2024 CCR ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

RWS III LANDFILL

PETERSBURG GENERATING STATION

PREPARED FOR:
Mr. David Heger
Senior Counsel
AES US Services. LLC
One Monument Circle, Suite 701A
Indianapolis, IN 46204-2901

PREPARED BY:
Atlas Technical Consultants LLC
7988 Centerpoint Drive, Suite 100
Indianapolis, IN 46256

January 30, 2025

January 30, 2025 Atlas Project No. 170AES0004

Mr. David M. Heger
Senior Counsel
AES US Services, LLC
One Monument Circle, Suite 701A
Indianapolis, Indiana 46204-2901

Re: 2024 CCR Annual Groundwater Monitoring and Corrective Action Report
Indianapolis Power & Light Company d/b/a AES Indiana (AESI)
Petersburg Generating Station – RWS III Landfill
Petersburg, Indiana
Atlas Project No. 170AES0004

Dear Mr. Heger:

Atlas Technical Consultants LLC (Atlas) has prepared this 2024 CCR Annual Groundwater Monitoring and Corrective Action Report for the Restricted Waste Site (RWS) Type III Landfill at the AESI Petersburg Generating Station located outside Petersburg, Pike County, Indiana. This report has been prepared to comply with reporting requirements described in the United States Environmental Protection Agency's (USEPA) Coal Combustion Residuals (CCR) Rule § 257.90(e). This annual report documents the status of the groundwater monitoring and corrective action program for the landfill and includes information required by § 257.90(e)(1) through § 257.90(e)(6).

Federal CCR Rule § 257.90(e)(6) specifies the following:

A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following: (i) At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95; (ii) At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95; (iii) If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e): (A) Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase; and (B) Provide the date when the assessment monitoring program was initiated for the CCR unit. (iv) If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to § 257.95(g) include all of the following: (A) Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase; (B) Provide the date when the assessment of corrective measures was initiated for the CCR unit; (C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and (D) Provide the date when the assessment of corrective measures was completed for the CCR unit. (v) Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so,

the date of remedy selection; and (vi) Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

Overview of 2024 Groundwater Monitoring and Corrective Action

For the duration of the 2024 reporting period, the CCR unit was operating under the Assessment Monitoring Program in § 257.95. Pursuant to 40 CFR 257.94(e)(2), 257.94(e)(3) and 257.95(b), the facility had previously established an Assessment Monitoring Program in accordance with the requirements of § 257.95 on July 16, 2018. Therefore, evaluation of statistically significant increase over background for one or more constituents listed in Appendix III to this part pursuant to § 257.94(e) was not performed in 2024.

At the end of the 2024 reporting period, it was determined that the following Appendix IV constituents were present at statistically significant levels (SSLs) above their associated groundwater protection standards (GWPS) pursuant to § 257.95(g)[1]: The SSLs are as follows:

Arsenic	Lithium	Molybdenum
MW-10[2]	MW-2R	MW-3
	MW-3	
	MW-4C	
	MW-13	

The above listed SSLs are not new constituent SSLs and were previously identified. Therefore, no new SSL notification was required pursuant to § 257.94(e).

The assessment of corrective measures was initiated for the Petersburg Generating Station CCR regulated unit on April 15, 2019 in response to SSLs of Appendix IV constituents exceeding GWPS. Pursuant to 40 CFR §257.96(a), a demonstration of need for a 60-day extension for the assessment of corrective measures was completed on July 12, 2019. The Corrective Measures Assessment (CMA) Report was completed and placed in the facility operating record on September 13, 2019 and subsequently amended on October 11, 2019. The nature and extent of CCR affected groundwater has been sufficiently characterized to support a CMA public meeting and subsequent selection of remedy. At an appropriate time, a public meeting will be held, a remedy will be selected pursuant to § 257.97, and implementation of the selected remedy will be initiated thereafter in accordance with § 257.98.

[1] SSLs provided are based on the May 2024 monitoring event as November 2024 sampling data was not finalized in 2024.

[2] An Alternate Source Demonstration (ASD) was successfully completed pursuant to § 257.95(g)(3)(ii) in October 2019 for total arsenic in monitoring well MW-10. The ASD report was provided as an attachment to the 2019 CCR Annual Groundwater Monitoring and Corrective Action Report dated January 30, 2020 for the AESI Petersburg Generating Station – RWS Type I Landfill.

Federal CCR Rule § 257.90(e) specifies the following:

> *For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2019, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by § 257.105(h)(1).*

The following key actions have been completed in 2024 to comply with 40 CFR 257.90-98:

- November 2023 laboratory analytical reports were finalized and placed in the facility operating record pursuant to 40 CFR 257.95(d)(1).
- Groundwater samples were collected from monitoring wells MW-1A and MW-12A in February, May, and November 2024.
- Collected groundwater samples from N&E monitoring well MW-15B during the February, May 2024, and November 2024 semi-annual events.
- AESI obtained access from off-site property owners (west of the White River);
- Performed environmental permit assessment to identify applicable permits necessary to conduct supplemental N&E work on offsite properties);
- Submitted a Letter of Authorization (LOA) to the Indiana Department of Natural Resources (IDNR) in July 2024 to conduct supplemental N&E work on offsite properties;
- Obtained LOA from IDNR in August 2024.
- Completed N&E investigation activities in October 2024.
- Semi-annual assessment monitoring sampling events were conducted in 2024 as required by § 257.95(b) and § 257.95(d)(1). Pursuant to 40 CFR 257.95(b), each Appendix IV constituents was sampled in 2024. Pursuant to 40 CFR 257.95(d)(1), semi-annual sampling of each Appendix III parameter and Appendix IV constituent detected in response to 40 CFR 257.95(b) was conducted in 2024. Specifically, each Appendix IV constituent was sampled during the spring event. If a constituent is not detected at the site during the spring event, it is not analyzed during the fall event. Each sampling event was

performed consistent with 40 CFR 257.93(e). Subsequent SSL evaluation of the November 2023 and May 2024 data were performed within 90 days of completing the sampling and analysis pursuant to § 257.93(h)(2)[3].

- Semi-Annual Remedy Selection Progress Reports pursuant to § 257.97(a) for the period of September 22, 2023 through March 24, 2024, and for the period of March 25, 2024 through September 18, 2024 were completed and placed in the facility's operating record and posted to AESI's CCR Website.

To report on the activities conducted during the prior calendar year and document compliance with the CCR Rule, the specific requirements listed in § 257.90(e)(1) through § 257.90(e)(5) are provided below in bold/italic type followed by a short narrative addressing how that specific requirement has been met.

At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

§ 257.90(e)(1) A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit.

AESI operates the Petersburg Station, located approximately four miles north of Petersburg, Indiana. It is located at 6925 North State Road 57, Petersburg, Indiana. A Site Location Map is provided as **Figure 1**. A map showing the location of each CCR management unit, associated upgradient and downgradient CCR monitoring wells, N&E monitoring equipment installed between 2019 and 2023 is provided as **Figure 2**.

§ 257.90(e)(2) Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

No monitoring wells were installed or abandoned during the 2024 reporting period.

The location of the CCR monitoring well network, enhancement wells, and N&E wells are depicted on **Figure 2**.

§ 257.90(e)(3) In addition to all the monitoring data obtained under § 257.90 through §257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

[3] Sampling results for the November 2023 and May 2024 semi-annual assessment monitoring events are summarized in **Table 3** and **Table 6**, respectively. Please refer to Section § 257.90(e)(4) on Page 10 of this report regarding SSL evaluation results.

Table 1 provides a summary of the number of samples collected at each CCR monitoring well and N&E monitoring well/piezometer, sampling dates, and designation of whether samples were required by the detection or assessment monitoring program, or N&E.

Monitoring well groundwater elevation data is provided in **Table 2**. Cumulative site-wide gauging data that includes wells, piezometers, and stream gauge data (when obtained) for the development of November 2023 and May 2024 potentiometric surface maps flow maps is provided in **Appendix A**.

Assessment Monitoring and N&E wells (MW-15, MW-15B, MW-16, MW-20I, MW-20A, MW-24, MW-33D2, MW-35D1, MW-35D2, and MW-35SS) groundwater analytical results for the November 2023 semi-annual sampling event are summarized in **Table 3**; these results were not finalized by the end of 2023 for inclusion in the associated 2023 Annual Report. Monitoring wells MW-14 and MW-20B were dry during the sampling event.

To verify elevated chromium, selenium, and lead concentrations identified in Monitoring well MW-10 and MW-13 during the November 2023 IDEM compliance sampling event, the wells were resampled in January 2024. The results are summarized in **Table 4**.

Sampling results from February 2024 for background monitoring wells MW-1A and MW-12A, in addition to supplemental N&E monitoring well MW-15B, are summarized in **Table 5.** MW-1A and MW-12A are currently being evaluated for potential incorporation into the monitoring network as additional up/gradient/background monitoring wells.

Assessment Monitoring, N&E well, and potential upgradient/background well (MW-1A, MW-12A, MW-14, MW-15, MW-15B, MW-16, MW-20B, MW-20I, MW-24, MW-33D2, MW-35D1, MW-35D2, and MW-35SS) groundwater analytical results for the May 2024 sampling event are summarized in **Table 6**. Monitoring well MW-20A became inaccessible due to flooded access paths and tree damage from storms and was unable to be sampled during the event.

Monitoring results for the August 2024 verification re-sampling event associated with MW-2R, MW-3, and MW-13 are summarized in **Table 7**.

Monitoring results for the August 2024 surface water sampling event on the White River are summarized in **Table 8**.

Monitoring results for the September 2024 verification re-sampling event associated with wells MW-2R and MW-13 are summarized in **Table 9**.

Groundwater results for both the October 2024 off-site investigation and November 2024 combined semi-annual assessment monitoring and N&E sampling event were not finalized in 2024 and therefore are not included with this submittal.

Potentiometric surface maps for the November 2023 sampling event are provided as **Figure 3** and **Figure 4**. Potentiometric surface maps for the May 2024 sampling event are provided as **Figure 5** and **Figure 6**. Potentiometric surface maps for the May 2024 sampling event are provided as **Figure 7** and **Figure 8**. Flow rate vectors are depicted on the maps. Gauging

summary tables and flow velocity calculations for each event are provided as supporting documentation in **Appendix A**. Laboratory certificates of analysis are provided in **Appendix B.**

Statistical Evaluation Procedures

The statistical evaluation procedures created for the Petersburg Generating Station RWS III Landfill define the statistical tests to be used for this site's CCR groundwater detection monitoring system. The aforementioned evaluation methods specify statistical tests for the detection monitoring program (Appendix III parameters) and assessment monitoring program (Appendix IV parameters) described in 40 CFR 257. These evaluation methods were created to comply with the requirements of § 257.93(f).

This plan is based on the use of the commercial software DUMPStat[4] (Version 3.0). The DUMPStat program uses statistical tests, procedures, and testing sequences described in Statistical Methods for Groundwater Monitoring[5] (Gibbons et. al., 2009). The statistical methods for the PGS landfill CCR monitoring system are designed to be consistent with ASTM International Standard Guide for Developing Appropriate Statistical Approaches for Groundwater Detection Monitoring Programs *at Waste Disposal Facilities* (D6312-17) along with federal and state guidance, and are also consistent with Indiana's regulations addressing statistical evaluation of groundwater at solid waste landfills.

The CCR landfill groundwater monitoring system at the Petersburg Station consists of eight (8) monitoring wells: one (1) upgradient monitoring well MW-1, and seven (7) downgradient monitoring wells MW-2R, MW-3, MW-4C, MW-10, MW-11, MW-12, and MW-13. Monitoring wells MW-1, MW-2, and MW-3 were installed in 1986. Monitoring well MW-2 was replaced by monitoring well MW-2R in 2017. Monitoring well MW-4C was installed in 1992. Due to requirements contained in the Federal CCR Rule, monitoring wells MW-10 through MW-13 were installed in 2017 for the purpose of providing additional coverage around the perimeter of the (once planned) landfill expansion footprint. AESI has subsequently decided not to proceed with the expansion.

Statistical levels defined in this evaluation plan depend, in part, on the values defined for certain settings in DUMPStat. The Plan is based on making interwell comparisons for each well and each parameter. The background database contains results from September 2016 through the respective November 2023 and May 2024 semi-annual events for the upgradient monitoring well, and from September 2016 through the respective November 2023 and May 2024 semi-annual events for the downgradient wells. The minimum background sample size was set to eight (8). Under this plan, if a detection monitoring result in a compliance well exceeds a statistical limit, a statistically significant increase, or SSI, will be declared.

Semi-annual assessment monitoring sampling events were conducted in 2024 as required by § 257.95(b) and § 257.95(d)(1). Pursuant to 40 CFR 257.95(b), each Appendix IV constituent was sampled in 2024. Pursuant to 40 CFR 257.95(d)(1), semi-annual sampling of each Appendix III

[4] DUMPStat Version 3.0 was written by Robert D. Gibbons and is distributed and supported by Discerning Systems Inc.

[5] Gibbons, R.D., Bhaumik D. K., Aryal S., 2009, Statistical Methods for Groundwater Monitoring, Second Edition, John Wiley & Sons, Inc. New York, 374 pages.

parameter and Appendix IV constituent detected in response to 40 CFR 257.95(b) was conducted in 2024. Each sampling event was performed consistent with 40 CFR 257.93(e). Subsequent SSL evaluation of the November 2023 and May 2024 data were performed within 90 days of completing the sampling and analysis pursuant to § 257.93(h)(2).

1.1 Background Data

Pursuant to 257.94(b), the monitoring well network has been sampled to establish a minimum eight background data sets prior to completion of initial statistical analyses. Groundwater samples were analysed for the Appendix III parameters: boron (total), calcium (total), chloride, fluoride, pH, sulfate, and total dissolved solids (TDS); and for the Appendix IV parameters: antimony (total), arsenic (total), barium (total), beryllium (total), cadmium (total), chromium (total), cobalt (total), fluoride, lead (total), lithium (total), mercury (total), molybdenum (total), selenium (total), thallium (total), and total radium.

Available historical data were used to calculate the background database for the system.

Included in this attachment are summaries of the historical data for the Appendix IV statistically evaluated parameters for the Petersburg RWS III Landfill. Historical data from groundwater sampling events were imported into the DUMPStat database. **Table C-1** in **Attachment C** contains groundwater quality data collected from the background monitoring well MW-1. Prediction limits based on groundwater quality reported from the background monitoring wells were calculated for each parameter and are presented in **Attachment C, Table C-5**.

1.2 Defined Statistical Tests - Interwell Statistical Comparisons

While Appendix III detection monitoring continues during the completion of the Appendix IV assessment monitoring program, detection monitoring statistics were not completed in 2024, as the facility has entered into statistical evaluation of assessment monitoring parameters.

Appendix IV assessment monitoring parameters are statistically evaluated using the appropriate upgradient versus downgradient statistical test also known as an interwell statistical comparison. To assign the appropriate upgradient versus downgradient statistical test, DUMPStat first checks the parameter concentration to determine the detection frequencies (**Attachment C, Table C-3**). It then applies the Shapiro-Wilk Test of Normality for Multiple Groups to determine if the data for each parameter are normally or lognormally distributed, or if a nonparametric prediction limit must be used (**Attachment C, Table C-4**). The statistics are then calculated and the prediction limits established (**Attachment C, Table C-5**). DUMPStat screens the background data using Dixon's test to remove the outliers. The results of the Dixon's test are listed in **Attachment C, Table C-6**. The parameters that exceed statistical limits in the downgradient monitoring wells, along with the associated historical data for those parameters, are listed in **Attachment C Table C-7**. A statistical power curve is also included.

Among the background measurements, if the constituent fits normal/lognormal distribution, the parametric prediction limit is calculated; if the constituent does not fit normal/lognormal distribution, the non-parametric prediction limit is calculated.

As will be explained in a subsequent section, calculated prediction limits are used in the development of GWPSs for each Appendix IV constituent.

1.3 False Positive Rates and Statistical Power

Included in this attachment is the power curve calculated by DUMPStat at the site for this interwell monitoring plan. As indicated in the US EPA Unified Guidance[6] document, as a general guide, when background is approximately normal in distribution, a statistical test should be able to detect a 3-standard deviation increase at least 55-60% of the time, and a 4-standard deviation increase with at least 80-85% probability. The calculated statistical power curve indicates general compliance with this guidance; the facility's statistical program has the annual power to detect 3- and 4-standard deviation increases above the true background mean. It is expected that the power curves will also improve as additional background data are added over time.

1.4 Interwell Statistics Comparisons

Future groundwater quality results at monitoring wells MW-2R, MW-3, MW-4C, MW-10, MW-11, MW-12, and MW-13 will be statistically compared to results from Monitoring Well MW-1.

1.5 Background Sample Size

The number of background samples for Appendix IV parameters is listed in the "N" column of **Appendix C, Table 5.** The minimum background sample size is eight.

1.6 Appendix IV Assessment Monitoring – Statistical Procedures to Determine GWPS Exceedances

In accordance with 257.95(a), as SSIs have previously been identified for one or more Appendix III constituents at one or more downgradient wells, an Appendix IV assessment monitoring program has been established. Prediction limits are calculated for each Appendix IV parameter. A groundwater protection standard (GWPS) for each Appendix IV parameter will also be established. The GWPS will be the larger of the background prediction limit, the regulatory standard (maximum contaminant level, MCL), or the USEPA Screening Level[7] for those Appendix IV constituents (cobalt, lithium, molybdenum) that do not have a defined MCL.

Appendix IV parameters are evaluated by calculating the lower confidence limit (LCL) on the mean of the last four reported concentrations for each Appendix IV parameter in each downgradient (compliance) well to the GWPS. This approach is discussed in technical literature (Gibbons and Coleman, 2001, Equation 19.5, p. 231)[8] and the US EPA Unified Guidance (2009). The 95% LCL of the mean of the last four measurements for each Appendix IV constituent will be calculated as follows:

$$LCL = \bar{x} - ts/\sqrt{m}$$

[6] Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities Unified Guidance, March 2009, EPA 530-R-09-007.

[7] USEPA Amendments to the National Minimum Criteria (Phase One, Part One), Disposal of Coal Combustion Residuals from Electric Utilities; effective August 29, 2018 (page 36444).

[8] Gibbons, R.D., and Coleman, D.E., 2001. Statistical Methods for Detection and Quantification of Environmental Contamination, John Wiley & Sons, 384 pp.

LCL = lower confidence limit for mean;

t = one-tailed 100(1-α) percentage point of Students *t*-distribution on m-1 degrees of freedom;

m = number of sample measurements;

$s/\sqrt{m}$ = standard error of the mean; and

$\bar{x}$ = sample mean of m measurements.

The procedure for evaluating LCLs to the GWPS to identify if an exceedance exists is as follows.

A. LCL EVALUATION OF FOUR MOST RECENT DATA RESULTS (TYPICALLY THE MOST RECENT TWO YEARS OF DATA)

Procedurally, the first step in the analysis compares the LCL to the GWPS based on the four most recent results. During this initial step, the associated mean of the four data points is also compared to the GWPS. LCL exceedances will be identified. See step B for additional description.

For non-detect data, LCL calculations utilize 1/2 the median non-detect (ND) reporting limit (RL) from the well's cumulative non-detect sample results. If RL levels changed over time, the current calculated LCL value may be larger than the most recent four ND results. In order to remove the effect of early, elevated non-detect reporting limits for cobalt and fluoride on the calculated prediction limit, these data points were removed from background prediction limit calculations beginning with the May 2024 dataset, allowing a lower, more robust prediction limit to be calculated.

B. MEAN VS. LCL QUANTITATIVE SCREENING EVALUATION

If a condition is identified where the *mean* exceeds the GWPS but the associated *LCL* does not, a concern is that, due either to the small sample size, an elevated standard deviation due to elevated sample result variability, the determination of no LCL GWPS exceedance may represent a "false negative" condition. For these isolated situations, an additional iteration of a larger dataset (typically N=8) is completed to determine if disagreement between the mean and LCL relative to the GWPS continues to exist. Prior to conducting the test, trend analysis was performed to verify stationarity of the LCL data period. The longest data range of the most recent 5 to 8 samples that was technically appropriate to evaluate (no statistically significant trends) was utilized. If this condition could not be met, the LCL was not evaluated further.

Both the mean and LCL in this iteration are calculated based on the 8 most recent results (or alternate N=_ population). During the additional iteration, if both the mean and calculated LCL are determined to be above the GWPS, a preliminary exceedance may be considered valid. Conversely, if they are both below the GWPS, an exceedance is not declared. If a conflict is still present, the data would be evaluated in Step C.

C. QUALITATIVE VISUAL SCREENING EVALUATION

To better ensure that Steps A and B do not overlook a potential exceedance that exists if an even larger dataset were considered, Atlas will visually evaluate the confidence limit graphs and time series plots for these potential situations. If a dataset that meets stationarity is identified, an appropriate expanded dataset for that constituent/well pair will be evaluated for an LCL exceedance. Conflicts that aren't resolved in Step B are also carried over to Step C evaluation.

Appendix III detection monitoring will continue during the completion of the Appendix IV assessment monitoring program.

§ 257.90(e)(4) A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels);

AESI Petersburg Generating Station RWS III Landfill operated under the assessment monitoring program in accordance with § 257.95 during 2024. No transition between monitoring programs was conducted in 2024.

During 2024, statistical evaluations of the November 2023 and May 2024 analytical data were performed in order to determine whether there was a SSL of a new Appendix IV constituent detected above the relevant GWPS in accordance with § 257.95(g) and 257.93(h). The evaluations were completed in April 2024 and September 2024, respectively. Based on the evaluations, it was determined that the Appendix IV constituents that exceeded the GWPS include arsenic, lithium, and molybdenum; however, these are the same constituent SSLs previously identified. SSLs and associated wells are summarized on Page 2.

Since there were no new Appendix IV constituents identified, an additional notification was not triggered pursuant to 40 CFR 257.95(g).

§ 257.90(e)(5) Other information required to be included in the annual report as specified in § 257.90 through § 257.98.

Table 10 summarizes the groundwater protection standards established in accordance with § 257.95(d)(2) and § 257.95(h) associated with the November 2023 and May 2024 semi-annual assessment monitoring events, respectively.

Projected key activities for the upcoming year include the following:

- Assessment monitoring sampling events in accordance with § 257.95 and consistent with § 257.90(e).
- Finalize November 2024 analytical data and complete statistical evaluation of November 2024 analytical data to determine whether there is an SSL above GWPS for Appendix IV constituents in accordance with § 257.95(g) and 257.93(h). Perform SSL evaluations of final May 2025 assessment monitoring analytical data.

- Incorporate supplemental groundwater data into the groundwater flow and solute transport model and provide additional data to support the groundwater CSM.

- Finalize off-site investigation data and prepare an off-site N&E investigation report summarizing the October 2024 investigation activities.

- Prepare an N&E Report which will provide a comprehensive summary of data evaluation and the groundwater conceptual site model (CSM).

- Begin preparing estimates quantity of Appendix IV material released.

- Continue to perform an engineering review of the potential CMA remedial alternatives. For these reviews, emphasis will be placed on integrating recent analytical results, identifying and evaluating applicability of emerging technologies and their potential applicability to the CMA and selection of remedy process

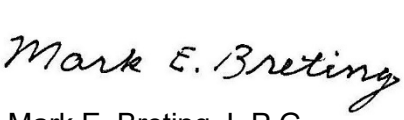
- Begin to develop an updated Corrective Measure Assessment to account for the supplemental information collected since 2019 which is sourced from additional monitoring data, groundwater N&E investigations, CSM development, geochemical and site-specific investigations, groundwater modeling updates, and potential corrective measures evaluations.

- Potentially conduct a public meeting to discuss the results of the corrective measures assessment at least 30 days prior to the selection of remedy pursuant to § 257.96(e).

- Prepare semi-annual report(s) describing progress in selecting and designing the remedy pursuant to § 257.97(a).

We appreciate the opportunity to assist with AESI's CCR Rule groundwater monitoring program at Petersburg Station's RWS III Landfill. Please contact either of the undersigned at 317.849.4990 if you have any questions regarding this report.

Respectfully submitted,
Atlas Technical Consultants LLC



Mark E. Breting, L.P.G.
Senior Project Geologist

Robert T. Duncan, L.P.G.
Principal Geologist

Copies: Ms. Pilar Cuadra, AES US Services, LLC
Mr. Nicholas Williams, AES US Services, LLC

Figures

C:\USERS\MILES.SHARPLESS\ONEATLAS\DIGITAL SERVICES - FILE SERVER\2023\1 OTHER OFFICES\INDIANA\AES\PETERSBURG\170LF01113\170AES0003-SITE LOCATION.DWG, FIG1

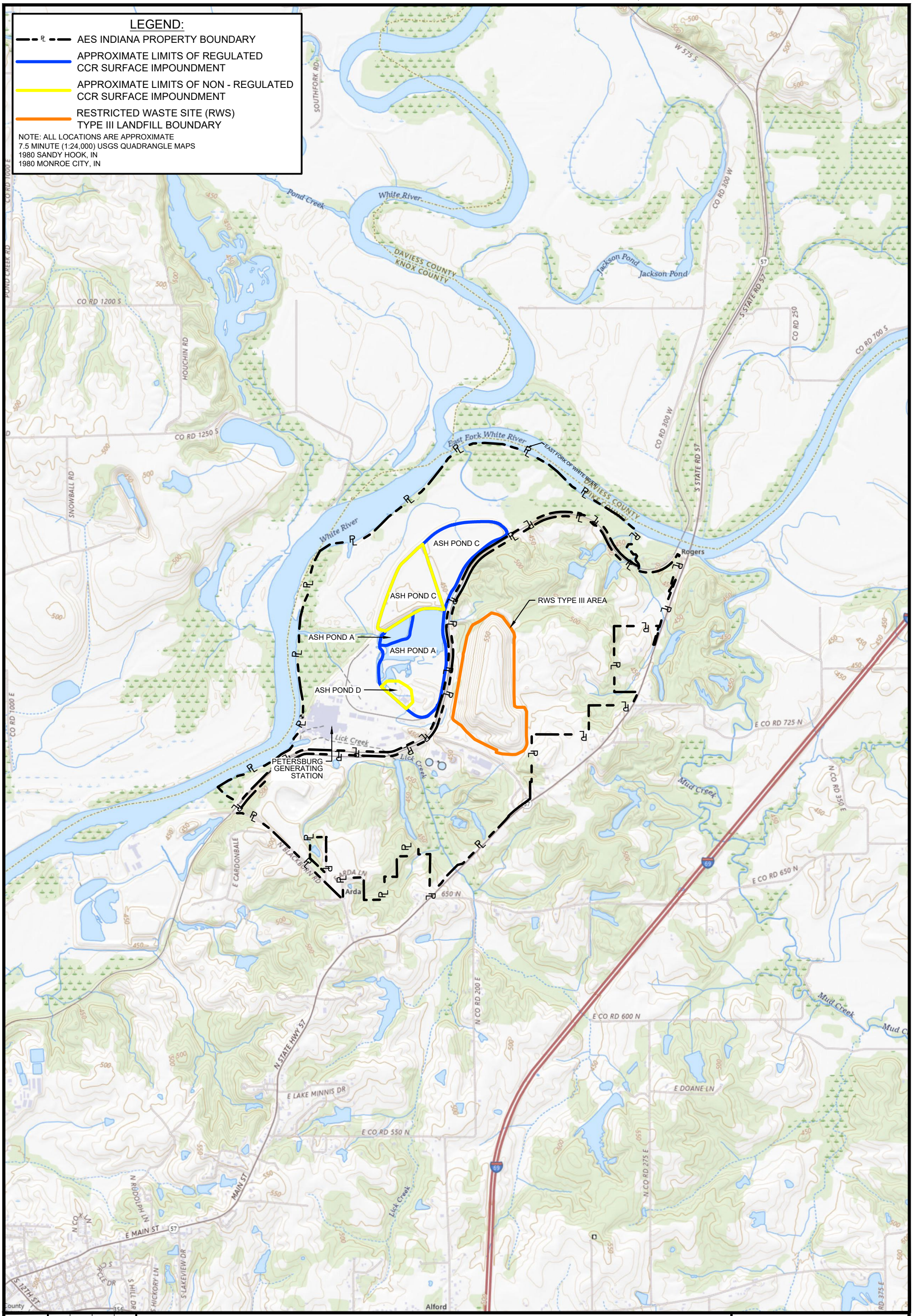
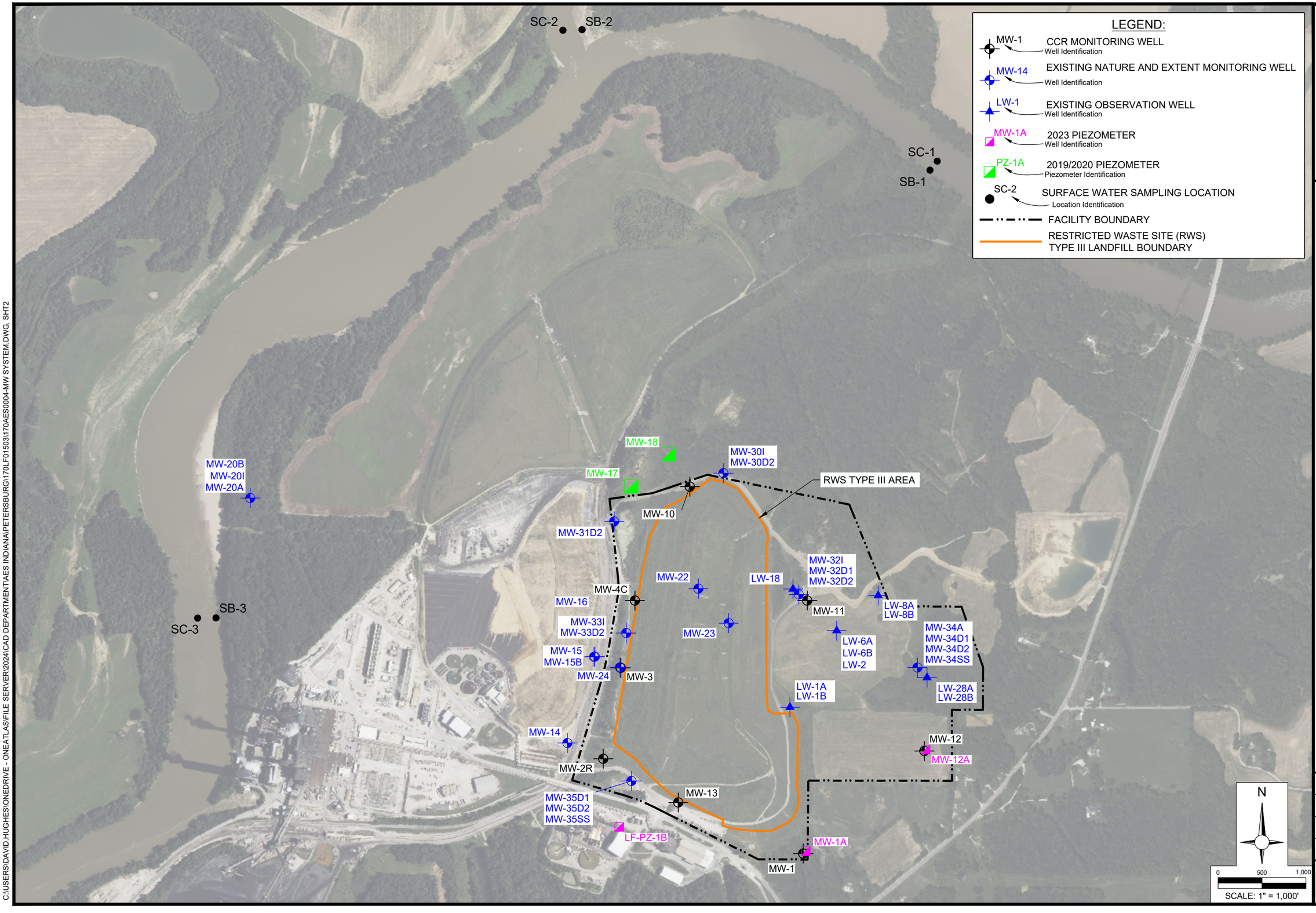


