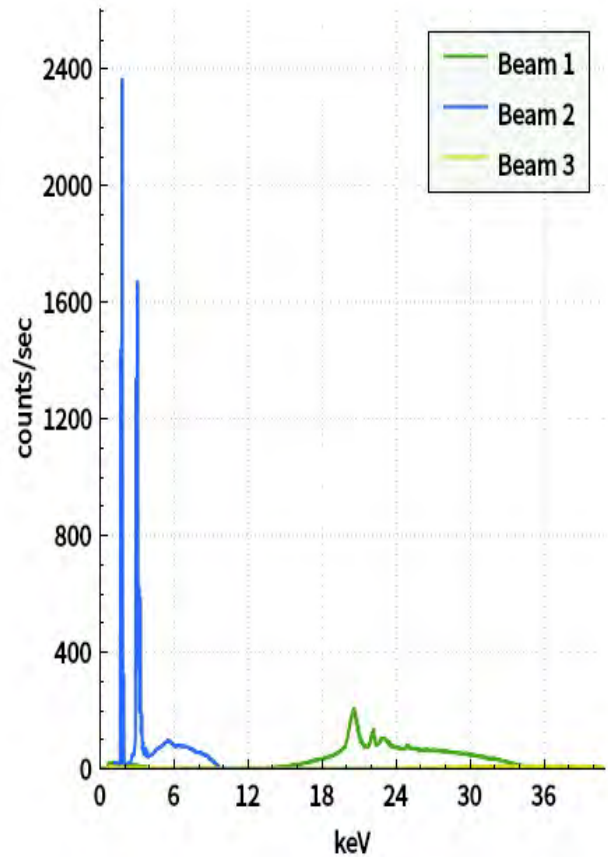
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	86	59
El	PPM	+/- 3σ
Cr	ND	<97
As	ND	<6
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<54
Hg	ND	<21
Pb	ND	<8

Spectrum



Notes

info: Blank 17

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 4

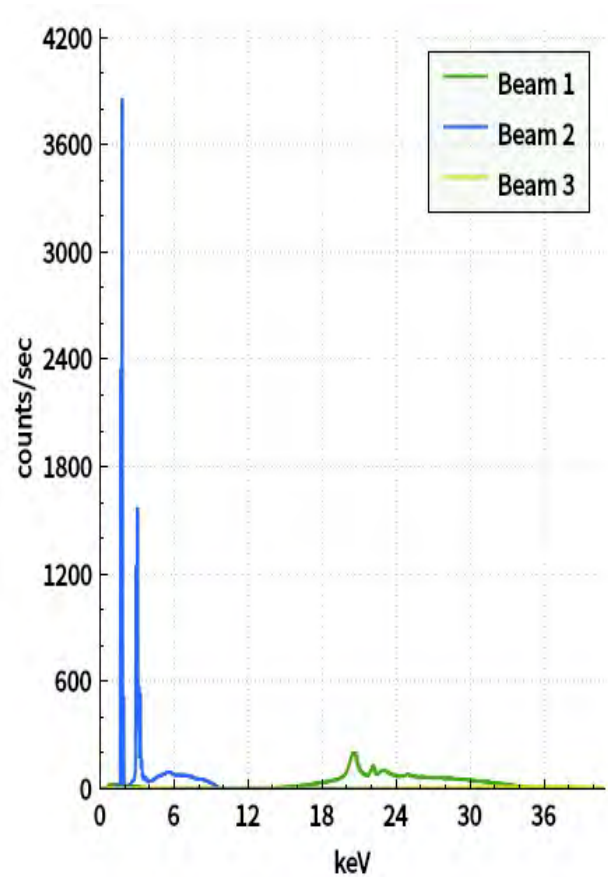
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Cr	ND	<87
As	ND	<6
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<53
Ba	ND	<1400
Hg	ND	<20
Pb	ND	<8

Spectrum



Notes

info: Blank 18

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 5

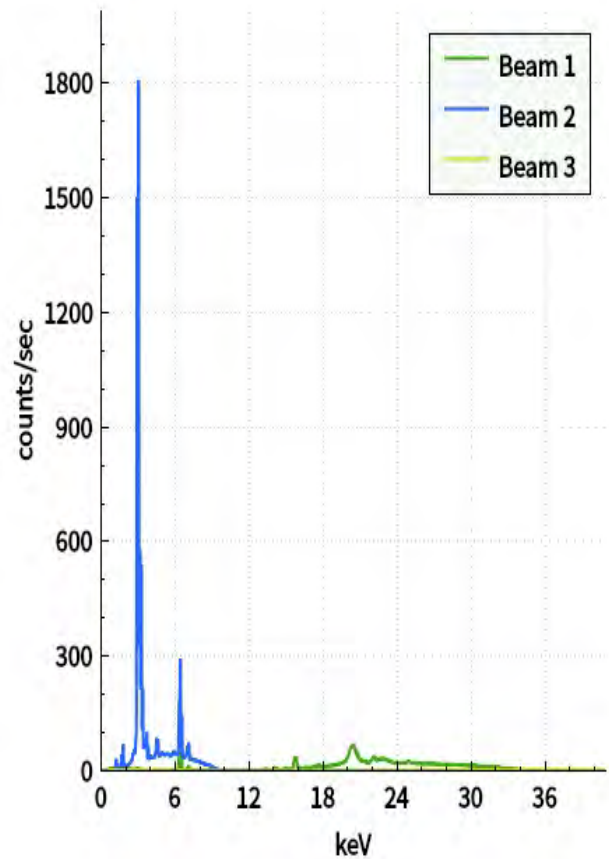
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	77	24
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<17
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<89
Hg	ND	<43
Pb	ND	<20

Spectrum



Notes

info: A21

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 6

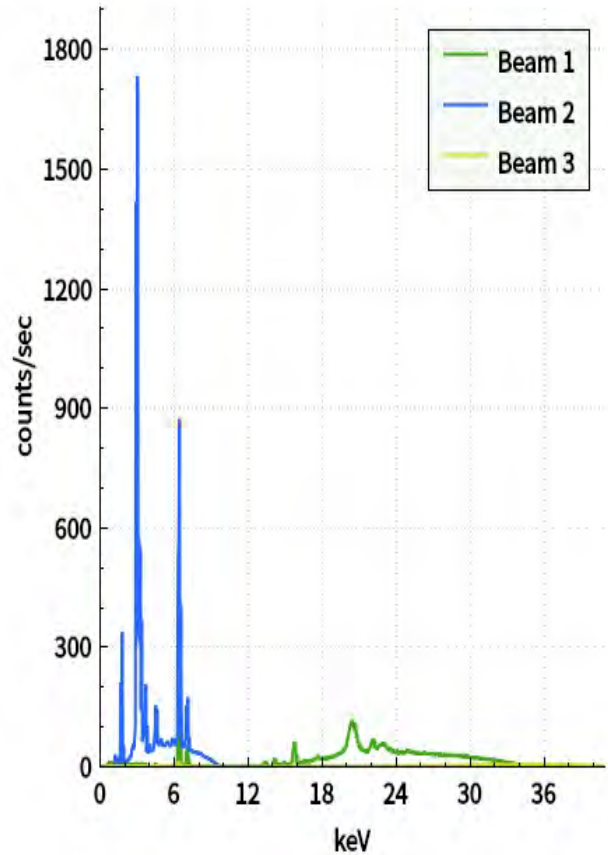
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	9	7
Ba	162	40
Pb	10	8
El	PPM	+/- 3σ
Cr	ND	<140
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<62
Hg	ND	<28

Spectrum



Notes

info: A22

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 7

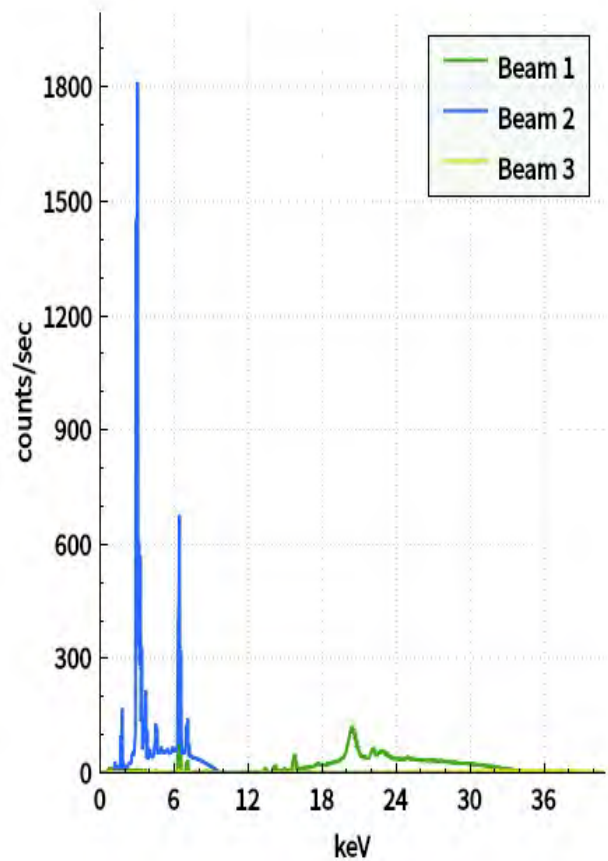
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	111	33
Pb	10	7
El	PPM	+/- 3σ
Cr	ND	<130
As	ND	<11
Se	ND	<6
Ag	ND	<0.1
Cd	ND	<62
Hg	ND	<27

Spectrum



Notes

info: 23SUR

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 8

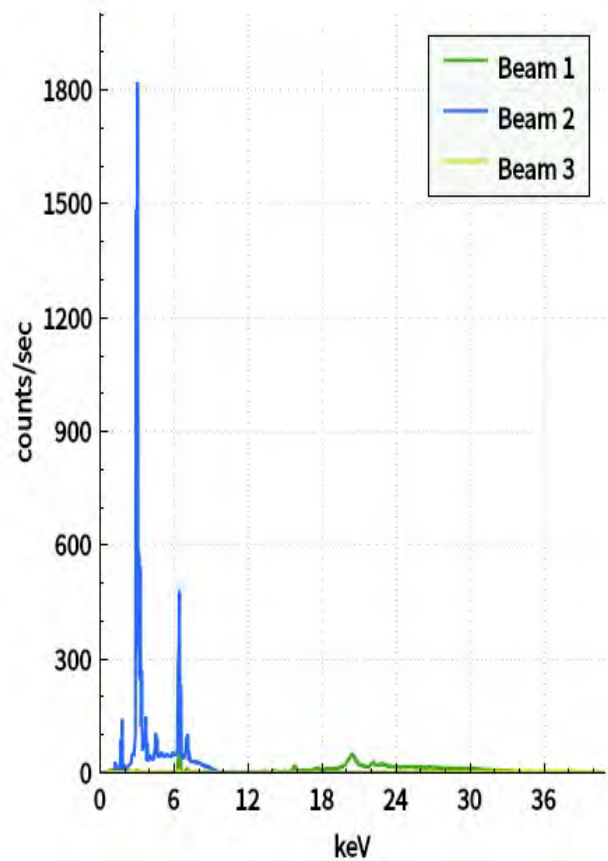
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	116	33
El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<21
Se	ND	<15
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<64
Pb	ND	<26

Spectrum



Notes

info: A24

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 9

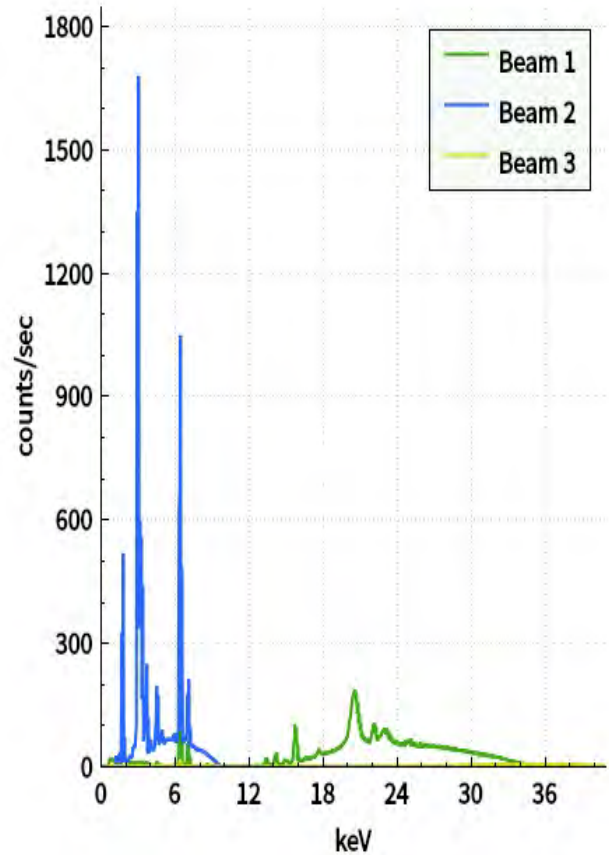
Chemistry

Elapsed Time : 33.7 s

Elapsed time: 33.7s

El	PPM	+/- 3σ
Ba	262	92
Pb	13	6
El	PPM	+/- 3σ
Cr	ND	<110
As	ND	<9
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<50
Hg	ND	<20

Spectrum



Notes

info: A25

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 10

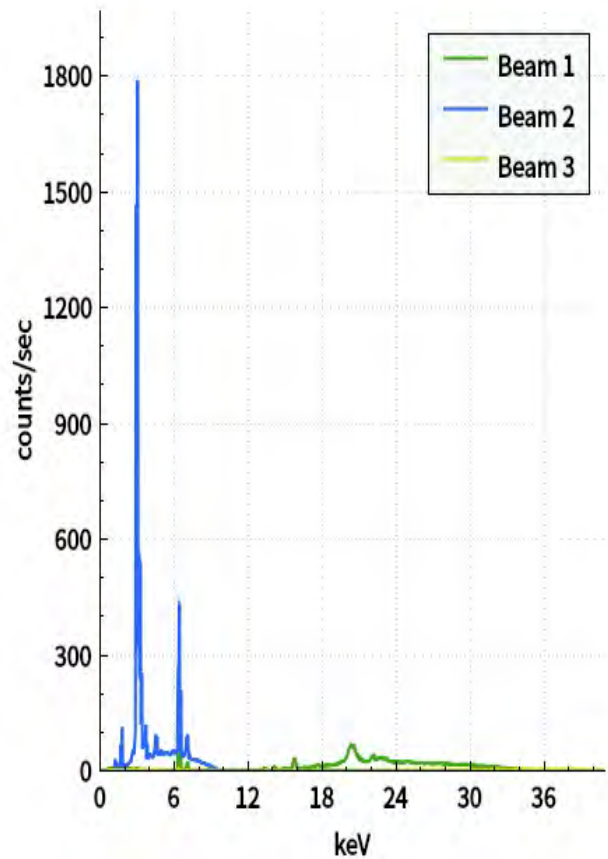
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	88	30
Pb	11	11
El	PPM	+/- 3σ
Cr	ND	<190
As	ND	<16
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<87
Hg	ND	<43

Spectrum



Notes

info: A25

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 11

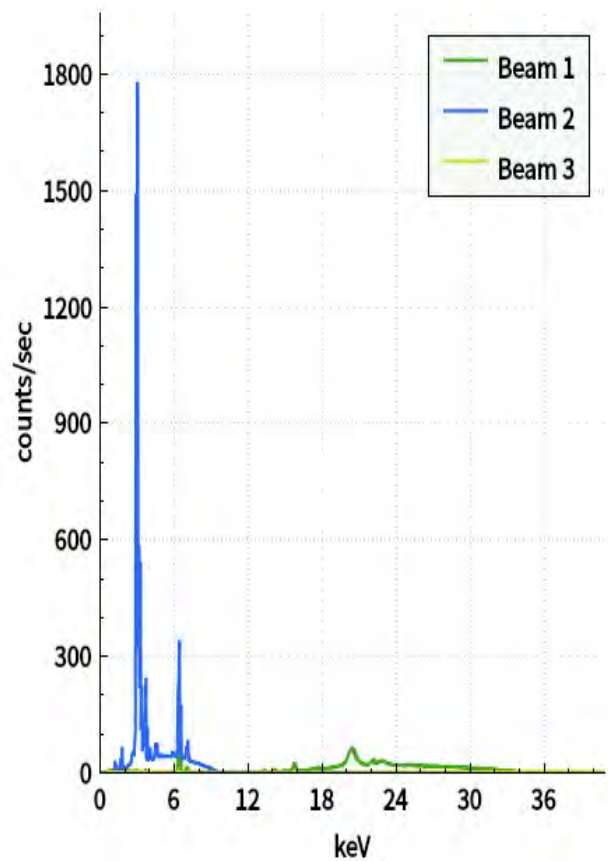
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	72	26
Pb	46	15
El	PPM	+/- 3σ
Cr	ND	<220
As	ND	<22
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<91
Hg	ND	<46