Figure: 1	Scale: 1" = 2,000'	Drn. By: MS	Ckd. By: MB	Date: 01/20/2025	Project Number: 170AES0003

SITE LOCATION MAP

AES INDIANA PETERSBURG GENERATING STATION
RWS III LANDFILL
PETERSBURG, INDIANA

ATLAS



ATLAS

CCR GROUNDWATER MONITORING SYSTEM

AES INDIANA PETERSBURG GENERATING STATION
RWS TYPE III LANDFILL
PETERSBURG, INDIANA

Project Number: 170AES0004	
Date: 01/29/2025	
Drn. By: MS	Ckd. By: MB
Scale: AS SHOWN	
Figure: 2	

C:\USERS\DAVID.HUGHES\ONEDRIVE - ONEATLAS\FILE SERVER2024\CAD DEPARTMENT\AES INDIANA\PETERSBURG\170LF01503\170AES0004-MW SYSTEM.DWG, SHT2

LEGEND:

- MW-1 496.61 — IDEM PERMIT MONITORING WELL
  - Well Identification
  - Static Water Level
- MW-1A — PIEZOMETER (POTENTIAL FUTURE BACKGROUND WELL)
  - Well Identification
- LW-6B — 1991 LANDFILL OBSERVATION WELL
  - Well Identification
- 445 — GROUNDWATER ELEVATION CONTOUR 5 FT. INTERVAL
- GROUNDWATER FLOW DIRECTION
- NG = NOT GAUGED
- PERMITTED LANDFILL BOUNDARY
- FACILITY BOUNDARY

NOTE:
FR = FLOW RATE (FT/DAY)

MW-10 460.87
FR1: 0.19
MW-4C 448.06
LW-18
LW-8A LW-8B 493.17
MW-11 478.61
LW-6A
MW-3 440.13
LW-28A LW-28B 486.32
LW-1A LW-1B 488.66
MW-12A
MW-12 483.98
MW-2R 435.60
FR2: 0.31
MW-13 463.65
MW-1 496.40
MW-1A

450 460 465 470 480 485 490 440 445 455 490 495

N

0 100 200 300 400
SCALE: 1" = 400'

POTENTIOMETRIC SURFACE MAP NOVEMBER 1, 2023 - ZONE B
PETERSBURG STATION RWS LANDFILL
AES INDIANA PETERSBURG GENERATING STATION
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA

Dm. By:	PH
Ckd. By:	MB
App'd By:	
Ckd. Date:	
Project Number:	170LF01503
Drawing File:	SEE LOWER LEFT
Date:	12/24
Scale:	AS SHOWN
Figure:	3

C:\USERS\DAVID.HUGHES\ONEDRIVE - ONEATLAS\FILE SERVER\2023\1 OTHER OFFICES\INDIANA\AES\PETERSBURG\170LF01324\170LF01503-POT-ZONE B 11.23.DWG, FIG1

LEGEND:

- MW-1 496.61 — IDEM PERMIT MONITORING WELL (Well Identification; Static Water Level)
- MW-1A — PIEZOMETER (POTENTIAL FUTURE BACKGROUND WELL) (Well Identification)
- LW-6B — 1991 LANDFILL OBSERVATION WELL (Well Identification)
- 445 — GROUNDWATER ELEVATION CONTOUR 5 FT. INTERVAL
- GROUNDWATER FLOW DIRECTION
- NG = NOT GAUGED
- PERMITTED LANDFILL BOUNDARY
- FACILITY BOUNDARY

NOTE:
FR = FLOW RATE (FT/DAY)

MW-10
MW-4C
MW-3
MW-2R
MW-13
LW-18 460.32
MW-11
LW-8A 461.49 LW-8B
465
470
LW-6A 472.74
475
FR1: 0.017
480
LW-28A 481.97 LW-28B
LW-1A 486.55 LW-1B
485
MW-12A 482.40
MW-12
480
475
470
465
460
MW-1
MW-1A 459.52

N

0 100 200 300 400
SCALE: 1" = 400'

Dm. By:	PH
Ckd. By:	MB
App'd By:	
Ckd. Date:	
Project Number:	170LF01503
Drawing File:	SEE LOWER LEFT

ATLAS

POTENTIOMETRIC SURFACE MAP NOVEMBER 1, 2023 - ZONE A

PETERSBURG STATION RWS LANDFILL

AES INDIANA PETERSBURG GENERATING STATION
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA

Date: 12/24
Scale: AS SHOWN
Figure: 4

C:\USERS\DAVID.HUGHES\ONEDRIVE - ONEATLAS\FILE SERVER\2023\1 OTHER OFFICES\INDIANA\AES\PETERSBURG\170LF01324\170LF01503-POT-ZONE A 11.23.DWG, FIG2

LEGEND:

- MW-1 494.68 — IDEM PERMIT MONITORING WELL
  - Well Identification
  - Static Water Level
- MW-1A — PIEZOMETER (POTENTIAL FUTURE BACKGROUND WELL)
  - Well Identification
- LW-6B — 1991 LANDFILL OBSERVATION WELL
  - Well Identification
- 445 — GROUNDWATER ELEVATION CONTOUR 5 FT. INTERVAL
- GROUNDWATER FLOW DIRECTION
- NG = NOT GAUGED
- PERMITTED LANDFILL BOUNDARY
- FACILITY BOUNDARY

NOTE:
FR = FLOW RATE (FT/DAY)

MW-10 462.21
MW-4C 448.46
MW-3 440.48
MW-2R 440.12
MW-13 464.80
MW-1 494.68
MW-1A
LW-18
MW-11 483.61
LW-6A
LW-8A LW-8B 493.10
LW-1A LW-1B 487.52
LW-28A LW-28B 486.33
MW-12A
MW-12 482.64
FR1: 0.18
FR2: 0.28
445
450
455
460
465
470
475
480
485
490

N

0 100 200 300 400
SCALE: 1" = 400'

POTENTIOMETRIC SURFACE MAP APRIL 30, 2024 - ZONE B
PETERSBURG STATION RWS III LANDFILL

AES INDIANA PETERSBURG GENERATING STATION
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA

Dm. By:	MS
Ckd. By:	MB
App'd By:	
Ckd. Date:	
Project Number:	170AES0006
Drawing File:	SEE LOWER LEFT
Date:	7/24
Scale:	AS SHOWN
Figure:	5

ATLAS

C:\USERS\MILES.SHARPLESS\ONEATLAS\DIGITAL SERVICES - FILE SERVER\2024\CAD DEPARTMENT\AES INDIANA\PETERSBURG\170LF01503\170AES0006-POT-ZONE B 4.24.DWG, FIG1

LEGEND:

- LW-6B 470.99 — 1991 LANDFILL OBSERVATION WELL (Well Identification / Static Water Level)
- MW-1A — PIEZOMETER (POTENTIAL FUTURE BACKGROUND WELL) (Well Identification)
- MW-3 — IDEM PERMIT MONITORING WELL (Well Identification)
- 445 — GROUNDWATER ELEVATION CONTOUR 5 FT. INTERVAL
- GROUNDWATER FLOW DIRECTION
- NG = NOT GAUGED
- PERMITTED LANDFILL BOUNDARY
- FACILITY BOUNDARY

NOTE:
FR = FLOW RATE (FT/DAY)
MONITORING WELLS MW-1A AND MW-12A ARE SCREENED ACROSS BEDROCK. STATIC WATER ELEVATIONS ARE PROVIDED ON MAP BUT ARE NOT UTILIZED IN CONTOURING OF ZONE A.

MW-10
MW-4C
MW-3
MW-2R
MW-13
MW-1
MW-1A 458.28
LW-18 458.42
MW-11
LW-8A 459.68 LW-8B
460
465
470
LW-6A 470.99
475
FR1: 0.017
480
LW-28A 482.16 LW-28B
LW-1A 485.38 LW-1B
485
MW-12A 481.16
MW-12

N

0 100 200 300 400
SCALE: 1" = 400'

Dm. By:	MS
Ckd. By:	MB
App'd By:	
Ckd. Date:	
Project Number:	170AES0006
Drawing File:	SEE LOWER LEFT

ATLAS

POTENTIOMETRIC SURFACE MAP APRIL 30, 2024- ZONE A
PETERSBURG STATION RWS III LANDFILL

AES INDIANA PETERSBURG GENERATING STATION
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA

Date: 7/24
Scale: AS SHOWN
Figure: 6

C:\USERS\MILES.SHARPLESS\ONEATLAS\DIGITAL SERVICES - FILE SERVER\2024\CAD DEPARTMENT\AES INDIANA\PETERSBURG\170LF01503\170AES0006-POT-ZONE A 4.24.DWG, FIG2

LEGEND:

- MW-1 495.46 — IDEM PERMIT MONITORING WELL
  - Well Identification
  - Static Water Level
- MW-1A — PIEZOMETER (POTENTIAL FUTURE BACKGROUND WELL)
  - Well Identification
- LW-6B — 1991 LANDFILL OBSERVATION WELL
  - Well Identification
- 440 — GROUNDWATER ELEVATION CONTOUR 5 FT. INTERVAL
- GROUNDWATER FLOW DIRECTION
- NG = NOT GAUGED
- PERMITTED LANDFILL BOUNDARY
- FACILITY BOUNDARY

NOTE:
FR = FLOW RATE (FT/DAY)

MW-10 459.89
FR1:0.18
MW-4C 447.64
LW-18
LW-8A LW-8B 493.04
MW-11 483.11
LW-6A
490
MW-3 439.78
LW-28A LW-28B 485.20
440
445
450
455
460
465
470
475
480
485
LW-1A LW-1B 483.72
MW-12A
MW-12 480.61
MW-2R 435.70
FR2:0.28
MW-13 461.79
490
MW-1A
MW-1 495.46

N

0 100 200 300 400
SCALE: 1" = 400'

Dm. By:	Ckd. By:	App'd By:	Ckd. Date:
MS	MB		

Project Number: 170AES0004
Drawing File: SEE LOWER LEFT

ATLAS

POTENTIOMETRIC SURFACE MAP NOVEMBER 1, 2024 - ZONE B
PETERSBURG STATION RWS III LANDFILL

AES INDIANA PETERSBURG GENERATING STATION
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA

Date: 1/25
Scale: AS SHOWN
Figure: 7

C:\USERS\MILES.SHARPLESS\ONEATLAS\DIGITAL SERVICES - FILE SERVER\2024\CAD DEPARTMENT\AES INDIANA\PETERSBURG\170LF01503\170AES0004-POT-ZONE B 11.24.DWG, FIG1

LEGEND:

- LW-18 / 457.74 — 1991 LANDFILL OBSERVATION WELL (Well Identification / Static Water Level)
- MW-1A — PIEZOMETER (POTENTIAL FUTURE BACKGROUND WELL) (Well Identification)
- MW-3 — IDEM PERMIT MONITORING WELL (Well Identification)
- 460 — GROUNDWATER ELEVATION CONTOUR 5 FT. INTERVAL
- GROUNDWATER FLOW DIRECTION
- NG = NOT GAUGED
- PERMITTED LANDFILL BOUNDARY
- FACILITY BOUNDARY

NOTE:
FR = FLOW RATE (FT/DAY)
MONITORING WELLS MW-1A AND MW-12A ARE SCREENED ACROSS BEDROCK. STATIC WATER ELEVATIONS ARE PROVIDED ON MAP BUT NOT UTILIZED IN CONTOURING OF ZONE A.

MW-10
MW-4C
MW-3
MW-2R
MW-13
MW-11
LW-18
457.74
LW-8A
458.70
LW-8B
460
465
470
LW-6A
470.73
FR1: 0.017
475
LW-28A
479.80
LW-28B
LW-1A
482.68
LW-1B
MW-12A
479.17
MW-12
480
MW-1
MW-1A
457.06

N

0 100 200 300 400
SCALE: 1" = 400'

POTENTIOMETRIC SURFACE MAP NOVEMBER 1, 2024 - ZONE A
PETERSBURG STATION RWS III LANDFILL

AES INDIANA PETERSBURG GENERATING STATION
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA

Dm. By:	MS
Ckd. By:	MB
App'd By:	
Ckd. Date:	
Project Number:	170AES0004
Drawing File:	SEE LOWER LEFT
Date:	1/25
Scale:	AS SHOWN
Figure:	8

ATLAS

C:\USERS\MILES.SHARPLESS\ONEATLAS\DIGITAL SERVICES - FILE SERVER\2024\CAD DEPARTMENT\AES INDIANA\PETERSBURG\170LF01503\170AES0004-POT-ZONE A 11.24.DWG, FIG2

Tables

Table 1
Well Sampling Summary
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Identification	Date Installed	Upgradient/Background, Downgradient, or Nature & Extent	Number of Samples	Sample Date	Detection or Assessment Monitoring Program
MW-1	11/21/1986	Upgradient	2	5/1/2024 11/3/2024	Assessment
MW-1A	3/14/2023	Upgradient	3	2/16/2024 5/2/2024 11/15/2024	Assessment
MW-2R	MW-2 - 1986 MW-2R - 2/1/2017	Downgradient	4	5/2/2024 8/13/2024 9/17/2024 11/7/2024	Assessment
MW-3	1986	Downgradient	3	5/12/2024 8/13/2024 11/11/2024	Assessment
MW-4C	9/29/1992	Downgradient	2	5/12/2024 11/10/2024	Assessment
MW-10	1/30/2017	Downgradient	3	1/24/2024 5/6/2024 11/4/2024	Assessment
MW-11	1/25/2017	Downgradient	2	5/2/2024 11/3/2024	Assessment
MW-12	1/26/2017	Downgradient	2	5/2/2024 11/4/2024	Assessment
MW-12A	3/16/2023	Upgradient	3	2/14/2024 5/3/2024 11/15/2024	Assessment
MW-13	1/31/2017	Downgradient	5	1/24/2024 5/2/2024 8/14/2024 9/17/2024 11/7/2024	Assessment
MW-14	4/3/2019	Nature & Extent	2	5/5/2024 11/10/2024	Assessment
MW-15B	9/6/2022	Nature & Extent	3	2/15/2024 5/21/2024 11/14/2024	Assessment
MW-15	4/2/2019	Nature & Extent	2	5/5/2024 11/10/2024	Assessment
MW-16	4/1/2019	Nature & Extent	2	5/7/2024 11/10/2024	Assessment
MW-20B	4/21/2020	Nature & Extent	1	5/24/2024	Assessment
MW-20I	4/21/2020	Nature & Extent	2	5/24/2024 11/11/2024	Assessment
MW-20A	4/22/2020	Nature & Extent	1	11/11/2024	Assessment
MW-24	10/28/2020	Nature & Extent	2	5/6/2024 11/14/2024	Assessment
MW-33D2	10/21/2021	Nature & Extent	2	5/3/2024 11/7/2024	Assessment

Table 1
Well Sampling Summary
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Identification	Date Installed	Upgradient/Background, Downgradient, or Nature & Extent	Number of Samples	Sample Date	Detection or Assessment Monitoring Program
MW-35D1	10/20/2021	Nature & Extent	2	5/1/2024 11/7/2024	Assessment
MW-35SS	10/20/2021	Nature & Extent	2	5/2/2024 11/7/2024	Assessment
MW-35D2	10/20/2021	Nature & Extent	2	5/2/2024 11/7/2024	Assessment

Notes
MW-20A was inaccessible in May 2024.
MW-20B was dry in November 2024.

Table 2
Groundwater Elevation Data
RWS Type III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Monitoring Well/Piezometer Location	Gauging Date	TOC Elevation (ft-MSL)	Depth to Water (ft)	Water Elevation (ft-MSL)
MW-1	4/30/2024	528.11	33.43	494.68
	11/1/2024		32.65	495.46
MW-1A	2/16/2024	529.36	71.06	458.30
	4/30/2024		71.08	458.28
	11/1/2024		72.30	457.06
MW-2R	4/30/2024	455.00	14.88	440.12
	8/13/2024		18.55	436.45
	9/17/2024		19.35	435.65
	11/1/2024		19.30	435.70
MW-3	4/30/2024	450.71	10.23	440.48
	8/13/2024		11.15	439.56
	11/1/2024		10.93	439.78
MW-4C	4/30/2024	454.44	5.98	448.46
	11/1/2024		6.80	447.64
MW-10	1/24/2024	502.38	41.77	460.61
	4/30/2024		40.17	462.21
	11/1/2024		42.49	459.89
MW-11	4/30/2024	517.51	33.90	483.61
	11/1/2024		34.40	483.11
MW-12	4/30/2024	517.64	35.00	482.64
	11/1/2024		37.03	480.61
MW-12A	2/14/2024	516.97	36.67	480.30
	4/30/2024		35.81	481.16
	11/1/2024		37.80	479.17
MW-13	1/24/2024	480.97	18.45	462.52
	4/30/2024		16.17	464.80
	8/14/2024		17.80	463.17
	9/17/2024		18.54	462.43
	11/1/2024		19.18	461.79
MW-14	4/30/2024	443.37	17.44	425.93
	11/1/2024		Dry to pump (17.45)	<425.92

Table 2
Groundwater Elevation Data
RWS Type III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Monitoring Well/Piezometer Location	Gauging Date	TOC Elevation (ft-MSL)	Depth to Water (ft)	Water Elevation (ft-MSL)
MW-15B	2/15/2024	444.69	10.86	433.83
	4/30/2024		10.60	434.09
	11/1/2024		11.23	433.46
MW-15	4/30/2024	444.11	20.99	423.12
	11/1/2024		25.75	418.36
MW-16	4/30/2024	442.78	3.22	439.56
	11/1/2024		4.15	438.63
MW-17	4/30/2024	472.33	15.16	457.17
	11/1/2024		17.39	454.94
MW-18	4/30/2024	458.27	6.12	452.15
	11/1/2024		11.05	447.22
MW-20B	4/30/2024	423.97	13.47	410.50
	11/1/2024		Dry to pump (16.25)	<407.72
MW-20I	4/30/2024	424.00	13.49	410.51
	11/1/2024		21.57	402.43
MW-20A	4/30/2024	424.23	13.73	410.50
	11/1/2024		21.81	402.42
MW-22	4/30/2024	561.61	88.11	473.50
	11/1/2024		89.84	471.77
MW-23	4/30/2024	564.60	86.91	477.69
	11/1/2024		88.33	476.27
MW-24	4/30/2024	452.71	13.42	439.29
	11/1/2024		14.08	438.63
MW-30D1	4/30/2024	502.83	Dry	#VALUE!
	11/1/2024		Dry to TD (59.36)	<443.47
MW-30D2	4/30/2024	502.82	87.21	415.61
	11/1/2024		93.94	408.88
MW-31D2	4/30/2024	453.91	36.61	417.30
	11/1/2024		40.64	413.27
MW-32D1	4/30/2024	516.22	74.00	442.22
	11/1/2024		74.32	441.90

Table 2
Groundwater Elevation Data
RWS Type III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Monitoring Well/Piezometer Location	Gauging Date	TOC Elevation (ft-MSL)	Depth to Water (ft)	Water Elevation (ft-MSL)
MW-32D2	4/30/2024	516.29	100.40	415.89
	11/1/2024		106.69	409.60
MW-32I	4/30/2024	516.33	53.11	463.22
	11/1/2024		53.13	463.20
MW-33D2	4/30/2024	454.58	39.04	415.54
	11/1/2024		45.70	408.88
MW-33I	4/30/2024	454.81	cant unlock	-
	11/1/2024		13.21	441.60
MW-34A	4/30/2024	498.25	24.16	474.09
	11/1/2024		26.79	471.46
MW-34D1	4/30/2024	498.82	32.87	465.95
	11/1/2024		34.39	464.43
MW-34D2	4/30/2024	499.31	81.70	417.61
	11/1/2024		84.34	414.97
MW-34SS	4/30/2024	498.95	33.28	465.67
	11/1/2024		34.35	464.60
MW-35D1	4/30/2024	470.09	16.38	453.71
	11/1/2024		17.50	452.59
MW-35D2	4/30/2024	470.54	52.25	418.29
	11/1/2024		57.07	413.47
MW-35SS	4/30/2024	470.16	19.39	450.77
	11/1/2024		20.53	449.63
LF-PZ-1B	4/30/2024	464.09	17.30	446.79
	11/1/2024		18.04	446.05
LW-18	4/30/2024	510.70	52.28	458.42
	11/1/2024		52.96	457.74
LW-1A	4/30/2024	504.40	19.02	485.38
	11/1/2024		21.72	482.68
LW-1B	4/30/2024	504.40	16.88	487.52
	11/1/2024		20.68	483.72
LW-2	4/30/2024	518.90	80.28	438.62
	11/1/2024		80.76	438.14

Table 2
Groundwater Elevation Data
RWS Type III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Monitoring Well/Piezometer Location	Gauging Date	TOC Elevation (ft-MSL)	Depth to Water (ft)	Water Elevation (ft-MSL)
LW-28A	4/30/2024	504.40	22.24	482.16
	11/1/2024		24.60	479.80
LW-28B	4/30/2024	504.40	18.07	486.33
	11/1/2024		19.20	485.20
LW-6A	4/30/2024	518.90	47.91	470.99
	11/1/2024		48.17	470.73
LW-6B	4/30/2024	518.90	Dry	-
	11/1/2024		Dry to TD (24.24)	<494.66
LW-8A	4/30/2024	524.90	65.22	459.68
	11/1/2024		66.20	458.70
LW-8B	4/30/2024	524.90	31.80	493.10
	11/1/2024		31.86	493.04

Notes:
TOC = Top of Casing
NA = Not Available
ft-MSL = feet above Mean Sea Level

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-1 (Field Reading)	MW-1 (P1R2)	MW-1 (P2R2)	MW-1 (P3R2)
Sample Date		11/5/2023	11/5/2023	11/5/2023	11/5/2023
Pace Lab ID		0	50358744003	50358745003	50358714003
Static Water Elevation		496.4	#N/A	#N/A	#N/A
Field Parameters					
Temperature, Field	°C	16.16	#N/A	#N/A	#N/A
Dissolved Oxygen, Field	mg/L	5.41	#N/A	#N/A	#N/A
Conductivity, Field	uS/cm	657.10	#N/A	#N/A	#N/A
ORP, Field	mV	111.15	#N/A	#N/A	#N/A
pH, Field	S.U.	7.04	#N/A	#N/A	#N/A
Turbidity, Field	NTU	2.70	#N/A	#N/A	#N/A
Appendix III Constituents					
Boron, Total	ug/L	#N/A	146	145	#N/A
Calcium, Total	ug/L	#N/A	128000	128000	#N/A
Chloride	mg/L	#N/A	3.5	2.4	#N/A
Fluoride	mg/L	#N/A	0.1	0.13	#N/A
Sulfate	mg/L	#N/A	159	146	#N/A
Total Dissolved Solids	mg/L	#N/A	547	532	543
pH at 25 Degrees C	Std. Units	#N/A	#N/A	7.4	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	<1	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	<1	<1	#N/A
Barium, Total	ug/L	#N/A	40.8	41.8	#N/A
Beryllium, Total	ug/L	#N/A	<0.2	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	<2	#N/A	#N/A
Chromium, Total	ug/L	#N/A	<10	#N/A	#N/A
Cobalt, Total	ug/L	#N/A	<1	<1	#N/A
Lead, Total	ug/L	#N/A	<10	<10	#N/A
Lithium, Total	ug/L	#N/A	<20	<20	#N/A
Mercury	ug/L	#N/A	<0.2	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	<10	<10	#N/A
Molybdenum, Dissolved	ug/L	#N/A	#N/A	#N/A	<10
Radium-226	pCi/L	#N/A	<-0.0651	<-0.0558	#N/A
Radium-228	pCi/L	#N/A	<0.461	<0.289	#N/A
Selenium, Total	ug/L	#N/A	<1	<1	#N/A
Thallium, Total	ug/L	#N/A	<1	<1	#N/A
Total Radium	pCi/L	#N/A	<0.461	<0.289	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A	#N/A	306
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	306
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	<10
Aluminum, Dissolved	ug/L	#N/A	#N/A	#N/A	<10
Aluminum, Total	ug/L	#N/A	#N/A	#N/A	94.5
Boron, Dissolved	ug/L	#N/A	#N/A	#N/A	152
Bromide	mg/L	#N/A	#N/A	#N/A	<0.05
Dissolved Organic Carbon	mg/L	#N/A	#N/A	#N/A	2.3
Iron, Total	ug/L	#N/A	<100	#N/A	<100
Iron, Ferrous	mg/L	#N/A	#N/A	#N/A	<0.2
Iron, Dissolved	ug/L	#N/A	#N/A	#N/A	<100
Magnesium, Total	ug/L	#N/A	#N/A	#N/A	37800
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A	38000
Manganese, Total	ug/L	#N/A	<10	#N/A	9.4
Manganese, Dissolved	ug/L	#N/A	#N/A	#N/A	6.0
Nitrogen, Nitrate	mg/L	#N/A	#N/A	#N/A	2.5
Nitrogen, Nitrite	mg/L	#N/A	#N/A	#N/A	<0.1
Phosphate as P04	mg/L	#N/A	#N/A	#N/A	<0.15
Potassium, Total	ug/L	#N/A	#N/A	#N/A	1020
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A	1170
Silica, Total	ug/L	#N/A	#N/A	#N/A	21300
Sodium, Total	ug/L	#N/A	#N/A	#N/A	3520
Sulfide	mg/L	#N/A	#N/A	#N/A	<0.1
Total Organic Carbon	mg/L	#N/A	#N/A	#N/A	1.8

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-1A (Field Reading)	MW-1A (P4R5)	MW-2R (Field Reading)	MW-2R (P1R1)
Sample Date		11/1/2023	11/1/2023	11/8/2023	11/8/2023
Pace Lab ID		0	50358239001	0	50359169005
Static Water Elevation		459.52	#N/A	435.6	#N/A
Field Parameters					
Temperature, Field	°C	12.44	#N/A	17.71	#N/A
Dissolved Oxygen, Field	mg/L	0.56	#N/A	0.64	#N/A
Conductivity, Field	uS/cm	668.07	#N/A	2106.65	#N/A
ORP, Field	mV	-46.76	#N/A	-79.74	#N/A
pH, Field	S.U.	5.79	#N/A	6.96	#N/A
Turbidity, Field	NTU	8.22	#N/A	85.95	#N/A
Appendix III Constituents					
Boron, Total	ug/L	#N/A	136	#N/A	1970
Calcium, Total	ug/L	#N/A	80700	#N/A	463000
Chloride	mg/L	#N/A	91	#N/A	63.4
Fluoride	mg/L	#N/A	<0.1	#N/A	<0.1
Sulfate	mg/L	#N/A	107	#N/A	1390
Total Dissolved Solids	mg/L	#N/A	541	#N/A	2450
pH at 25 Degrees C	Std. Units	#N/A	6.9	#N/A	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	<1
Arsenic, Total	ug/L	#N/A	1	#N/A	11.8
Barium, Total	ug/L	#N/A	80.3	#N/A	51.8
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	<0.2
Cadmium, Total	ug/L	#N/A	<2	#N/A	<2
Chromium, Total	ug/L	#N/A	<10	#N/A	<10
Cobalt, Total	ug/L	#N/A	<1	#N/A	2.3
Lead, Total	ug/L	#N/A	<10	#N/A	<10
Lithium, Total	ug/L	#N/A	<20	#N/A	718
Mercury	ug/L	#N/A	<0.2	#N/A	<0.2
Molybdenum, Total	ug/L	#N/A	<10	#N/A	10.9
Molybdenum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Radium-226	pCi/L	#N/A	0.909	#N/A	0.334
Radium-228	pCi/L	#N/A	1.85	#N/A	0.694
Selenium, Total	ug/L	#N/A	<1	#N/A	<1
Thallium, Total	ug/L	#N/A	<1	#N/A	<1
Total Radium	pCi/L	#N/A	2.76	#N/A	1.03
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	217	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	217	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	<10	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Aluminum, Total	ug/L	#N/A	212	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	168	#N/A	#N/A
Bromide	mg/L	#N/A	<0.05	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	3.3	#N/A	#N/A
Iron, Total	ug/L	#N/A	4140	#N/A	13000
Iron, Ferrous	mg/L	#N/A	0.66	#N/A	#N/A
Iron, Dissolved	ug/L	#N/A	3780	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	23400	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	23600	#N/A	#N/A
Manganese, Total	ug/L	#N/A	180	#N/A	5480
Manganese, Dissolved	ug/L	#N/A	190	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	<0.1	#N/A	#N/A
Nitrogen, Nitrite	mg/L	#N/A	<0.1	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	0.31	#N/A	#N/A
Potassium, Total	ug/L	#N/A	1410	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	1260	#N/A	#N/A
Silica, Total	ug/L	#N/A	31100	#N/A	#N/A
Sodium, Total	ug/L	#N/A	77400	#N/A	#N/A
Sulfide	mg/L	#N/A	0.025	#N/A	#N/A
Total Organic Carbon	mg/L	#N/A	1.5	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-2R (P2R1)	MW-2R (P3R1)	MW-3 (Field Reading)	MW-3 (P1R1)
Sample Date		11/8/2023	11/8/2023	11/8/2023	11/8/2023
Pace Lab ID		50359170007	50359167005	0	50359169003
Static Water Elevation		#N/A	#N/A	440.13	#N/A
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	17.20	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	0.22	#N/A
Conductivity, Field	uS/cm	#N/A	#N/A	1834.29	#N/A
ORP, Field	mV	#N/A	#N/A	-4.30	#N/A
pH, Field	S.U.	#N/A	#N/A	7.44	#N/A
Turbidity, Field	NTU	#N/A	#N/A	55.39	#N/A
Appendix III Constituents					
Boron, Total	ug/L	1900	#N/A	#N/A	756
Calcium, Total	ug/L	460000	#N/A	#N/A	286000
Chloride	mg/L	70.3	#N/A	#N/A	69.4
Fluoride	mg/L	<0.1	#N/A	#N/A	<0.1
Sulfate	mg/L	1780	#N/A	#N/A	1010
Total Dissolved Solids	mg/L	2510	2440	#N/A	1860
pH at 25 Degrees C	Std. Units	7.4	#N/A	#N/A	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	<1
Arsenic, Total	ug/L	7.5	#N/A	#N/A	63.1
Barium, Total	ug/L	45.2	#N/A	#N/A	61.7
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	<0.2
Cadmium, Total	ug/L	#N/A	#N/A	#N/A	<2
Chromium, Total	ug/L	#N/A	#N/A	#N/A	<10
Cobalt, Total	ug/L	2.7	#N/A	#N/A	2.1
Lead, Total	ug/L	<10	#N/A	#N/A	<10
Lithium, Total	ug/L	638	#N/A	#N/A	1590
Mercury	ug/L	#N/A	#N/A	#N/A	<0.2
Molybdenum, Total	ug/L	10.6	#N/A	#N/A	245
Molybdenum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Radium-226	pCi/L	<0.0509	#N/A	#N/A	1.96
Radium-228	pCi/L	1.33	#N/A	#N/A	0.457
Selenium, Total	ug/L	<1	#N/A	#N/A	<1
Thallium, Total	ug/L	<1	#N/A	#N/A	<1
Total Radium	pCi/L	1.38	#N/A	#N/A	2.42
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	170	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	170	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	<10	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	23.3	#N/A	#N/A
Aluminum, Total	ug/L	#N/A	5980	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	1990	#N/A	#N/A
Bromide	mg/L	#N/A	0.7	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	4.6	#N/A	#N/A
Iron, Total	ug/L	#N/A	23200	#N/A	<100
Iron, Ferrous	mg/L	#N/A	<0.2	#N/A	#N/A
Iron, Dissolved	ug/L	#N/A	9890	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	56100	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	60000	#N/A	#N/A
Manganese, Total	ug/L	#N/A	5550	#N/A	1950
Manganese, Dissolved	ug/L	#N/A	5840	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	<0.1	#N/A	#N/A
Nitrogen, Nitrite	mg/L	#N/A	<0.1	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	1.7	#N/A	#N/A
Potassium, Total	ug/L	#N/A	112000	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	99600	#N/A	#N/A
Silica, Total	ug/L	#N/A	33700	#N/A	#N/A
Sodium, Total	ug/L	#N/A	88500	#N/A	#N/A
Sulfide	mg/L	#N/A	<0.1	#N/A	#N/A
Total Organic Carbon	mg/L	#N/A	<4	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-3 (P2R1)	MW-3 (P3R1)	MW-4C (Field Reading)	MW-4C (P1R1)
Sample Date		11/8/2023	11/8/2023	11/8/2023	11/8/2023
Pace Lab ID		50359170005	50359167003	0	50359169001
Static Water Elevation		#N/A	#N/A	448.06	#N/A
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	16.29	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	0.20	#N/A
Conductivity, Field	uS/cm	#N/A	#N/A	2200.58	#N/A
ORP, Field	mV	#N/A	#N/A	90.85	#N/A
pH, Field	S.U.	#N/A	#N/A	6.95	#N/A
Turbidity, Field	NTU	#N/A	#N/A	0.05	#N/A
Appendix III Constituents					
Boron, Total	ug/L	758	#N/A	#N/A	3890
Calcium, Total	ug/L	286000	#N/A	#N/A	586000
Chloride	mg/L	67.5	#N/A	#N/A	40.7
Fluoride	mg/L	<0.1	#N/A	#N/A	0.18
Sulfate	mg/L	1120	#N/A	#N/A	1430
Total Dissolved Solids	mg/L	1890	1910	#N/A	2630
pH at 25 Degrees C	Std. Units	7.2	#N/A	#N/A	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	<1
Arsenic, Total	ug/L	59.3	#N/A	#N/A	<1
Barium, Total	ug/L	59.1	#N/A	#N/A	29.8
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	<0.2
Cadmium, Total	ug/L	#N/A	#N/A	#N/A	<2
Chromium, Total	ug/L	#N/A	#N/A	#N/A	<10
Cobalt, Total	ug/L	2.2	#N/A	#N/A	1
Lead, Total	ug/L	<10	#N/A	#N/A	<10
Lithium, Total	ug/L	1640	#N/A	#N/A	331
Mercury	ug/L	#N/A	#N/A	#N/A	<0.2
Molybdenum, Total	ug/L	242	#N/A	#N/A	<10
Molybdenum, Dissolved	ug/L	#N/A	252	#N/A	#N/A
Radium-226	pCi/L	1.25	#N/A	#N/A	<-0.32
Radium-228	pCi/L	0.855	#N/A	#N/A	0.373
Selenium, Total	ug/L	<1	#N/A	#N/A	<1
Thallium, Total	ug/L	<1	#N/A	#N/A	<1
Total Radium	pCi/L	2.11	#N/A	#N/A	<0.373
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	135	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	135	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	<10	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Aluminum, Total	ug/L	#N/A	<10	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	801	#N/A	#N/A
Bromide	mg/L	#N/A	0.69	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	1.8	#N/A	#N/A
Iron, Total	ug/L	#N/A	<100	#N/A	<100
Iron, Ferrous	mg/L	#N/A	<0.2	#N/A	#N/A
Iron, Dissolved	ug/L	#N/A	<100	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	15400	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	15800	#N/A	#N/A
Manganese, Total	ug/L	#N/A	2080	#N/A	2190
Manganese, Dissolved	ug/L	#N/A	2130	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	<0.1	#N/A	#N/A
Nitrogen, Nitrite	mg/L	#N/A	<0.1	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	0.29	#N/A	#N/A
Potassium, Total	ug/L	#N/A	206000	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	237000	#N/A	#N/A
Silica, Total	ug/L	#N/A	13300	#N/A	#N/A
Sodium, Total	ug/L	#N/A	85900	#N/A	#N/A
Sulfide	mg/L	#N/A	<0.1	#N/A	#N/A
Total Organic Carbon	mg/L	#N/A	1.1	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-4C (P2R1)	MW-4C (P3R1)	MW-10 (Field Reading)	MW-10 (P1R2)
Sample Date		11/8/2023	11/8/2023	11/6/2023	11/6/2023
Pace Lab ID		50359170001	50359167001	0	50358891001
Static Water Elevation		#N/A	#N/A	460.87	#N/A
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	15.98	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	0.21	#N/A
Conductivity, Field	uS/cm	#N/A	#N/A	2398.36	#N/A
ORP, Field	mV	#N/A	#N/A	-133.69	#N/A
pH, Field	S.U.	#N/A	#N/A	7.01	#N/A
Turbidity, Field	NTU	#N/A	#N/A	14.41	#N/A
Appendix III Constituents					
Boron, Total	ug/L	4010	#N/A	#N/A	21200
Calcium, Total	ug/L	593000	#N/A	#N/A	534000
Chloride	mg/L	37.8	#N/A	#N/A	135
Fluoride	mg/L	0.16	#N/A	#N/A	0.5
Sulfate	mg/L	1550	#N/A	#N/A	1020
Total Dissolved Solids	mg/L	2640	2650	#N/A	2490
pH at 25 Degrees C	Std. Units	7.1	#N/A	#N/A	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	<1
Arsenic, Total	ug/L	<1	#N/A	#N/A	88.4
Barium, Total	ug/L	28.6	#N/A	#N/A	98.9
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	1.5
Cadmium, Total	ug/L	#N/A	#N/A	#N/A	<2
Chromium, Total	ug/L	#N/A	#N/A	#N/A	12.9
Cobalt, Total	ug/L	1.1	#N/A	#N/A	5.2
Lead, Total	ug/L	<10	#N/A	#N/A	11.2
Lithium, Total	ug/L	351	#N/A	#N/A	31.8
Mercury	ug/L	#N/A	#N/A	#N/A	<0.2
Molybdenum, Total	ug/L	<10	#N/A	#N/A	11.5
Molybdenum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Radium-226	pCi/L	<0.0853	#N/A	#N/A	0.58
Radium-228	pCi/L	1.48	#N/A	#N/A	0.659
Selenium, Total	ug/L	<1	#N/A	#N/A	1.8
Thallium, Total	ug/L	<1	#N/A	#N/A	<1
Total Radium	pCi/L	1.57	#N/A	#N/A	1.24
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	434	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	434	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	<10	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Aluminum, Total	ug/L	#N/A	<10	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	4370	#N/A	#N/A
Bromide	mg/L	#N/A	0.5	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	4.4	#N/A	#N/A
Iron, Total	ug/L	#N/A	<100	#N/A	49500
Iron, Ferrous	mg/L	#N/A	<0.2	#N/A	#N/A
Iron, Dissolved	ug/L	#N/A	<100	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	53100	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	53900	#N/A	#N/A
Manganese, Total	ug/L	#N/A	2460	#N/A	2580
Manganese, Dissolved	ug/L	#N/A	2490	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	<0.1	#N/A	#N/A
Nitrogen, Nitrite	mg/L	#N/A	<0.1	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	<0.15	#N/A	#N/A
Potassium, Total	ug/L	#N/A	60200	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	63200	#N/A	#N/A
Silica, Total	ug/L	#N/A	20000	#N/A	#N/A
Sodium, Total	ug/L	#N/A	79300	#N/A	#N/A
Sulfide	mg/L	#N/A	<0.1	#N/A	#N/A
Total Organic Carbon	mg/L	#N/A	2.6	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-10 (P2R2)	MW-10 (P3R2)	MW-11 (Field Reading)	MW-11 (P1R2)
Sample Date		11/6/2023	11/6/2023	11/5/2023	11/5/2023
Pace Lab ID		50358894001	50358883001	0	50358744004
Static Water Elevation		#N/A	#N/A	478.61	#N/A
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	18.59	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	8.02	#N/A
Conductivity, Field	uS/cm	#N/A	#N/A	799.24	#N/A
ORP, Field	mV	#N/A	#N/A	120.85	#N/A
pH, Field	S.U.	#N/A	#N/A	7.13	#N/A
Turbidity, Field	NTU	#N/A	#N/A	325.89	#N/A
Appendix III Constituents					
Boron, Total	ug/L	21500	#N/A	#N/A	1060
Calcium, Total	ug/L	534000	#N/A	#N/A	169000
Chloride	mg/L	130	#N/A	#N/A	2.3
Fluoride	mg/L	0.49	#N/A	#N/A	0.14
Sulfate	mg/L	978	#N/A	#N/A	470
Total Dissolved Solids	mg/L	2510	2460	#N/A	804
pH at 25 Degrees C	Std. Units	7	#N/A	#N/A	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	<1
Arsenic, Total	ug/L	84	#N/A	#N/A	4.7
Barium, Total	ug/L	58.2	#N/A	#N/A	54
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	0.3
Cadmium, Total	ug/L	#N/A	#N/A	#N/A	<2
Chromium, Total	ug/L	#N/A	#N/A	#N/A	<10
Cobalt, Total	ug/L	2.6	#N/A	#N/A	1.5
Lead, Total	ug/L	<10	#N/A	#N/A	<10
Lithium, Total	ug/L	23.4	#N/A	#N/A	<20
Mercury	ug/L	#N/A	#N/A	#N/A	<0.2
Molybdenum, Total	ug/L	11.1	#N/A	#N/A	<10
Molybdenum, Dissolved	ug/L	#N/A	11.9	#N/A	#N/A
Radium-226	pCi/L	<0.408	#N/A	#N/A	<0.285
Radium-228	pCi/L	0.655	#N/A	#N/A	0.633
Selenium, Total	ug/L	<1	#N/A	#N/A	3.4
Thallium, Total	ug/L	<1	#N/A	#N/A	<1
Total Radium	pCi/L	1.06	#N/A	#N/A	0.918
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	727	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	727	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	<10	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Aluminum, Total	ug/L	#N/A	2900	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	20900	#N/A	#N/A
Bromide	mg/L	#N/A	1.8	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	13.6	#N/A	#N/A
Iron, Total	ug/L	#N/A	45000	#N/A	13100
Iron, Ferrous	mg/L	#N/A	1.3	#N/A	#N/A
Iron, Dissolved	ug/L	#N/A	38900	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	119000	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	108000	#N/A	#N/A
Manganese, Total	ug/L	#N/A	2700	#N/A	30.3
Manganese, Dissolved	ug/L	#N/A	2510	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	<0.1	#N/A	#N/A
Nitrogen, Nitrite	mg/L	#N/A	<0.1	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	1.7	#N/A	#N/A
Potassium, Total	ug/L	#N/A	30900	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	31400	#N/A	#N/A
Silica, Total	ug/L	#N/A	37400	#N/A	#N/A
Sodium, Total	ug/L	#N/A	85500	#N/A	#N/A
Sulfide	mg/L	#N/A	<0.1	#N/A	#N/A
Total Organic Carbon	mg/L	#N/A	10.2	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-11 (P2R2)	MW-11 (P3R2)	MW-12 (Field Reading)	MW-12 (P1R2)
Sample Date		11/5/2023	11/5/2023	11/5/2023	11/5/2023
Pace Lab ID		50358745004	50358714004	0	50358744002
Static Water Elevation		#N/A	#N/A	483.98	#N/A
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	14.24	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	9.54	#N/A
Conductivity, Field	uS/cm	#N/A	#N/A	311.85	#N/A
ORP, Field	mV	#N/A	#N/A	121.62	#N/A
pH, Field	S.U.	#N/A	#N/A	7.08	#N/A
Turbidity, Field	NTU	#N/A	#N/A	4.24	#N/A
Appendix III Constituents					
Boron, Total	ug/L	1010	#N/A	#N/A	<100
Calcium, Total	ug/L	162000	#N/A	#N/A	46800
Chloride	mg/L	1.8	#N/A	#N/A	7.4
Fluoride	mg/L	0.17	#N/A	#N/A	0.12
Sulfate	mg/L	440	#N/A	#N/A	13.6
Total Dissolved Solids	mg/L	774	773	#N/A	213
pH at 25 Degrees C	Std. Units	7.1	#N/A	#N/A	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	<1
Arsenic, Total	ug/L	1.3	#N/A	#N/A	<1
Barium, Total	ug/L	37.6	#N/A	#N/A	25
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	<0.2
Cadmium, Total	ug/L	#N/A	#N/A	#N/A	<2
Chromium, Total	ug/L	#N/A	#N/A	#N/A	<10
Cobalt, Total	ug/L	<1	#N/A	#N/A	<1
Lead, Total	ug/L	<10	#N/A	#N/A	<10
Lithium, Total	ug/L	<20	#N/A	#N/A	<20
Mercury	ug/L	#N/A	#N/A	#N/A	<0.2
Molybdenum, Total	ug/L	<10	#N/A	#N/A	<10
Molybdenum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Radium-226	pCi/L	<0.149	#N/A	#N/A	<-0.203
Radium-228	pCi/L	1.13	#N/A	#N/A	0.594
Selenium, Total	ug/L	3.5	#N/A	#N/A	<1
Thallium, Total	ug/L	<1	#N/A	#N/A	<1
Total Radium	pCi/L	1.28	#N/A	#N/A	<0.594
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	161	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	161	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	<10	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	45.5	#N/A	#N/A
Aluminum, Total	ug/L	#N/A	1110	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	1020	#N/A	#N/A
Bromide	mg/L	#N/A	<0.05	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	2.1	#N/A	#N/A
Iron, Total	ug/L	#N/A	5900	#N/A	470
Iron, Ferrous	mg/L	#N/A	<0.2	#N/A	#N/A
Iron, Dissolved	ug/L	#N/A	205	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	49300	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	47800	#N/A	#N/A
Manganese, Total	ug/L	#N/A	13.6	#N/A	<10
Manganese, Dissolved	ug/L	#N/A	1.8	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	1.8	#N/A	#N/A
Nitrogen, Nitrite	mg/L	#N/A	<0.1	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	0.63	#N/A	#N/A
Potassium, Total	ug/L	#N/A	<1000	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	<1000	#N/A	#N/A
Silica, Total	ug/L	#N/A	24600	#N/A	#N/A
Sodium, Total	ug/L	#N/A	2930	#N/A	#N/A
Sulfide	mg/L	#N/A	<0.1	#N/A	#N/A
Total Organic Carbon	mg/L	#N/A	<4	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-12 (P2R2)	MW-12 (P3R2)	MW-12A (Field Reading)	MW-12A (P4R5)
Sample Date		11/5/2023	11/5/2023	11/1/2023	11/2/2023
Pace Lab ID		50358745002	50358714002	0	50358455001
Static Water Elevation		#N/A	#N/A	482.4	#N/A
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	11.95	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	0.41	#N/A
Conductivity, Field	uS/cm	#N/A	#N/A	256.84	#N/A
ORP, Field	mV	#N/A	#N/A	-26.67	#N/A
pH, Field	S.U.	#N/A	#N/A	6.00	#N/A
Turbidity, Field	NTU	#N/A	#N/A	0.35	#N/A
Appendix III Constituents					
Boron, Total	ug/L	<100	#N/A	#N/A	<100
Calcium, Total	ug/L	49100	#N/A	#N/A	47500
Chloride	mg/L	6.8	#N/A	#N/A	7.3
Fluoride	mg/L	0.15	#N/A	#N/A	<0.1
Sulfate	mg/L	13.1	#N/A	#N/A	63.9
Total Dissolved Solids	mg/L	215	212	#N/A	240
pH at 25 Degrees C	Std. Units	7.7	#N/A	#N/A	7.6
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	<1	#N/A	#N/A	<1
Barium, Total	ug/L	25	#N/A	#N/A	76.4
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	#N/A	#N/A	<2
Chromium, Total	ug/L	#N/A	#N/A	#N/A	<10
Cobalt, Total	ug/L	<1	#N/A	#N/A	<1
Lead, Total	ug/L	<10	#N/A	#N/A	<10
Lithium, Total	ug/L	<20	#N/A	#N/A	<20
Mercury	ug/L	#N/A	#N/A	#N/A	<0.2
Molybdenum, Total	ug/L	<10	#N/A	#N/A	<10
Molybdenum, Dissolved	ug/L	#N/A	<10	#N/A	<10
Radium-226	pCi/L	<0.0572	#N/A	#N/A	0.419
Radium-228	pCi/L	<0.187	#N/A	#N/A	1.07
Selenium, Total	ug/L	<1	#N/A	#N/A	<1
Thallium, Total	ug/L	<1	#N/A	#N/A	<1
Total Radium	pCi/L	<0.244	#N/A	#N/A	1.49
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	153	#N/A	125
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	153	#N/A	125
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	<10	#N/A	<10
Aluminum, Dissolved	ug/L	#N/A	<10	#N/A	<10
Aluminum, Total	ug/L	#N/A	263	#N/A	12.9
Boron, Dissolved	ug/L	#N/A	<100	#N/A	<100
Bromide	mg/L	#N/A	<0.05	#N/A	<0.05
Dissolved Organic Carbon	mg/L	#N/A	2.3	#N/A	3.1
Iron, Total	ug/L	#N/A	210	#N/A	2860
Iron, Ferrous	mg/L	#N/A	<0.2	#N/A	0.71
Iron, Dissolved	ug/L	#N/A	243	#N/A	2830
Magnesium, Total	ug/L	#N/A	21600	#N/A	18200
Magnesium, Dissolved	ug/L	#N/A	19800	#N/A	18000
Manganese, Total	ug/L	#N/A	3.6	#N/A	532
Manganese, Dissolved	ug/L	#N/A	<1	#N/A	535
Nitrogen, Nitrate	mg/L	#N/A	8.2	#N/A	<0.1
Nitrogen, Nitrite	mg/L	#N/A	<0.5	#N/A	<0.1
Phosphate as P04	mg/L	#N/A	<0.15	#N/A	0.18
Potassium, Total	ug/L	#N/A	<1000	#N/A	2000
Potassium, Dissolved	ug/L	#N/A	<1000	#N/A	2000
Silica, Total	ug/L	#N/A	23600	#N/A	17900
Sodium, Total	ug/L	#N/A	3160	#N/A	3740
Sulfide	mg/L	#N/A	<0.1	#N/A	<0.1
Total Organic Carbon	mg/L	#N/A	<1	#N/A	<1

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-13 (Field Reading)	MW-13 (P1R2)	MW-13 (P2R2)	MW-13 (P3R2)
Sample Date		11/5/2023	11/5/2023	11/5/2023	11/5/2023
Pace Lab ID		0	50358744001	50358745001	50358714001
Static Water Elevation		463.65	#N/A	#N/A	#N/A
Field Parameters					
Temperature, Field	°C	14.84	#N/A	#N/A	#N/A
Dissolved Oxygen, Field	mg/L	1.08	#N/A	#N/A	#N/A
Conductivity, Field	uS/cm	2004.28	#N/A	#N/A	#N/A
ORP, Field	mV	129.93	#N/A	#N/A	#N/A
pH, Field	S.U.	7.16	#N/A	#N/A	#N/A
Turbidity, Field	NTU	1.21	#N/A	#N/A	#N/A
Appendix III Constituents					
Boron, Total	ug/L	#N/A	2440	2540	#N/A
Calcium, Total	ug/L	#N/A	640000	631000	#N/A
Chloride	mg/L	#N/A	18	18.2	#N/A
Fluoride	mg/L	#N/A	0.82	0.86	#N/A
Sulfate	mg/L	#N/A	1430	1450	#N/A
Total Dissolved Solids	mg/L	#N/A	2400	2320	2440
pH at 25 Degrees C	Std. Units	#N/A	#N/A	7.5	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	<1	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	<1	<1	#N/A
Barium, Total	ug/L	#N/A	20.5	20.9	#N/A
Beryllium, Total	ug/L	#N/A	<0.2	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	<2	#N/A	#N/A
Chromium, Total	ug/L	#N/A	<10	#N/A	#N/A
Cobalt, Total	ug/L	#N/A	<1	<1	#N/A
Lead, Total	ug/L	#N/A	<10	<10	#N/A
Lithium, Total	ug/L	#N/A	463	456	#N/A
Mercury	ug/L	#N/A	<0.2	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	79.4	82.6	#N/A
Molybdenum, Dissolved	ug/L	#N/A	#N/A	#N/A	74.7
Radium-226	pCi/L	#N/A	<0	<0.0606	#N/A
Radium-228	pCi/L	#N/A	0.678	<0.352	#N/A
Selenium, Total	ug/L	#N/A	20	19.1	#N/A
Thallium, Total	ug/L	#N/A	<1	<1	#N/A
Total Radium	pCi/L	#N/A	<0.678	<0.413	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A	#N/A	169
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	169
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	<10
Aluminum, Dissolved	ug/L	#N/A	#N/A	#N/A	<10
Aluminum, Total	ug/L	#N/A	#N/A	#N/A	313
Boron, Dissolved	ug/L	#N/A	#N/A	#N/A	2410
Bromide	mg/L	#N/A	#N/A	#N/A	0.21
Dissolved Organic Carbon	mg/L	#N/A	#N/A	#N/A	3.3
Iron, Total	ug/L	#N/A	<100	#N/A	461
Iron, Ferrous	mg/L	#N/A	#N/A	#N/A	<0.2
Iron, Dissolved	ug/L	#N/A	#N/A	#N/A	<100
Magnesium, Total	ug/L	#N/A	#N/A	#N/A	35100
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A	30400
Manganese, Total	ug/L	#N/A	<10	#N/A	30.9
Manganese, Dissolved	ug/L	#N/A	#N/A	#N/A	5
Nitrogen, Nitrate	mg/L	#N/A	#N/A	#N/A	0.37
Nitrogen, Nitrite	mg/L	#N/A	#N/A	#N/A	<0.1
Phosphate as P04	mg/L	#N/A	#N/A	#N/A	<0.15
Potassium, Total	ug/L	#N/A	#N/A	#N/A	21000
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A	21200
Silica, Total	ug/L	#N/A	#N/A	#N/A	19000
Sodium, Total	ug/L	#N/A	#N/A	#N/A	30700
Sulfide	mg/L	#N/A	#N/A	#N/A	<0.1
Total Organic Carbon	mg/L	#N/A	#N/A	#N/A	1.7