Spectrum



Notes

info: E83

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 12

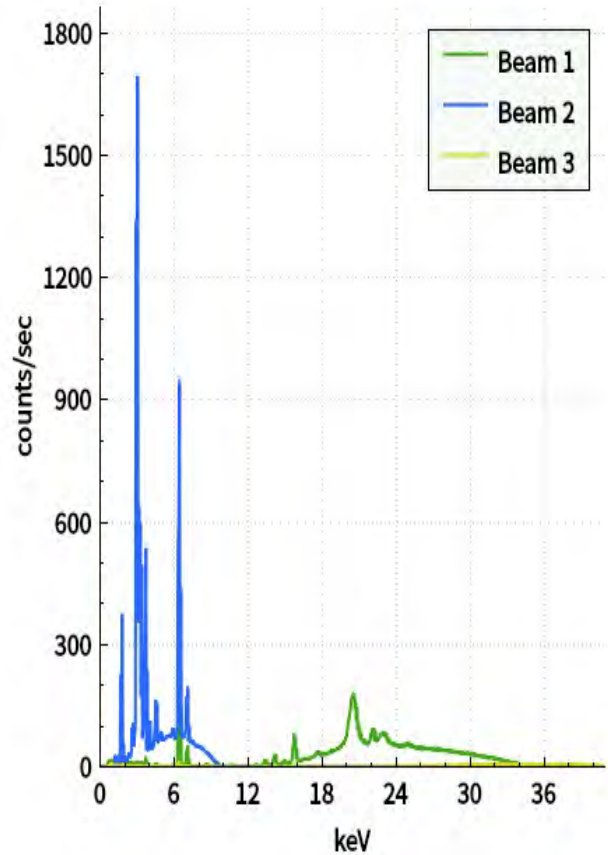
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	8	6
Ba	144	41
Pb	29	7
El	PPM	+/- 3σ
Cr	ND	<110
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<50
Hg	ND	<21

Spectrum



Notes

info: E84

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 13

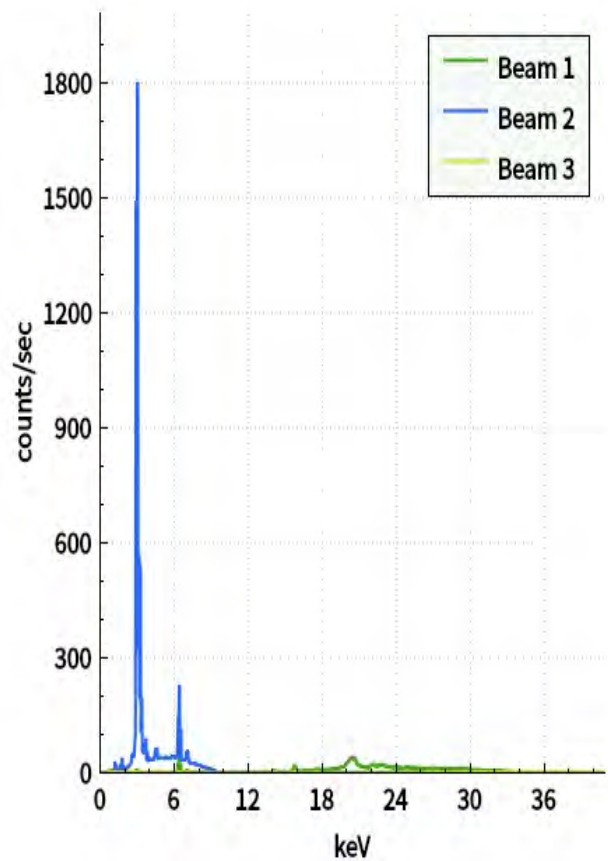
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	57	23
El	PPM	+/- 3σ
Cr	ND	<280
As	ND	<24
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<71
Pb	ND	<30

Spectrum



Notes

info: E85

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 14

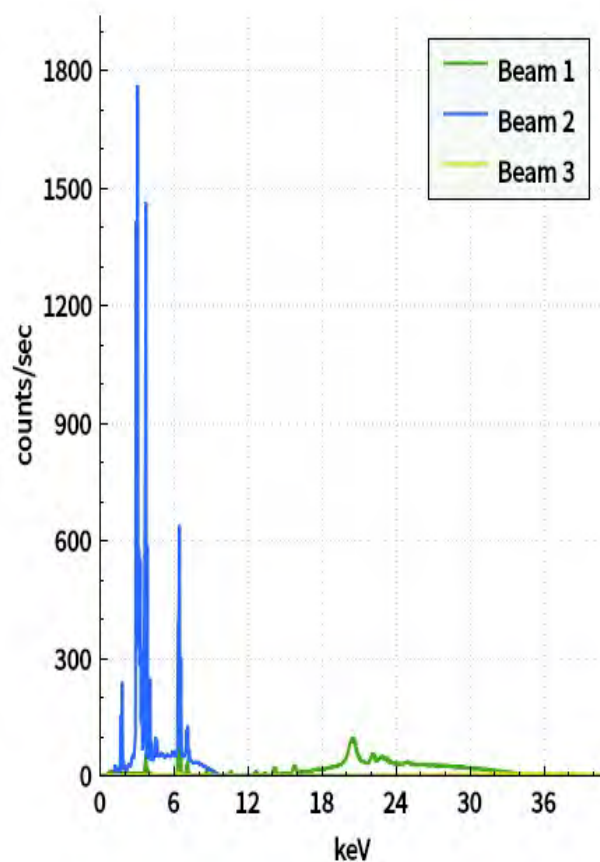
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	109	41
Pb	185	19
El	PPM	+/- 3σ
Cr	ND	<140
As	ND	<27
Se	ND	<8
Ag	ND	<0.1
Cd	ND	<69
Hg	ND	<31

Spectrum



Notes

info: E86

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 15

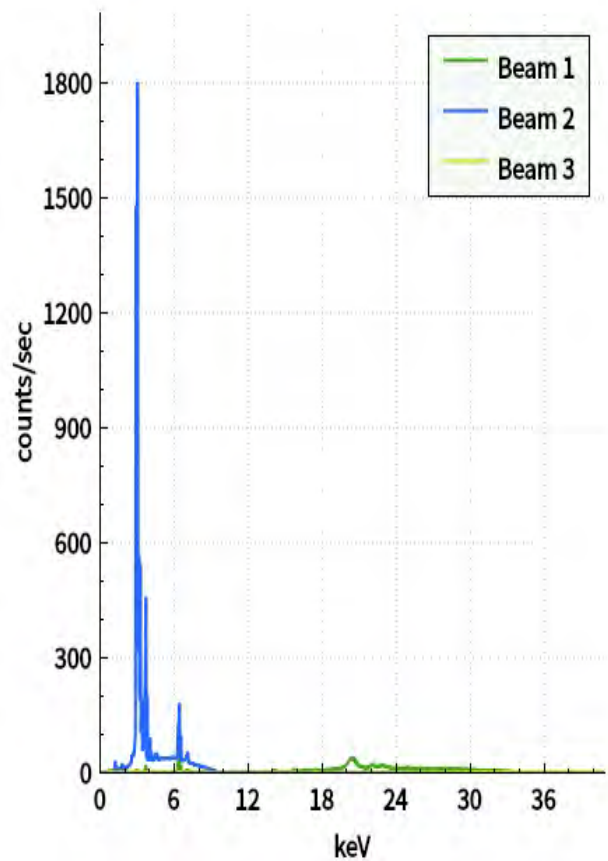
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	32	20
El	PPM	+/- 3σ
Cr	ND	<280
As	ND	<26
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<130
Hg	ND	<74
Pb	ND	<31

Spectrum



Notes

info: E87

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 16

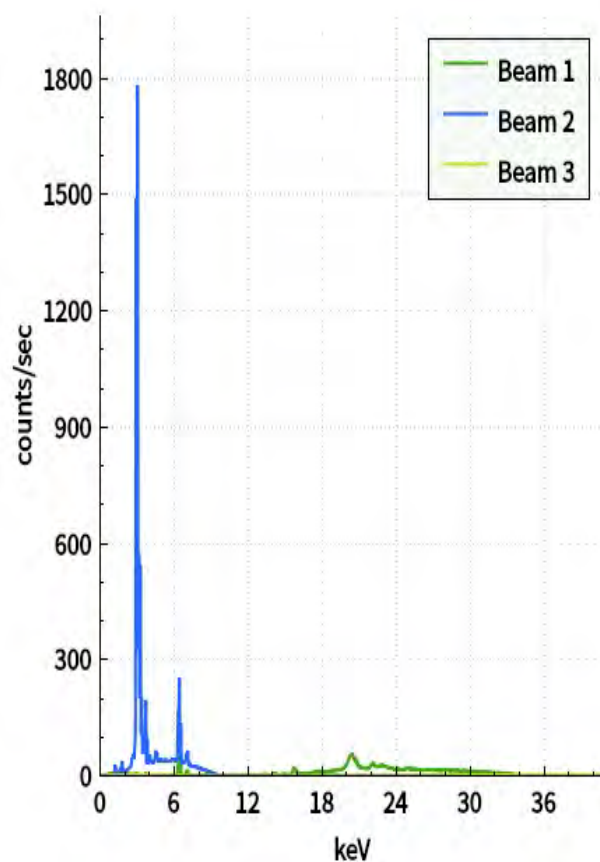
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	52	21
Pb	84	20
El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<28
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<50

Spectrum



Notes

info: E88

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 17

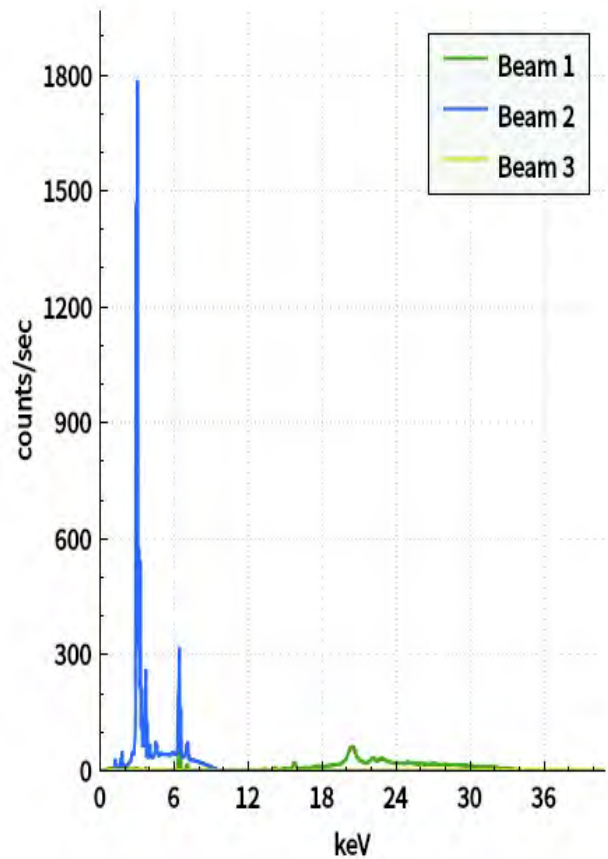
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	73	24
Pb	58	16
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<23
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<90
Hg	ND	<45

Spectrum



Notes

info: E89

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 18

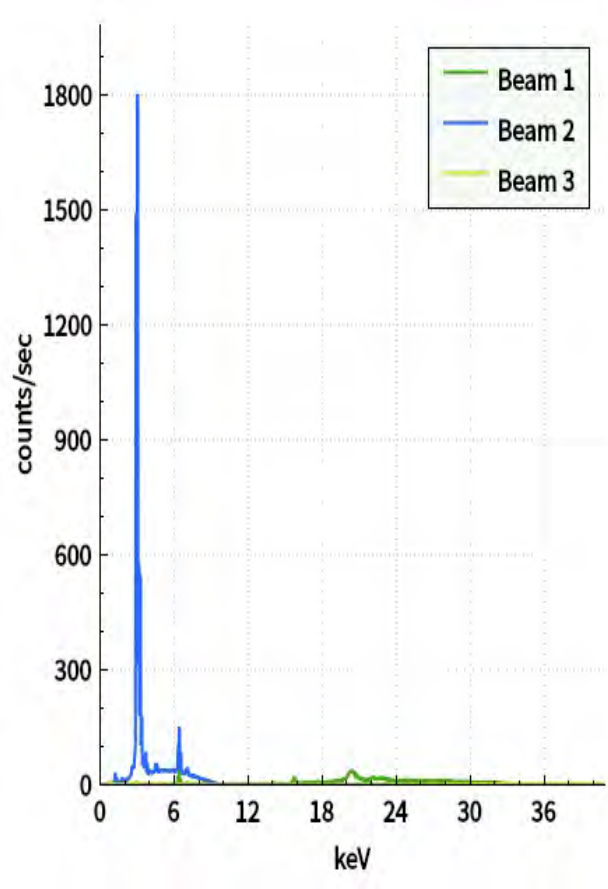
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	48	19
Pb	24	20
El	PPM	+/- 3σ
Cr	ND	<330
As	ND	<29
Se	ND	<19
Ag	ND	<0.1
Cd	ND	<130
Hg	ND	<77

Spectrum



Notes

info: E90

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 19

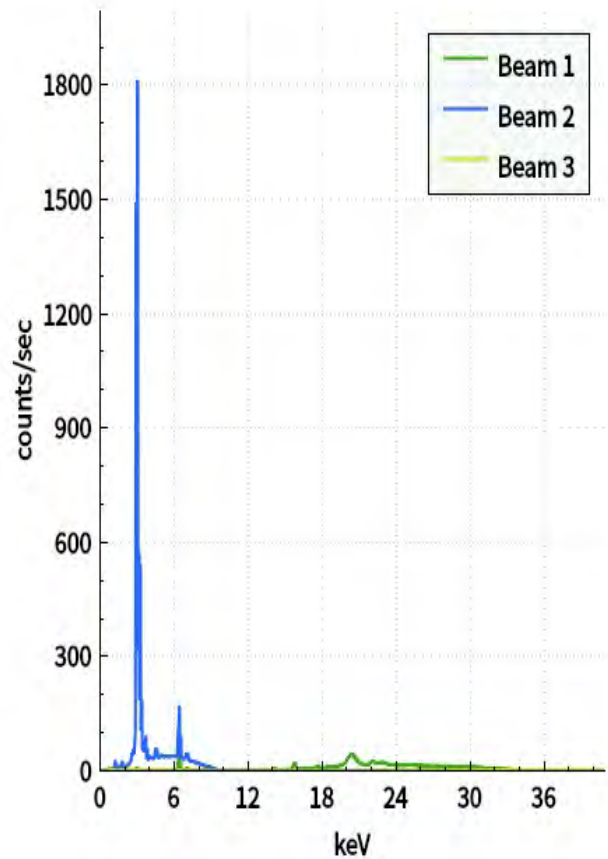
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	9	7
Ba	48	19
Pb	22	16
El	PPM	+/- 3σ
Cr	ND	<280
As	ND	<23
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<60

Spectrum



Notes

info: A26

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 20

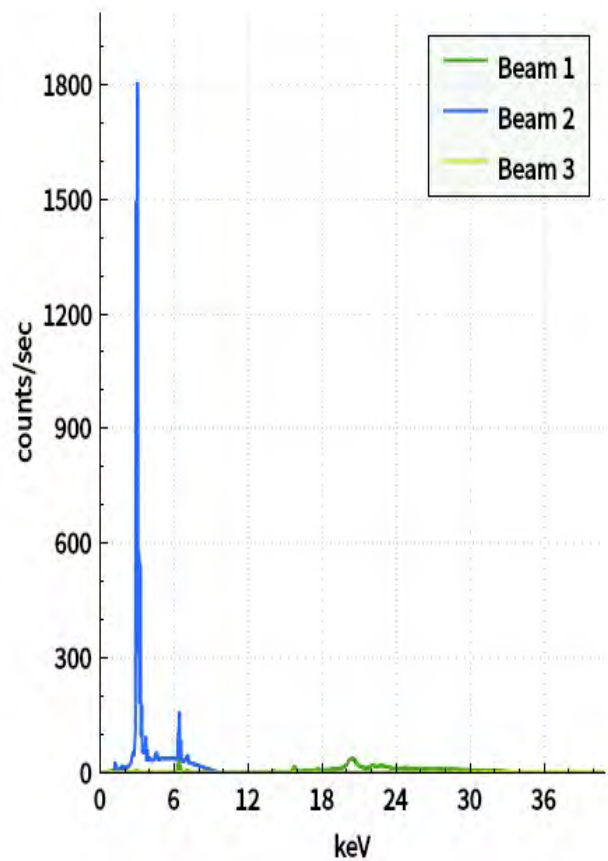
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	40	17
Pb	30	19
El	PPM	+/- 3σ
Cr	ND	<330
As	ND	<29
Se	ND	<15
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<69