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-14 (Field Reading)	MW-15 (Field Reading)	MW-15B (Field Reading)	MW-15B (P2R3)
Sample Date		11/1/2023	11/1/2023	11/1/2023	11/15/2023
Pace Lab ID		0	0	0	50359844001
Static Water Elevation		#VALUE!	418.51	433.31	#N/A
Field Parameters					
Temperature, Field	°C	#N/A	15.94	18.78	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	0.66	0.19	#N/A
Conductivity, Field	uS/cm	#N/A	1314.04	1182.13	#N/A
ORP, Field	mV	#N/A	-124.17	-92.61	#N/A
pH, Field	S.U.	#N/A	7.24	6.63	#N/A
Turbidity, Field	NTU	#N/A	1065.62	9.99	#N/A
Appendix III Constituents					
Boron, Total	ug/L	#N/A	#N/A	#N/A	1380
Calcium, Total	ug/L	#N/A	#N/A	#N/A	227000
Chloride	mg/L	#N/A	#N/A	#N/A	41.5
Fluoride	mg/L	#N/A	#N/A	#N/A	0.11
Sulfate	mg/L	#N/A	#N/A	#N/A	828
Total Dissolved Solids	mg/L	#N/A	#N/A	#N/A	1260
pH at 25 Degrees C	Std. Units	#N/A	#N/A	#N/A	7
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	#N/A	#N/A	1.2
Barium, Total	ug/L	#N/A	#N/A	#N/A	51.3
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Chromium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cobalt, Total	ug/L	#N/A	#N/A	#N/A	<1
Lead, Total	ug/L	#N/A	#N/A	#N/A	<10
Lithium, Total	ug/L	#N/A	#N/A	#N/A	785
Mercury	ug/L	#N/A	#N/A	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	#N/A	#N/A	16.4
Molybdenum, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Radium-226	pCi/L	#N/A	#N/A	#N/A	<0.203
Radium-228	pCi/L	#N/A	#N/A	#N/A	1.4
Selenium, Total	ug/L	#N/A	#N/A	#N/A	<1
Thallium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Total Radium	pCi/L	#N/A	#N/A	#N/A	1.6
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Aluminum, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Bromide	mg/L	#N/A	#N/A	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	#N/A	#N/A	#N/A
Iron, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Iron, Ferrous	mg/L	#N/A	#N/A	#N/A	#N/A
Iron, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Manganese, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Manganese, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	#N/A	#N/A	#N/A
Nitrogen, Nitrite	mg/L	#N/A	#N/A	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	#N/A	#N/A	#N/A
Potassium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Silica, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Sodium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Sulfide	mg/L	#N/A	#N/A	#N/A	#N/A
Total Organic Carbon	mg/L	#N/A	#N/A	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-15B (P3R3)	MW-15 (P2R3)	MW-15 (P3R2)	MW-16 (Field Reading)
Sample Date		11/15/2023	11/5/2023	11/5/2023	11/1/2023
Pace Lab ID		50359841001	50358746002	50358742002	0
Static Water Elevation		#N/A	#N/A	#N/A	438.84
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	#N/A	18.51
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	#N/A	0.11
Conductivity, Field	uS/cm	#N/A	#N/A	#N/A	2147.67
ORP, Field	mV	#N/A	#N/A	#N/A	-131.29
pH, Field	S.U.	#N/A	#N/A	#N/A	7.17
Turbidity, Field	NTU	#N/A	#N/A	#N/A	7.39
Appendix III Constituents					
Boron, Total	ug/L	#N/A	1280	#N/A	#N/A
Calcium, Total	ug/L	#N/A	251000	#N/A	#N/A
Chloride	mg/L	#N/A	66.8	#N/A	#N/A
Fluoride	mg/L	#N/A	0.1	#N/A	#N/A
Sulfate	mg/L	#N/A	638	#N/A	#N/A
Total Dissolved Solids	mg/L	1200	1310	1290	#N/A
pH at 25 Degrees C	Std. Units	#N/A	7	#N/A	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	<1	#N/A	#N/A
Barium, Total	ug/L	#N/A	102	#N/A	#N/A
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Chromium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cobalt, Total	ug/L	#N/A	<1	#N/A	#N/A
Lead, Total	ug/L	#N/A	<10	#N/A	#N/A
Lithium, Total	ug/L	#N/A	757	#N/A	#N/A
Mercury	ug/L	#N/A	#N/A	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	117	#N/A	#N/A
Molybdenum, Dissolved	ug/L	16.6	#N/A	115	#N/A
Radium-226	pCi/L	#N/A	1.13	#N/A	#N/A
Radium-228	pCi/L	#N/A	0.732	#N/A	#N/A
Selenium, Total	ug/L	#N/A	<1	#N/A	#N/A
Thallium, Total	ug/L	#N/A	<1	#N/A	#N/A
Total Radium	pCi/L	#N/A	1.86	#N/A	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	190	#N/A	210	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	190	#N/A	210	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	<10	#N/A	<10	#N/A
Aluminum, Dissolved	ug/L	<10	#N/A	<10	#N/A
Aluminum, Total	ug/L	50.8	#N/A	<10	#N/A
Boron, Dissolved	ug/L	1390	#N/A	1290	#N/A
Bromide	mg/L	0.41	#N/A	0.64	#N/A
Dissolved Organic Carbon	mg/L	3.6	#N/A	2.4	#N/A
Iron, Total	ug/L	6910	#N/A	2070	#N/A
Iron, Ferrous	mg/L	<0.2	#N/A	1.6	#N/A
Iron, Dissolved	ug/L	6660	#N/A	2290	#N/A
Magnesium, Total	ug/L	32200	#N/A	39000	#N/A
Magnesium, Dissolved	ug/L	31600	#N/A	40200	#N/A
Manganese, Total	ug/L	1610	#N/A	421	#N/A
Manganese, Dissolved	ug/L	1690	#N/A	431	#N/A
Nitrogen, Nitrate	mg/L	<0.1	#N/A	<0.1	#N/A
Nitrogen, Nitrite	mg/L	<0.1	#N/A	<0.1	#N/A
Phosphate as P04	mg/L	0.4	#N/A	0.28	#N/A
Potassium, Total	ug/L	75900	#N/A	54100	#N/A
Potassium, Dissolved	ug/L	76400	#N/A	60300	#N/A
Silica, Total	ug/L	18000	#N/A	18200	#N/A
Sodium, Total	ug/L	56700	#N/A	60600	#N/A
Sulfide	mg/L	<0.1	#N/A	<0.1	#N/A
Total Organic Carbon	mg/L	1.1	#N/A	2.1	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-16 (P2R3)	MW-16 (P3R3)	MW-17 (Field Reading)	MW-18 (Field Reading)
Sample Date		11/6/2023	11/6/2023	11/1/2023	11/1/2023
Pace Lab ID		50358895001	50358888001	0	0
Static Water Elevation		#N/A	#N/A	454.34	447.82
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	#N/A	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	#N/A	#N/A
Conductivity, Field	uS/cm	#N/A	#N/A	#N/A	#N/A
ORP, Field	mV	#N/A	#N/A	#N/A	#N/A
pH, Field	S.U.	#N/A	#N/A	#N/A	#N/A
Turbidity, Field	NTU	#N/A	#N/A	#N/A	#N/A
Appendix III Constituents					
Boron, Total	ug/L	4240	#N/A	#N/A	#N/A
Calcium, Total	ug/L	500000	#N/A	#N/A	#N/A
Chloride	mg/L	40.4	#N/A	#N/A	#N/A
Fluoride	mg/L	<0.1	#N/A	#N/A	#N/A
Sulfate	mg/L	1130	#N/A	#N/A	#N/A
Total Dissolved Solids	mg/L	2380	2340	#N/A	#N/A
pH at 25 Degrees C	Std. Units	7.2	#N/A	#N/A	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	3.9	#N/A	#N/A	#N/A
Barium, Total	ug/L	58.1	#N/A	#N/A	#N/A
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Chromium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cobalt, Total	ug/L	<1	#N/A	#N/A	#N/A
Lead, Total	ug/L	<10	#N/A	#N/A	#N/A
Lithium, Total	ug/L	1040	#N/A	#N/A	#N/A
Mercury	ug/L	#N/A	#N/A	#N/A	#N/A
Molybdenum, Total	ug/L	394	#N/A	#N/A	#N/A
Molybdenum, Dissolved	ug/L	#N/A	396	#N/A	#N/A
Radium-226	pCi/L	0.528	#N/A	#N/A	#N/A
Radium-228	pCi/L	1.63	#N/A	#N/A	#N/A
Selenium, Total	ug/L	<1	#N/A	#N/A	#N/A
Thallium, Total	ug/L	<1	#N/A	#N/A	#N/A
Total Radium	pCi/L	2.16	#N/A	#N/A	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	386	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	386	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	<10	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Aluminum, Total	ug/L	#N/A	<10	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	4200	#N/A	#N/A
Bromide	mg/L	#N/A	0.67	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	4.8	#N/A	#N/A
Iron, Total	ug/L	#N/A	7130	#N/A	#N/A
Iron, Ferrous	mg/L	#N/A	<0.2	#N/A	#N/A
Iron, Dissolved	ug/L	#N/A	6900	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	35400	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	35700	#N/A	#N/A
Manganese, Total	ug/L	#N/A	5070	#N/A	#N/A
Manganese, Dissolved	ug/L	#N/A	5110	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	<0.1	#N/A	#N/A
Nitrogen, Nitrite	mg/L	#N/A	<0.1	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	1.6	#N/A	#N/A
Potassium, Total	ug/L	#N/A	180000	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	190000	#N/A	#N/A
Silica, Total	ug/L	#N/A	12300	#N/A	#N/A
Sodium, Total	ug/L	#N/A	66600	#N/A	#N/A
Sulfide	mg/L	#N/A	<0.1	#N/A	#N/A
Total Organic Carbon	mg/L	#N/A	3.6	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-20B (Field Reading)	MW-20I (Field Reading)	MW-20I (P4R3)	MW-20A (Field Reading)
Sample Date		11/1/2023	11/1/2023	11/2/2023	11/1/2023
Pace Lab ID		0	0	50358454002	0
Static Water Elevation		#VALUE!	402.58	#N/A	402.59
Field Parameters					
Temperature, Field	°C	#N/A	12.80	#N/A	13.26
Dissolved Oxygen, Field	mg/L	#N/A	0.14	#N/A	0.00
Conductivity, Field	uS/cm	#N/A	614.79	#N/A	1541.35
ORP, Field	mV	#N/A	-14.58	#N/A	-112.38
pH, Field	S.U.	#N/A	6.72	#N/A	6.82
Turbidity, Field	NTU	#N/A	2.10	#N/A	94.55
Appendix III Constituents					
Boron, Total	ug/L	#N/A	#N/A	339	#N/A
Calcium, Total	ug/L	#N/A	#N/A	115000	#N/A
Chloride	mg/L	#N/A	#N/A	9.4	#N/A
Fluoride	mg/L	#N/A	#N/A	<0.1	#N/A
Sulfate	mg/L	#N/A	#N/A	44.7	#N/A
Total Dissolved Solids	mg/L	#N/A	#N/A	424	#N/A
pH at 25 Degrees C	Std. Units	#N/A	#N/A	7.6	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	#N/A	<1	#N/A
Barium, Total	ug/L	#N/A	#N/A	50.8	#N/A
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	#N/A	<2	#N/A
Chromium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cobalt, Total	ug/L	#N/A	#N/A	1.4	#N/A
Lead, Total	ug/L	#N/A	#N/A	<10	#N/A
Lithium, Total	ug/L	#N/A	#N/A	<20	#N/A
Mercury	ug/L	#N/A	#N/A	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	#N/A	<10	#N/A
Molybdenum, Dissolved	ug/L	#N/A	#N/A	<10	#N/A
Radium-226	pCi/L	#N/A	#N/A	<-0.168	#N/A
Radium-228	pCi/L	#N/A	#N/A	0.339	#N/A
Selenium, Total	ug/L	#N/A	#N/A	1.8	#N/A
Thallium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Total Radium	pCi/L	#N/A	#N/A	<0.339	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A	328	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	314	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	13.6	#N/A
Aluminum, Dissolved	ug/L	#N/A	#N/A	<10	#N/A
Aluminum, Total	ug/L	#N/A	#N/A	45.4	#N/A
Boron, Dissolved	ug/L	#N/A	#N/A	348	#N/A
Bromide	mg/L	#N/A	#N/A	0.051	#N/A
Dissolved Organic Carbon	mg/L	#N/A	#N/A	1.6	#N/A
Iron, Total	ug/L	#N/A	#N/A	157	#N/A
Iron, Ferrous	mg/L	#N/A	#N/A	<0.2	#N/A
Iron, Dissolved	ug/L	#N/A	#N/A	<100	#N/A
Magnesium, Total	ug/L	#N/A	#N/A	24600	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A	25000	#N/A
Manganese, Total	ug/L	#N/A	#N/A	1770	#N/A
Manganese, Dissolved	ug/L	#N/A	#N/A	1770	#N/A
Nitrogen, Nitrate	mg/L	#N/A	#N/A	3.3	#N/A
Nitrogen, Nitrite	mg/L	#N/A	#N/A	<0.1	#N/A
Phosphate as P04	mg/L	#N/A	#N/A	<0.15	#N/A
Potassium, Total	ug/L	#N/A	#N/A	<1000	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A	<1000	#N/A
Silica, Total	ug/L	#N/A	#N/A	11300	#N/A
Sodium, Total	ug/L	#N/A	#N/A	5260	#N/A
Sulfide	mg/L	#N/A	#N/A	<0.1	#N/A
Total Organic Carbon	mg/L	#N/A	#N/A	<1	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-20A (P4R3)	MW-24 (Field Reading)	MW-24 (P4R2)	MW-33D2 (Field Reading)
Sample Date		11/2/2023	11/1/2023	11/21/2023	11/1/2023
Pace Lab ID		50358454001	0	50360238001	0
Static Water Elevation		#N/A	438.95	#N/A	409.23
Field Parameters					
Temperature, Field	°C	#N/A	19.58	#N/A	13.78
Dissolved Oxygen, Field	mg/L	#N/A	0.75	#N/A	0.45
Conductivity, Field	uS/cm	#N/A	1329.72	#N/A	735.65
ORP, Field	mV	#N/A	58.89	#N/A	-110.05
pH, Field	S.U.	#N/A	6.40	#N/A	8.69
Turbidity, Field	NTU	#N/A	196.15	#N/A	1.87
Appendix III Constituents					
Boron, Total	ug/L	13000	#N/A	906	#N/A
Calcium, Total	ug/L	364000	#N/A	261000	#N/A
Chloride	mg/L	48.7	#N/A	48.3	#N/A
Fluoride	mg/L	<0.1	#N/A	0.11	#N/A
Sulfate	mg/L	585	#N/A	751	#N/A
Total Dissolved Solids	mg/L	1360	#N/A	1350	#N/A
pH at 25 Degrees C	Std. Units	7.6	#N/A	7.6	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	1.6	#N/A	<1	#N/A
Barium, Total	ug/L	30.1	#N/A	35.7	#N/A
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	<2	#N/A	<2	#N/A
Chromium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cobalt, Total	ug/L	<1	#N/A	1.4	#N/A
Lead, Total	ug/L	<10	#N/A	<10	#N/A
Lithium, Total	ug/L	<20	#N/A	1060	#N/A
Mercury	ug/L	#N/A	#N/A	#N/A	#N/A
Molybdenum, Total	ug/L	362	#N/A	345	#N/A
Molybdenum, Dissolved	ug/L	347	#N/A	344	#N/A
Radium-226	pCi/L	<0.107	#N/A	0.477	#N/A
Radium-228	pCi/L	0.943	#N/A	1.15	#N/A
Selenium, Total	ug/L	<1	#N/A	<1	#N/A
Thallium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Total Radium	pCi/L	1.05	#N/A	1.63	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	225	#N/A	186	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	225	#N/A	186	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	<10	#N/A	<10	#N/A
Aluminum, Dissolved	ug/L	<10	#N/A	<10	#N/A
Aluminum, Total	ug/L	<10	#N/A	13.2	#N/A
Boron, Dissolved	ug/L	12400	#N/A	921	#N/A
Bromide	mg/L	0.73	#N/A	0.49	#N/A
Dissolved Organic Carbon	mg/L	3.7	#N/A	3.4	#N/A
Iron, Total	ug/L	7220	#N/A	<100	#N/A
Iron, Ferrous	mg/L	0.34	#N/A	<0.2	#N/A
Iron, Dissolved	ug/L	6910	#N/A	<100	#N/A
Magnesium, Total	ug/L	29600	#N/A	26600	#N/A
Magnesium, Dissolved	ug/L	29300	#N/A	27000	#N/A
Manganese, Total	ug/L	1270	#N/A	744	#N/A
Manganese, Dissolved	ug/L	1280	#N/A	783	#N/A
Nitrogen, Nitrate	mg/L	<0.1	#N/A	<0.1	#N/A
Nitrogen, Nitrite	mg/L	<0.1	#N/A	<0.1	#N/A
Phosphate as P04	mg/L	0.35	#N/A	<0.15	#N/A
Potassium, Total	ug/L	5840	#N/A	149000	#N/A
Potassium, Dissolved	ug/L	5630	#N/A	149000	#N/A
Silica, Total	ug/L	13000	#N/A	17600	#N/A
Sodium, Total	ug/L	27100	#N/A	57000	#N/A
Sulfide	mg/L	<0.1	#N/A	0.11	#N/A
Total Organic Carbon	mg/L	1.1	#N/A	<1	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-33D2 (P5R1)	MW-35D1 (Field Reading)	MW-35D1 (P5R1)	MW-35D2 (Field Reading)
Sample Date		11/21/2023	11/1/2023	11/22/2023	11/1/2023
Pace Lab ID		50360237001	0	50360386001	0
Static Water Elevation		#N/A	453.09	#N/A	415.11
Field Parameters					
Temperature, Field	°C	#N/A	14.15	#N/A	10.76
Dissolved Oxygen, Field	mg/L	#N/A	0.07	#N/A	1.58
Conductivity, Field	uS/cm	#N/A	1428.81	#N/A	725.95
ORP, Field	mV	#N/A	-199.80	#N/A	-50.43
pH, Field	S.U.	#N/A	6.67	#N/A	6.69
Turbidity, Field	NTU	#N/A	0.00	#N/A	30.89
Appendix III Constituents					
Boron, Total	ug/L	1120	#N/A	<100	#N/A
Calcium, Total	ug/L	4220	#N/A	241000	#N/A
Chloride	mg/L	47.2	#N/A	35.6	#N/A
Fluoride	mg/L	3.4	#N/A	0.32	#N/A
Sulfate	mg/L	11.4	#N/A	720	#N/A
Total Dissolved Solids	mg/L	633	#N/A	1350	#N/A
pH at 25 Degrees C	Std. Units	7.6	#N/A	7.8	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	<1	#N/A	<1	#N/A
Barium, Total	ug/L	127	#N/A	89.7	#N/A
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	<2	#N/A	<2	#N/A
Chromium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cobalt, Total	ug/L	<1	#N/A	2	#N/A
Lead, Total	ug/L	<10	#N/A	<10	#N/A
Lithium, Total	ug/L	28.9	#N/A	382	#N/A
Mercury	ug/L	#N/A	#N/A	#N/A	#N/A
Molybdenum, Total	ug/L	<10	#N/A	36.4	#N/A
Molybdenum, Dissolved	ug/L	<10	#N/A	37.8	#N/A
Radium-226	pCi/L	<0.211	#N/A	0.978	#N/A
Radium-228	pCi/L	<-0.145	#N/A	<0.107	#N/A
Selenium, Total	ug/L	<1	#N/A	<1	#N/A
Thallium, Total	ug/L	<1	#N/A	<1	#N/A
Total Radium	pCi/L	<0.211	#N/A	1.09	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	520	#N/A	289	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	477	#N/A	289	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	42.8	#N/A	<10	#N/A
Aluminum, Dissolved	ug/L	<10	#N/A	<10	#N/A
Aluminum, Total	ug/L	29.6	#N/A	<10	#N/A
Boron, Dissolved	ug/L	1120	#N/A	<100	#N/A
Bromide	mg/L	0.17	#N/A	0.22	#N/A
Dissolved Organic Carbon	mg/L	2.2	#N/A	2.6	#N/A
Iron, Total	ug/L	<100	#N/A	8140	#N/A
Iron, Ferrous	mg/L	<0.2	#N/A	1.2	#N/A
Iron, Dissolved	ug/L	<100	#N/A	9010	#N/A
Magnesium, Total	ug/L	1220	#N/A	61300	#N/A
Magnesium, Dissolved	ug/L	<1000	#N/A	70200	#N/A
Manganese, Total	ug/L	15.3	#N/A	847	#N/A
Manganese, Dissolved	ug/L	12.1	#N/A	846	#N/A
Nitrogen, Nitrate	mg/L	<0.1	#N/A	<0.1	#N/A
Nitrogen, Nitrite	mg/L	<0.1	#N/A	<0.1	#N/A
Phosphate as P04	mg/L	<0.15	#N/A	1.6	#N/A
Potassium, Total	ug/L	1590	#N/A	8890	#N/A
Potassium, Dissolved	ug/L	1470	#N/A	9670	#N/A
Silica, Total	ug/L	9250	#N/A	19900	#N/A
Sodium, Total	ug/L	259000	#N/A	58800	#N/A
Sulfide	mg/L	0.065	#N/A	0.26	#N/A
Total Organic Carbon	mg/L	<1	#N/A	2.6	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 3
Summary of Monitoring Results - November 2023
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-35D2 (P5R1)	MW-35SS (Field Reading)	MW-35SS (P5R1)
Sample Date		11/29/2023	11/1/2023	11/28/2023
Pace Lab ID		50360613001	0	50360496001
Static Water Elevation		#N/A	451.18	#N/A
Field Parameters				
Temperature, Field	°C	#N/A	10.76	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	1.58	#N/A
Conductivity, Field	uS/cm	#N/A	725.95	#N/A
ORP, Field	mV	#N/A	-50.43	#N/A
pH, Field	S.U.	#N/A	6.69	#N/A
Turbidity, Field	NTU	#N/A	30.89	#N/A
Appendix III Constituents				
Boron, Total	ug/L	1190	#N/A	614
Calcium, Total	ug/L	10800	#N/A	45800
Chloride	mg/L	8.5	#N/A	23.2
Fluoride	mg/L	2	#N/A	0.41
Sulfate	mg/L	10.9	#N/A	67.8
Total Dissolved Solids	mg/L	517	#N/A	493
pH at 25 Degrees C	Std. Units	8.0	#N/A	7.4
Appendix IV Constituents				
Antimony, Total	ug/L	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	3.1	#N/A	1.3
Barium, Total	ug/L	281	#N/A	190
Beryllium, Total	ug/L	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	<2	#N/A	<2
Chromium, Total	ug/L	#N/A	#N/A	#N/A
Cobalt, Total	ug/L	3.3	#N/A	2.9
Lead, Total	ug/L	<10	#N/A	<10
Lithium, Total	ug/L	27	#N/A	41.7
Mercury	ug/L	#N/A	#N/A	#N/A
Molybdenum, Total	ug/L	30	#N/A	25
Molybdenum, Dissolved	ug/L	#N/A	#N/A	21.4
Radium-226	pCi/L	<-0.0567	#N/A	<-0.197
Radium-228	pCi/L	1.07	#N/A	<0.156
Selenium, Total	ug/L	3	#N/A	<1
Thallium, Total	ug/L	<1	#N/A	<1
Total Radium	pCi/L	1.07	#N/A	<0.156
Geochemical Constituents				
Alkalinity, Total as CaCO3	mg/L	352	#N/A	351
Alkalinity,Bicarbonate (CaCO3)	mg/L	315	#N/A	328
Alkalinity,Carbonate (CaCO3)	mg/L	37.2	#N/A	22.8
Aluminum, Dissolved	ug/L	119	#N/A	<10
Aluminum, Total	ug/L	6070	#N/A	372
Boron, Dissolved	ug/L	#N/A	#N/A	613
Bromide	mg/L	<0.05	#N/A	0.064
Dissolved Organic Carbon	mg/L	1.0	#N/A	2.0
Iron, Total	ug/L	7290	#N/A	1200
Iron, Ferrous	mg/L	<0.2	#N/A	0.42
Iron, Dissolved	ug/L	#N/A	#N/A	<100
Magnesium, Total	ug/L	4240	#N/A	12100
Magnesium, Dissolved	ug/L	#N/A	#N/A	12100
Manganese, Total	ug/L	124	#N/A	130
Manganese, Dissolved	ug/L	24.9	#N/A	62.9
Nitrogen, Nitrate	mg/L	2.6	#N/A	0.12
Nitrogen, Nitrite	mg/L	<0.1	#N/A	<0.1
Phosphate as P04	mg/L	0.57	#N/A	0.18
Potassium, Total	ug/L	3270	#N/A	3980
Potassium, Dissolved	ug/L	#N/A	#N/A	3540
Silica, Total	ug/L	32500	#N/A	13500
Sodium, Total	ug/L	149000	#N/A	130000
Sulfide	mg/L	<0.1	#N/A	<0.1
Total Organic Carbon	mg/L	<4	#N/A	1.8

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 4
Summary of Monitoring Results - January 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-10	MW-13
Sample Date		1/24/2024	1/24/2024
Pace Lab ID		50364396001	50364396002
Static Water Elevation		460.61	462.52
Field Parameters			
Temperature, Field	°C	14.72	13.61
Dissolved Oxygen, Field	mg/L	0	1.62
Conductivity, Field	uS/cm	3178.9	2570.5
ORP, Field	mV	-142.4	104.5
pH, Field	S.U.	7.16	7.5
Turbidity, Field	NTU	0.97	1.14
Appendix III Constituents			
Boron, Total	ug/L	#N/A	#N/A
Calcium, Total	ug/L	#N/A	#N/A
Chloride	mg/L	#N/A	#N/A
Fluoride	mg/L	#N/A	#N/A
Sulfate	mg/L	#N/A	#N/A
Total Dissolved Solids	mg/L	#N/A	#N/A
pH at 25 Degrees C	Std. Units	#N/A	#N/A
Appendix IV Constituents			
Antimony, Total	ug/L	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	#N/A
Barium, Total	ug/L	#N/A	#N/A
Beryllium, Total	ug/L	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	#N/A
Chromium, Total	ug/L	<10	#N/A
Cobalt, Total	ug/L	#N/A	#N/A
Lead, Total	ug/L	<10	#N/A
Lithium, Total	ug/L	#N/A	#N/A
Mercury	ug/L	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	#N/A
Molybdenum, Dissolved	ug/L	#N/A	#N/A
Radium-226	pCi/L	#N/A	#N/A
Radium-228	pCi/L	#N/A	#N/A
Selenium, Total	ug/L	#N/A	1.7
Thallium, Total	ug/L	#N/A	#N/A
Total Radium	pCi/L	#N/A	#N/A
Geochemical Constituents			
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	#N/A
Iron, Total	ug/L	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A
Manganese, Total	ug/L	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	#N/A
Potassium, Total	ug/L	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A
Sodium, Total	ug/L	#N/A	#N/A
Sulfide	mg/L	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Draft Date:1/18/2025

Table 5
Summary of Monitoring Results - February 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-1A (Field Reading)	MW-1A (P4R5)	MW-12A (Field Reading)	MW-12A (P4R3)
Sample Date		2/16/2024	2/16/2024	2/14/2024	2/14/2024
Pace Lab ID		0	50366105001	0	50365894003
Static Water Elevation		458.30	#N/A	480.30	#N/A
Field Parameters					
Temperature, Field	°C	8.42	#N/A	13.76	#N/A
Dissolved Oxygen, Field	mg/L	0.54	#N/A	0.10	#N/A
Conductivity, Field	uS/cm	549.16	#N/A	262.34	#N/A
ORP, Field	mV	-93.90	#N/A	-56.22	#N/A
pH, Field	S.U.	6.97	#N/A	6.82	#N/A
Turbidity, Field	NTU	37.62	#N/A	3.80	#N/A
Appendix III Constituents		#N/A	#N/A	#N/A	#N/A
Boron, Total	ug/L	#N/A	162.00	#N/A	<100
Calcium, Total	ug/L	#N/A	75600.00	#N/A	45400.00
Chloride	mg/L	#N/A	93.60	#N/A	7.10
Fluoride	mg/L	#N/A	0.18	#N/A	<0.1
Sulfate	mg/L	#N/A	122.00	#N/A	63.60
Total Dissolved Solids	mg/L	#N/A	529.00	#N/A	228.00
pH at 25 Degrees C	Std. Units	#N/A	8.10	#N/A	7.10
Appendix IV Constituents		#N/A	#N/A	#N/A	#N/A
Antimony, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	<1	#N/A	<1
Barium, Total	ug/L	#N/A	80.60	#N/A	82.50
Beryllium, Total	ug/L	#N/A	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	<2	#N/A	<2
Chromium, Total	ug/L	#N/A	<10	#N/A	#N/A
Cobalt, Total	ug/L	#N/A	<1	#N/A	<1
Lead, Total	ug/L	#N/A	<10	#N/A	<10
Lithium, Total	ug/L	#N/A	<20	#N/A	<20
Mercury	ug/L	#N/A	<0.2	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	<10	#N/A	<10
Molybdenum, Dissolved	ug/L	#N/A	<10	#N/A	<10
Radium-226	pCi/L	#N/A	1.70	#N/A	0.66
Radium-228	pCi/L	#N/A	1.03	#N/A	0.47
Selenium, Total	ug/L	#N/A	<1	#N/A	<1
Thallium, Total	ug/L	#N/A	<1	#N/A	#N/A
Total Radium	pCi/L	#N/A	2.73	#N/A	1.13
Geochemical Constituents		#N/A	#N/A	#N/A	#N/A
Alkalinity, Total as CaCO3	mg/L	#N/A	214.00	#N/A	120.00
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	214.00	#N/A	120.00
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	<10	#N/A	<10
Aluminum, Dissolved	ug/L	#N/A	<10	#N/A	<10
Aluminum, Total	ug/L	#N/A	25.50	#N/A	<10
Boron, Dissolved	ug/L	#N/A	159.00	#N/A	<100
Bromide	mg/L	#N/A	<0.05	#N/A	<0.05
Dissolved Organic Carbon	mg/L	#N/A	11.90	#N/A	1.10
Iron, Total	ug/L	#N/A	3570.00	#N/A	2800.00
Iron, Ferrous	mg/L	#N/A	<0.2	#N/A	2.60
Iron, Dissolved	ug/L	#N/A	3380.00	#N/A	2740.00
Magnesium, Total	ug/L	#N/A	22600.00	#N/A	18100.00
Magnesium, Dissolved	ug/L	#N/A	21900.00	#N/A	18100.00
Manganese, Total	ug/L	#N/A	157.00	#N/A	558.00
Manganese, Dissolved	ug/L	#N/A	154.00	#N/A	580.00
Nitrogen, Nitrate	mg/L	#N/A	<0.1	#N/A	<0.1
Nitrogen, Nitrite	mg/L	#N/A	<0.1	#N/A	<0.1
Phosphate as P04	mg/L	#N/A	0.24	#N/A	0.29
Potassium, Total	ug/L	#N/A	1310.00	#N/A	2100.00
Potassium, Dissolved	ug/L	#N/A	1270.00	#N/A	2090.00
Silica, Total	ug/L	#N/A	27500.00	#N/A	17200.00
Sodium, Total	ug/L	#N/A	77600.00	#N/A	3880.00
Sulfide	mg/L	#N/A	<0.1	#N/A	<0.1
Total Organic Carbon	mg/L	#N/A	1.10	#N/A	<1

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 5
Summary of Monitoring Results - February 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-15B (Field Reading)	MW-15B (P2R3)
Sample Date		2/15/2024	2/15/2024
Pace Lab ID		0	50366028001
Static Water Elevation		433.83	#N/A
Field Parameters			
Temperature, Field	°C	15.09	#N/A
Dissolved Oxygen, Field	mg/L	0.08	#N/A
Conductivity, Field	uS/cm	1091.14	#N/A
ORP, Field	mV	-110.08	#N/A
pH, Field	S.U.	7.18	#N/A
Turbidity, Field	NTU	12.08	#N/A
Appendix III Constituents		#N/A	#N/A
Boron, Total	ug/L	#N/A	1360.00
Calcium, Total	ug/L	#N/A	199000.00
Chloride	mg/L	#N/A	38.70
Fluoride	mg/L	#N/A	0.13
Sulfate	mg/L	#N/A	618.00
Total Dissolved Solids	mg/L	#N/A	1180.00
pH at 25 Degrees C	Std. Units	#N/A	7.90
Appendix IV Constituents		#N/A	#N/A
Antimony, Total	ug/L	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	1.30
Barium, Total	ug/L	#N/A	46.60
Beryllium, Total	ug/L	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	#N/A
Chromium, Total	ug/L	#N/A	#N/A
Cobalt, Total	ug/L	#N/A	<1
Lead, Total	ug/L	#N/A	<10
Lithium, Total	ug/L	#N/A	726.00
Mercury	ug/L	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	16.80
Molybdenum, Dissolved	ug/L	#N/A	#N/A
Radium-226	pCi/L	#N/A	<0
Radium-228	pCi/L	#N/A	0.86
Selenium, Total	ug/L	#N/A	<1
Thallium, Total	ug/L	#N/A	<1
Total Radium	pCi/L	#N/A	0.86
Geochemical Constituents		#N/A	#N/A
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	#N/A
Aluminum, Total	ug/L	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	#N/A
Bromide	mg/L	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	#N/A
Iron, Total	ug/L	#N/A	#N/A
Iron, Ferrous	mg/L	#N/A	#N/A
Iron, Dissolved	ug/L	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A
Manganese, Total	ug/L	#N/A	#N/A
Manganese, Dissolved	ug/L	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	#N/A
Nitrogen, Nitrite	mg/L	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	#N/A
Potassium, Total	ug/L	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A
Silica, Total	ug/L	#N/A	#N/A
Sodium, Total	ug/L	#N/A	#N/A
Sulfide	mg/L	#N/A	#N/A
Total Organic Carbon	mg/L	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-1 (Field Reading)	MW-1 (P1R2)	MW-1 (P2R2)	MW-1A
Sample Date		5/1/2024	5/1/2024	5/1/2024	5/2/2024
Pace Lab ID		0	50372034001	50372035001	50372107001
Static Water Elevation		494.68	#N/A	#N/A	458.28
Field Parameters					
Temperature, Field	°C	15.54	#N/A	#N/A	20.49
Dissolved Oxygen, Field	mg/L	4.28	#N/A	#N/A	0.76
Conductivity, Field	uS/cm	954.81	#N/A	#N/A	698.55
ORP, Field	mV	70.97	#N/A	#N/A	-6.82
pH, Field	S.U.	6.66	#N/A	#N/A	6.59
Turbidity, Field	NTU	7.83	#N/A	#N/A	462.17
Appendix III Constituents					
Boron, Total	ug/L	#N/A	109	109	156
Calcium, Total	ug/L	#N/A	123000	122000	70800
Chloride	mg/L	#N/A	3.9	3.8	94.6
Fluoride	mg/L	#N/A	0.1	0.11	<0.1
Sulfate	mg/L	#N/A	127	130	129
Total Dissolved Solids	mg/L	#N/A	530	525	513
pH at 25 Degrees C	Std. Units	#N/A	#N/A	7.8	7.2
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	<1	<1	<1
Arsenic, Total	ug/L	#N/A	<1	<1	<1
Barium, Total	ug/L	#N/A	41.5	39.6	84.5
Beryllium, Total	ug/L	#N/A	<0.2	<0.2	<0.2
Cadmium, Total	ug/L	#N/A	<2	<2	<2
Chromium, Total	ug/L	#N/A	<10	<10	<10
Cobalt, Total	ug/L	#N/A	<1	<1	<1
Lead, Total	ug/L	#N/A	<10	<10	<10
Lithium, Total	ug/L	#N/A	<20	<20	<20
Mercury	ug/L	#N/A	<0.2	<0.2	<0.2
Molybdenum, Total	ug/L	#N/A	<10	<10	<10
Molybdenum, Dissolved	ug/L	#N/A	#N/A	<10	#N/A
Radium-226	pCi/L	#N/A	<0.228	<-0.123	1.88
Radium-228	pCi/L	#N/A	<0.302	0.78	1.24
Selenium, Total	ug/L	#N/A	<1	<1	<1
Thallium, Total	ug/L	#N/A	<1	<1	<1
Total Radium	pCi/L	#N/A	<0.53	<0.78	3.12
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A	342	214
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	214
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	<10
Aluminum, Dissolved	ug/L	#N/A	#N/A	<10	#N/A
Boron, Dissolved	ug/L	#N/A	#N/A	122	#N/A
Dissolved Organic Carbon	mg/L	#N/A	#N/A	1.4	<1
Iron, Total	ug/L	#N/A	300	<100	3110
Magnesium, Total	ug/L	#N/A	#N/A	36200	21100
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Manganese, Total	ug/L	#N/A	13.4	2	159
Nitrogen, Nitrate	mg/L	#N/A	#N/A	1.7	<0.1
Phosphate as P04	mg/L	#N/A	#N/A	0.16	0.22
Potassium, Total	ug/L	#N/A	#N/A	1140	1390
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Sodium, Total	ug/L	#N/A	#N/A	4200	76300
Sulfide	mg/L	#N/A	#N/A	<0.1	<0.1

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-2R (Field Reading)	MW-2R (P1R1)	MW-2R (P2R1)	MW-3 (Field Reading)
Sample Date		5/2/2024	5/2/2024	5/2/2024	5/12/2024
Pace Lab ID		0	50372196001	50372174001	0
Static Water Elevation		440.12	#N/A	#N/A	440.48
Field Parameters					
Temperature, Field	°C	21.67	#N/A	#N/A	16.77
Dissolved Oxygen, Field	mg/L	0.23	#N/A	#N/A	0.24
Conductivity, Field	uS/cm	3484.44	#N/A	#N/A	2749.66
ORP, Field	mV	-75.62	#N/A	#N/A	-89.99
pH, Field	S.U.	6.66	#N/A	#N/A	7.08
Turbidity, Field	NTU	300.46	#N/A	#N/A	300.99
Appendix III Constituents					
Boron, Total	ug/L	#N/A	1730	1860	#N/A
Calcium, Total	ug/L	#N/A	505000	514000	#N/A
Chloride	mg/L	#N/A	80	76.2	#N/A
Fluoride	mg/L	#N/A	<0.1	<0.1	#N/A
Sulfate	mg/L	#N/A	1620	1650	#N/A
Total Dissolved Solids	mg/L	#N/A	2310	2620	#N/A
pH at 25 Degrees C	Std. Units	#N/A	#N/A	7.3	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	<1	<1	#N/A
Arsenic, Total	ug/L	#N/A	20.7	10.8	#N/A
Barium, Total	ug/L	#N/A	77.9	53.6	#N/A
Beryllium, Total	ug/L	#N/A	0.21	<0.2	#N/A
Cadmium, Total	ug/L	#N/A	<2	<2	#N/A
Chromium, Total	ug/L	#N/A	<10	<10	#N/A
Cobalt, Total	ug/L	#N/A	3.7	3.3	#N/A
Lead, Total	ug/L	#N/A	<10	<10	#N/A
Lithium, Total	ug/L	#N/A	804	778	#N/A
Mercury	ug/L	#N/A	<0.2	<0.2	#N/A
Molybdenum, Total	ug/L	#N/A	10.1	10.4	#N/A
Molybdenum, Dissolved	ug/L	#N/A	#N/A	10	#N/A
Radium-226	pCi/L	#N/A	0.527	0.432	#N/A
Radium-228	pCi/L	#N/A	1.13	1.26	#N/A
Selenium, Total	ug/L	#N/A	1.5	<1	#N/A
Thallium, Total	ug/L	#N/A	<1	<1	#N/A
Total Radium	pCi/L	#N/A	1.66	1.69	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A	139	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	#N/A	<10	#N/A
Boron, Dissolved	ug/L	#N/A	#N/A	1770	#N/A
Dissolved Organic Carbon	mg/L	#N/A	#N/A	3.3	#N/A
Iron, Total	ug/L	#N/A	21400	15500	#N/A
Magnesium, Total	ug/L	#N/A	#N/A	60300	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Manganese, Total	ug/L	#N/A	6250	6870	#N/A
Nitrogen, Nitrate	mg/L	#N/A	#N/A	<0.1	#N/A
Phosphate as P04	mg/L	#N/A	#N/A	<1.5	#N/A
Potassium, Total	ug/L	#N/A	#N/A	103000	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Sodium, Total	ug/L	#N/A	#N/A	112000	#N/A
Sulfide	mg/L	#N/A	#N/A	<0.1	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-3 (P1R1)	MW-3 (P2R1)	MW-4C (Field Reading)	MW-4C (P1R1)
Sample Date		5/12/2024	5/12/2024	5/12/2024	5/12/2024
Pace Lab ID		50372953003	50372949003	0	50372953001
Static Water Elevation		#N/A	#N/A	448.46	#N/A
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	17.73	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	0.92	#N/A
Conductivity, Field	uS/cm	#N/A	#N/A	2871.72	#N/A
ORP, Field	mV	#N/A	#N/A	140.62	#N/A
pH, Field	S.U.	#N/A	#N/A	6.59	#N/A
Turbidity, Field	NTU	#N/A	#N/A	847.85	#N/A
Appendix III Constituents					
Boron, Total	ug/L	842	863	#N/A	3940
Calcium, Total	ug/L	390000	430000	#N/A	574000
Chloride	mg/L	52.7	52.4	#N/A	43.5
Fluoride	mg/L	<0.1	<0.1	#N/A	0.24
Sulfate	mg/L	1250	1260	#N/A	1440
Total Dissolved Solids	mg/L	2120	2080	#N/A	2420
pH at 25 Degrees C	Std. Units	#N/A	8.5	#N/A	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	2.4	2.1	#N/A	<1
Arsenic, Total	ug/L	263	234	#N/A	<1
Barium, Total	ug/L	72.9	70.5	#N/A	27.5
Beryllium, Total	ug/L	<0.2	<0.2	#N/A	<0.2
Cadmium, Total	ug/L	<2	<2	#N/A	<2
Chromium, Total	ug/L	<10	<10	#N/A	<10
Cobalt, Total	ug/L	1.9	1.9	#N/A	1.2
Lead, Total	ug/L	<10	<10	#N/A	<10
Lithium, Total	ug/L	1600	1620	#N/A	366
Mercury	ug/L	<0.2	<0.2	#N/A	<0.2
Molybdenum, Total	ug/L	414	426	#N/A	<10
Molybdenum, Dissolved	ug/L	#N/A	433	#N/A	#N/A
Radium-226	pCi/L	0.53	0.642	#N/A	<0.115
Radium-228	pCi/L	0.967	<0.288	#N/A	<0.431
Selenium, Total	ug/L	<1	<1	#N/A	<1
Thallium, Total	ug/L	<1	<1	#N/A	<1
Total Radium	pCi/L	1.5	0.93	#N/A	<0.546
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	98.4	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	<10	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	879	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	1.3	#N/A	#N/A
Iron, Total	ug/L	<100	<100	#N/A	<100
Magnesium, Total	ug/L	#N/A	9050	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Manganese, Total	ug/L	2140	2260	#N/A	2650
Nitrogen, Nitrate	mg/L	#N/A	<0.1	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	0.45	#N/A	#N/A
Potassium, Total	ug/L	#N/A	221000	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Sodium, Total	ug/L	#N/A	90600	#N/A	#N/A
Sulfide	mg/L	#N/A	<0.5	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-4C (P2R1)	MW-10 (Field Reading)	MW-10 (P1R2)	MW-10 (P2R2)
Sample Date		5/12/2024	5/6/2024	5/6/2024	5/6/2024
Pace Lab ID		50372949001	0	50372351001	50372339001
Static Water Elevation		#N/A	462.21	#N/A	#N/A
Field Parameters					
Temperature, Field	°C	#N/A	15.82	#N/A	#N/A
Dissolved Oxygen, Field	mg/L	#N/A	0.11	#N/A	#N/A
Conductivity, Field	uS/cm	#N/A	3504.09	#N/A	#N/A
ORP, Field	mV	#N/A	-120.61	#N/A	#N/A
pH, Field	S.U.	#N/A	6.61	#N/A	#N/A
Turbidity, Field	NTU	#N/A	0.00	#N/A	#N/A
Appendix III Constituents					
Boron, Total	ug/L	3970	#N/A	34600	34400
Calcium, Total	ug/L	622000	#N/A	589000	591000
Chloride	mg/L	44.3	#N/A	88.8	65.9
Fluoride	mg/L	0.23	#N/A	0.39	<0.1
Sulfate	mg/L	1340	#N/A	1390	920
Total Dissolved Solids	mg/L	2640	#N/A	2530	1550
pH at 25 Degrees C	Std. Units	6.8	#N/A	#N/A	6.4
Appendix IV Constituents					
Antimony, Total	ug/L	<1	#N/A	<1	<1
Arsenic, Total	ug/L	<1	#N/A	63.6	62.6
Barium, Total	ug/L	27.4	#N/A	78.5	79.1
Beryllium, Total	ug/L	<0.2	#N/A	<0.2	<0.2
Cadmium, Total	ug/L	<2	#N/A	<2	<2
Chromium, Total	ug/L	<10	#N/A	<10	<10
Cobalt, Total	ug/L	1.1	#N/A	2.2	2.2
Lead, Total	ug/L	<10	#N/A	<10	<10
Lithium, Total	ug/L	350	#N/A	24	24.9
Mercury	ug/L	<0.2	#N/A	<0.2	<0.2
Molybdenum, Total	ug/L	<10	#N/A	13.1	12.9
Molybdenum, Dissolved	ug/L	10.1	#N/A	#N/A	13.1
Radium-226	pCi/L	<0	#N/A	0.653	0.677
Radium-228	pCi/L	0.995	#N/A	0.419	0.674
Selenium, Total	ug/L	<1	#N/A	<1	<1
Thallium, Total	ug/L	<1	#N/A	<1	<1
Total Radium	pCi/L	0.995	#N/A	1.07	1.35
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	429	#N/A	#N/A	175
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Aluminum, Dissolved	ug/L	<10	#N/A	#N/A	<10
Boron, Dissolved	ug/L	4100	#N/A	#N/A	37400
Dissolved Organic Carbon	mg/L	2.3	#N/A	#N/A	1.8
Iron, Total	ug/L	<100	#N/A	35500	34900
Magnesium, Total	ug/L	51600	#N/A	#N/A	110000
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Manganese, Total	ug/L	2670	#N/A	2440	2630
Nitrogen, Nitrate	mg/L	<0.1	#N/A	#N/A	<0.1
Phosphate as P04	mg/L	<0.15	#N/A	#N/A	<0.15
Potassium, Total	ug/L	64900	#N/A	#N/A	32500
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Sodium, Total	ug/L	84100	#N/A	#N/A	76700
Sulfide	mg/L	<0.1	#N/A	#N/A	<0.1

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-11 (Field Reading)	MW-11 (P1R2)	MW-11 (P2R2)	MW-12 (Field Reading)
Sample Date		5/2/2024	5/2/2024	5/2/2024	5/2/2024
Pace Lab ID		0	50372194001	50372175001	0
Static Water Elevation		483.61	#N/A	#N/A	482.64
Field Parameters					
Temperature, Field	°C	21.68	#N/A	#N/A	18.69
Dissolved Oxygen, Field	mg/L	6.75	#N/A	#N/A	8.78
Conductivity, Field	uS/cm	971.29	#N/A	#N/A	408.67
ORP, Field	mV	104.01	#N/A	#N/A	130.95
pH, Field	S.U.	6.81	#N/A	#N/A	6.58
Turbidity, Field	NTU	127.47	#N/A	#N/A	48.67
Appendix III Constituents					
Boron, Total	ug/L	#N/A	716	807	#N/A
Calcium, Total	ug/L	#N/A	128000	136000	#N/A
Chloride	mg/L	#N/A	2.1	2	#N/A
Fluoride	mg/L	#N/A	0.16	0.15	#N/A
Sulfate	mg/L	#N/A	325	318	#N/A
Total Dissolved Solids	mg/L	#N/A	597	592	#N/A
pH at 25 Degrees C	Std. Units	#N/A	#N/A	7.6	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	#N/A	<1	<1	#N/A
Arsenic, Total	ug/L	#N/A	<1	<1	#N/A
Barium, Total	ug/L	#N/A	29.8	29.6	#N/A
Beryllium, Total	ug/L	#N/A	<0.2	<0.2	#N/A
Cadmium, Total	ug/L	#N/A	<2	<2	#N/A
Chromium, Total	ug/L	#N/A	<10	<10	#N/A
Cobalt, Total	ug/L	#N/A	<1	<1	#N/A
Lead, Total	ug/L	#N/A	<10	<10	#N/A
Lithium, Total	ug/L	#N/A	<20	<20	#N/A
Mercury	ug/L	#N/A	<0.2	<0.2	#N/A
Molybdenum, Total	ug/L	#N/A	<10	<10	#N/A
Molybdenum, Dissolved	ug/L	#N/A	#N/A	<10	#N/A
Radium-226	pCi/L	#N/A	<-0.0994	<0.196	#N/A
Radium-228	pCi/L	#N/A	0.795	0.806	#N/A
Selenium, Total	ug/L	#N/A	2.7	3	#N/A
Thallium, Total	ug/L	#N/A	<1	<1	#N/A
Total Radium	pCi/L	#N/A	0.795	<1	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A	156	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	#N/A	<10	#N/A
Boron, Dissolved	ug/L	#N/A	#N/A	830	#N/A
Dissolved Organic Carbon	mg/L	#N/A	#N/A	<1	#N/A
Iron, Total	ug/L	#N/A	238	164	#N/A
Magnesium, Total	ug/L	#N/A	#N/A	39300	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Manganese, Total	ug/L	#N/A	<10	<1	#N/A
Nitrogen, Nitrate	mg/L	#N/A	#N/A	2.4	#N/A
Phosphate as P04	mg/L	#N/A	#N/A	1.9	#N/A
Potassium, Total	ug/L	#N/A	#N/A	<1000	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Sodium, Total	ug/L	#N/A	#N/A	5050	#N/A
Sulfide	mg/L	#N/A	#N/A	<0.1	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-12 (P1R2)	MW-12 (P2R2)	MW-12A	MW-13 (Field Reading)
Sample Date		5/2/2024	5/2/2024	5/3/2024	5/2/2024
Pace Lab ID		50372194002	50372175002	50372218001	0
Static Water Elevation		#N/A	#N/A	481.16	464.8
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	16.62	13.41
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	0.04	5.21
Conductivity, Field	uS/cm	#N/A	#N/A	357.16	3089.89
ORP, Field	mV	#N/A	#N/A	-74.47	108.00
pH, Field	S.U.	#N/A	#N/A	6.86	6.99
Turbidity, Field	NTU	#N/A	#N/A	64.76	0.00
Appendix III Constituents					
Boron, Total	ug/L	<100	<100	<100	#N/A
Calcium, Total	ug/L	44500	46200	49500	#N/A
Chloride	mg/L	7.9	8.5	7.2	#N/A
Fluoride	mg/L	0.12	0.12	<0.1	#N/A
Sulfate	mg/L	13.5	13.3	63.4	#N/A
Total Dissolved Solids	mg/L	187	182	210	#N/A
pH at 25 Degrees C	Std. Units	#N/A	7.5	7.3	#N/A
Appendix IV Constituents					
Antimony, Total	ug/L	<1	<1	<1	#N/A
Arsenic, Total	ug/L	<1	2.4	<1	#N/A
Barium, Total	ug/L	22.4	30.4	76.4	#N/A
Beryllium, Total	ug/L	<0.2	<0.2	<0.2	#N/A
Cadmium, Total	ug/L	<2	<2	<2	#N/A
Chromium, Total	ug/L	<10	<10	<10	#N/A
Cobalt, Total	ug/L	<1	<1	<1	#N/A
Lead, Total	ug/L	<10	<10	<10	#N/A
Lithium, Total	ug/L	<20	<20	<20	#N/A
Mercury	ug/L	<0.2	<0.2	<0.2	#N/A
Molybdenum, Total	ug/L	<10	<10	<10	#N/A
Molybdenum, Dissolved	ug/L	#N/A	<10	<10	#N/A
Radium-226	pCi/L	0.496	<-0.603	0.648	#N/A
Radium-228	pCi/L	0.431	<0.343	0.955	#N/A
Selenium, Total	ug/L	<1	1.2	<1	#N/A
Thallium, Total	ug/L	<1	<1	<1	#N/A
Total Radium	pCi/L	0.927	<0.343	1.6	#N/A
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	156	134	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	134	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	<10	#N/A
Aluminum, Dissolved	ug/L	#N/A	34.3	<10	#N/A
Boron, Dissolved	ug/L	#N/A	<100	<100	#N/A
Dissolved Organic Carbon	mg/L	#N/A	1.7	<1	#N/A
Iron, Total	ug/L	566	2950	2560	#N/A
Magnesium, Total	ug/L	#N/A	20300	18000	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A	17900	#N/A
Manganese, Total	ug/L	<10	35.2	499	#N/A
Nitrogen, Nitrate	mg/L	#N/A	8	<0.1	#N/A
Phosphate as P04	mg/L	#N/A	<0.15	<0.15	#N/A
Potassium, Total	ug/L	#N/A	1420	1930	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A	1890	#N/A
Sodium, Total	ug/L	#N/A	4000	4160	#N/A
Sulfide	mg/L	#N/A	<0.1	<0.1	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-13 (P1R2)	MW-13 (P2R2)	MW-14	MW-15
Sample Date		5/2/2024	5/2/2024	5/5/2024	5/5/2024
Pace Lab ID		50372194003	50372175003	50372278001	50372278003
Static Water Elevation		#N/A	#N/A	425.93	423.12
Field Parameters					
Temperature, Field	°C	#N/A	#N/A	15.64	18.69
Dissolved Oxygen, Field	mg/L	#N/A	#N/A	0.83	1.51
Conductivity, Field	uS/cm	#N/A	#N/A	1516.60	1953.51
ORP, Field	mV	#N/A	#N/A	-54.38	-91.17
pH, Field	S.U.	#N/A	#N/A	6.39	6.86
Turbidity, Field	NTU	#N/A	#N/A	16.92	275.20
Appendix III Constituents					
Boron, Total	ug/L	1660	1730	600	1210
Calcium, Total	ug/L	572000	571000	249000	279000
Chloride	mg/L	25.8	26	24.8	70.4
Fluoride	mg/L	0.7	0.74	<0.1	<0.1
Sulfate	mg/L	1470	1390	290	690
Total Dissolved Solids	mg/L	2230	2330	864	1280
pH at 25 Degrees C	Std. Units	#N/A	7.1	7.1	6.4
Appendix IV Constituents					
Antimony, Total	ug/L	<1	<1	<1	<1
Arsenic, Total	ug/L	<1	<1	2.7	<1
Barium, Total	ug/L	32.9	31.8	95.7	112
Beryllium, Total	ug/L	<0.2	<0.2	<0.2	<0.2
Cadmium, Total	ug/L	<2	<2	<2	<2
Chromium, Total	ug/L	<10	<10	<10	<10
Cobalt, Total	ug/L	<1	<1	1.9	<1
Lead, Total	ug/L	<10	<10	<10	<10
Lithium, Total	ug/L	652	594	<20	797
Mercury	ug/L	<0.2	<0.2	<0.2	<0.2
Molybdenum, Total	ug/L	41.9	45.5	<10	119
Molybdenum, Dissolved	ug/L	#N/A	44.6	<10	117
Radium-226	pCi/L	<0.0538	0.94	0.262	0.497
Radium-228	pCi/L	0.367	0.683	1.63	0.542
Selenium, Total	ug/L	21	21	<1	<1
Thallium, Total	ug/L	<1	<1	<1	<1
Total Radium	pCi/L	<0.421	1.62	1.89	1.04
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	#N/A	221	497	223
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	<10	<10	<10
Boron, Dissolved	ug/L	#N/A	1760	594	1200
Dissolved Organic Carbon	mg/L	#N/A	1.2	3.7	2
Iron, Total	ug/L	<100	<100	7160	2390
Magnesium, Total	ug/L	#N/A	34000	38400	40100
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Manganese, Total	ug/L	<10	11.3	3760	453
Nitrogen, Nitrate	mg/L	#N/A	0.88	<0.1	<0.1
Phosphate as P04	mg/L	#N/A	<0.15	0.72	0.29
Potassium, Total	ug/L	#N/A	63600	2310	60900
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A	#N/A
Sodium, Total	ug/L	#N/A	49500	21000	64900
Sulfide	mg/L	#N/A	<0.1	<0.1	<0.1

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-15B	MW-16	MW-20B	MW-20I
Sample Date		5/21/2024	5/7/2024	5/24/2024	5/24/2024
Pace Lab ID		50373806001	50372468001	50374203001	50374203002
Static Water Elevation		434.09	439.56	410.5	410.51
Field Parameters					
Temperature, Field	°C	20.92	15.63	14.47	15.02
Dissolved Oxygen, Field	mg/L	0.12	0.24	1.36	0.05
Conductivity, Field	uS/cm	1597.02	3064.09	894.81	753.49
ORP, Field	mV	-119.63	-108.43	147.66	131.73
pH, Field	S.U.	7.17	6.76	6.74	7.10
Turbidity, Field	NTU	50.20	12.21	0.00	8.61
Appendix III Constituents					
Boron, Total	ug/L	1210	4070	468	284
Calcium, Total	ug/L	184000	542000	166000	121000
Chloride	mg/L	33.1	49.7	16.2	8.9
Fluoride	mg/L	0.11	<0.1	<0.1	<0.1
Sulfate	mg/L	617	1380	56.9	39.2
Total Dissolved Solids	mg/L	1070	2350	552	382
pH at 25 Degrees C	Std. Units	7.7	6.8	7.4	7.5
Appendix IV Constituents					
Antimony, Total	ug/L	<1	<1	<1	<1
Arsenic, Total	ug/L	1.4	4.3	<1	<1
Barium, Total	ug/L	45.7	56	100	47.1
Beryllium, Total	ug/L	<0.2	<0.2	<0.2	<0.2
Cadmium, Total	ug/L	<2	<2	<2	<2
Chromium, Total	ug/L	<10	<10	<10	<10
Cobalt, Total	ug/L	<1	<1	<1	1.2
Lead, Total	ug/L	<10	<10	<10	<10
Lithium, Total	ug/L	622	823	<20	<20
Mercury	ug/L	<0.2	<0.2	<0.2	<0.2
Molybdenum, Total	ug/L	15.7	318	<10	<10
Molybdenum, Dissolved	ug/L	15.8	315	<10	<10
Radium-226	pCi/L	#N/A	<0.116	<-0.116	<0.376
Radium-228	pCi/L	#N/A	0.766	<0.477	0.813
Selenium, Total	ug/L	<1	<1	9.4	3.5
Thallium, Total	ug/L	<1	<1	<1	<1
Total Radium	pCi/L	#N/A	<0.882	<0.477	1.19
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L	196	425	470	353
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	470	353
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	<10	<10
Aluminum, Dissolved	ug/L	14.1	<10	<10	<10
Boron, Dissolved	ug/L	1210	3860	468	264
Dissolved Organic Carbon	mg/L	2	5.4	1.1	<1
Iron, Total	ug/L	5010	8190	<100	<100
Magnesium, Total	ug/L	26800	44200	27200	26600
Magnesium, Dissolved	ug/L	#N/A	#N/A	26300	24200
Manganese, Total	ug/L	1310	6050	2	1650
Nitrogen, Nitrate	mg/L	<0.1	<0.1	3.9	1.2
Phosphate as P04	mg/L	0.51	1.6	<0.15	<0.15
Potassium, Total	ug/L	70200	153000	<1000	<1000
Potassium, Dissolved	ug/L	#N/A	#N/A	<1000	<1000
Sodium, Total	ug/L	51000	63400	11500	4850
Sulfide	mg/L	<1	<0.1	<0.1	<0.1

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-20A	MW-24	MW-33D2	MW-35D1
Sample Date		4/30/2024	5/6/2024	5/3/2024	5/1/2024
Pace Lab ID		0	50372340001	50372217001	50371997001
Static Water Elevation		410.5	439.29	395.54	453.71
Field Parameters					
Temperature, Field	°C	Not Sampled (Became Inaccessible During Event)	19.63	21.26	18.24
Dissolved Oxygen, Field	mg/L		0.06	1.23	8.62
Conductivity, Field	uS/cm		2035.18	1224.61	-
ORP, Field	mV		-17.80	15.56	91.21
pH, Field	S.U.		7.23	6.55	-
Turbidity, Field	NTU		16.55	0.77	0.00
Appendix III Constituents					
Boron, Total	ug/L		1080	1100	<100
Calcium, Total	ug/L		273000	15800	242000
Chloride	mg/L		89.2	66.2	33.8
Fluoride	mg/L		0.37	2.9	0.35
Sulfate	mg/L		1290	64.4	692
Total Dissolved Solids	mg/L		2630	641	1180
pH at 25 Degrees C	Std. Units		6.7	8.2	7.2
Appendix IV Constituents					
Antimony, Total	ug/L		<1	<1	<1
Arsenic, Total	ug/L		<1	1.2	1.2
Barium, Total	ug/L		37.3	226	85
Beryllium, Total	ug/L		<0.2	<0.2	<0.2
Cadmium, Total	ug/L		<2	<2	<2
Chromium, Total	ug/L		<10	<10	<10
Cobalt, Total	ug/L		2	<1	2.2
Lead, Total	ug/L		<10	<10	<10
Lithium, Total	ug/L		1240	57	375
Mercury	ug/L		<0.2	<0.2	<0.2
Molybdenum, Total	ug/L		354	33.7	38.8
Molybdenum, Dissolved	ug/L		387	22	38.1
Radium-226	pCi/L		<0.0506	<0.201	1.79
Radium-228	pCi/L		0.445	0.432	<0.0906
Selenium, Total	ug/L		<1	<1	<1
Thallium, Total	ug/L		<1	<1	<1
Total Radium	pCi/L		<0.496	<0.633	1.88
Geochemical Constituents					
Alkalinity, Total as CaCO3	mg/L		641	461	292
Alkalinity,Bicarbonate (CaCO3)	mg/L		641	432	292
Alkalinity,Carbonate (CaCO3)	mg/L		<10	28.4	<10
Aluminum, Dissolved	ug/L		<10	<10	<10
Boron, Dissolved	ug/L		1220	1100	<100
Dissolved Organic Carbon	mg/L		14.1	1	2.1
Iron, Total	ug/L		100	280	8530
Magnesium, Total	ug/L		32400	4490	66200
Magnesium, Dissolved	ug/L		33800	3030	65600
Manganese, Total	ug/L		987	25.4	848
Nitrogen, Nitrate	mg/L		<0.1	<0.1	<0.1
Phosphate as P04	mg/L		1.3	<0.15	3
Potassium, Total	ug/L		142000	3710	8970
Potassium, Dissolved	ug/L		154000	2650	9230
Sodium, Total	ug/L		73800	252000	59300
Sulfide	mg/L		<0.1	0.15	<0.1