Spectrum



Notes

info: A27

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 21

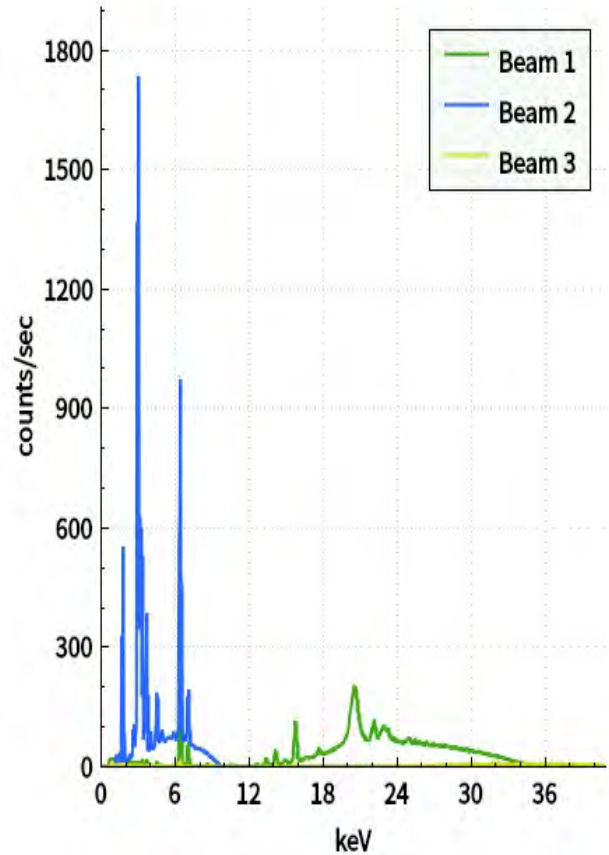
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	6	6
Se	3	3
Cd	38	28
Ba	230	47
Pb	32	7
El	PPM	+/- 3σ
Cr	ND	<100
Ag	ND	<0.1
Hg	ND	<18

Spectrum



Notes

info: A28

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 22

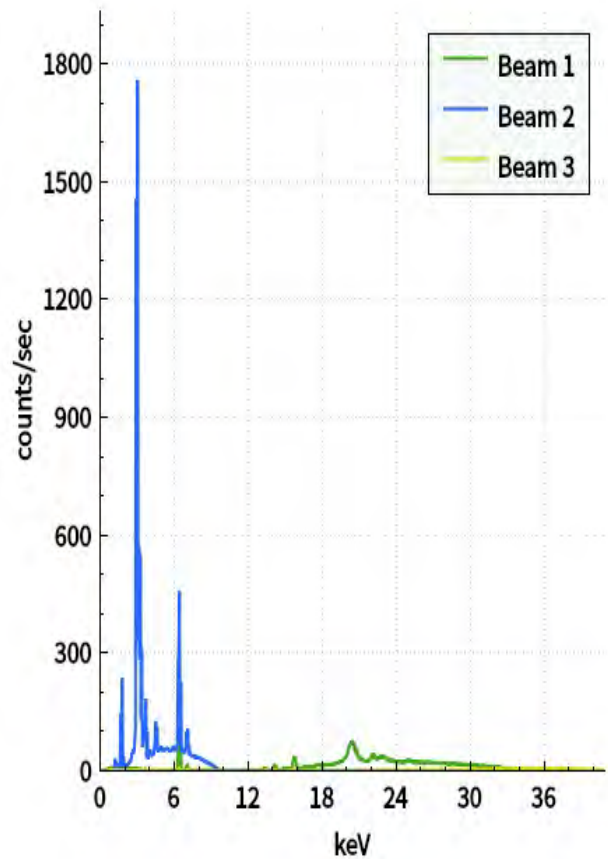
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	151	38
Pb	18	11
El	PPM	+/- 3σ
Cr	ND	<180
As	ND	<17
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<82
Hg	ND	<34

Spectrum



Notes

info: A29

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 23

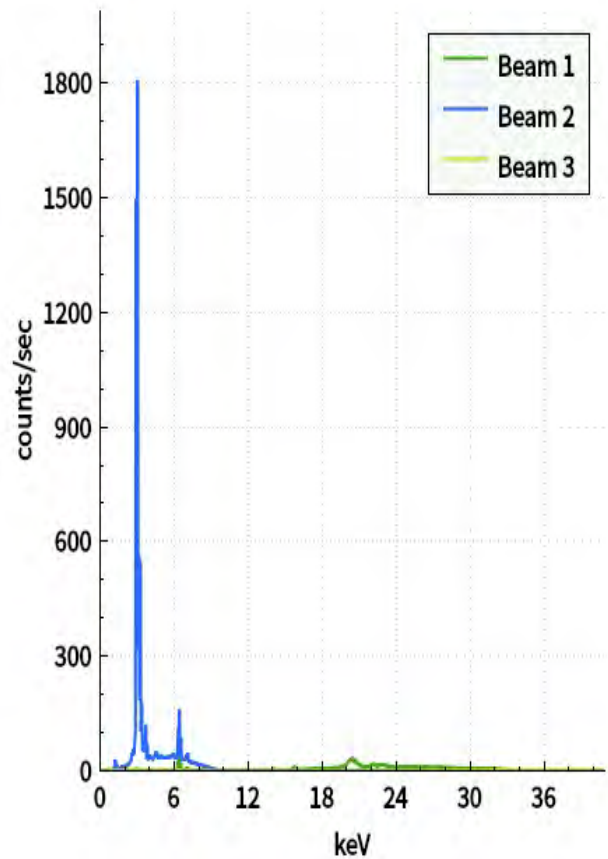
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	17	17
Se	12	12
Ba	34	16
El	PPM	+/- 3σ
Cr	ND	<390
Ag	ND	<0.1
Cd	ND	<140
Hg	ND	<89
Pb	ND	<33

Spectrum



Notes

info: A30

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 24

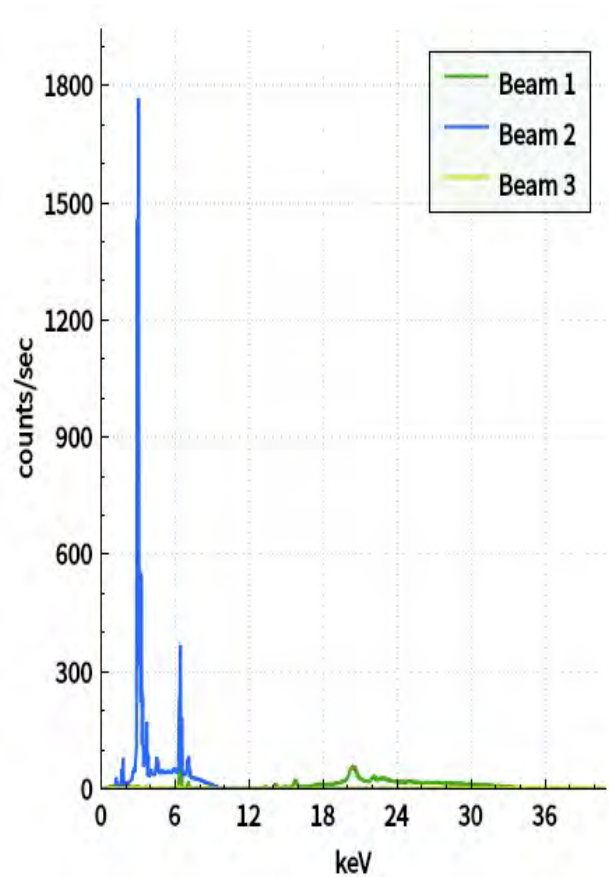
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	11	11
Ba	93	27
El	PPM	+/- 3σ
Cr	ND	<240
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<95
Hg	ND	<50
Pb	ND	<21

Spectrum



Notes

info: A31

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 25

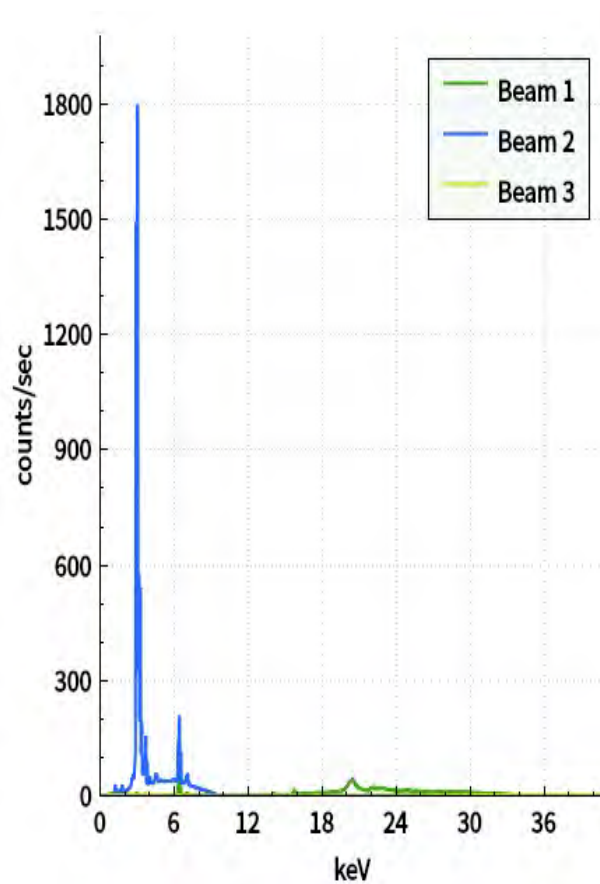
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	52	21
Pb	40	19
El	PPM	+/- 3σ
Cr	ND	<290
As	ND	<29
Se	ND	<14
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<64

Spectrum



Notes

info: A32

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 26

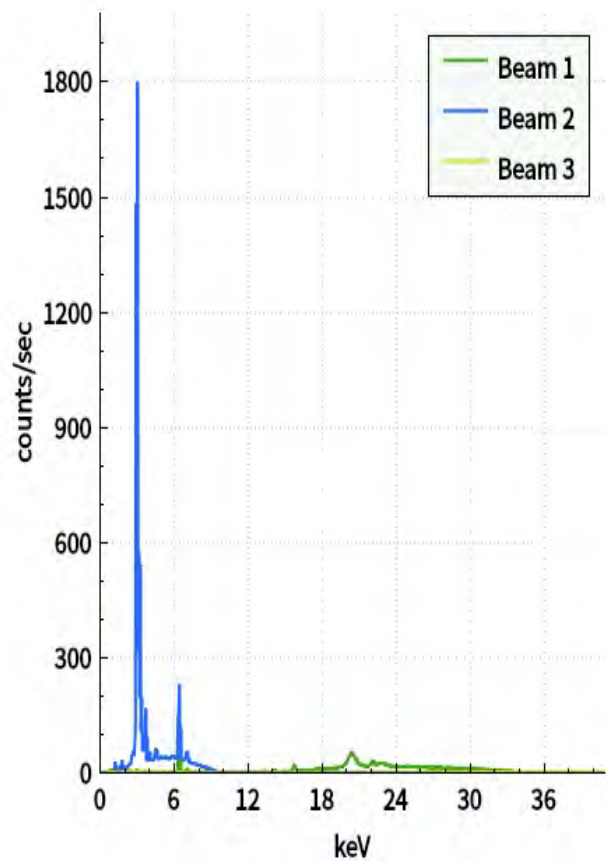
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	8	7
Ba	44	20
Pb	37	17
El	PPM	+/- 3σ
Cr	ND	<230
As	ND	<25
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<54

Spectrum



Notes

info: DupA32-1

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 27

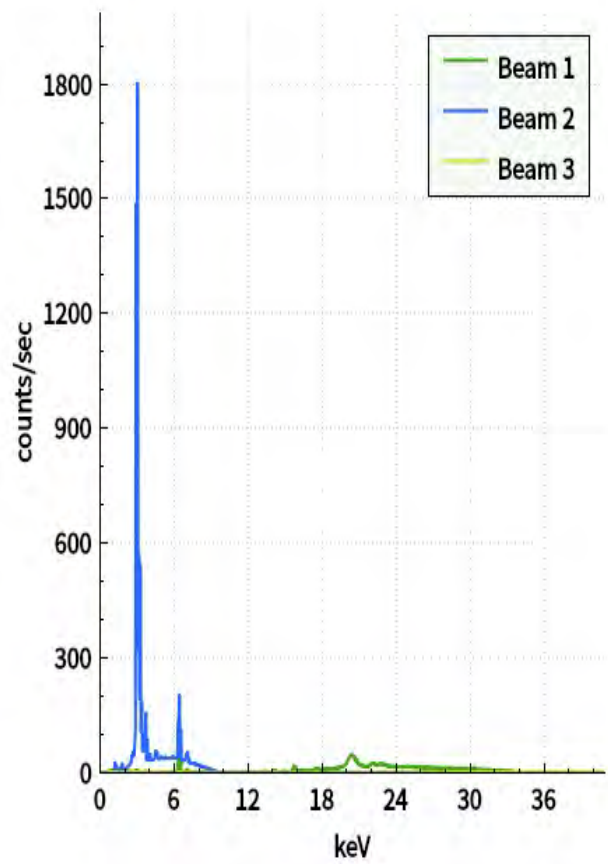
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	61	20
Pb	43	18
El	PPM	+/- 3σ
Cr	ND	<270
As	ND	<27
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<60

Spectrum



Notes

info:

DupA32-2

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 28

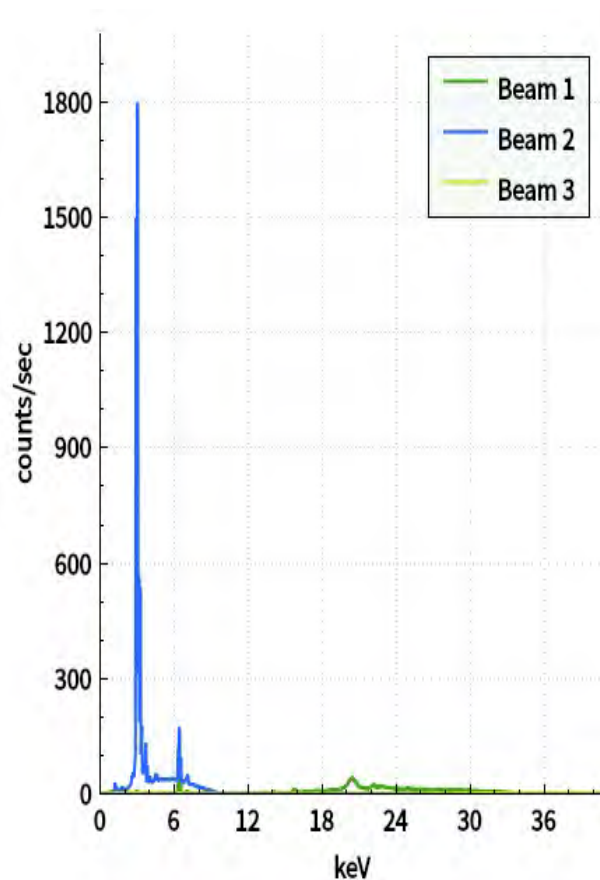
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	38	18
Pb	27	18
El	PPM	+/- 3σ
Cr	ND	<300
As	ND	<29
Se	ND	<17
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<70

Spectrum



Notes

info: DupA32-3

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 29

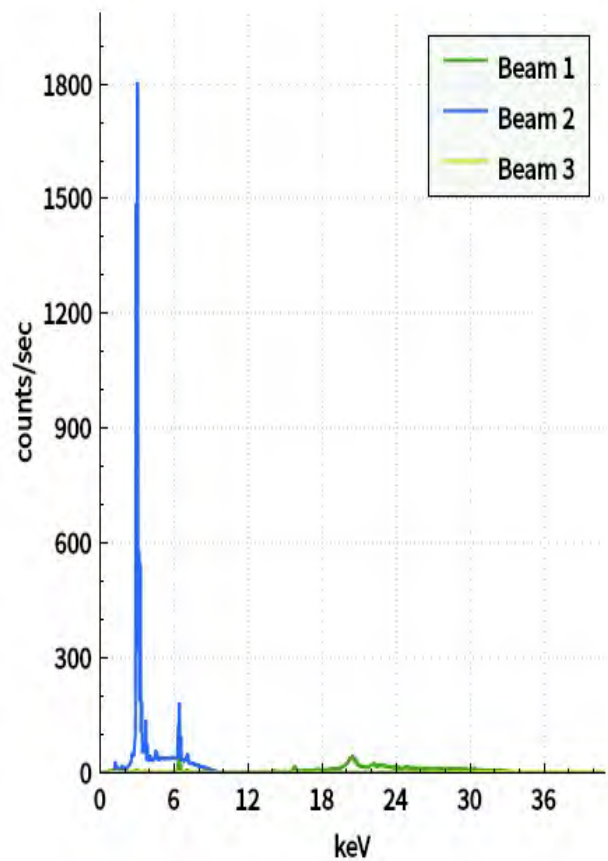
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	19	16
Se	9	8
Ba	50	19
Pb	25	18
El	PPM	+/- 3σ
Cr	ND	<280
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<61

Spectrum



Notes

info: DupA32-4

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 30

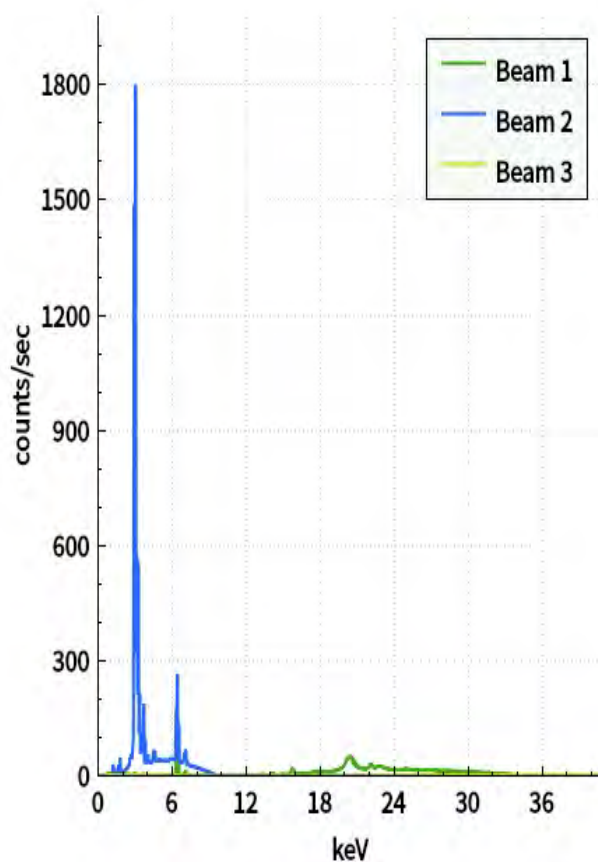
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	63	23
Pb	37	16
El	PPM	+/- 3σ
Cr	ND	<230
As	ND	<25
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<55