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 6
Summary of Monitoring Results - May-June 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	MW-35D2	MW-35SS
Sample Date		5/2/2024	5/2/2024
Pace Lab ID		50372109002	50372109001
Static Water Elevation		418.29	450.77
Field Parameters			
Temperature, Field	°C	16.06	17.23
Dissolved Oxygen, Field	mg/L	6.93	0.53
Conductivity, Field	uS/cm	939.60	892.56
ORP, Field	mV	-161.99	-189.59
pH, Field	S.U.	6.99	6.15
Turbidity, Field	NTU	10.81	6.95
Appendix III Constituents			
Boron, Total	ug/L	1160	580
Calcium, Total	ug/L	17600	46200
Chloride	mg/L	14.8	23.5
Fluoride	mg/L	2.2	0.46
Sulfate	mg/L	87.8	81.8
Total Dissolved Solids	mg/L	468	466
pH at 25 Degrees C	Std. Units	8.2	7.6
Appendix IV Constituents			
Antimony, Total	ug/L	<1	<1
Arsenic, Total	ug/L	<1	<1
Barium, Total	ug/L	108	197
Beryllium, Total	ug/L	<0.2	<0.2
Cadmium, Total	ug/L	<2	<2
Chromium, Total	ug/L	<10	<10
Cobalt, Total	ug/L	<1	<1
Lead, Total	ug/L	<10	<10
Lithium, Total	ug/L	21.4	53
Mercury	ug/L	<0.2	<0.2
Molybdenum, Total	ug/L	16.6	20
Molybdenum, Dissolved	ug/L	17.4	20.7
Radium-226	pCi/L	0.419	<0.448
Radium-228	pCi/L	0.474	<0.272
Selenium, Total	ug/L	<1	<1
Thallium, Total	ug/L	<1	<1
Total Radium	pCi/L	0.893	<0.72
Geochemical Constituents			
Alkalinity, Total as CaCO3	mg/L	369	354
Alkalinity,Bicarbonate (CaCO3)	mg/L	341	354
Alkalinity,Carbonate (CaCO3)	mg/L	27.2	<10
Aluminum, Dissolved	ug/L	<10	<10
Boron, Dissolved	ug/L	1180	604
Dissolved Organic Carbon	mg/L	1.2	1.3
Iron, Total	ug/L	178	212
Magnesium, Total	ug/L	5300	12900
Magnesium, Dissolved	ug/L	5160	12600
Manganese, Total	ug/L	41.4	90.3
Nitrogen, Nitrate	mg/L	<0.1	0.19
Phosphate as P04	mg/L	<0.15	<0.15
Potassium, Total	ug/L	1720	3990
Potassium, Dissolved	ug/L	1690	3820
Sodium, Total	ug/L	173000	121000
Sulfide	mg/L	<0.1	<0.1

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 7
Summary of Monitoring Results - August 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-2R	MW-3	MW-13
Sample Date		8/13/2024	8/13/2024	8/14/2024
Pace Lab ID		50380227001	50380227002	50380227003
Static Water Elevation		436.45	439.56	463.17
Field Parameters				
Temperature, Field	°C	16.14	18.14	15.43
Dissolved Oxygen, Field	mg/L	0	0	0.67
Conductivity, Field	uS/cm	2890	2050	2440
ORP, Field	mV	-54	28	247
pH, Field	S.U.	6.85	7.32	7.08
Turbidity, Field	NTU	585	0	0
Appendix III Constituents				
Boron, Total	ug/L	#N/A	#N/A	#N/A
Calcium, Total	ug/L	#N/A	#N/A	#N/A
Chloride	mg/L	#N/A	#N/A	#N/A
Fluoride	mg/L	#N/A	#N/A	#N/A
Sulfate	mg/L	#N/A	#N/A	#N/A
Total Dissolved Solids	mg/L	#N/A	#N/A	#N/A
pH at 25 Degrees C	Std. Units	#N/A	#N/A	#N/A
Appendix IV Constituents				
Antimony, Total	ug/L	#N/A	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	#N/A	#N/A
Barium, Total	ug/L	84.9	35.8	#N/A
Beryllium, Total	ug/L	#N/A	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	#N/A	#N/A
Chromium, Total	ug/L	#N/A	#N/A	#N/A
Cobalt, Total	ug/L	#N/A	#N/A	#N/A
Lead, Total	ug/L	#N/A	#N/A	#N/A
Lithium, Total	ug/L	#N/A	#N/A	#N/A
Mercury	ug/L	#N/A	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	#N/A	#N/A
Molybdenum, Dissolved	ug/L	#N/A	#N/A	#N/A
Radium-226	pCi/L	#N/A	#N/A	#N/A
Radium-228	pCi/L	#N/A	#N/A	#N/A
Selenium, Total	ug/L	#N/A	#N/A	25.5
Thallium, Total	ug/L	#N/A	#N/A	#N/A
Total Radium	pCi/L	#N/A	#N/A	#N/A
Geochemical Constituents				
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	#N/A	#N/A
Iron, Total	ug/L	#N/A	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A	#N/A
Manganese, Total	ug/L	#N/A	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	#N/A	#N/A
Potassium, Total	ug/L	#N/A	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A	#N/A
Sodium, Total	ug/L	#N/A	#N/A	#N/A
Sulfide	mg/L	#N/A	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 8
Surface Water Sampling Results - August 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0006

Well ID	Units	SB-1	SC-1	SB-2	SC-2	SB-3	SC-3
Sample Date		8/19/2024	8/19/2024	8/19/2024	8/19/2024	8/19/2024	8/19/2024
Pace Lab ID		50380603001	50380603002	50380603003	50380603004	50380603005	50380603006
Sample Depth	ft below water surface	4.75	6.0	1.25	7.75	2.25	6.25
Field Parameters							
Temperature, Field	°C	25.90	26.96	26.50	25.90	26.93	26.90
Dissolved Oxygen, Field	mg/L	12.77	12.00	12.02	12.74	6.78	12.48
Conductivity, Field	uS/cm	492.00	373.00	554.00	300.00	803.00	427.00
ORP, Field	mV	173.00	221.00	245.00	265.00	252.00	256.00
pH, Field	S.U.	8.14	8.07	8.07	7.88	8.18	8.11
Turbidity, Field	NTU	439.00	57.80	72.70	75.90	36.50	101.00
Appendix IV Constituents							
Boron, Total	ug/L	54.9	52.2	96.6	96.3	2470	62.2
Molybdenum, Total	ug/L	<10	<10	<10	<10	<10	<10

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 9
Summary of Monitoring Results - September 2024
RWS III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Well ID	Units	MW-2R	MW-13
Sample Date		9/17/2024	9/17/2024
Pace Lab ID		50382809001	50382809002
Static Water Elevation		435.65	462.43
Field Parameters			
Temperature, Field	°C	16.7	15.8
Dissolved Oxygen, Field	mg/L	0.14	1.96
Conductivity, Field	uS/cm	2547.8	2436
ORP, Field	mV	-72.4	126
pH, Field	S.U.	6.85	7.08
Turbidity, Field	NTU	25.92	2.44
Appendix III Constituents			
Boron, Total	ug/L	#N/A	#N/A
Calcium, Total	ug/L	#N/A	#N/A
Chloride	mg/L	#N/A	#N/A
Fluoride	mg/L	#N/A	#N/A
Sulfate	mg/L	#N/A	#N/A
Total Dissolved Solids	mg/L	#N/A	#N/A
pH at 25 Degrees C	Std. Units	#N/A	#N/A
Appendix IV Constituents			
Antimony, Total	ug/L	#N/A	#N/A
Arsenic, Total	ug/L	#N/A	#N/A
Barium, Total	ug/L	45.3	#N/A
Beryllium, Total	ug/L	#N/A	#N/A
Cadmium, Total	ug/L	#N/A	#N/A
Chromium, Total	ug/L	#N/A	#N/A
Cobalt, Total	ug/L	#N/A	#N/A
Lead, Total	ug/L	#N/A	#N/A
Lithium, Total	ug/L	#N/A	#N/A
Mercury	ug/L	#N/A	#N/A
Molybdenum, Total	ug/L	#N/A	#N/A
Molybdenum, Dissolved	ug/L	#N/A	#N/A
Radium-226	pCi/L	#N/A	#N/A
Radium-228	pCi/L	#N/A	#N/A
Selenium, Total	ug/L	#N/A	15.7
Thallium, Total	ug/L	#N/A	#N/A
Total Radium	pCi/L	#N/A	#N/A
Geochemical Constituents			
Alkalinity, Total as CaCO3	mg/L	#N/A	#N/A
Alkalinity,Bicarbonate (CaCO3)	mg/L	#N/A	#N/A
Alkalinity,Carbonate (CaCO3)	mg/L	#N/A	#N/A
Aluminum, Dissolved	ug/L	#N/A	#N/A
Boron, Dissolved	ug/L	#N/A	#N/A
Dissolved Organic Carbon	mg/L	#N/A	#N/A
Iron, Total	ug/L	#N/A	#N/A
Magnesium, Total	ug/L	#N/A	#N/A
Magnesium, Dissolved	ug/L	#N/A	#N/A
Manganese, Total	ug/L	#N/A	#N/A
Nitrogen, Nitrate	mg/L	#N/A	#N/A
Phosphate as P04	mg/L	#N/A	#N/A
Potassium, Total	ug/L	#N/A	#N/A
Potassium, Dissolved	ug/L	#N/A	#N/A
Sodium, Total	ug/L	#N/A	#N/A
Sulfide	mg/L	#N/A	#N/A

Notes:
ft MSL: Elevation, feet mean sea level
°C: Degrees celcius
uS/cm: microsiemen per centimeter
umhos/cm: micromhos per centimeter
#NA: Not analyzed
NM: Not Measured
NS: Not Sampled
mV: millivolt
Std. Units: standard units
mg/L: milligram per liter
ug/L: microgram per liter
pCi/L: picoCurie per liter
Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Table 10
Groundwater Protection Standards - November 2023 and May 2024
RWS Type III Landfill
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
Atlas Project No. 170AES0004

Parameter	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226/228 Combined
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
GWPS	6	10	2000	4	5	100	6	4	15	40	2	100	50	2	5

Notes:
ug/L = micrograms per liter (ppb)
mg/L = milligrams per liter (ppm)
pCi/L = picoCuries per liter
GWPS = Groundwater Protection Standard

Appendix A: Gauging Data and Groundwater Flow Rate Calculations

Table A-1
Gauging Summary
November 1, 2023
Petersburg Generating Station - RWS Type III Landfill
Atlas Project No. 170AES0004

Well	Date	Time	DTW, from top of Reference Point	Reference Point Elevation (TOC)	SWE, ft MSL
Monitoring Wells					
MW-1	11/1/2023	8:53	31.71	528.11	496.40
MW-1A	11/1/2023	8:51	69.84	529.36	459.52
MW-2R	11/1/2023	9:45	19.40	455.00	435.60
MW-3	11/1/2023	9:50	10.58	450.71	440.13
MW-4C	11/1/2023	10:07	6.38	454.44	448.06
MW-10	11/1/2023	10:20	41.51	502.38	460.87
MW-11	11/1/2023	10:54	38.90	517.51	478.61
MW-12	11/1/2023	11:25	33.66	517.64	483.98
MW-12A	11/1/2023	11:23	34.57	516.97	482.40
MW-13	11/1/2023	8:45	17.32	480.97	463.65
Nature and Extent Wells					
MW-14	11/1/2023	12:37	dry	443.37	-
MW-15	11/1/2023	12:32	25.60	444.11	418.51
MW-15B	11/1/2023	12:30	11.38	444.69	433.31
MW-16	11/1/2023	12:25	3.94	442.78	438.84
MW-19A	11/1/2023	14:35	19.07	421.41	402.34
MW-19I	11/1/2023	14:33	18.97	421.28	402.31
MW-19B	11/1/2023	14:31	dry	421.51	-
MW-22	11/1/2023	9:10	86.49	561.61	475.12
MW-23	11/1/2023	9:30	84.42	564.60	480.18
MW-24	11/1/2023	9:52	13.76	452.71	438.95
MW-30D1	11/1/2023	10:38	dry	502.83	-
MW-30D2	11/1/2023	10:30	93.63	502.82	409.19
MW-31D2	11/1/2023	10:10	41.96	453.91	411.95
MW-32I	11/1/2023	10:50	53.05	516.33	463.28
MW-32D1	11/1/2023	10:52	74.31	516.22	441.91
MW-32D2	11/1/2023	10:45	101.13	516.29	415.16
MW-33I	11/1/2023	cant unlock		454.81	-
MW-33D2	11/1/2023	10:05	45.35	454.58	409.23
MW-34A	11/1/2023	11:21	24.37	498.25	473.88
MW-34D1	11/1/2023	11:19	32.98	498.82	465.84
MW-34SS	11/1/2023	11:17	32.79	498.95	466.16
MW-34D2	11/1/2023	11:15	84.52	499.31	414.79
MW-35D1	11/1/2023	8:44	17.00	470.09	453.09
MW-35SS	11/1/2023	8:42	18.98	470.16	451.18
MW-35D2	11/1/2023	8:40	55.43	470.54	415.11
Piezometers					
LW-1A	11/1/2023	11:32	17.85	504.40	486.55
LW-1B	11/1/2023	11:35	15.74	504.40	488.66
LW-2	11/1/2023	11:41	80.79	518.90	438.11
LW-6A	11/1/2023	11:44	46.16	518.90	472.74
LW-6B	11/1/2023	~11:44	dry	518.90	-
LW-8A	11/1/2023	11:02	63.41	524.90	461.49
LW-8B	11/1/2023	11:00	31.73	524.90	493.17
LW-18	11/1/2023	11:05	50.38	510.70	460.32
LW-28A	11/1/2023	11:10	22.43	504.40	481.97
LW-28B	11/1/2023	11:12	18.08	504.40	486.32
LB-1	11/1/2023	9:00	95.42	572.85	477.43
LB-2	11/1/2023	9:34	dry	564.01	-
LB-3	11/1/2023	9:15	dry	559.73	-
LB-4	11/1/2023	Apparently destroyed		563.42	-
LB-5	11/1/2023	9:20	79.23	559.42	480.19
MW-17	11/1/2023	10:14	17.99	472.33	454.34
MW-18	11/1/2023	10:17	10.45	458.27	447.82
TP-2	11/1/2023	10:27	41.01	501.39	460.38
TP-3	11/1/2023	10:25	40.54	500.83	460.29
LF-PZ-1B	11/1/2023	16:30	19.05	464.09	445.04

TOC = top of casing
SWE = Static Water Level
DTW = Depth to Water
TBD = To Be Determined

Table A-2
Flow Rate Calculations - November 2023
AES Indiana Petersburg Generating Station - RWS III Landfill
Petersburg, Indiana
Atlas Project No. 170AES0004

PETERSBURG LF - ZONE B FIGURE 3		**RWS III LANDFILL**	
11/1/2023	Flow Rate Line	FR1	FR2
ΔH (ft)	Potentiometric Surface Hydraulic Head Change	40	55
ΔL (ft)	Flow Line Length	2020	1650
K (hydraulic conductivity (ft/day))	N&E Well Slug Test Summary 2019-2021	3.3	3.3
I (ΔH/ΔL)		0.020	0.033
n_e (porosity, dimensionless)		0.35	0.35
v (ft/day)		0.19	0.31
PETERSBURG LF - ZONE A FIGURE 4			
11/1/2023	Flow Rate Line	FR1	
ΔH (ft)	Potentiometric surface hydraulic head change	20	
ΔL (ft)	Flow Line Length	710	
K (hydraulic conductivity (ft/day))	N&E Well Slug Test Summary 2019-2021	0.21	
I (ΔH/ΔL)		0.028	
n_e (porosity, dimensionless)		0.35	
v (ft/day)		0.017	

Notes

1 - Average linear velocity equation from Fetter, C.W., 1980, Applied Hydrogeology: Merrill Publishing Company, 592 p.
v = Q/neA1 = KI/ne

Table A-3
Gauging Summary
April 30, 2024
Petersburg Generating Station - RWS Type III Landfill
Atlas Project No. 170AES0004

Well	Date	Time	DTW, from top of Reference Point	Reference Point Elevation (TOC)	SWE, ft MSL
Monitoring Wells					
MW-1	4/30/2024	12:23	33.43	528.11	494.68
MW-1A	4/30/2024	12:23	71.08	529.36	458.28
MW-2R	4/30/2024	14:13	14.88	455.00	440.12
MW-3	4/30/2024	14:17	10.23	450.71	440.48
MW-4C	4/30/2024	14:33	5.98	454.44	448.46
MW-10	4/30/2024	13:37	40.17	502.38	462.21
MW-11	4/30/2024	13:20	33.90	517.51	483.61
MW-12	4/30/2024	12:53	35.00	517.64	482.64
MW-12A	4/30/2024	12:53	35.81	516.97	481.16
MW-13	4/30/2024	14:05	16.17	480.97	464.80
Nature and Extent Wells					
MW-14	4/30/2024	14:55	17.44	443.37	425.93
MW-15	4/30/2024	14:50	20.99	444.11	423.12
MW-15B	4/30/2024	14:50	10.60	444.69	434.09
MW-16	4/30/2024	14:48	3.22	442.78	439.56
MW-19A	4/30/2024	11:06	11.07	421.41	410.34
MW-19I	4/30/2024	11:06	10.94	421.28	410.34
MW-19B	4/30/2024	11:06	10.95	421.51	410.56
MW-22	4/30/2024	12:24	88.11	561.61	473.50
MW-23	4/30/2024	12:42	86.91	564.60	477.69
MW-24	4/30/2024	14:17	13.42	452.71	439.29
MW-30D1	4/30/2024	13:32	Dry	502.83	-
MW-30D2	4/30/2024	13:32	87.21	502.82	415.61
MW-31D2	4/30/2024	14:36	36.61	453.91	417.30
MW-32I	4/30/2024	13:22	53.11	516.33	463.22
MW-32D1	4/30/2024	13:22	74.00	516.22	442.22
MW-32D2	4/30/2024	13:22	100.40	516.29	415.89
MW-33I	4/30/2024	-	can't unlock	454.81	-
MW-33D2	4/30/2024	14:22	39.04	454.58	415.54
MW-34A	4/30/2024	13:00	24.16	498.25	474.09
MW-34D1	4/30/2024	12:59	32.87	498.82	465.95
MW-34SS	4/30/2024	12:59	33.28	498.95	465.67
MW-34D2	4/30/2024	12:57	81.70	499.31	417.61
MW-35D1	4/30/2024	14:10	16.38	470.09	453.71
MW-35SS	4/30/2024	14:10	19.39	470.16	450.77
MW-35D2	4/30/2024	14:10	52.25	470.54	418.29
Piezometers					
LW-1A	4/30/2024	12:48	19.02	504.40	485.38
LW-1B	4/30/2024	12:48	16.88	504.40	487.52
LW-2	4/30/2024	13:16	80.28	518.90	438.62
LW-6A	4/30/2024	13:13	47.91	518.90	470.99
LW-6B	4/30/2024	13:13	Dry	518.90	-
LW-8A	4/30/2024	13:07	65.22	524.90	459.68
LW-8B	4/30/2024	13:07	31.80	524.90	493.10
LW-18	4/30/2024	13:30	52.28	510.70	458.42
LW-28A	4/30/2024	13:04	22.24	504.40	482.16
LW-28B	4/30/2024	13:04	18.07	504.40	486.33
LB-1	4/30/2024	12:29	96.35	572.85	476.50
LB-2	4/30/2024	12:42	Dry	564.01	-
LB-3	4/30/2024	12:35	Dry	559.73	-
LB-4	4/30/2024	Apparently destroyed		563.42	-
LB-5	4/30/2024	12:39	79.22	559.42	480.20
MW-17	4/30/2024	14:40	15.16	472.33	457.17
MW-18	4/30/2024	14:44	6.12	458.27	452.15
TP-2	4/30/2024	13:41	39.67	501.39	461.72
TP-3	4/30/2024	13:38	39.15	500.83	461.68
LF-PZ-1B	4/30/2024	8:10	17.30	464.09	446.79

TOC = Top of Casing
SWE = Static Water Level
DTW = Depth to Water
TBD = To Be Determined

Table A-4
Flow Rate Calculations - April 2024
AES Indiana Petersburg Generating Station - RWS III Landfill
Petersburg, Indiana
Atlas Project No. 170AES0004

PETERSBURG LF - ZONE B FIGURE 5		**RWS III LANDFILL**	
4/30/2024	Flow Rate Line	FR1	FR2
ΔH (ft)	Potentiometric Surface Hydraulic Head Change	40	45
ΔL (ft)	Flow Line Length	2090	1510
K (hydraulic conductivity (ft/day))	N&E Well Slug Test Summary 2019-2021	3.3	3.3
I (ΔH/ΔL)		0.019	0.030
n_e (porosity, dimensionless)		0.35	0.35
v (ft/day)		0.18	0.28
PETERSBURG LF - ZONE A FIGURE 6			
4/30/2024	Flow Rate Line	FR1	
ΔH (ft)	Potentiometric surface hydraulic head change	25	
ΔL (ft)	Flow Line Length	860	
K (hydraulic conductivity (ft/day))	N&E Well Slug Test Summary 2019-2021	0.21	
I (ΔH/ΔL)		0.029	
n_e (porosity, dimensionless)		0.35	
v (ft/day)		0.017	

Notes

1 - Average linear velocity equation from Fetter, C.W., 1980, Applied Hydrogeology: Merrill Publishing Company, 592 p.
v = Q/neA1 = KI/ne

Table A-5
Gauging Summary
November 1, 2024
Petersburg Generating Station - RWS Type III Landfill
Atlas Project No. 170AES0004

Well	Date	Time	DTW, from top of Reference Point	Reference Point Elevation (TOC)	SWE, ft MSL
Monitoring Wells					
MW-1	11/1/2024	9:25	32.65	528.11	495.46
MW-1A	11/1/2024	9:23	72.30	529.36	457.06
MW-2R	11/1/2024	11:22	19.30	455.00	435.70
MW-3	11/1/2024	11:19	10.93	450.71	439.78
MW-4C	11/1/2024	11:09	6.80	454.44	447.64
MW-10	11/1/2024	10:52	42.49	502.38	459.89
MW-11	11/1/2024	10:34	34.40	517.51	483.11
MW-12	11/1/2024	10:04	37.03	517.64	480.61
MW-12A	11/1/2024	10:08	37.80	516.97	479.17
MW-13	11/1/2024	11:25	19.18	480.97	461.79
Nature and Extent Wells					
MW-14	11/1/2024	11:46	dry to pump (17.45)	443.37	<425.92
MW-15	11/1/2024	11:51	25.75	444.11	418.36
MW-15B	11/1/2024	11:52	11.23	444.69	433.46
MW-16	11/1/2024	11:55	4.15	442.78	438.63
MW-19B	11/1/2024	14:18	dry to pump (18.40)	421.51	<403.11
MW-19I	11/1/2024	14:19	19.08	421.28	402.20
MW-19A	11/1/2024	14:20	19.18	421.41	402.23
MW-22	11/1/2024	9:39	89.84	561.61	471.77
MW-23	11/1/2024	9:48	88.33	564.60	476.27
MW-24	11/1/2024	11:18	14.08	452.71	438.63
MW-30D1	11/1/2024	10:49	dry to TD (59.36)	502.83	<443.47
MW-30D2	11/1/2024	10:47	93.94	502.82	408.88
MW-31D2	11/1/2024	11:07	40.64	453.91	413.27
MW-32I	11/1/2024	10:37	53.13	516.33	463.20
MW-32D1	11/1/2024	10:36	74.32	516.22	441.90
MW-32D2	11/1/2024	10:38	106.69	516.29	409.60
MW-33I	11/1/2024	11:12	13.21	454.81	441.60
MW-33D2	11/1/2024	11:14	45.70	454.58	408.88
MW-34A	11/1/2024	10:11	26.79	498.25	471.46
MW-34D1	11/1/2024	10:13	34.39	498.82	464.43
MW-34SS	11/1/2024	10:15	34.35	498.95	464.60
MW-34D2	11/1/2024	10:17	84.34	499.31	414.97
MW-35D1	11/1/2024	11:30	17.50	470.09	452.59
MW-35SS	11/1/2024	11:30	20.53	470.16	449.63
MW-35D2	11/1/2024	11:29	57.07	470.54	413.47
Piezometers					
LW-1A	11/1/2024	9:55	21.72	504.40	482.68
LW-1B	11/1/2024	9:57	20.68	504.40	483.72
LW-2	11/1/2024	10:32	80.76	518.90	438.14
LW-6A	11/1/2024	10:30	48.17	518.90	470.73
LW-6B	11/1/2024	10:31	dry to TD (24.24)	518.90	<494.66
LW-8A	11/1/2024	10:27	66.20	524.90	458.70
LW-8B	11/1/2024	10:25	31.86	524.90	493.04
LW-18	11/1/2024	10:40	52.96	510.70	457.74
LW-28A	11/1/2024	10:19	24.60	504.40	479.80
LW-28B	11/1/2024	10:21	19.20	504.40	485.20
LB-1	11/1/2024	9:28	97.72	572.85	475.13
LB-2	11/1/2024	9:45	dry to TD (79.94)	564.01	<484.07
LB-3	11/1/2024	9:37	dry to TD (82.70)	559.73	<477.03
LB-4	11/1/2024	Apparently destroyed		563.42	-
LB-5	11/1/2024	9:40	79.21	559.42	480.21
MW-17	11/1/2024	11:03	17.39	472.33	454.94
MW-18	11/1/2024	10:59	11.05	458.27	447.22
TP-2	11/1/2024	10:57	41.97	501.39	459.42
TP-3	11/1/2024	10:54	41.50	500.83	459.33
LF-PZ-1B	11/1/2024	9:10	18.04	464.09	446.05

TOC = top of casing
SWE = Static Water Level
DTW = Depth to Water
TBD = To Be Determined

Table A-6
Flow Rate Calculations - November 2024
AES Indiana Petersburg Generating Station - RWS III Landfill
Petersburg, Indiana
Atlas Project No. 170AES0004

PETERSBURG LF - ZONE B FIGURE 7		**RWS III LANDFILL**	
11/1/2024	Flow Rate Line	FR1	FR2
ΔH (ft)	Potentiometric Surface Hydraulic Head Change	40	50
ΔL (ft)	Flow Line Length	2140	1660
K (hydraulic conductivity (ft/day))	N&E Well Slug Test Summary 2019-2021	3.3	3.3
I (ΔH/ΔL)		0.019	0.030
n_e (porosity, dimensionless)		0.35	0.35
v (ft/day)		0.18	0.28
PETERSBURG LF - ZONE A FIGURE 8			
11/1/2024	Flow Rate Line	FR1	
ΔH (ft)	Potentiometric surface hydraulic head change	20	
ΔL (ft)	Flow Line Length	700	
K (hydraulic conductivity (ft/day))	N&E Well Slug Test Summary 2019-2021	0.21	
I (ΔH/ΔL)		0.029	
n_e (porosity, dimensionless)		0.35	
v (ft/day)		0.017	

Notes

1 - Average linear velocity equation from Fetter, C.W., 1980, Applied Hydrogeology: Merrill Publishing Company, 592 p.
v = Q/neA1 = KI/ne

Appendix B: Laboratory Certificates of Analyses

November 2023

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 07, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 02, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358239001	**MW-1A**	Water	11/01/23 15:00	11/02/23 09:20

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358239001	**MW-1A**	EPA 9056	KBB	4	PASI-I
		EPA 6010	FRW	12	PASI-I
		EPA 6010	ELK	6	PASI-I
		EPA 6020	MGM	7	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	BMS	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358239001	**MW-1A**					
EPA 9056	Chloride	91.0	mg/L	2.5	11/10/23 07:57	
EPA 9056	Sulfate	107	mg/L	2.5	11/10/23 07:57	
EPA 6010	Boron	136	ug/L	100	11/13/23 12:42	
EPA 6010	Calcium	80700	ug/L	1000	11/13/23 12:42	
EPA 6010	Iron	4140	ug/L	100	11/13/23 12:42	
EPA 6010	Magnesium	23400	ug/L	1000	11/13/23 12:42	
EPA 6010	Potassium	1410	ug/L	1000	11/13/23 12:42	
EPA 6010	Silica	31100	ug/L	450	11/13/23 12:42	N2
EPA 6010	Sodium	77400	ug/L	1000	11/13/23 12:42	
EPA 6010	Boron, Dissolved	168	ug/L	100	11/13/23 13:46	
EPA 6010	Iron, Dissolved	3780	ug/L	100	11/13/23 13:46	
EPA 6010	Magnesium, Dissolved	23600	ug/L	1000	11/13/23 13:46	
EPA 6010	Potassium, Dissolved	1260	ug/L	1000	11/13/23 13:46	
EPA 6020	Aluminum	212	ug/L	10.0	11/03/23 23:51	
EPA 6020	Arsenic	1.0	ug/L	1.0	11/03/23 23:51	
EPA 6020	Barium	80.3	ug/L	1.0	11/03/23 23:51	
EPA 6020	Manganese	180	ug/L	1.0	11/03/23 23:51	
EPA 6020	Manganese, Dissolved	190	ug/L	2.0	11/06/23 19:07	
EPA 903.1	Radium-226	0.909 ± 0.915 (1.44) C:NA T:89%	pCi/L		11/17/23 15:10	
EPA 904.0	Radium-228	1.85 ± 0.575 (0.671) C:81% T:73%	pCi/L		11/16/23 11:16	
Total Radium Calculation	Total Radium	2.76 ± 1.49 (2.11)	pCi/L		11/20/23 12:16	
SM 2320B	Alkalinity, Total as CaCO3	217	mg/L	10.0	11/02/23 20:28	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	217	mg/L	10.0	11/02/23 20:28	
SM 2540C	Total Dissolved Solids	541	mg/L	10.0	11/07/23 15:15	
SM 4500-H+B	pH at 25 Degrees C	6.9	Std. Units	0.10	11/13/23 09:33	H3
SM 4500-S2-D	Sulfide	0.025J	mg/L	0.10	11/03/23 15:41	
HACH 8146	Iron, Ferrous	0.66	mg/L	0.20	11/10/23 11:09	H3,N2
EPA 365.1	Phosphate as P04	0.31	mg/L	0.15	11/10/23 11:20	
SM 5310C	Total Organic Carbon	1.5	mg/L	1.0	11/11/23 04:41	
SM 5310C	Dissolved Organic Carbon	3.3	mg/L	1.0	11/07/23 06:29	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

Sample: MW-1A **Lab ID: 50358239001** Collected: 11/01/23 15:00 Received: 11/02/23 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		11/10/23 07:40	24959-67-9	
Chloride	**91.0**	mg/L	2.5	0.67	10		11/10/23 07:57	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/10/23 07:40	16984-48-8	
Sulfate	**107**	mg/L	2.5	1.9	10		11/10/23 07:57	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**136**	ug/L	100	6.2	1	11/08/23 16:02	11/13/23 12:42	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/08/23 16:02	11/13/23 12:42	7440-43-9	
Calcium	**80700**	ug/L	1000	67.7	1	11/08/23 16:02	11/13/23 12:42	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	11/08/23 16:02	11/13/23 12:42	7440-47-3	
Iron	**4140**	ug/L	100	30.0	1	11/08/23 16:02	11/13/23 12:42	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/08/23 16:02	11/13/23 12:42	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	11/08/23 16:02	11/13/23 12:42	7439-93-2	
Magnesium	**23400**	ug/L	1000	33.6	1	11/08/23 16:02	11/13/23 12:42	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	11/08/23 16:02	11/13/23 12:42	7439-98-7	
Potassium	**1410**	ug/L	1000	97.8	1	11/08/23 16:02	11/13/23 12:42	7440-09-7	
Silica	**31100**	ug/L	450		1	11/08/23 16:02	11/13/23 12:42	7631-86-9	N2
Sodium	**77400**	ug/L	1000	54.8	1	11/08/23 16:02	11/13/23 12:42	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**168**	ug/L	100	12.3	1	11/12/23 20:56	11/13/23 13:46	7440-42-8	
Iron, Dissolved	**3780**	ug/L	100	28.6	1	11/12/23 20:56	11/13/23 13:46	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.2	1	11/12/23 20:56	11/13/23 13:46	7439-93-2	
Magnesium, Dissolved	**23600**	ug/L	1000	45.6	1	11/12/23 20:56	11/13/23 13:46	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	1.2	1	11/12/23 20:56	11/13/23 13:46	7439-98-7	
Potassium, Dissolved	**1260**	ug/L	1000	219	1	11/12/23 20:56	11/13/23 13:46	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**212**	ug/L	10.0	2.8	1	11/03/23 09:05	11/03/23 23:51	7429-90-5	
Arsenic	**1.0**	ug/L	1.0	0.10	1	11/03/23 09:05	11/03/23 23:51	7440-38-2	
Barium	**80.3**	ug/L	1.0	0.14	1	11/03/23 09:05	11/03/23 23:51	7440-39-3	
Cobalt	ND	ug/L	1.0	0.082	1	11/03/23 09:05	11/03/23 23:51	7440-48-4	
Manganese	**180**	ug/L	1.0	0.18	1	11/03/23 09:05	11/03/23 23:51	7439-96-5	
Selenium	ND	ug/L	1.0	0.44	1	11/03/23 09:05	11/03/23 23:51	7782-49-2	
Thallium	ND	ug/L	1.0	0.072	1	11/03/23 09:05	11/03/23 23:51	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	11/05/23 10:00	11/06/23 20:32	7429-90-5	
Manganese, Dissolved	**190**	ug/L	2.0	0.34	2	11/05/23 10:00	11/06/23 19:07	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

Sample: MW-1A **Lab ID: 50358239001** Collected: 11/01/23 15:00 Received: 11/02/23 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	11/08/23 10:16	11/08/23 18:18	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**217**	mg/L	10.0	10.0	1		11/02/23 20:28		
Alkalinity,Bicarbonate (CaCO3)	**217**	mg/L	10.0	10.0	1		11/02/23 20:28		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/02/23 20:28		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**541**	mg/L	10.0	10.0	1		11/07/23 15:15		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.9**	Std. Units	0.10	0.10	1		11/13/23 09:33		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	**0.025J**	mg/L	0.10	0.025	1		11/03/23 15:41	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**0.66**	mg/L	0.20	0.035	1		11/10/23 11:09	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/03/23 00:20	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/03/23 00:20	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.31**	mg/L	0.15	0.15	1	11/08/23 17:00	11/10/23 11:20		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**1.5**	mg/L	1.0	0.24	1		11/11/23 04:41	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**3.3**	mg/L	1.0	0.24	1		11/07/23 06:29		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 761299
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358239001

METHOD BLANK: 3489307 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	11/09/23 12:33	
Chloride	mg/L	ND	0.25	0.067	11/09/23 12:33	
Fluoride	mg/L	ND	0.10	0.017	11/09/23 12:33	
Sulfate	mg/L	ND	0.25	0.19	11/09/23 12:33	

LABORATORY CONTROL SAMPLE: 3489308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.95	95	80-120	
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.95	95	80-120	
Sulfate	mg/L	5	4.6	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3489309 3489310

Parameter	Units	50357988001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.066	1	1	0.96	0.97	89	90	80-120	1	15	
Chloride	mg/L	33.5	25	25	59.4	55.9	103	90	80-120	6	15	
Fluoride	mg/L	0.49	1	1	1.4	1.4	94	95	80-120	0	15	
Sulfate	mg/L	31.7	5	5	36.3	36.3	92	92	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 760971
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358239001

METHOD BLANK: 3487990 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	11/08/23 17:53	

LABORATORY CONTROL SAMPLE: 3487991

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3487992 3487993

Parameter	Units	50358265003 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	4.3	4.9	86	98	75-125	13	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 760584
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358239001

METHOD BLANK: 3485899 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	11/13/23 12:12	
Cadmium	ug/L	ND	2.0	0.60	11/13/23 12:12	
Calcium	ug/L	ND	1000	67.7	11/13/23 12:12	
Chromium	ug/L	ND	10.0	0.42	11/13/23 12:12	
Iron	ug/L	ND	100	30.0	11/13/23 12:12	
Lead	ug/L	ND	10.0	2.5	11/13/23 12:12	
Lithium	ug/L	ND	20.0	6.8	11/13/23 12:12	
Magnesium	ug/L	ND	1000	33.6	11/13/23 12:12	
Molybdenum	ug/L	ND	10.0	0.78	11/13/23 12:12	
Potassium	ug/L	ND	1000	97.8	11/13/23 12:12	
Silica	ug/L	ND	450		11/13/23 12:12	N2
Sodium	ug/L	ND	1000	54.8	11/13/23 12:12	

LABORATORY CONTROL SAMPLE: 3485900

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	938	94	80-120	
Cadmium	ug/L	1000	990	99	80-120	
Calcium	ug/L	10000	10100	101	80-120	
Chromium	ug/L	1000	996	100	80-120	
Iron	ug/L	10000	10100	101	80-120	
Lead	ug/L	1000	939	94	80-120	
Lithium	ug/L	1000	980	98	80-120	
Magnesium	ug/L	10000	9640	96	80-120	
Molybdenum	ug/L	1000	1030	103	80-120	
Potassium	ug/L	10000	9620	96	80-120	
Silica	ug/L	10700	10800	101	80-120	N2
Sodium	ug/L	10000	9350	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3485901 3485902

Parameter	Units	50358215001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	<0.10 mg/L	1000	1000	990	998	99	100	75-125	1	20	
Cadmium	ug/L	<0.0020 mg/L	1000	1000	1030	1020	103	102	75-125	0	20	
Calcium	ug/L	72.8 mg/L	10000	10000	81700	82000	89	91	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3485901 3485902

Parameter	Units	50358215001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	<0.010 mg/L	1000	1000	1020	1020	102	102	75-125	0	20	
Iron	ug/L	3.9 mg/L	10000	10000	14200	14300	103	104	75-125	1	20	
Lead	ug/L	<0.010 mg/L	1000	1000	950	955	95	95	75-125	1	20	
Lithium	ug/L	<0.020 mg/L	1000	1000	1020	1020	102	102	75-125	0	20	
Magnesium	ug/L	22.6 mg/L	10000	10000	31900	32100	93	95	75-125	1	20	
Molybdenum	ug/L	<0.010 mg/L	1000	1000	1070	1070	107	107	75-125	0	20	
Potassium	ug/L	0.89 mg/L	10000	10000	10700	10700	98	98	75-125	0	20	
Silica	ug/L	11.1 mg/L	10700	10700	22400	22400	106	106	75-125	0	20	N2
Sodium	ug/L	1.2 mg/L	10000	10000	10800	10800	96	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 762141
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358239001

METHOD BLANK: 3493550 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	12.3	11/13/23 13:22	
Iron, Dissolved	ug/L	ND	100	28.6	11/13/23 13:22	
Lithium, Dissolved	ug/L	ND	20.0	6.2	11/13/23 13:22	
Magnesium, Dissolved	ug/L	ND	1000	45.6	11/13/23 13:22	
Molybdenum, Dissolved	ug/L	ND	10.0	1.2	11/13/23 13:22	
Potassium, Dissolved	ug/L	ND	1000	219	11/13/23 13:22	

LABORATORY CONTROL SAMPLE: 3493551

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	960	96	80-120	
Iron, Dissolved	ug/L	10000	9650	96	80-120	
Lithium, Dissolved	ug/L	1000	956	96	80-120	F5
Magnesium, Dissolved	ug/L	10000	9360	94	80-120	
Molybdenum, Dissolved	ug/L	1000	971	97	80-120	
Potassium, Dissolved	ug/L	10000	9350	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493552 3493553

Parameter	Units	50358203001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	626	1000	1000	1640	1590	101	96	75-125	3	20	
Iron, Dissolved	ug/L	1120	10000	10000	11000	10500	99	93	75-125	5	20	
Lithium, Dissolved	ug/L	ND	1000	1000	1060	1010	105	100	75-125	5	20	F5
Magnesium, Dissolved	ug/L	21900	10000	10000	32100	31600	103	97	75-125	2	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1010	959	100	95	75-125	5	20	
Potassium, Dissolved	ug/L	2610	10000	10000	12700	12100	100	95	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 760597
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358239001

METHOD BLANK: 3485970 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.8	11/03/23 23:19	
Arsenic	ug/L	ND	1.0	0.10	11/03/23 23:19	
Barium	ug/L	ND	1.0	0.14	11/03/23 23:19	
Cobalt	ug/L	ND	1.0	0.082	11/03/23 23:19	
Manganese	ug/L	ND	1.0	0.18	11/03/23 23:19	
Selenium	ug/L	ND	1.0	0.44	11/03/23 23:19	
Thallium	ug/L	ND	1.0	0.072	11/03/23 23:19	

LABORATORY CONTROL SAMPLE: 3485971

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	399	100	80-120	
Arsenic	ug/L	40	39.7	99	80-120	
Barium	ug/L	40	40.0	100	80-120	
Cobalt	ug/L	40	41.8	104	80-120	
Manganese	ug/L	40	41.9	105	80-120	
Selenium	ug/L	40	40.5	101	80-120	
Thallium	ug/L	40	40.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3485972 3485973

Parameter	Units	50358218003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	415	400	99	95	75-125	4	20	
Arsenic	ug/L	0.011 mg/L	40	40	52.2	51.7	102	101	75-125	1	20	
Barium	ug/L	0.11 mg/L	40	40	150	149	110	108	75-125	1	20	
Cobalt	ug/L	0.0016 mg/L	40	40	40.7	41.1	98	99	75-125	1	20	
Manganese	ug/L	1.8 mg/L	40	40	1890	1900	101	121	75-125	0	20	E
Selenium	ug/L	ND	40	40	38.1	39.5	95	99	75-125	3	20	
Thallium	ug/L	ND	40	40	41.7	41.5	104	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 760848
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358239001

METHOD BLANK: 3487259 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	11/06/23 18:36	
Manganese, Dissolved	ug/L	ND	1.0	0.17	11/06/23 18:36	

LABORATORY CONTROL SAMPLE: 3487260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	414	104	80-120	
Manganese, Dissolved	ug/L	40	41.8	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3487261 3487262

Parameter	Units	50358239001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	416	416	104	103	75-125	0	20	
Manganese, Dissolved	ug/L	190	40	40	227	229	93	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 760606
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358239001

METHOD BLANK: 3486004 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/02/23 20:28	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/02/23 20:28	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/02/23 20:28	

LABORATORY CONTROL SAMPLE: 3486005

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.9	100	90-110	

SAMPLE DUPLICATE: 3486006

Parameter	Units	50358203001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	258	264	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	258	264	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3486007

Parameter	Units	50358218003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	390	395	1	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	390	395	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 761264
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358239001

METHOD BLANK: 3489196 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/07/23 15:09	

LABORATORY CONTROL SAMPLE: 3489197

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	261	87	80-120	

SAMPLE DUPLICATE: 3489198

Parameter	Units	50358218015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	584	573	2	10	

SAMPLE DUPLICATE: 3489199

Parameter	Units	50358219001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	639	629	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 762488
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358239001

SAMPLE DUPLICATE: 3495168

Parameter	Units	50358265003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.9	7.9	0	2	H3

SAMPLE DUPLICATE: 3495169

Parameter	Units	50358265004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.0	8.0	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 760793
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358239001

METHOD BLANK: 3486941 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/03/23 15:41	

LABORATORY CONTROL SAMPLE: 3486942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3486943 3486944

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.50	0.50	99	98	90-110	1	20	

MATRIX SPIKE SAMPLE: 3486945

Parameter	Units	50358436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.54	107	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 762067
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358239001

METHOD BLANK: 3493223 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/10/23 10:49	H3,N2

LABORATORY CONTROL SAMPLE: 3493224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	100	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493225 3493226

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	0.69	2.5	2.5	3.3	3.3	103	103	90-110	0	20	H3,N2

MATRIX SPIKE SAMPLE: 3493227

Parameter	Units	50358454002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.0	103	90-110	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 760617
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358239001

METHOD BLANK: 3486236 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/02/23 23:59	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/02/23 23:59	

LABORATORY CONTROL SAMPLE: 3486237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	101	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE SAMPLE: 3486238

Parameter	Units	50358219009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.0	99	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.0	102	90-110	

MATRIX SPIKE SAMPLE: 3486239

Parameter	Units	50358390001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.0	99	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.0	103	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 761485
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358239001

METHOD BLANK: 3490187 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	11/10/23 11:15	

LABORATORY CONTROL SAMPLE: 3490188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490189 3490190

Parameter	Units	50358239001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	0.31			1.7	1.7				2		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 762132
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358239001

METHOD BLANK: 3493511 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	11/11/23 00:22	

LABORATORY CONTROL SAMPLE: 3493512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493513 3493514

Parameter	Units	50358000006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	2.2	80	80	80.7	80.9	98	98	80-120	0	20	

MATRIX SPIKE SAMPLE: 3493515

Parameter	Units	50358214001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.8	10	12.6	97	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 761056
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358239001

METHOD BLANK: 3488419 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	11/06/23 23:01	

LABORATORY CONTROL SAMPLE: 3488420

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3488421 3488422

Parameter	Units	50358000006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.1	10	10	11.8	11.8	97	97	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3488424 3488425

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.9	10	10	11.7	11.7	98	98	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

Sample: MW-1A **Lab ID: 50358239001** Collected: 11/01/23 15:00 Received: 11/02/23 09:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.909 ± 0.915 (1.44) C:NA T:89%**	pCi/L	11/17/23 15:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.85 ± 0.575 (0.671) C:81% T:73%**	pCi/L	11/16/23 11:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.76 ± 1.49 (2.11)**	pCi/L	11/20/23 12:16	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 627813
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358239001

METHOD BLANK: 3060124 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.151 ± 0.362 (0.700) C:NA T:86%	pCi/L	11/17/23 14:58	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

QC Batch: 627814
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358239001

METHOD BLANK: 3060129 Matrix: Water
Associated Lab Samples: 50358239001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.225 ± 0.300 (0.638) C:86% T:82%	pCi/L	11/16/23 11:34	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
F5	The recovery of the analyte in the CRDL standard (also known as the reporting limit verification) did not meet the acceptance criteria.
H3	Sample was received or analysis requested beyond the recognized method holding time.
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.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358239

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358239001	**MW-1A**	EPA 9056	761299		
50358239001	**MW-1A**	EPA 3010	760584	EPA 6010	762555
50358239001	**MW-1A**	EPA 3010	762141	EPA 6010	762568
50358239001	**MW-1A**	EPA 200.2	760597	EPA 6020	760819
50358239001	**MW-1A**	EPA 200.2	760848	EPA 6020	760976
50358239001	**MW-1A**	EPA 7470	760971	EPA 7470	761657
50358239001	**MW-1A**	EPA 903.1	627813		
50358239001	**MW-1A**	EPA 904.0	627814		
50358239001	**MW-1A**	Total Radium Calculation	631114		
50358239001	**MW-1A**	SM 2320B	760606		
50358239001	**MW-1A**	SM 2540C	761264		
50358239001	**MW-1A**	SM 4500-H+B	762488		
50358239001	**MW-1A**	SM 4500-S2-D	760793		
50358239001	**MW-1A**	HACH 8146	762067		
50358239001	**MW-1A**	EPA 353.2	760617		
50358239001	**MW-1A**	EPA 365.1	761485	EPA 365.1	762180
50358239001	**MW-1A**	SM 5310C	762132		
50358239001	**MW-1A**	SM 5310C	761056		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analy

The Chain-of-Custody is a LEGAL DOCUMEN

WO# : 50358239

50358239

Page 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4R5 Nov 2023	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/54

Regulatory Agency
State / Location
IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Br, Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum			Residual Chlorine (Y/N)	
																		Requested Analysis Filtered (Y/N)				Y			Y							
1	MW-1A	WT	G	11/01/23	15:00				11	X	X	X		X					✓	✓	✓	✓	✓	✓	✓	✓	✓				
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li, sila) (12)	Hayley Tollis	11-1	1540	Fedex	11-1-23	1540				
020 (Al, Mn, Co, As, Se, Ba, Tl) (7) + 7470 (Hg)	Fedex	11-2-23	0920		11-2-23	0920	0.6	Y	Y	Y
* Dissolved FF 6010 (B, Fe, Mo, Mg, K, Li) (6) FF 6020 (Al, Mn) (2)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Hayley Tollis		
SIGNATURE of SAMPLER:		DATE Signed:	11-1-23

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11-2-23 1010 CRR

1. **Courier:** ☑ FED EX ☐ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H
4. **Cooler Temperature(s):** 06 | 10.6 | | | | **(Initial/Corrected)** RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)
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
   Cooler temp should be above freezing to 6°C

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

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? **Analysis:** NV2/NO3	✓	
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1135	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: ~~HNO3 (<2)~~ ~~H2SO4 (<2)~~ NaOH (>10) ~~NaOH/ZnAc (>9)~~** Any non-conformance to pH recommendations will be noted on the container count form	✓		
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			—
Residual Chlorine Check (Total/Amenable/Free Cyanide)			—
Headspace Wisconsin Sulfide?			—
	Present	Absent	No VOA Vials Sent
Headspace in VOA Vials (>6mm): See Containter Count form for details			—
Trip Blank Present?		—	
Trip Blank Custody Seals?:			—

COMMENTS:

COC PAGE ____ of ____

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1												1	1			2	1	2	1	1	1		1					WT	✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 09, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 03, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358454001	**MW-20A**	Water	11/02/23 10:57	11/03/23 10:00
50358454002	**MW-20I**	Water	11/02/23 12:40	11/03/23 10:00
50358454003	**MW-19I**	Water	11/02/23 10:45	11/03/23 10:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358454001	**MW-20A**	EPA 9056	ADM	4	PASI-I
		EPA 6010	FRW	11	PASI-I
		EPA 6010	FRW	6	PASI-I
		EPA 6020	CAW	6	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50358454002	**MW-20I**	EPA 9056	ADM	4	PASI-I
		EPA 6010	FRW	11	PASI-I
		EPA 6010	FRW	6	PASI-I
		EPA 6020	CAW	6	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50358454003	**MW-19I**	EPA 9056	ADM	4	PASI-I
		EPA 6010	FRW	11	PASI-I
		EPA 6010	FRW	6	PASI-I