Spectrum



Notes

info: DupA32-5

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 31

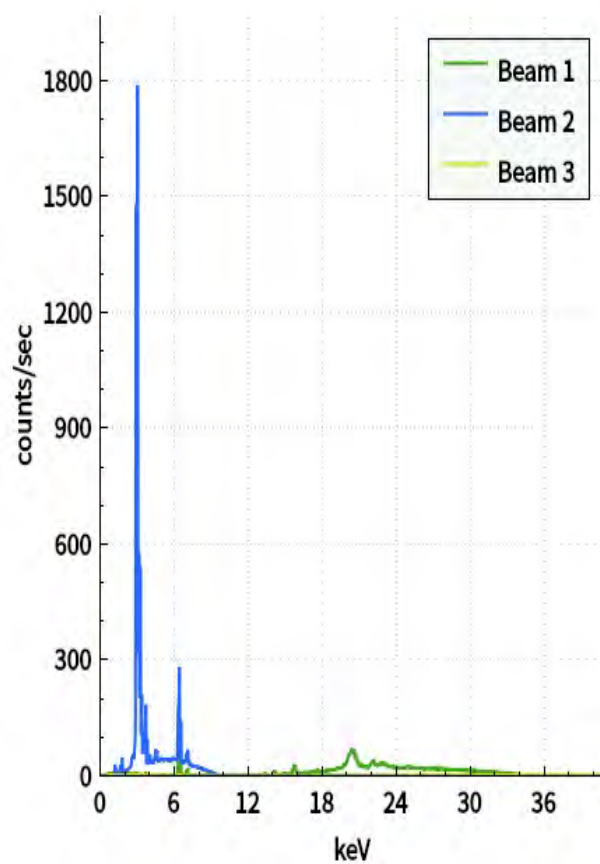
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	6	6
Ba	63	22
Pb	35	13
El	PPM	+/- 3σ
Cr	ND	<200
As	ND	<20
Ag	ND	<0.1
Cd	ND	<87
Hg	ND	<42

Spectrum



Notes

info: DupA32-6

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 32

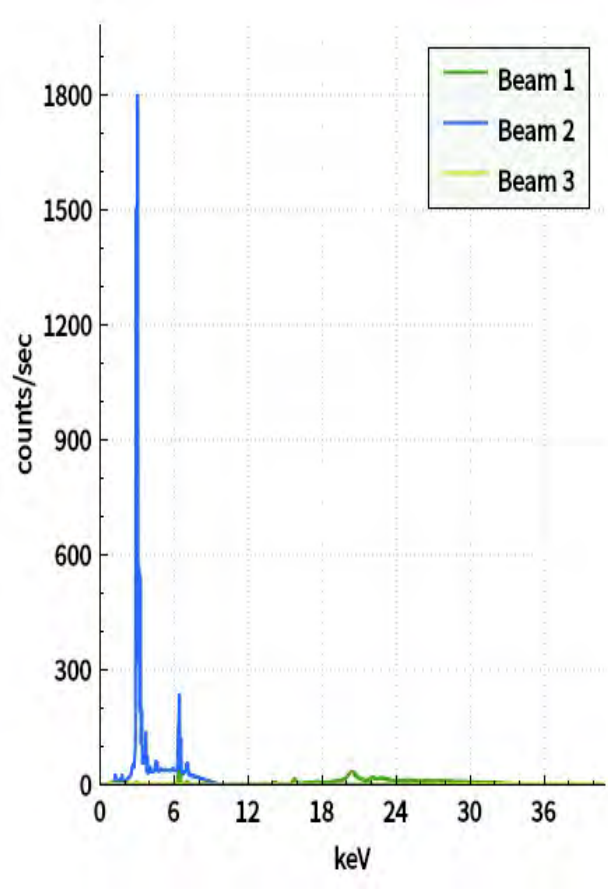
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	50	21
El	PPM	+/- 3σ
Cr	ND	<310
As	ND	<25
Se	ND	<17
Ag	ND	<0.1
Cd	ND	<130
Hg	ND	<76
Pb	ND	<31

Spectrum



Notes

info: A33

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 33

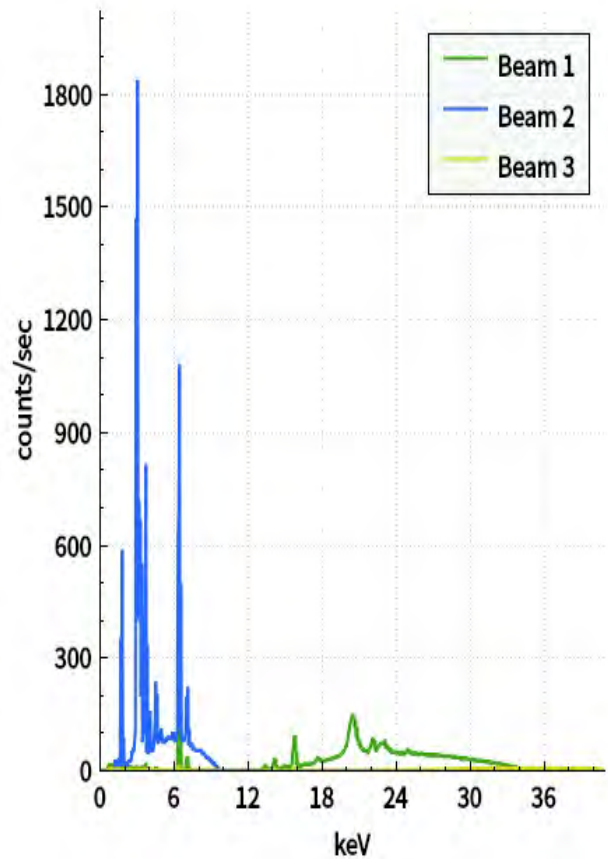
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	259	51
El	PPM	+/- 3σ
Cr	ND	<120
As	ND	<9
Se	ND	<6
Ag	ND	<0.1
Cd	ND	<56
Hg	ND	<23
Pb	ND	<11

Spectrum



Notes

info: A34SUR

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 34

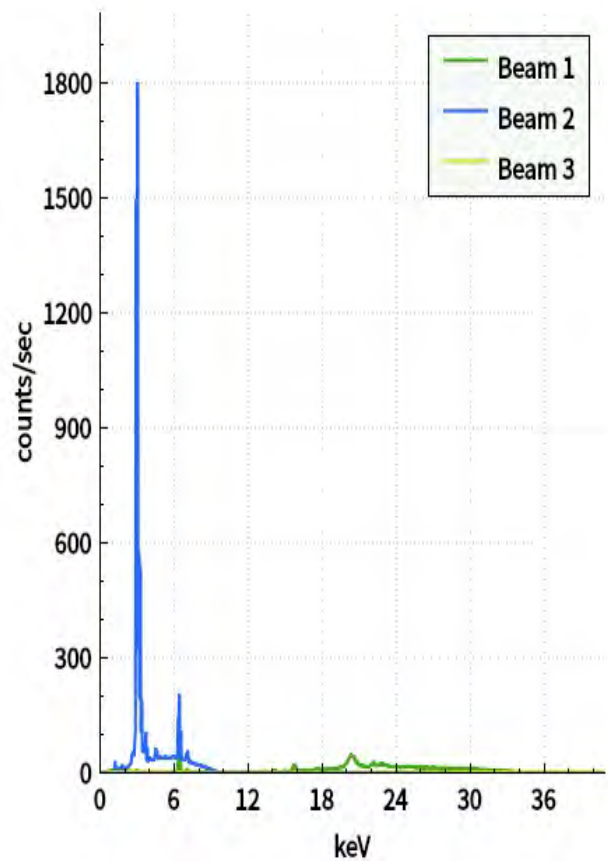
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	63	19
El	PPM	+/- 3σ
Cr	ND	<270
As	ND	<20
Se	ND	<14
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<53
Pb	ND	<25

Spectrum



Notes

info: A35

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 35

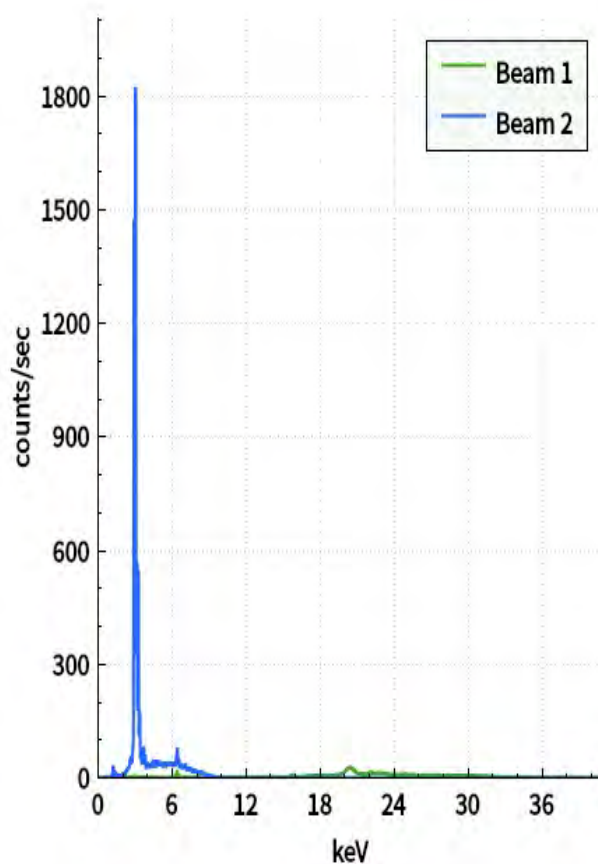
Chemistry

Elapsed Time : 12.1 s

Elapsed time: 12.1s

El	PPM	+/- 3σ
Cr	ND	<450
As	ND	<39
Se	ND	<24
Ag	ND	<0.1
Cd	ND	<170
Ba	ND	<12000
Hg	ND	<92
Pb	ND	<45

Spectrum



Notes

info: A36

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 36

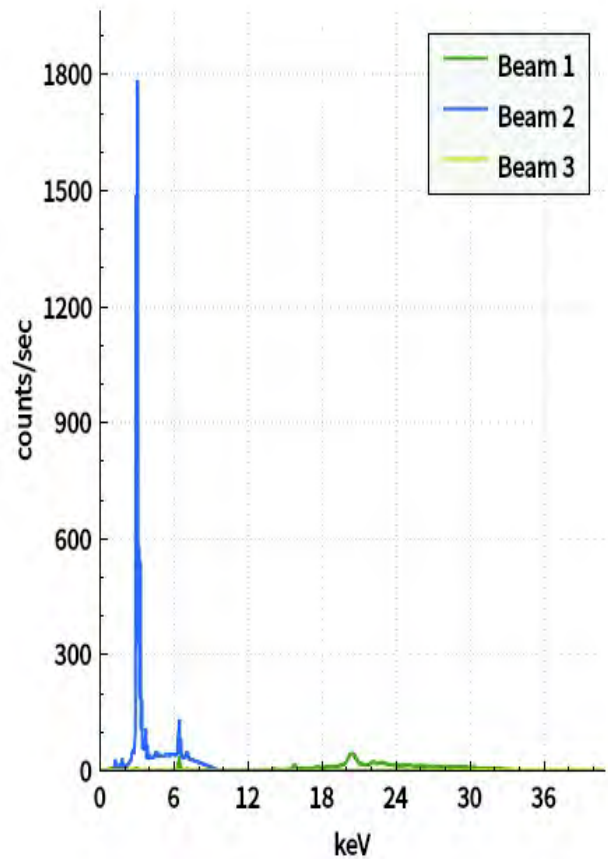
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	26	17
Pb	21	16
El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<25
Se	ND	<15
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<53

Spectrum



Notes

info: A36

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 37

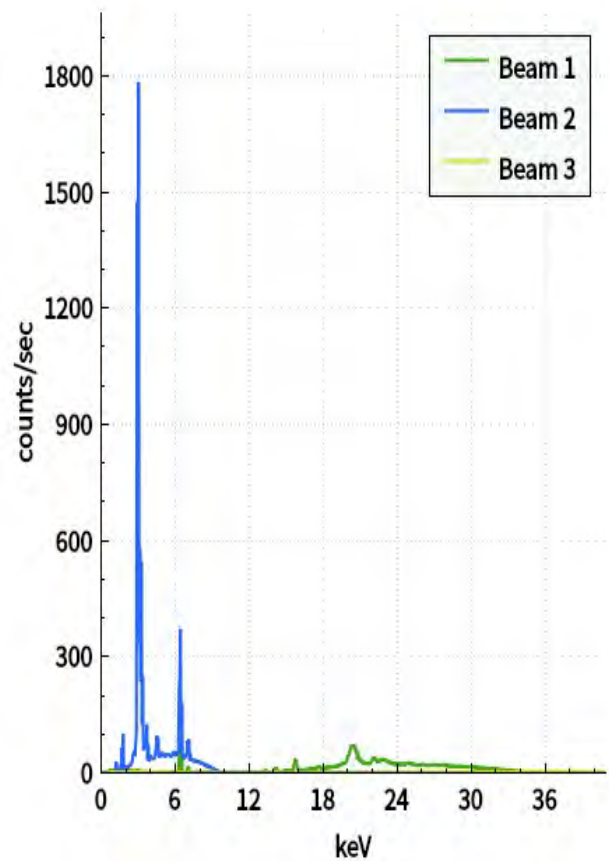
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	75	26
El	PPM	+/- 3σ
Cr	ND	<180
As	ND	<15
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<83
Hg	ND	<38
Pb	ND	<19

Spectrum



Notes

info: A37

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Cal Check

Daily ID : 38C

Chemistry

Elapsed Time : 15 s

Cal Check : Failed - Cal Check rate out of range.

Resolution : 136

Count : 64987

Slope : 0.0200006

Offset : -0.0151696

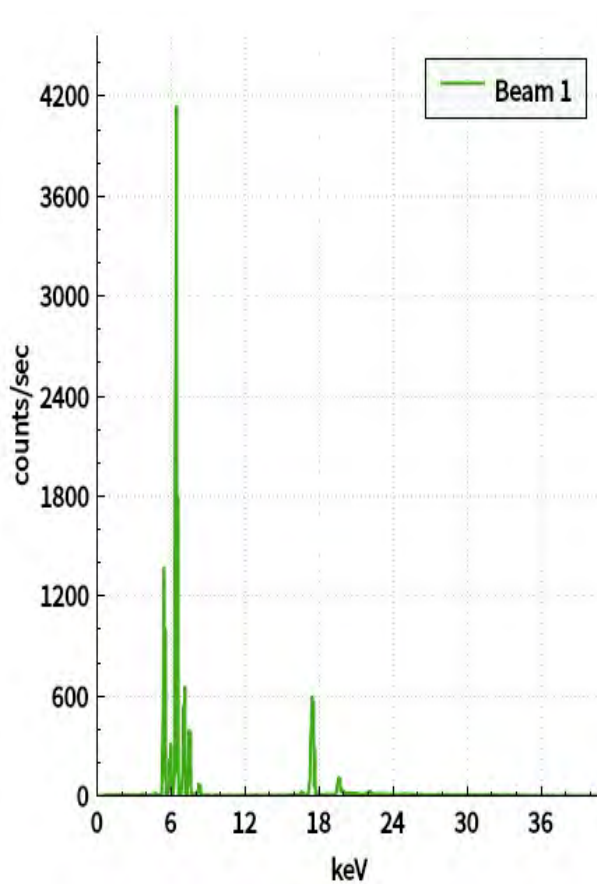
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Cal Check  
Daily ID : 39C

Chemistry

Elapsed Time : 15 s

Cal Check : Failed - Cal Check rate out of range.

Resolution : 136

Count : 76809

Slope : 0.0199995

Offset : -0.0147862

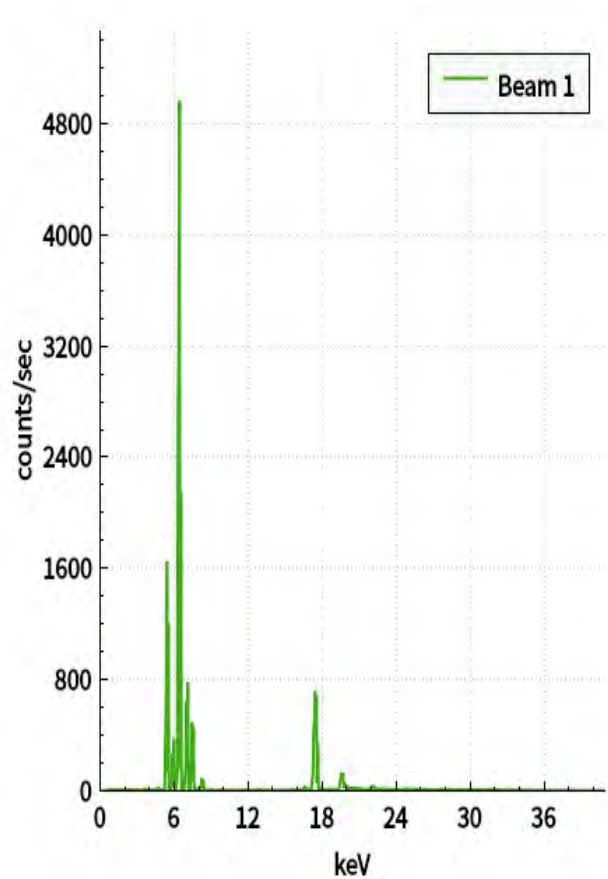
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Cal Check  
Daily ID : 40C

Chemistry

Elapsed Time : 15 s

Cal Check : Passed

Resolution : 136

Count : 87512

Slope : 0.0199993

Offset : -0.0149023

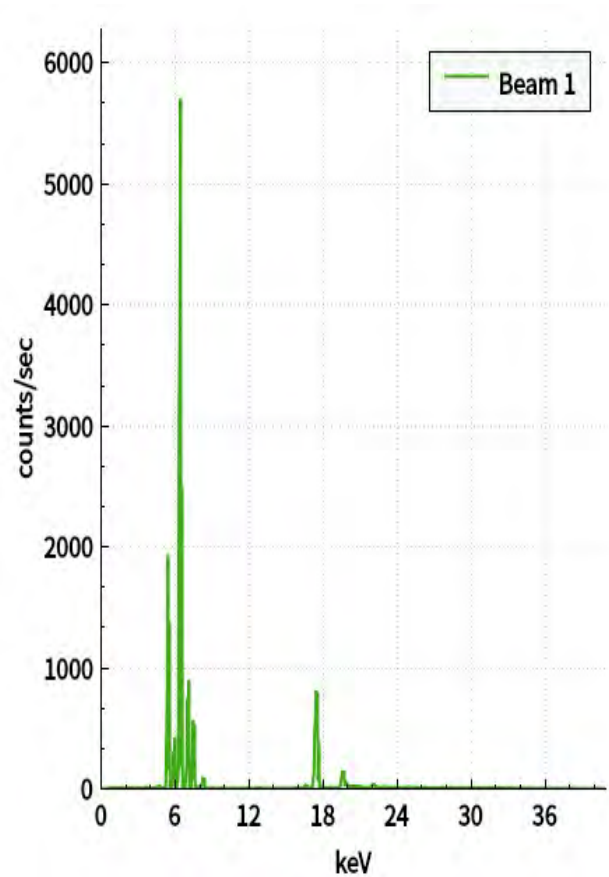
Expected Resolution: 0

Expected Count: 0

Expected Slope : 0.0199996

Expected Offset : -0.0149023

Spectrum



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Chemistry

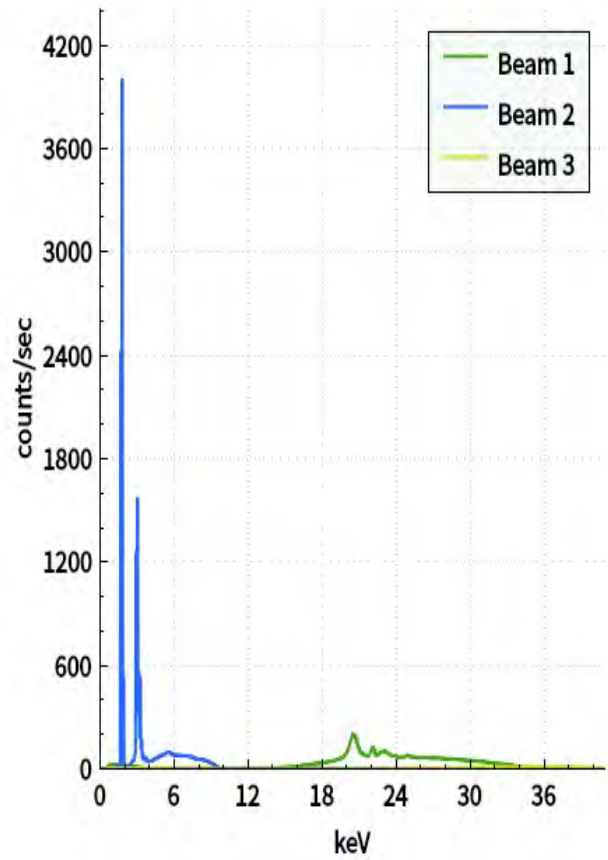
Method : Geochem(3-Beam)  
Daily ID : 41

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	4	3
El	PPM	+/- 3σ
Cr	ND	<96
As	ND	<6
Ag	ND	<0.1
Cd	ND	<54
Ba	ND	<1400
Hg	ND	<22
Pb	ND	<8

Spectrum



Notes

info: Blank 19

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 42

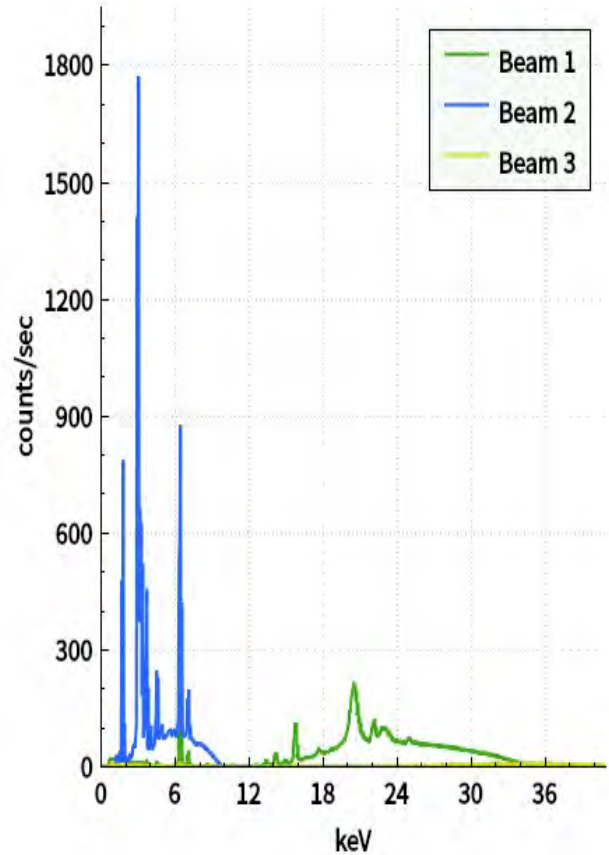
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	218	49
Pb	27	6
El	PPM	+/- 3σ
Cr	ND	<96
As	ND	<10
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<47
Hg	ND	<18

Spectrum



Notes

info: A38SUR

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 43

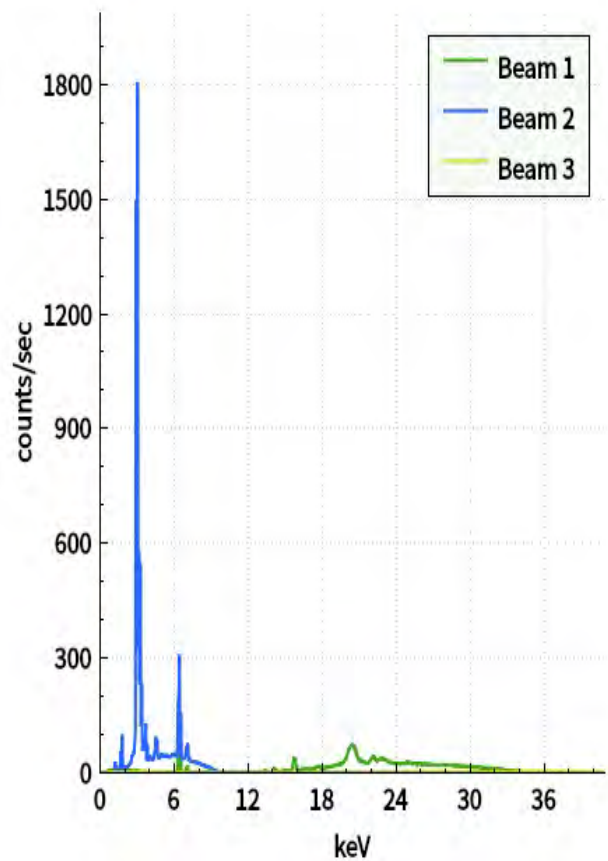
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	85	26
Pb	30	12
El	PPM	+/- 3σ
Cr	ND	<190
As	ND	<18
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<82
Hg	ND	<39

Spectrum



Notes

info: A38

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 44

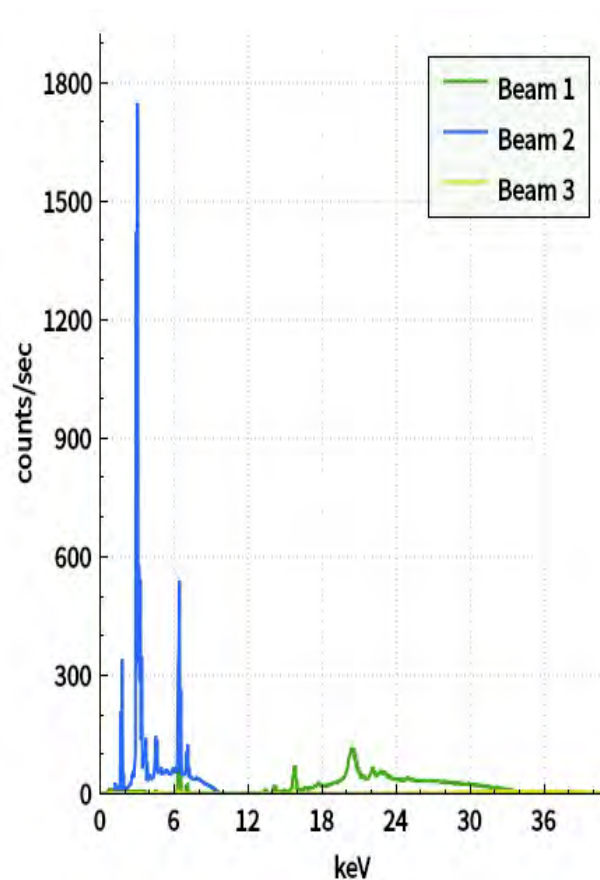
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	166	39
Pb	14	8
El	PPM	+/- 3σ
Cr	ND	<130
As	ND	<11
Se	ND	<7
Ag	ND	<0.1
Cd	ND	<63
Hg	ND	<26

Spectrum



Notes

info: A39

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 45

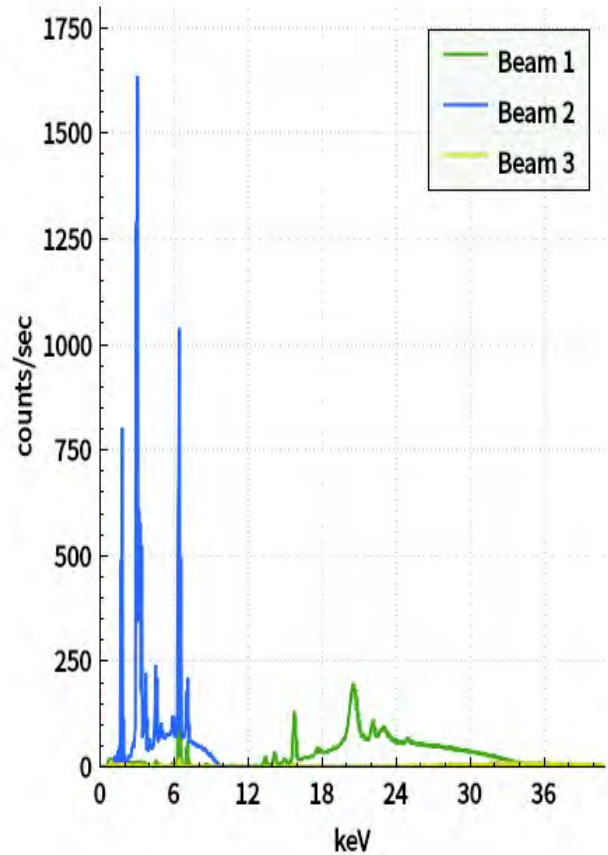
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	10	5
Ba	273	52
Pb	15	6
El	PPM	+/- 3σ
Cr	ND	<99
Se	ND	<5
Ag	ND	<0.1
Cd	ND	<48
Hg	ND	<18

Spectrum



Notes

info: A40

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 46

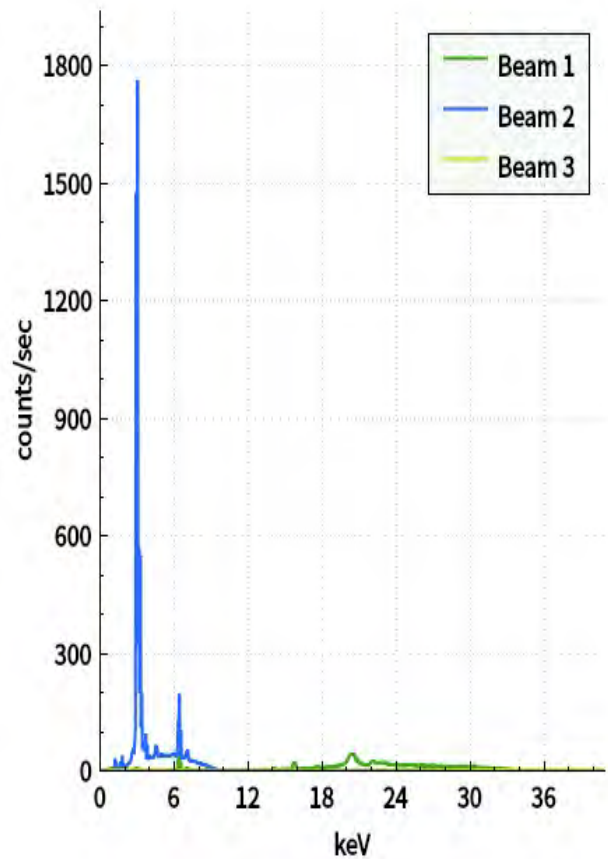
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	44	20
Pb	84	22
El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<33
Se	ND	<14
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<61

Spectrum



Notes

info: A41

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 47

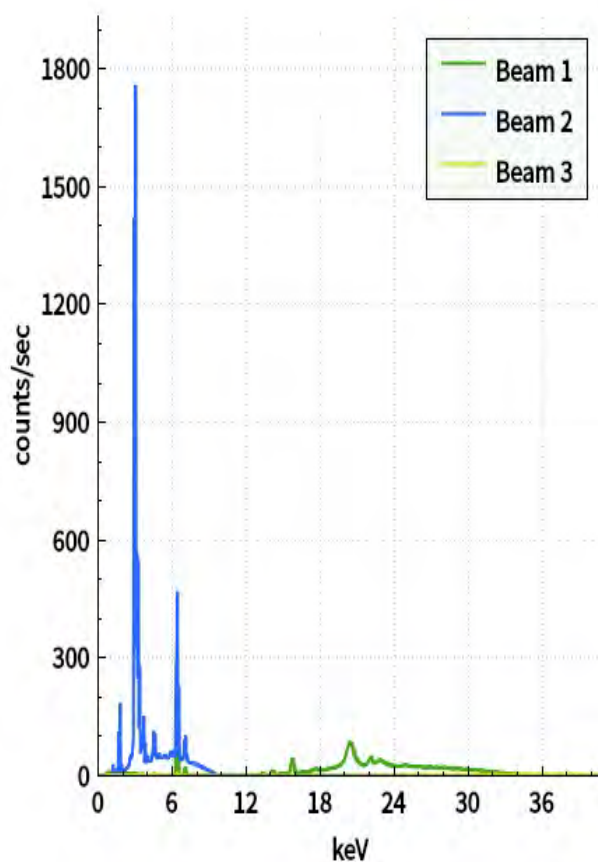
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	92	31
Pb	44	12
El	PPM	+/- 3σ
Cr	ND	<170
As	ND	<18
Se	ND	<9
Ag	ND	<0.1
Cd	ND	<75
Hg	ND	<34

Spectrum



Notes

info: A42

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 48

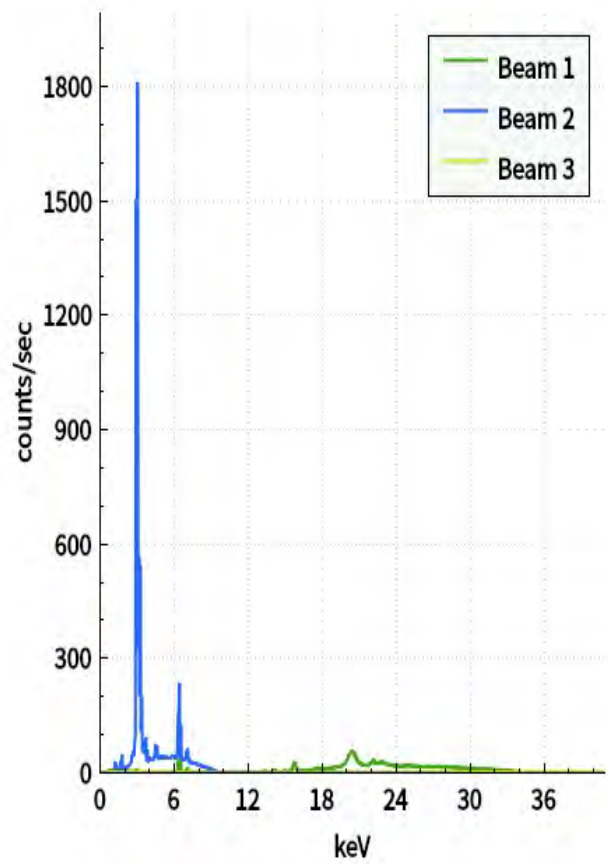
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	59	22
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<18
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<98
Hg	ND	<47
Pb	ND	<22

Spectrum



Notes

info: A43

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 49

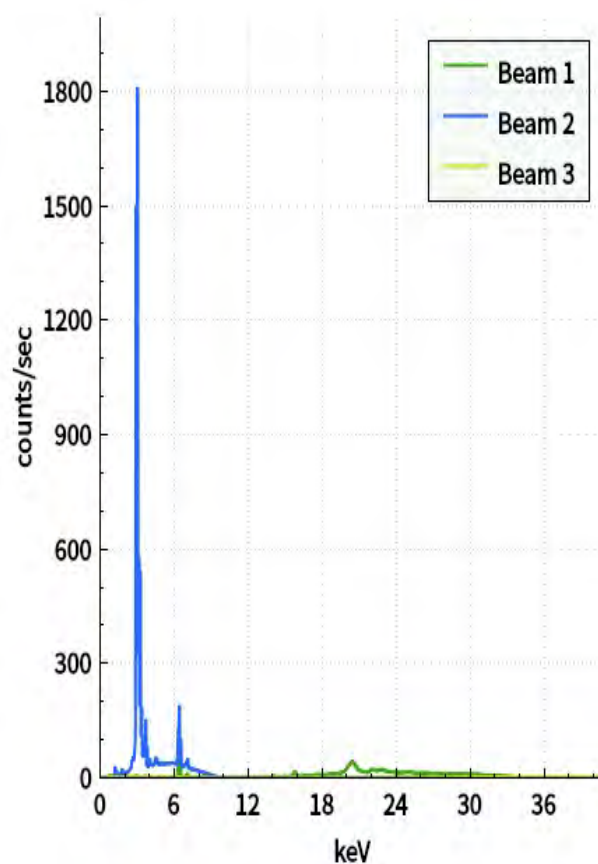
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	34	18
Pb	112	26
El	PPM	+/- 3σ
Cr	ND	<280
As	ND	<37
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<67

Spectrum



Notes

info: A44

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 50

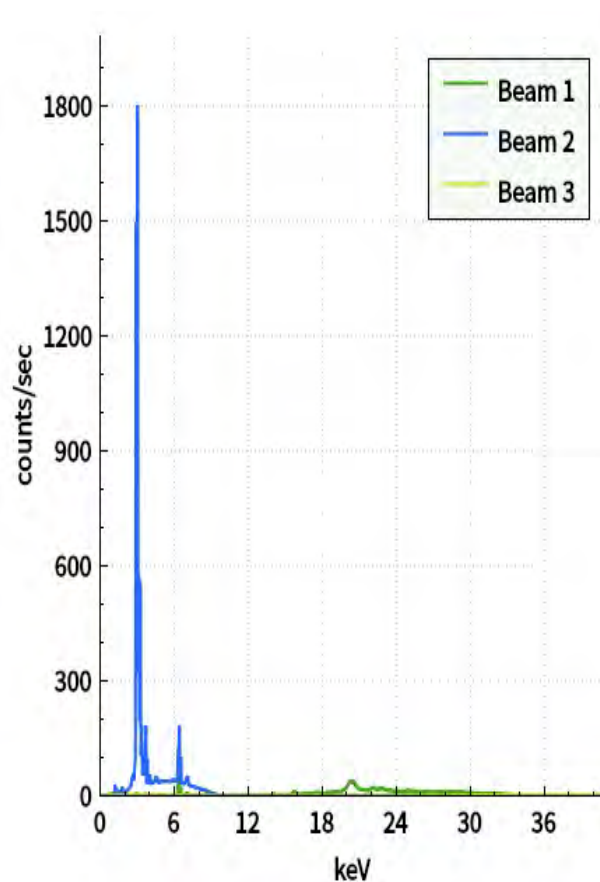
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	27	18
Pb	33	20
El	PPM	+/- 3σ
Cr	ND	<290
As	ND	<29
Se	ND	<18
Ag	ND	<0.1
Cd	ND	<120
Hg	ND	<73

Spectrum



Notes

info: A45

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 51

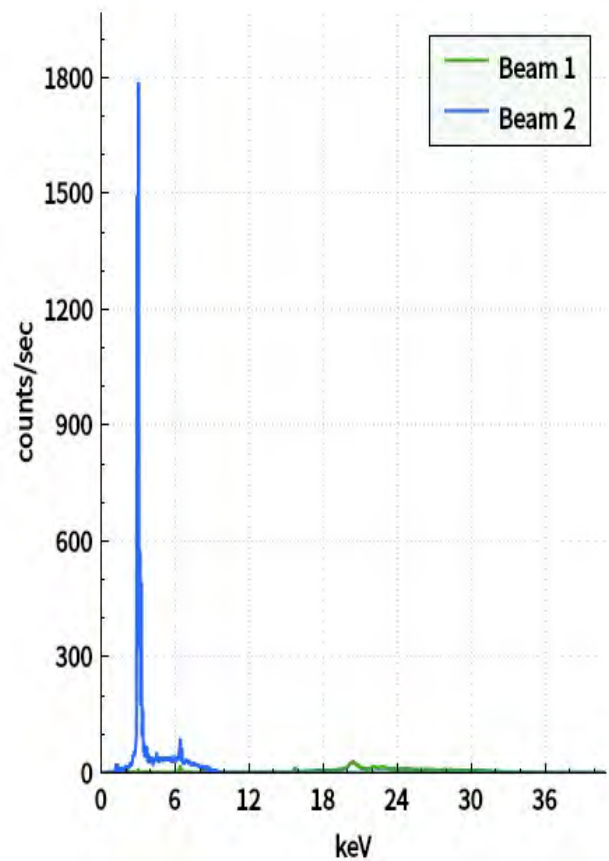
Chemistry

Elapsed Time : 12.2 s

Elapsed time: 12.2s

El	PPM	+/- 3σ
Cr	ND	<430
As	ND	<36
Se	ND	<21
Ag	ND	<0.1
Cd	ND	<160
Ba	ND	<11000
Hg	ND	<98
Pb	ND	<44

Spectrum



Notes

info: A46

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 52

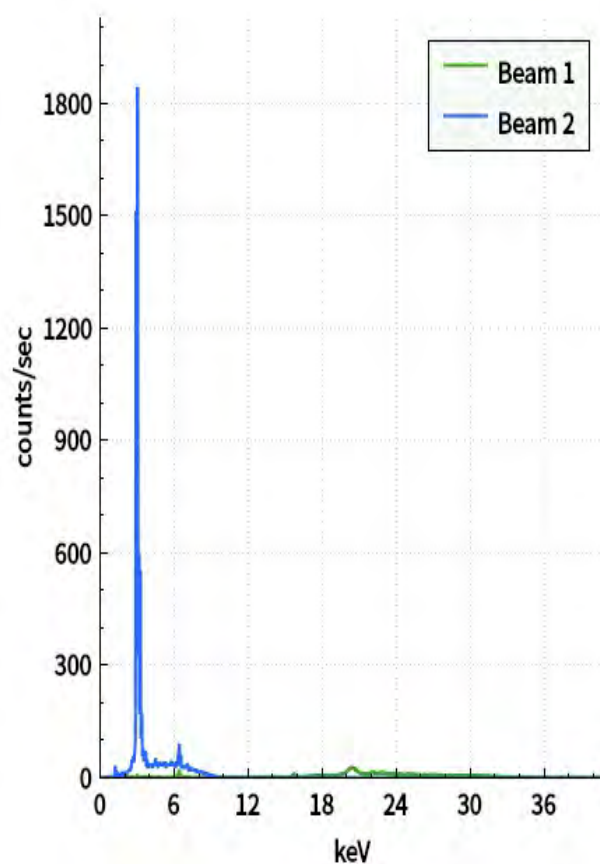
Chemistry

Elapsed Time : 13.7 s

Elapsed time: 13.7s

El	PPM	+/- 3σ
Cr	ND	<440
As	ND	<36
Se	ND	<22
Ag	ND	<0.1
Cd	ND	<160
Ba	ND	<12000
Hg	ND	<97
Pb	ND	<44

Spectrum



Notes

info: A46

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Chemistry

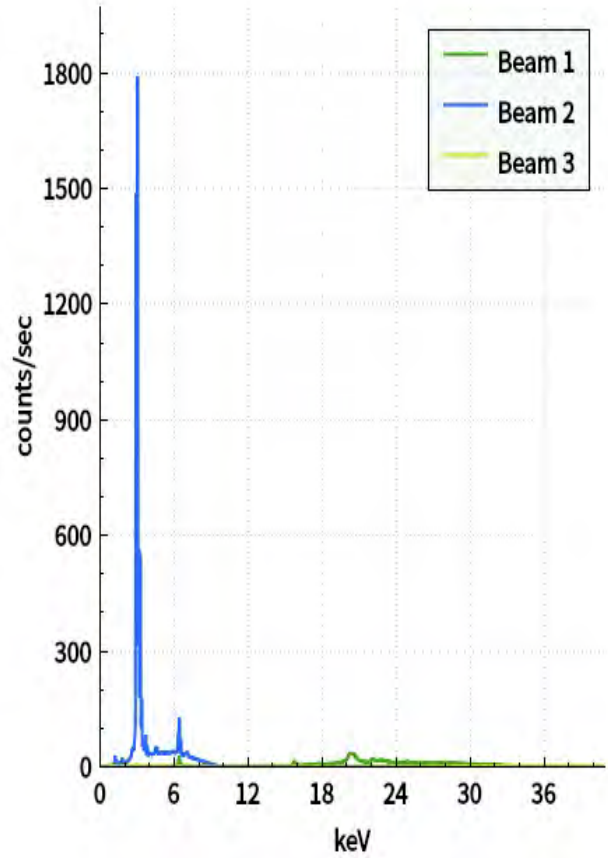
Method : Geochem(3-Beam)  
Daily ID : 53

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	47	17
El	PPM	+/- 3σ
Cr	ND	<310
As	ND	<29
Se	ND	<17
Ag	ND	<0.1
Cd	ND	<140
Hg	ND	<80
Pb	ND	<36

Spectrum



Notes

info: A46

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 54

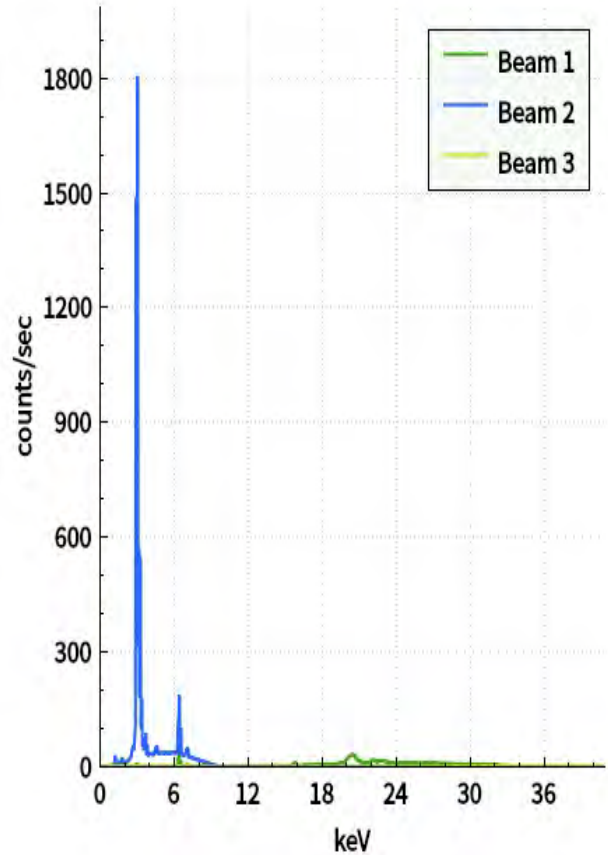
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	41	17
El	PPM	+/- 3σ
Cr	ND	<390
As	ND	<31
Se	ND	<20
Ag	ND	<0.1
Cd	ND	<140
Hg	ND	<88
Pb	ND	<37

Spectrum



Notes

info: E91

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)  
Daily ID : 55

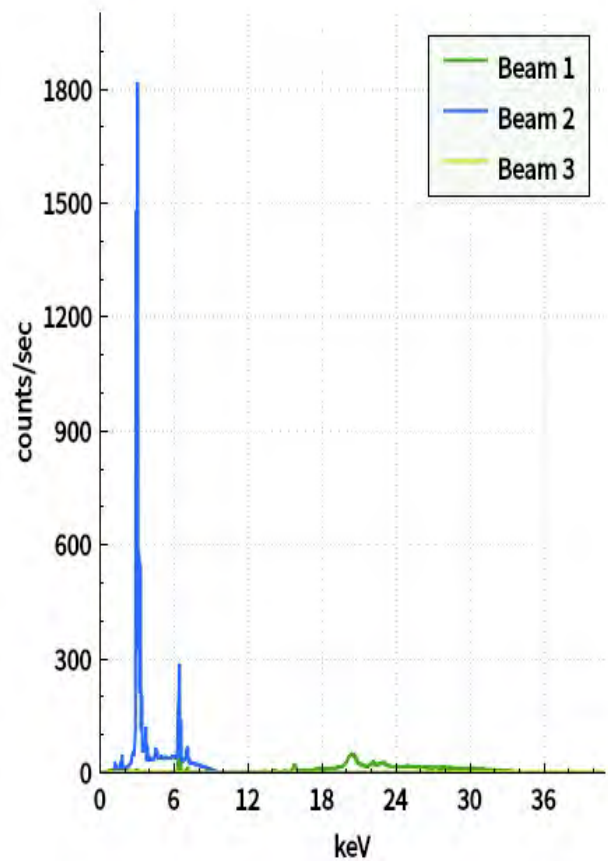
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	53	21
Pb	15	14
El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<21
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<53

Spectrum



Notes

info: E92

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 56

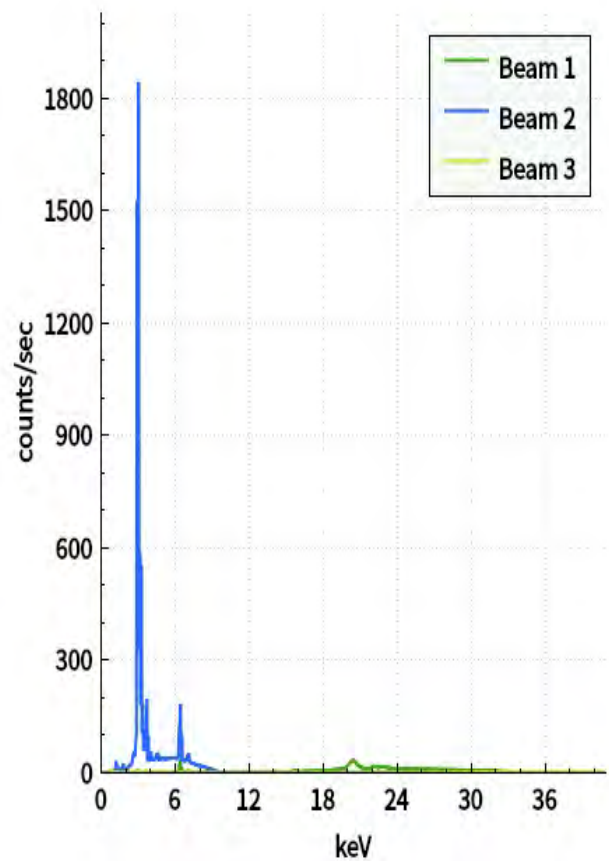
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	33	20
El	PPM	+/- 3σ
Cr	ND	<370
As	ND	<30
Se	ND	<19
Ag	ND	<0.1
Cd	ND	<140
Hg	ND	<85
Pb	ND	<37

Spectrum



Notes

info: E93

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 57

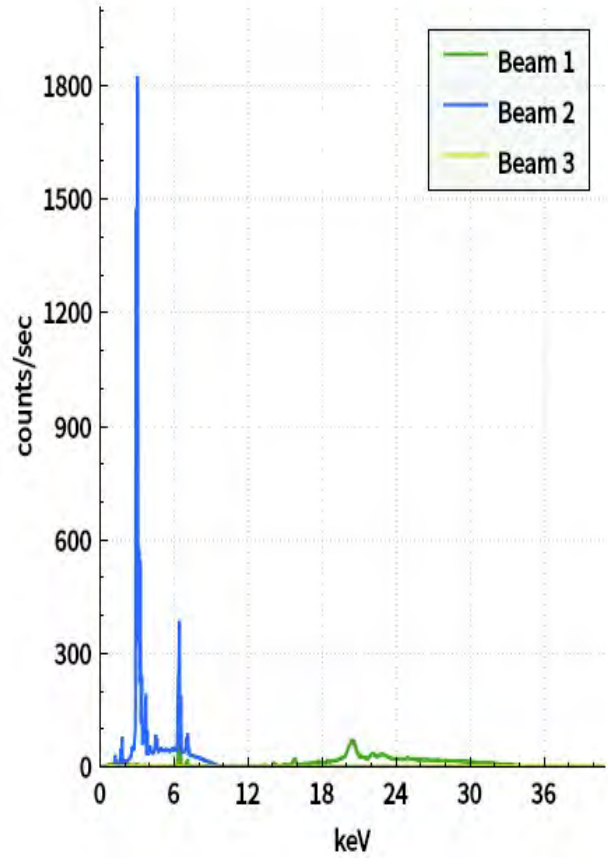
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	6	6
Ba	56	24
Pb	19	12
El	PPM	+/- 3σ
Cr	ND	<180
As	ND	<17
Ag	ND	<0.1
Cd	ND	<85
Hg	ND	<37

Spectrum



Notes

info: E94

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 58

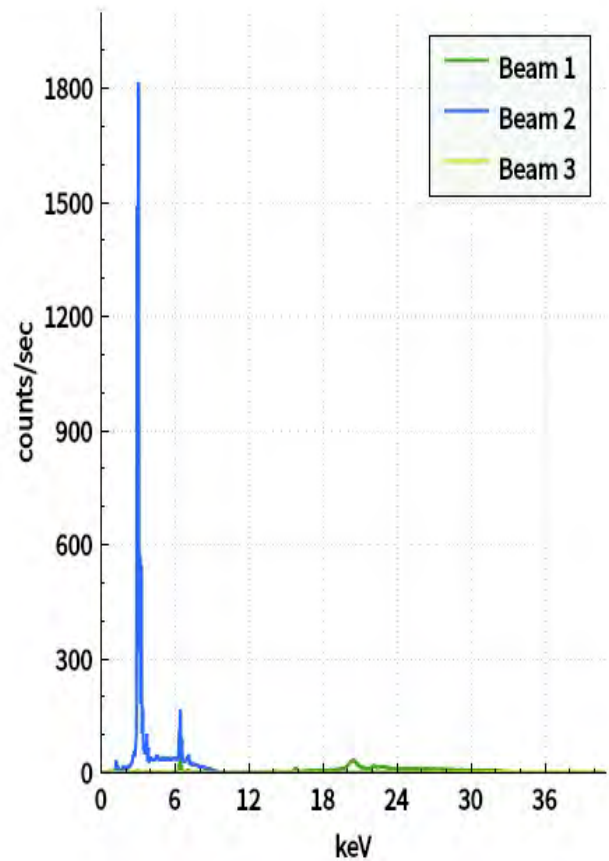
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	30	16
Pb	30	22
El	PPM	+/- 3σ
Cr	ND	<370
As	ND	<32
Se	ND	<18
Ag	ND	<0.1
Cd	ND	<140
Hg	ND	<80

Spectrum



Notes

info: E94 Dup

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 59

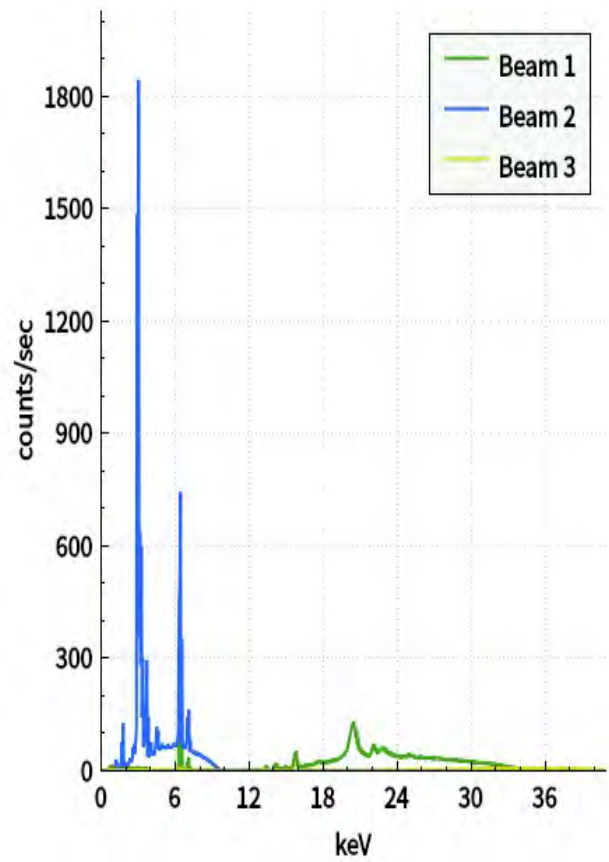
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	136	35
Pb	13	7
El	PPM	+/- 3σ
Cr	ND	<130
As	ND	<11
Se	ND	<6
Ag	ND	<0.1
Cd	ND	<61
Hg	ND	<25

Spectrum



Notes

info: E95SUR

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 60

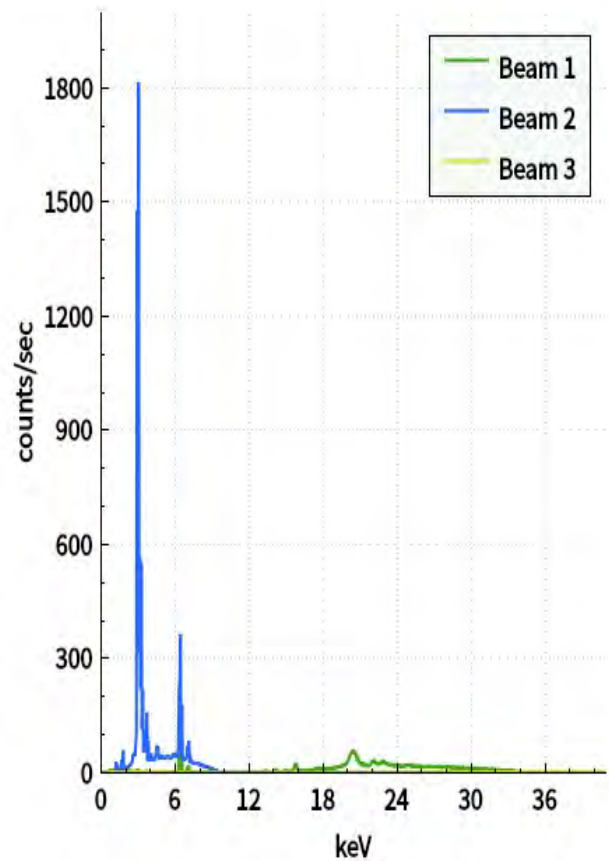
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	66	24
El	PPM	+/- 3σ
Cr	ND	<220
As	ND	<18
Se	ND	<11
Ag	ND	<0.1
Cd	ND	<94
Hg	ND	<49
Pb	ND	<21

Spectrum



Notes

info: E96

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 61

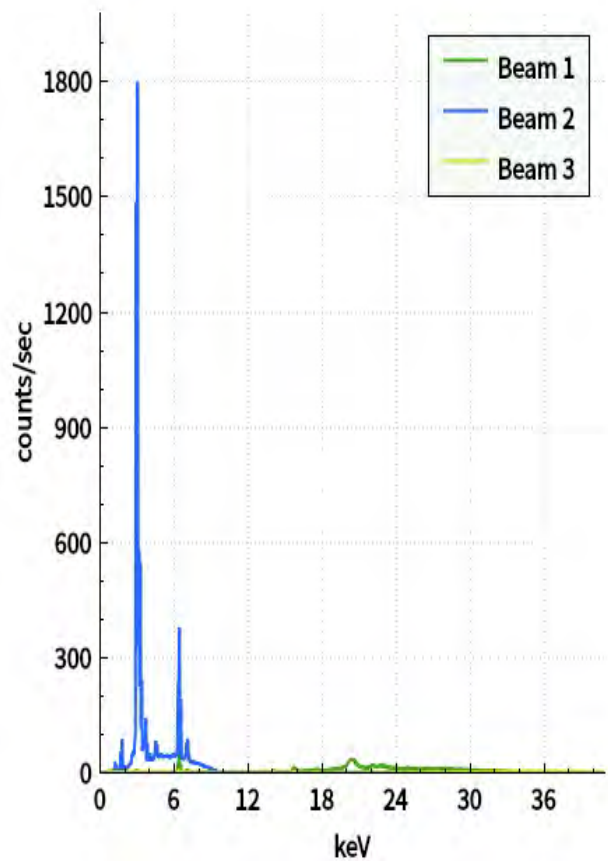
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	109	31
El	PPM	+/- 3σ
Cr	ND	<340
As	ND	<26
Se	ND	<16
Ag	ND	<0.1
Cd	ND	<130
Hg	ND	<74
Pb	ND	<33

Spectrum



Notes

info: E97

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 62

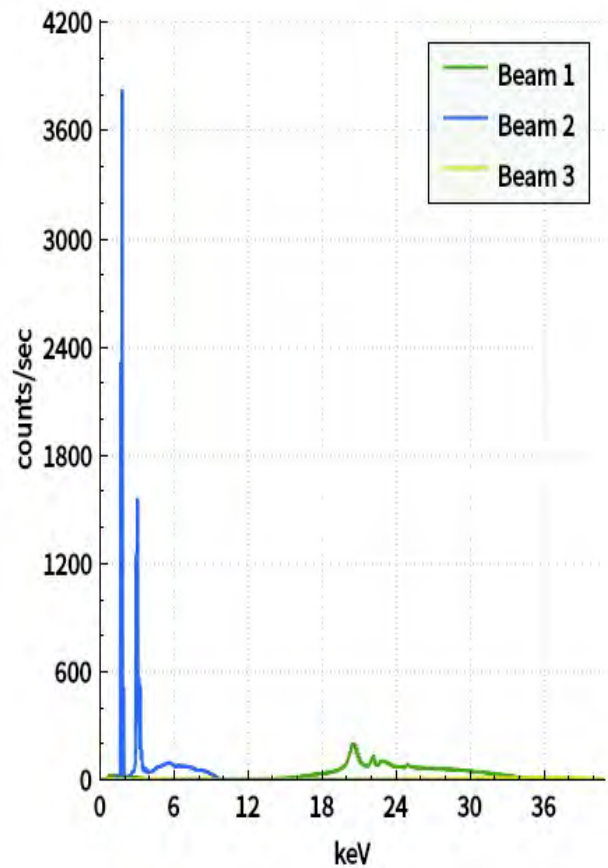
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	3	3
El	PPM	+/- 3σ
Cr	ND	<100
As	ND	<6
Ag	ND	<0.1
Cd	ND	<54
Ba	ND	<1400
Hg	ND	<20
Pb	ND	<8

Spectrum



Notes

info: Blank 20

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 63

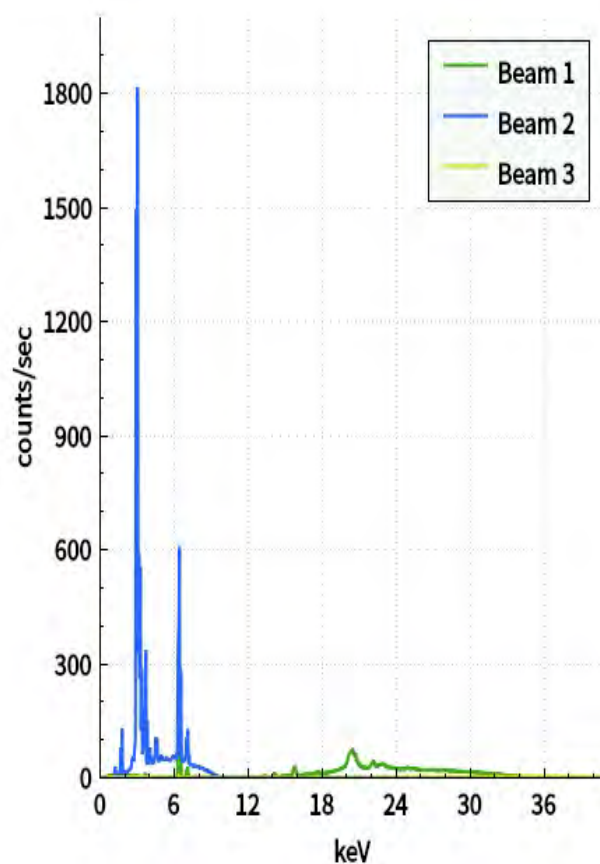
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
As	10	10
Se	7	6
Ba	83	30
Pb	14	11
El	PPM	+/- 3σ
Cr	ND	<170
Ag	ND	<0.1
Cd	ND	<81
Hg	ND	<40

Spectrum



Notes

info: E98

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 64

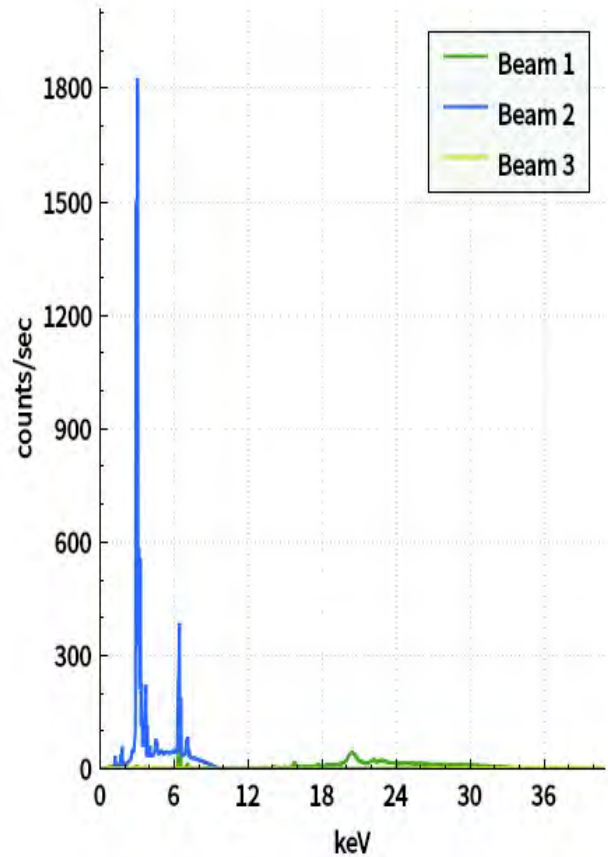
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	72	27
El	PPM	+/- 3σ
Cr	ND	<280
As	ND	<24
Se	ND	<14
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<64
Pb	ND	<27

Spectrum



Notes

info: E98 Dup

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 65

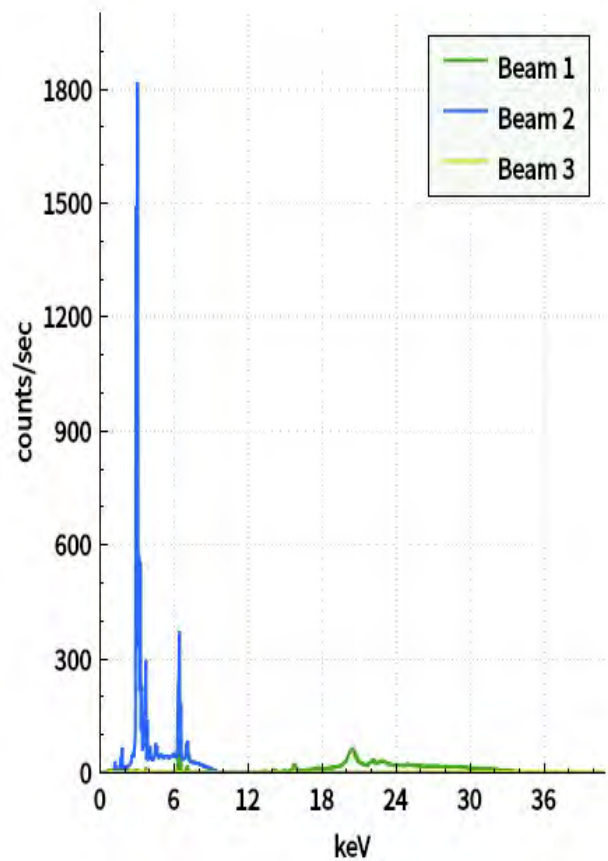
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	65	25
Pb	19	12
El	PPM	+/- 3σ
Cr	ND	<210
As	ND	<18
Se	ND	<10
Ag	ND	<0.1
Cd	ND	<90
Hg	ND	<48

Spectrum



Notes

info: E98 Dup 2

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Chemistry

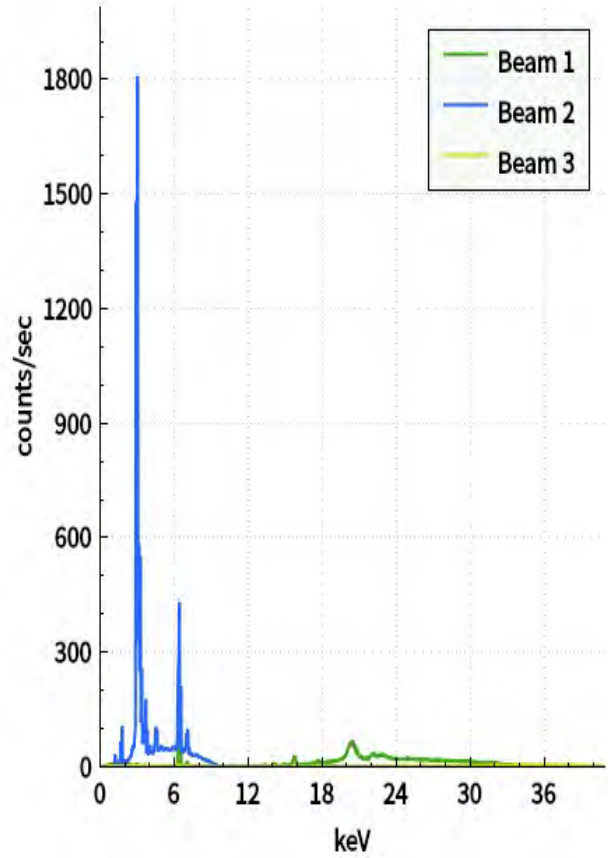
Method : Geochem(3-Beam)  
Daily ID : 66

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	8	6
Ba	100	32
Pb	23	13
El	PPM	+/- 3σ
Cr	ND	<200
As	ND	<18
Ag	ND	<0.1
Cd	ND	<87
Hg	ND	<41

Spectrum



Notes

info: E99

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Chemistry

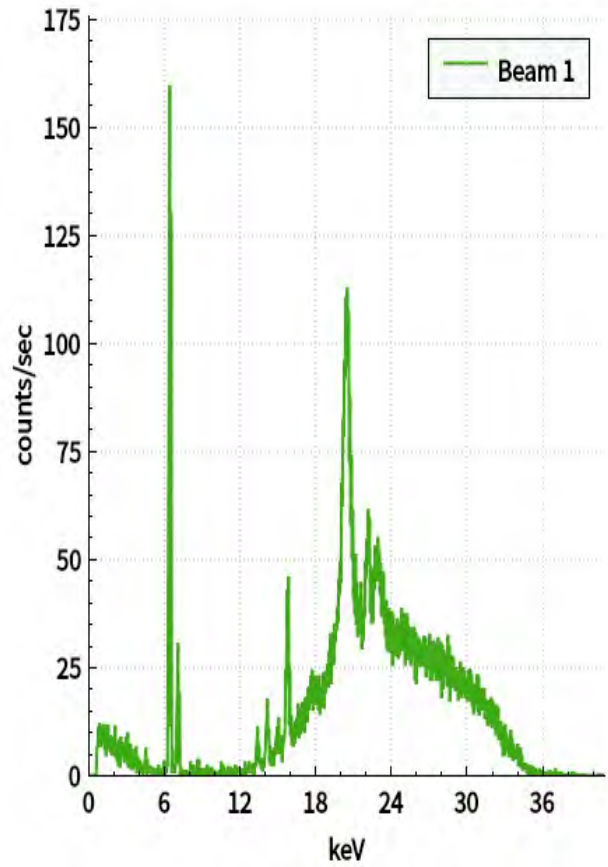
Method : Geochem(3-Beam)  
Daily ID : 67

Elapsed Time : 3.33 s

Elapsed time: 3.3s

El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<21
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<110
Ba	ND	<6700
Hg	ND	<47
Pb	ND	<24

Spectrum



Notes

info: E100

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 68

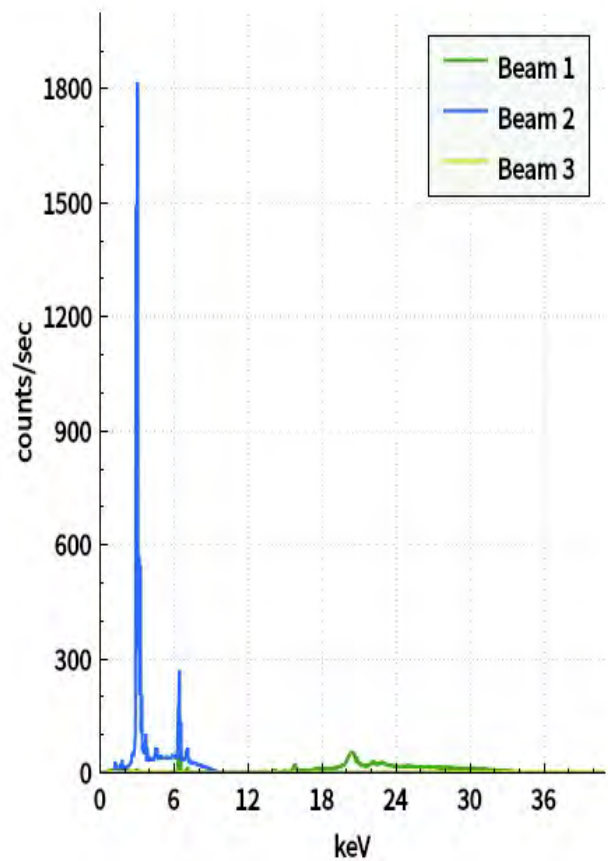
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	50	21
Pb	19	14
El	PPM	+/- 3σ
Cr	ND	<250
As	ND	<20
Se	ND	<12
Ag	ND	<0.1
Cd	ND	<99
Hg	ND	<48

Spectrum



Notes

info: E100

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 69

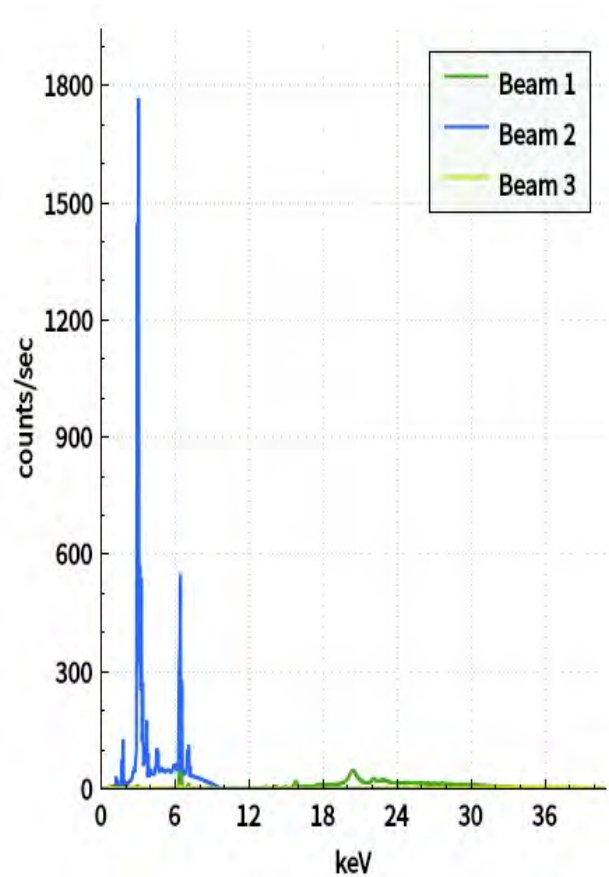
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	104	35
El	PPM	+/- 3σ
Cr	ND	<260
As	ND	<23
Se	ND	<14
Ag	ND	<0.1
Cd	ND	<110
Hg	ND	<56
Pb	ND	<26

Spectrum



Notes

info: E101

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)  
Daily ID : 70

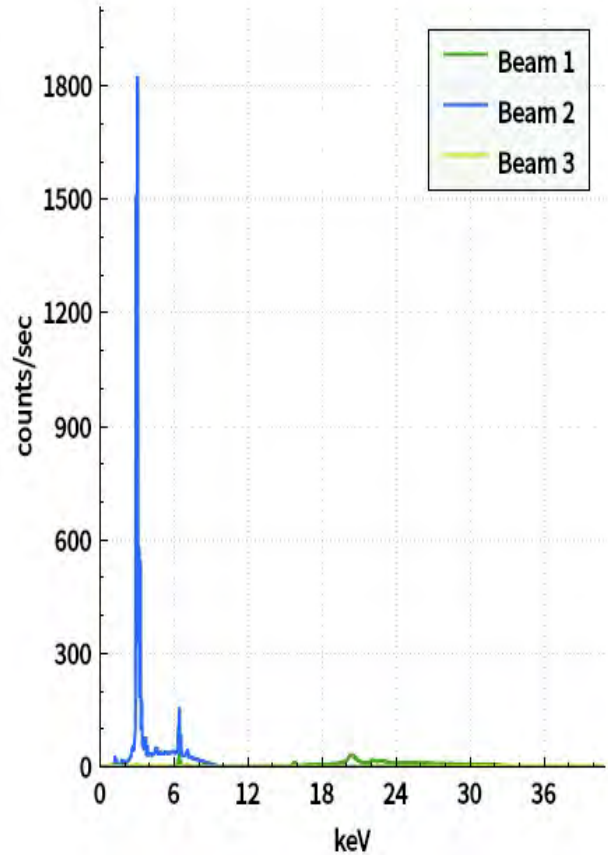
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	35	18
El	PPM	+/- 3σ
Cr	ND	<350
As	ND	<32
Se	ND	<19
Ag	ND	<0.1
Cd	ND	<140
Hg	ND	<85
Pb	ND	<39

Spectrum



Notes

info: E102

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



Method : Geochem(3-Beam)

Daily ID : 71

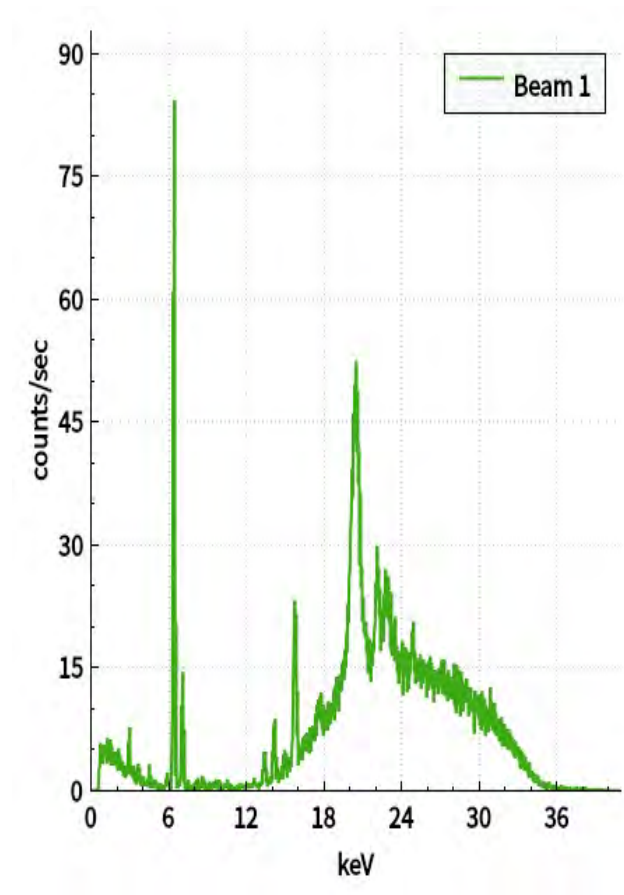
Chemistry

Elapsed Time : 10 s

Elapsed time: 10.0s

El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<21
Se	ND	<13
Ag	ND	<0.1
Cd	ND	<100
Ba	ND	<7400
Hg	ND	<58
Pb	ND	<25

Spectrum



Notes

info: E103

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 72

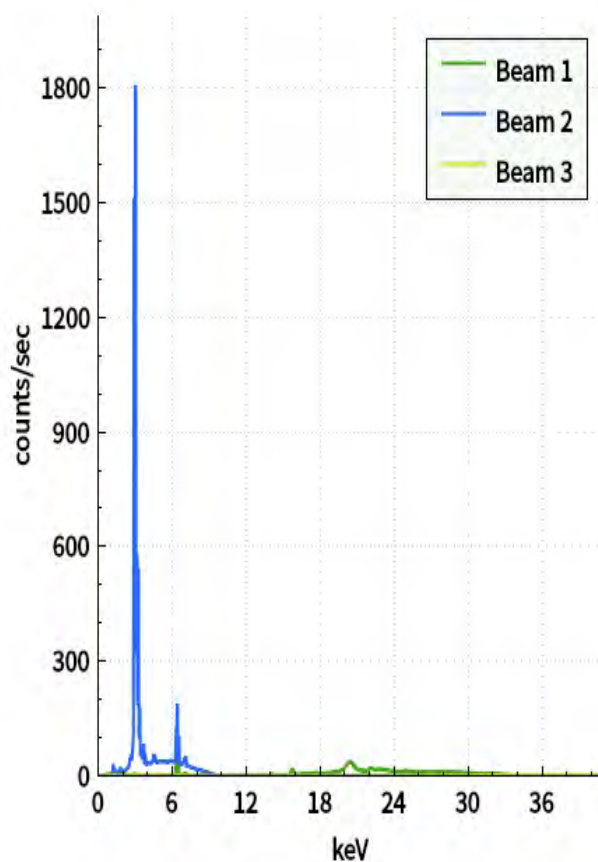
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	39	17
El	PPM	+/- 3σ
Cr	ND	<330
As	ND	<26
Se	ND	<17
Ag	ND	<0.1
Cd	ND	<130
Hg	ND	<77
Pb	ND	<33

Spectrum



Notes

info: E103

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 73

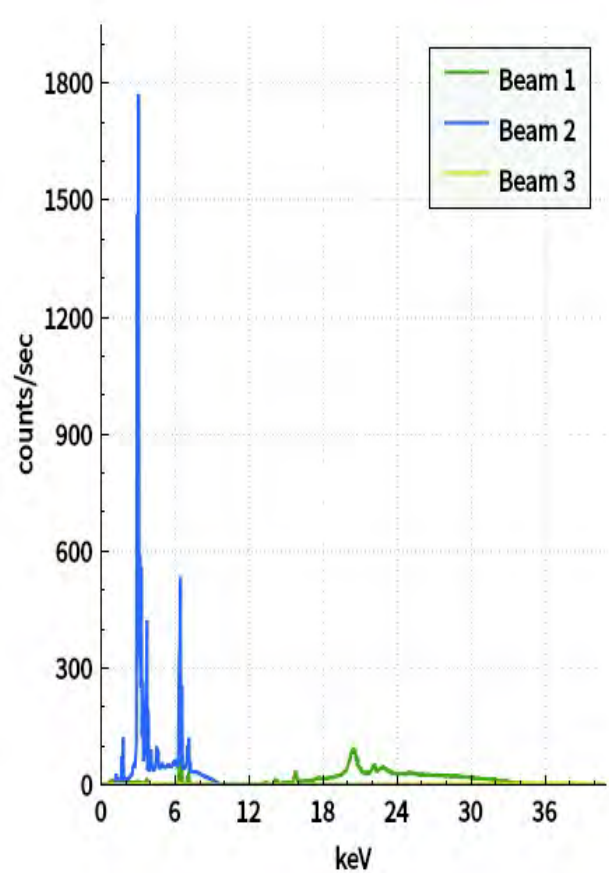
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Ba	86	30
Pb	24	10
El	PPM	+/- 3σ
Cr	ND	<160
As	ND	<15
Se	ND	<8
Ag	ND	<0.1
Cd	ND	<72
Hg	ND	<32

Spectrum



Notes

info: E104

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Method : Geochem(3-Beam)

Daily ID : 74

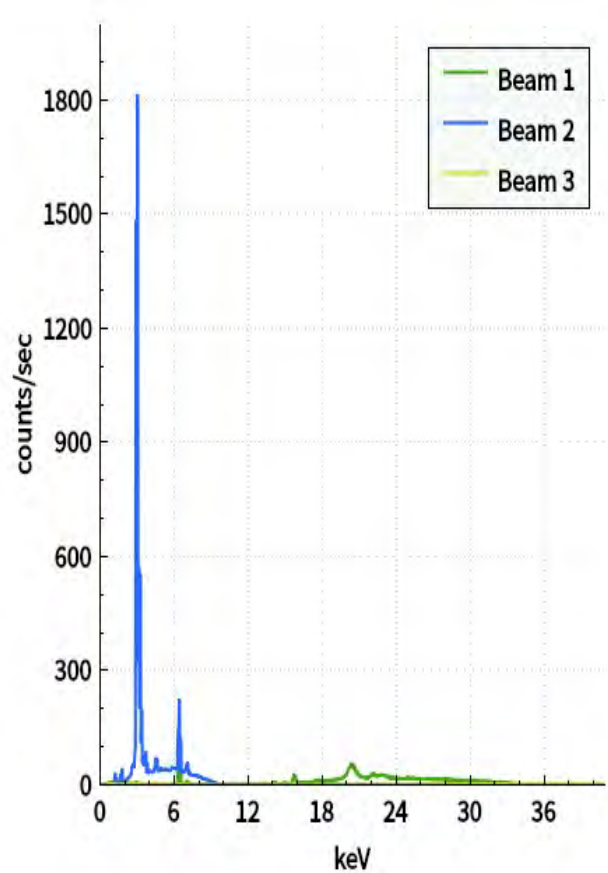
Chemistry

Elapsed Time : 50 s

Elapsed time: 50.0s

El	PPM	+/- 3σ
Se	9	7
Ba	44	20
Pb	14	13
El	PPM	+/- 3σ
Cr	ND	<240
As	ND	<20
Ag	ND	<0.1
Cd	ND	<100
Hg	ND	<48

Spectrum



Notes

info: E105

Signature: \_\_\_\_\_

Date: \_\_\_\_\_