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6020	CAW	6	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358454001	**MW-20A**					
EPA 9056	Bromide	0.73	mg/L	0.050	11/10/23 05:52	
EPA 9056	Chloride	48.7	mg/L	2.5	11/10/23 06:10	
EPA 9056	Sulfate	585	mg/L	25.0	11/16/23 02:04	
EPA 6010	Boron	13000	ug/L	100	11/13/23 13:11	
EPA 6010	Calcium	364000	ug/L	5000	11/13/23 13:42	
EPA 6010	Iron	7220	ug/L	100	11/13/23 13:11	
EPA 6010	Magnesium	29600	ug/L	1000	11/13/23 13:11	
EPA 6010	Molybdenum	362	ug/L	10.0	11/13/23 13:11	
EPA 6010	Potassium	5840	ug/L	1000	11/13/23 13:11	
EPA 6010	Silica	13000	ug/L	450	11/13/23 13:11	N2
EPA 6010	Sodium	27100	ug/L	1000	11/13/23 13:11	
EPA 6010	Boron, Dissolved	12400	ug/L	100	11/13/23 14:08	
EPA 6010	Iron, Dissolved	6910	ug/L	100	11/13/23 14:08	
EPA 6010	Magnesium, Dissolved	29300	ug/L	1000	11/13/23 14:08	
EPA 6010	Molybdenum, Dissolved	347	ug/L	10.0	11/13/23 14:08	
EPA 6010	Potassium, Dissolved	5630	ug/L	1000	11/13/23 14:08	
EPA 6020	Arsenic	1.6	ug/L	1.0	11/07/23 05:11	
EPA 6020	Barium	30.1	ug/L	1.0	11/07/23 05:11	
EPA 6020	Manganese	1270	ug/L	10.0	11/07/23 04:47	
EPA 6020	Manganese, Dissolved	1280	ug/L	10.0	11/06/23 19:34	
EPA 903.1	Radium-226	0.107 ± 0.365 (0.704) C:NA T:87%	pCi/L		11/29/23 12:31	
EPA 904.0	Radium-228	0.943 ± 0.429 (0.687) C:77% T:85%	pCi/L		11/27/23 16:30	
Total Radium Calculation	Total Radium	1.05 ± 0.794 (1.39)	pCi/L		11/30/23 08:51	
SM 2320B	Alkalinity, Total as CaCO3	225	mg/L	10.0	11/03/23 23:05	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	225	mg/L	10.0	11/03/23 23:05	
SM 2540C	Total Dissolved Solids	1360	mg/L	20.0	11/08/23 14:03	
SM 4500-H+B	pH at 25 Degrees C	7.6	Std. Units	0.10	11/14/23 15:01	H3
HACH 8146	Iron, Ferrous	0.34	mg/L	0.20	11/10/23 11:20	H3,N2
EPA 365.1	Phosphate as P04	0.35	mg/L	0.15	11/14/23 17:08	
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	11/11/23 09:17	
SM 5310C	Dissolved Organic Carbon	3.7	mg/L	1.0	11/15/23 00:31	
50358454002	**MW-20I**					
EPA 9056	Bromide	0.051	mg/L	0.050	11/10/23 06:42	
EPA 9056	Chloride	9.4	mg/L	0.25	11/10/23 06:42	
EPA 9056	Sulfate	44.7	mg/L	0.25	11/10/23 06:42	
EPA 6010	Boron	339	ug/L	100	11/13/23 13:18	
EPA 6010	Calcium	115000	ug/L	1000	11/13/23 13:18	
EPA 6010	Iron	157	ug/L	100	11/13/23 13:18	
EPA 6010	Magnesium	24600	ug/L	1000	11/13/23 13:18	
EPA 6010	Silica	11300	ug/L	450	11/13/23 13:18	N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358454002	**MW-20I**					
EPA 6010	Sodium	5260	ug/L	1000	11/13/23 13:18	
EPA 6010	Boron, Dissolved	348	ug/L	100	11/13/23 14:10	
EPA 6010	Magnesium, Dissolved	25000	ug/L	1000	11/13/23 14:10	
EPA 6020	Aluminum	45.4	ug/L	10.0	11/07/23 05:15	
EPA 6020	Barium	50.8	ug/L	1.0	11/07/23 05:15	
EPA 6020	Cobalt	1.4	ug/L	1.0	11/07/23 05:15	
EPA 6020	Manganese	1770	ug/L	10.0	11/07/23 04:51	
EPA 6020	Selenium	1.8	ug/L	1.0	11/07/23 05:15	
EPA 6020	Manganese, Dissolved	1770	ug/L	25.0	11/06/23 19:38	
EPA 903.1	Radium-226	-0.168 ± 0.396 (0.887) C:NA T:84%	pCi/L		11/29/23 12:31	
EPA 904.0	Radium-228	0.339 ± 0.322 (0.651) C:82% T:82%	pCi/L		11/27/23 16:30	
Total Radium Calculation	Total Radium	0.339 ± 0.718 (1.54)	pCi/L		11/30/23 08:51	
SM 2320B	Alkalinity, Total as CaCO3	328	mg/L	10.0	11/03/23 23:05	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	314	mg/L	10.0	11/03/23 23:05	
SM 2320B	Alkalinity,Carbonate (CaCO3)	13.6	mg/L	10.0	11/03/23 23:05	
SM 2540C	Total Dissolved Solids	424	mg/L	10.0	11/08/23 14:04	
SM 4500-H+B	pH at 25 Degrees C	7.6	Std. Units	0.10	11/14/23 15:02	H3
EPA 353.2	Nitrogen, Nitrate	3.3	mg/L	0.10	11/04/23 00:40	
SM 5310C	Dissolved Organic Carbon	1.6	mg/L	1.0	11/15/23 00:42	
50358454003	**MW-19I**					
EPA 9056	Bromide	0.058	mg/L	0.050	11/10/23 08:00	
EPA 9056	Chloride	10.0	mg/L	0.25	11/10/23 08:00	
EPA 9056	Sulfate	46.1	mg/L	2.5	11/10/23 08:16	
EPA 6010	Boron	656	ug/L	100	11/13/23 13:19	
EPA 6010	Calcium	113000	ug/L	1000	11/13/23 13:19	
EPA 6010	Iron	206	ug/L	100	11/13/23 13:19	
EPA 6010	Magnesium	26200	ug/L	1000	11/13/23 13:19	
EPA 6010	Silica	10500	ug/L	450	11/13/23 13:19	N2
EPA 6010	Sodium	7410	ug/L	1000	11/13/23 13:19	
EPA 6010	Boron, Dissolved	654	ug/L	100	11/13/23 14:11	
EPA 6010	Magnesium, Dissolved	26000	ug/L	1000	11/13/23 14:11	
EPA 6020	Barium	62.2	ug/L	1.0	11/07/23 05:18	
EPA 6020	Cobalt	1.6	ug/L	1.0	11/07/23 05:18	
EPA 6020	Manganese	1920	ug/L	20.0	11/07/23 04:54	
EPA 6020	Manganese, Dissolved	1850	ug/L	20.0	11/06/23 19:41	
EPA 903.1	Radium-226	-0.392 ± 0.481 (1.09) C:NA T:89%	pCi/L		11/29/23 12:31	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358454003	**MW-19I**					
EPA 904.0	Radium-228	0.979 ± 0.474 (0.789) C:72% T:80%	pCi/L		11/27/23 16:30	
Total Radium Calculation	Total Radium	0.979 ± 0.955 (1.88)	pCi/L		11/30/23 08:51	
SM 2320B	Alkalinity, Total as CaCO3	321	mg/L	10.0	11/03/23 23:05	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	307	mg/L	10.0	11/03/23 23:05	
SM 2320B	Alkalinity,Carbonate (CaCO3)	14.4	mg/L	10.0	11/03/23 23:05	
SM 2540C	Total Dissolved Solids	422	mg/L	10.0	11/08/23 14:04	
SM 4500-H+B	pH at 25 Degrees C	7.6	Std. Units	0.10	11/14/23 15:02	H3
EPA 353.2	Nitrogen, Nitrate	2.6	mg/L	0.10	11/04/23 00:22	
SM 5310C	Dissolved Organic Carbon	2.0	mg/L	1.0	11/15/23 00:53	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Sample: MW-20A **Lab ID: 50358454001** Collected: 11/02/23 10:57 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.73**	mg/L	0.050	0.0090	1		11/10/23 05:52	24959-67-9	
Chloride	**48.7**	mg/L	2.5	0.67	10		11/10/23 06:10	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/10/23 05:52	16984-48-8	
Sulfate	**585**	mg/L	25.0	19.0	100		11/16/23 02:04	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**13000**	ug/L	100	6.2	1	11/08/23 20:56	11/13/23 13:11	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/08/23 20:56	11/13/23 13:11	7440-43-9	
Calcium	**364000**	ug/L	5000	338	5	11/08/23 20:56	11/13/23 13:42	7440-70-2	
Iron	**7220**	ug/L	100	30.0	1	11/08/23 20:56	11/13/23 13:11	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/08/23 20:56	11/13/23 13:11	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	11/08/23 20:56	11/13/23 13:11	7439-93-2	
Magnesium	**29600**	ug/L	1000	33.6	1	11/08/23 20:56	11/13/23 13:11	7439-95-4	
Molybdenum	**362**	ug/L	10.0	0.78	1	11/08/23 20:56	11/13/23 13:11	7439-98-7	
Potassium	**5840**	ug/L	1000	97.8	1	11/08/23 20:56	11/13/23 13:11	7440-09-7	
Silica	**13000**	ug/L	450		1	11/08/23 20:56	11/13/23 13:11	7631-86-9	N2
Sodium	**27100**	ug/L	1000	54.8	1	11/08/23 20:56	11/13/23 13:11	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**12400**	ug/L	100	6.2	1	11/12/23 20:56	11/13/23 14:08	7440-42-8	
Iron, Dissolved	**6910**	ug/L	100	30.0	1	11/12/23 20:56	11/13/23 14:08	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	11/12/23 20:56	11/13/23 14:08	7439-93-2	
Magnesium, Dissolved	**29300**	ug/L	1000	33.6	1	11/12/23 20:56	11/13/23 14:08	7439-95-4	
Molybdenum, Dissolved	**347**	ug/L	10.0	0.78	1	11/12/23 20:56	11/13/23 14:08	7439-98-7	
Potassium, Dissolved	**5630**	ug/L	1000	97.8	1	11/12/23 20:56	11/13/23 14:08	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	2.3	1	11/05/23 10:00	11/07/23 05:11	7429-90-5	
Arsenic	**1.6**	ug/L	1.0	0.075	1	11/05/23 10:00	11/07/23 05:11	7440-38-2	
Barium	**30.1**	ug/L	1.0	0.077	1	11/05/23 10:00	11/07/23 05:11	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/05/23 10:00	11/07/23 05:11	7440-48-4	
Manganese	**1270**	ug/L	10.0	1.7	10	11/05/23 10:00	11/07/23 04:47	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	11/05/23 10:00	11/07/23 05:11	7782-49-2	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	11/05/23 10:00	11/06/23 20:59	7429-90-5	
Manganese, Dissolved	**1280**	ug/L	10.0	1.7	10	11/05/23 10:00	11/06/23 19:34	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Sample: MW-20A **Lab ID: 50358454001** Collected: 11/02/23 10:57 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**225**	mg/L	10.0	10.0	1		11/03/23 23:05		
Alkalinity,Bicarbonate (CaCO3)	**225**	mg/L	10.0	10.0	1		11/03/23 23:05		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/03/23 23:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1360**	mg/L	20.0	20.0	1		11/08/23 14:03		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.6**	Std. Units	0.10	0.10	1		11/14/23 15:01		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/03/23 15:41	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**0.34**	mg/L	0.20	0.035	1		11/10/23 11:20	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/04/23 00:24	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/04/23 00:24	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.35**	mg/L	0.15	0.15	1	11/09/23 16:00	11/14/23 17:08		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**1.1**	mg/L	1.0	0.24	1		11/11/23 09:17	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**3.7**	mg/L	1.0	0.24	1		11/15/23 00:31		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Sample: MW-20I **Lab ID: 50358454002** Collected: 11/02/23 12:40 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.051**	mg/L	0.050	0.0090	1		11/10/23 06:42	24959-67-9	
Chloride	**9.4**	mg/L	0.25	0.067	1		11/10/23 06:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/10/23 06:42	16984-48-8	
Sulfate	**44.7**	mg/L	0.25	0.19	1		11/10/23 06:42	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**339**	ug/L	100	6.2	1	11/08/23 20:56	11/13/23 13:18	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/08/23 20:56	11/13/23 13:18	7440-43-9	
Calcium	**115000**	ug/L	1000	67.7	1	11/08/23 20:56	11/13/23 13:18	7440-70-2	
Iron	**157**	ug/L	100	30.0	1	11/08/23 20:56	11/13/23 13:18	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/08/23 20:56	11/13/23 13:18	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	11/08/23 20:56	11/13/23 13:18	7439-93-2	
Magnesium	**24600**	ug/L	1000	33.6	1	11/08/23 20:56	11/13/23 13:18	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	11/08/23 20:56	11/13/23 13:18	7439-98-7	
Potassium	ND	ug/L	1000	97.8	1	11/08/23 20:56	11/13/23 13:18	7440-09-7	
Silica	**11300**	ug/L	450		1	11/08/23 20:56	11/13/23 13:18	7631-86-9	N2
Sodium	**5260**	ug/L	1000	54.8	1	11/08/23 20:56	11/13/23 13:18	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**348**	ug/L	100	6.2	1	11/12/23 20:56	11/13/23 14:10	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	11/12/23 20:56	11/13/23 14:10	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	11/12/23 20:56	11/13/23 14:10	7439-93-2	
Magnesium, Dissolved	**25000**	ug/L	1000	33.6	1	11/12/23 20:56	11/13/23 14:10	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	11/12/23 20:56	11/13/23 14:10	7439-98-7	
Potassium, Dissolved	ND	ug/L	1000	97.8	1	11/12/23 20:56	11/13/23 14:10	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**45.4**	ug/L	10.0	2.3	1	11/05/23 10:00	11/07/23 05:15	7429-90-5	
Arsenic	ND	ug/L	1.0	0.075	1	11/05/23 10:00	11/07/23 05:15	7440-38-2	
Barium	**50.8**	ug/L	1.0	0.077	1	11/05/23 10:00	11/07/23 05:15	7440-39-3	
Cobalt	**1.4**	ug/L	1.0	0.046	1	11/05/23 10:00	11/07/23 05:15	7440-48-4	
Manganese	**1770**	ug/L	10.0	1.7	10	11/05/23 10:00	11/07/23 04:51	7439-96-5	
Selenium	**1.8**	ug/L	1.0	0.20	1	11/05/23 10:00	11/07/23 05:15	7782-49-2	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	11/05/23 10:00	11/06/23 21:02	7429-90-5	
Manganese, Dissolved	**1770**	ug/L	25.0	4.2	25	11/05/23 10:00	11/06/23 19:38	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Sample: MW-20I **Lab ID: 50358454002** Collected: 11/02/23 12:40 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**328**	mg/L	10.0	10.0	1		11/03/23 23:05		
Alkalinity,Bicarbonate (CaCO3)	**314**	mg/L	10.0	10.0	1		11/03/23 23:05		
Alkalinity,Carbonate (CaCO3)	**13.6**	mg/L	10.0	10.0	1		11/03/23 23:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**424**	mg/L	10.0	10.0	1		11/08/23 14:04		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.6**	Std. Units	0.10	0.10	1		11/14/23 15:02		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/03/23 15:41	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 11:22	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**3.3**	mg/L	0.10	0.011	1		11/04/23 00:40	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/04/23 00:40	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	11/09/23 16:00	11/14/23 17:09		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		11/11/23 10:02	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.6**	mg/L	1.0	0.24	1		11/15/23 00:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Sample: MW-19I **Lab ID: 50358454003** Collected: 11/02/23 10:45 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.058**	mg/L	0.050	0.0090	1		11/10/23 08:00	24959-67-9	
Chloride	**10.0**	mg/L	0.25	0.067	1		11/10/23 08:00	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/10/23 08:00	16984-48-8	
Sulfate	**46.1**	mg/L	2.5	1.9	10		11/10/23 08:16	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**656**	ug/L	100	6.2	1	11/08/23 20:56	11/13/23 13:19	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/08/23 20:56	11/13/23 13:19	7440-43-9	
Calcium	**113000**	ug/L	1000	67.7	1	11/08/23 20:56	11/13/23 13:19	7440-70-2	
Iron	**206**	ug/L	100	30.0	1	11/08/23 20:56	11/13/23 13:19	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/08/23 20:56	11/13/23 13:19	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	11/08/23 20:56	11/13/23 13:19	7439-93-2	
Magnesium	**26200**	ug/L	1000	33.6	1	11/08/23 20:56	11/13/23 13:19	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	11/08/23 20:56	11/13/23 13:19	7439-98-7	
Potassium	ND	ug/L	1000	97.8	1	11/08/23 20:56	11/13/23 13:19	7440-09-7	
Silica	**10500**	ug/L	450		1	11/08/23 20:56	11/13/23 13:19	7631-86-9	N2
Sodium	**7410**	ug/L	1000	54.8	1	11/08/23 20:56	11/13/23 13:19	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**654**	ug/L	100	6.2	1	11/12/23 20:56	11/13/23 14:11	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	11/12/23 20:56	11/13/23 14:11	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	11/12/23 20:56	11/13/23 14:11	7439-93-2	
Magnesium, Dissolved	**26000**	ug/L	1000	33.6	1	11/12/23 20:56	11/13/23 14:11	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	11/12/23 20:56	11/13/23 14:11	7439-98-7	
Potassium, Dissolved	ND	ug/L	1000	97.8	1	11/12/23 20:56	11/13/23 14:11	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	2.3	1	11/05/23 10:00	11/07/23 05:18	7429-90-5	
Arsenic	ND	ug/L	1.0	0.075	1	11/05/23 10:00	11/07/23 05:18	7440-38-2	
Barium	**62.2**	ug/L	1.0	0.077	1	11/05/23 10:00	11/07/23 05:18	7440-39-3	
Cobalt	**1.6**	ug/L	1.0	0.046	1	11/05/23 10:00	11/07/23 05:18	7440-48-4	
Manganese	**1920**	ug/L	20.0	3.4	20	11/05/23 10:00	11/07/23 04:54	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	11/05/23 10:00	11/07/23 05:18	7782-49-2	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	11/05/23 10:00	11/06/23 21:13	7429-90-5	
Manganese, Dissolved	**1850**	ug/L	20.0	3.4	20	11/05/23 10:00	11/06/23 19:41	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Sample: MW-19I **Lab ID: 50358454003** Collected: 11/02/23 10:45 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**321**	mg/L	10.0	10.0	1		11/03/23 23:05		
Alkalinity,Bicarbonate (CaCO3)	**307**	mg/L	10.0	10.0	1		11/03/23 23:05		
Alkalinity,Carbonate (CaCO3)	**14.4**	mg/L	10.0	10.0	1		11/03/23 23:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**422**	mg/L	10.0	10.0	1		11/08/23 14:04		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.6**	Std. Units	0.10	0.10	1		11/14/23 15:02		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/03/23 15:41	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 11:20	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**2.6**	mg/L	0.10	0.011	1		11/04/23 00:22	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/04/23 00:22	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	11/09/23 16:00	11/14/23 17:09		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		11/11/23 10:27	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.0**	mg/L	1.0	0.24	1		11/15/23 00:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 761640
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3490967 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	11/09/23 12:06	
Chloride	mg/L	ND	0.25	0.067	11/09/23 12:06	
Fluoride	mg/L	ND	0.10	0.017	11/09/23 12:06	
Sulfate	mg/L	ND	0.25	0.19	11/09/23 12:06	

LABORATORY CONTROL SAMPLE: 3490968

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.97	97	80-120	
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	1.0	100	80-120	
Sulfate	mg/L	5	4.9	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490969 3490970

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.27	1	1	1.2	1.2	94	94	80-120	0	15	
Chloride	mg/L	129	25	25	152	152	91	93	80-120	0	15	
Fluoride	mg/L	0.26	1	1	1.3	1.3	101	101	80-120	0	15	
Sulfate	mg/L	85.5	50	50	131	132	92	92	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 761569
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3490608 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	11/13/23 13:08	
Cadmium	ug/L	ND	2.0	0.60	11/13/23 13:08	
Calcium	ug/L	ND	1000	67.7	11/13/23 13:08	
Iron	ug/L	ND	100	30.0	11/13/23 13:08	
Lead	ug/L	ND	10.0	2.5	11/13/23 13:08	
Lithium	ug/L	ND	20.0	6.8	11/13/23 13:08	
Magnesium	ug/L	ND	1000	33.6	11/13/23 13:08	
Molybdenum	ug/L	ND	10.0	0.78	11/13/23 13:08	
Potassium	ug/L	ND	1000	97.8	11/13/23 13:08	
Silica	ug/L	ND	450		11/13/23 13:08	N2
Sodium	ug/L	ND	1000	54.8	11/13/23 13:08	

LABORATORY CONTROL SAMPLE: 3490609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	912	91	80-120	
Cadmium	ug/L	1000	966	97	80-120	
Calcium	ug/L	10000	9910	99	80-120	
Iron	ug/L	10000	9900	99	80-120	
Lead	ug/L	1000	922	92	80-120	
Lithium	ug/L	1000	946	95	80-120	
Magnesium	ug/L	10000	9540	95	80-120	
Molybdenum	ug/L	1000	1010	101	80-120	
Potassium	ug/L	10000	9220	92	80-120	
Silica	ug/L	10700	10500	99	80-120	N2
Sodium	ug/L	10000	8980	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490610 3490611

Parameter	Units	50358454001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	13000	1000	1000	14200	13900	119	92	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	1000	994	100	99	75-125	1	20	
Calcium	ug/L	364000	10000	10000	378000	370000	139	58	75-125	2	20	P6
Iron	ug/L	7220	10000	10000	16900	16600	97	94	75-125	1	20	
Lead	ug/L	ND	1000	1000	880	875	88	87	75-125	1	20	
Lithium	ug/L	ND	1000	1000	967	959	97	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490610 3490611

Parameter	Units	50358454001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	29600	10000	10000	38800	38000	92	85	75-125	2	20	
Molybdenum	ug/L	362	1000	1000	1400	1380	104	102	75-125	1	20	
Potassium	ug/L	5840	10000	10000	15500	15000	96	92	75-125	3	20	
Silica	ug/L	13000	10700	10700	24000	23600	103	99	75-125	2	20	N2
Sodium	ug/L	27100	10000	10000	36500	35600	93	84	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 762143
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3493555 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	11/13/23 13:47	
Iron, Dissolved	ug/L	ND	100	30.0	11/13/23 13:47	
Lithium, Dissolved	ug/L	ND	20.0	6.8	11/13/23 13:47	
Magnesium, Dissolved	ug/L	ND	1000	33.6	11/13/23 13:47	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	11/13/23 13:47	
Potassium, Dissolved	ug/L	ND	1000	97.8	11/13/23 13:47	

LABORATORY CONTROL SAMPLE: 3493556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	2000	1770	89	80-120	
Iron, Dissolved	ug/L	20000	18600	93	80-120	
Lithium, Dissolved	ug/L	2000	1760	88	80-120	
Magnesium, Dissolved	ug/L	20000	17800	89	80-120	
Molybdenum, Dissolved	ug/L	2000	1930	96	80-120	
Potassium, Dissolved	ug/L	20000	17300	87	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493557 3493558

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	203	1000	1000	1100	1140	90	94	75-125	4	20	
Iron, Dissolved	ug/L	2210	10000	10000	11100	11600	89	94	75-125	4	20	
Lithium, Dissolved	ug/L	ND	1000	1000	844	889	84	89	75-125	5	20	
Magnesium, Dissolved	ug/L	24100	10000	10000	32500	32900	84	89	75-125	1	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	942	978	93	97	75-125	4	20	
Potassium, Dissolved	ug/L	5980	10000	10000	14200	14700	83	87	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 760849
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3487263 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.3	11/07/23 03:36	
Arsenic	ug/L	ND	1.0	0.075	11/07/23 03:36	
Barium	ug/L	ND	1.0	0.077	11/07/23 03:36	
Cobalt	ug/L	ND	1.0	0.046	11/07/23 03:36	
Manganese	ug/L	ND	1.0	0.17	11/07/23 03:36	
Selenium	ug/L	ND	1.0	0.20	11/07/23 03:36	

LABORATORY CONTROL SAMPLE: 3487264

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	407	102	80-120	
Arsenic	ug/L	40	39.7	99	80-120	
Barium	ug/L	40	39.9	100	80-120	
Cobalt	ug/L	40	42.1	105	80-120	
Manganese	ug/L	40	41.4	103	80-120	
Selenium	ug/L	40	40.7	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3487265 3487266

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	406	397	101	99	75-125	2	20	
Arsenic	ug/L	2.8	40	40	41.8	41.5	97	97	75-125	1	20	
Barium	ug/L	213	40	40	258	251	111	96	75-125	2	20	E
Cobalt	ug/L	ND	40	40	39.2	39.4	98	98	75-125	1	20	
Manganese	ug/L	274	40	40	308	311	86	93	75-125	1	20	E
Selenium	ug/L	ND	40	40	40.5	39.5	101	99	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 760848
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3487259 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	11/06/23 18:36	
Manganese, Dissolved	ug/L	ND	1.0	0.17	11/06/23 18:36	

LABORATORY CONTROL SAMPLE: 3487260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	414	104	80-120	
Manganese, Dissolved	ug/L	40	41.8	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3487261 3487262

Parameter	Units	50358239001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	416	416	104	103	75-125	0	20	
Manganese, Dissolved	ug/L	190	40	40	227	229	93	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 760838 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3487203 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/03/23 23:05	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/03/23 23:05	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/03/23 23:05	

LABORATORY CONTROL SAMPLE: 3487204

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.8	100	90-110	

SAMPLE DUPLICATE: 3487205

Parameter	Units	50358390001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	253	259	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	253	259	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3487206

Parameter	Units	50358403008 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	569	580	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	569	580	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 761523
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3490336 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/08/23 14:02	

LABORATORY CONTROL SAMPLE: 3490337

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	281	94	80-120	

SAMPLE DUPLICATE: 3490338

Parameter	Units	50358435001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	314	321	2	10	

SAMPLE DUPLICATE: 3490339

Parameter	Units	50358597004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	826	818	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 762884
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

SAMPLE DUPLICATE: 3496538

Parameter	Units	50358390001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.8	6.8	1	2	H3

SAMPLE DUPLICATE: 3496539

Parameter	Units	50358403008 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.0	7.0	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 760793
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3486941 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/03/23 15:41	

LABORATORY CONTROL SAMPLE: 3486942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3486943 3486944

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.50	0.50	99	98	90-110	1	20	

MATRIX SPIKE SAMPLE: 3486945

Parameter	Units	50358436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.54	107	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 762067
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3493223 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/10/23 10:49	H3,N2

LABORATORY CONTROL SAMPLE: 3493224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	100	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493225 3493226

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	0.69	2.5	2.5	3.3	3.3	103	103	90-110	0	20	H3,N2

MATRIX SPIKE SAMPLE: 3493227

Parameter	Units	50358454002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.0	103	90-110	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 760854
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3487288 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/03/23 23:50	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/03/23 23:50	

LABORATORY CONTROL SAMPLE: 3487289

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.1	107	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3487290 3487291

Parameter	Units	50358423011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.0	1.1	103	105	90-110	2	20	
Nitrogen, Nitrite	mg/L	ND	1	1	1.1	1.1	106	106	90-110	0	20	

MATRIX SPIKE SAMPLE: 3487292

Parameter	Units	50358423013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.1	106	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.1	105	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 761823
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3491765 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	11/14/23 17:01	

LABORATORY CONTROL SAMPLE: 3491766

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491767 3491768

Parameter	Units	50358969001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.6	1.6				1		

MATRIX SPIKE SAMPLE: 3491769

Parameter	Units	50359113001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	6.0		7.7			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 762135
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3493531 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	11/11/23 05:59	

LABORATORY CONTROL SAMPLE: 3493532

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493533 3493534

Parameter	Units	50358403008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	4.8	40	40	44.9	44.3	100	99	80-120	1	20	

MATRIX SPIKE SAMPLE: 3493535

Parameter	Units	50358454001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.1	10	16.7	156	80-120	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 762633
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3495673 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	11/14/23 19:55	

LABORATORY CONTROL SAMPLE: 3495674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495675 3495676

Parameter	Units	50358403008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	6.8	10	10	16.1	16.2	93	94	80-120	0	20	

MATRIX SPIKE SAMPLE: 3495677

Parameter	Units	50358403009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	8.5	10	17.9	94	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Sample: MW-20A **Lab ID: 50358454001** Collected: 11/02/23 10:57 Received: 11/03/23 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.107 ± 0.365 (0.704) C:NA T:87%**	pCi/L	11/29/23 12:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.943 ± 0.429 (0.687) C:77% T:85%**	pCi/L	11/27/23 16:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.05 ± 0.794 (1.39)**	pCi/L	11/30/23 08:51	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Sample: MW-20I **Lab ID: 50358454002** Collected: 11/02/23 12:40 Received: 11/03/23 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.168 ± 0.396 (0.887) C:NA T:84%**	pCi/L	11/29/23 12:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.339 ± 0.322 (0.651) C:82% T:82%**	pCi/L	11/27/23 16:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.339 ± 0.718 (1.54)**	pCi/L	11/30/23 08:51	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Sample: MW-19I **Lab ID: 50358454003** Collected: 11/02/23 10:45 Received: 11/03/23 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.392 ± 0.481 (1.09) C:NA T:89%**	pCi/L	11/29/23 12:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.979 ± 0.474 (0.789) C:72% T:80%**	pCi/L	11/27/23 16:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.979 ± 0.955 (1.88)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 629058
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3066687 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0425 ± 0.194 (0.458) C:NA T:94%	pCi/L	11/29/23 12:31	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

QC Batch: 629059
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358454001, 50358454002, 50358454003

METHOD BLANK: 3066691 Matrix: Water
Associated Lab Samples: 50358454001, 50358454002, 50358454003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.194 ± 0.348 (0.762) C:80% T:84%	pCi/L	11/27/23 16:27	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358454001	**MW-20A**	EPA 9056	761640		
50358454002	**MW-20I**	EPA 9056	761640		
50358454003	**MW-19I**	EPA 9056	761640		
50358454001	**MW-20A**	EPA 3010	761569	EPA 6010	762571
50358454002	**MW-20I**	EPA 3010	761569	EPA 6010	762571
50358454003	**MW-19I**	EPA 3010	761569	EPA 6010	762571
50358454001	**MW-20A**	EPA 3010	762143	EPA 6010	762576
50358454002	**MW-20I**	EPA 3010	762143	EPA 6010	762576
50358454003	**MW-19I**	EPA 3010	762143	EPA 6010	762576
50358454001	**MW-20A**	EPA 200.2	760849	EPA 6020	760974
50358454002	**MW-20I**	EPA 200.2	760849	EPA 6020	760974
50358454003	**MW-19I**	EPA 200.2	760849	EPA 6020	760974
50358454001	**MW-20A**	EPA 200.2	760848	EPA 6020	760976
50358454002	**MW-20I**	EPA 200.2	760848	EPA 6020	760976
50358454003	**MW-19I**	EPA 200.2	760848	EPA 6020	760976
50358454001	**MW-20A**	EPA 903.1	629058		
50358454002	**MW-20I**	EPA 903.1	629058		
50358454003	**MW-19I**	EPA 903.1	629058		
50358454001	**MW-20A**	EPA 904.0	629059		
50358454002	**MW-20I**	EPA 904.0	629059		
50358454003	**MW-19I**	EPA 904.0	629059		
50358454001	**MW-20A**	Total Radium Calculation	632884		
50358454002	**MW-20I**	Total Radium Calculation	632884		
50358454003	**MW-19I**	Total Radium Calculation	632884		
50358454001	**MW-20A**	SM 2320B	760838		
50358454002	**MW-20I**	SM 2320B	760838		
50358454003	**MW-19I**	SM 2320B	760838		
50358454001	**MW-20A**	SM 2540C	761523		
50358454002	**MW-20I**	SM 2540C	761523		
50358454003	**MW-19I**	SM 2540C	761523		
50358454001	**MW-20A**	SM 4500-H+B	762884		
50358454002	**MW-20I**	SM 4500-H+B	762884		
50358454003	**MW-19I**	SM 4500-H+B	762884		
50358454001	**MW-20A**	SM 4500-S2-D	760793		
50358454002	**MW-20I**	SM 4500-S2-D	760793		
50358454003	**MW-19I**	SM 4500-S2-D	760793		
50358454001	**MW-20A**	HACH 8146	762067		
50358454002	**MW-20I**	HACH 8146	762067		
50358454003	**MW-19I**	HACH 8146	762067		
50358454001	**MW-20A**	EPA 353.2	760854		
50358454002	**MW-20I**	EPA 353.2	760854		
50358454003	**MW-19I**	EPA 353.2	760854		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50358454

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358454001	**MW-20A**	EPA 365.1	761823	EPA 365.1	762969
50358454002	**MW-20I**	EPA 365.1	761823	EPA 365.1	762969
50358454003	**MW-19I**	EPA 365.1	761823	EPA 365.1	762969
50358454001	**MW-20A**	SM 5310C	762135		
50358454002	**MW-20I**	SM 5310C	762135		
50358454003	**MW-19I**	SM 5310C	762135		
50358454001	**MW-20A**	SM 5310C	762633		
50358454002	**MW-20I**	SM 5310C	762633		
50358454003	**MW-19I**	SM 5310C	762633		

50358454

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4R3 Nov 2023	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/53

Regulatory Agency	State / Location
	IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Br, Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum			Residual Chlorine (Y/N)	
	Requested Analysis Filtered (Y/N)																	Y				Y									
1	MW-20A	WT	G	11/2	10:26	11/2	10:57		11	X	X	X		X					X	X	X	X	X	X	X	X	X			001
2	MW-20 I	WT	G	11/2	11:45	11/2	12:40		11	X	X	X		X					X	X	X	X	X	X	X	X	X			002
3	MW-19 I	WT	G	11/2	10:10	11/2	10:45		11	X	X	X		X					X	X	X	X	X	X	X	X	X			003
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 (B, Cd, Fe, Pb, Mo, Ca, Mg, Na, K, Li, sila) (11)	Mohammed Bazlamit	11/02	16:00	Jay Williams	11/3	7.45				
6020 (Al, Mn, Co, As, Se, Ba) (6)	Jay Williams	11/2	10:00	MichStitch / PACE	11-3-23	10000	SEE SCNR	Y	Y	Y
** Dissolved FF 6010 (B, Fe, Mo, Mg, K, Li) (6) FF 6020 (Al, Mn) (2)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Carsen Clouser					
SIGNATURE of SAMPLER:	Carsen Clouser	DATE Signed: 11/2/2023				

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: NMS 11-03-2023 1147

1. **Courier:** ☐ FED EX ☐ UPS ☒ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B (C) D E F G H

4. **Cooler Temperature(s):** 0.4/0.4 | 1.7/1.7 | | |
(Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**

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
Cooler temp should be above freezing to 6°C

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)		X	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: (HNO3 (<2)) (H2SO4 (<2)) NaOH (>10) (NaOH/ZnAc (>9))** Any non-conformance to pH recommendations will be noted on the container count form	X		
Short Hold Time Analysis (48 hours or less)? Analysis: Nitrate	X					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1445			Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			X
Rush TAT Requested (4 days or less):		X	Residual Chlorine Check (Total/Amenable/Free Cyanide)			X
Custody Signatures Present?	X		Headspace Wisconsin Sulfide?			X
Containers Intact?:	X		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent X
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	X		Trip Blank Present?		X	
Extra labels on Terracore Vials? (soils only)		X	Trip Blank Custody Seals?:			X

COMMENTS:

COC PAGE 1 **of** 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit	Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1												1	1			2	1	2	1	1	1		1				WT	✓	✓		✓
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 09, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 03, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358455001	**MW-12A**	Water	11/02/23 12:00	11/03/23 10:00
50358455002	**Blind Dup 12**	Water	11/02/23 08:00	11/03/23 10:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358455001	**MW-12A**	EPA 9056	ADM	4	PASI-I
		EPA 6010	FRW	12	PASI-I
		EPA 6010	FRW	6	PASI-I
		EPA 6020	CAW	7	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50358455002	**Blind Dup 12**	EPA 9056	ADM	4	PASI-I
		EPA 6010	FRW	12	PASI-I
		EPA 6010	FRW	6	PASI-I
		EPA 6020	CAW	7	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358455001	**MW-12A**					
EPA 9056	Chloride	7.3	mg/L	0.25	11/10/23 08:47	
EPA 9056	Sulfate	63.9	mg/L	2.5	11/10/23 09:03	
EPA 6010	Calcium	47500	ug/L	1000	11/13/23 13:24	
EPA 6010	Iron	2860	ug/L	100	11/13/23 13:24	
EPA 6010	Magnesium	18200	ug/L	1000	11/13/23 13:24	
EPA 6010	Potassium	2000	ug/L	1000	11/13/23 13:24	
EPA 6010	Silica	17900	ug/L	450	11/13/23 13:24	N2
EPA 6010	Sodium	3740	ug/L	1000	11/13/23 13:24	
EPA 6010	Iron, Dissolved	2830	ug/L	100	11/13/23 14:17	
EPA 6010	Magnesium, Dissolved	18000	ug/L	1000	11/13/23 14:17	
EPA 6010	Potassium, Dissolved	2000	ug/L	1000	11/13/23 14:17	
EPA 6020	Aluminum	12.9	ug/L	10.0	11/07/23 05:21	
EPA 6020	Barium	76.4	ug/L	1.0	11/07/23 05:21	
EPA 6020	Manganese	532	ug/L	5.0	11/07/23 04:58	
EPA 6020	Manganese, Dissolved	535	ug/L	5.0	11/06/23 19:51	
EPA 903.1	Radium-226	0.419 ± 0.526 (0.874) C:NA T:93%	pCi/L		11/29/23 12:31	
EPA 904.0	Radium-228	1.07 ± 0.532 (0.950) C:87% T:82%	pCi/L		11/27/23 16:30	
Total Radium Calculation	Total Radium	1.49 ± 1.06 (1.82)	pCi/L		11/30/23 08:51	
SM 2320B	Alkalinity, Total as CaCO3	125	mg/L	10.0	11/03/23 22:45	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	125	mg/L	10.0	11/03/23 22:45	
SM 2540C	Total Dissolved Solids	240	mg/L	10.0	11/08/23 14:04	
SM 4500-H+B	pH at 25 Degrees C	7.6	Std. Units	0.10	11/14/23 15:03	H3
HACH 8146	Iron, Ferrous	0.71	mg/L	0.20	11/10/23 11:22	H3,N2
EPA 365.1	Phosphate as P04	0.18	mg/L	0.15	11/14/23 17:10	
SM 5310C	Dissolved Organic Carbon	3.1	mg/L	1.0	11/15/23 01:04	
50358455002	**Blind Dup 12**					
EPA 9056	Chloride	7.3	mg/L	0.25	11/10/23 09:39	
EPA 9056	Sulfate	63.4	mg/L	2.5	11/10/23 09:57	
EPA 6010	Calcium	46100	ug/L	1000	11/13/23 13:25	
EPA 6010	Iron	2780	ug/L	100	11/13/23 13:25	
EPA 6010	Magnesium	17700	ug/L	1000	11/13/23 13:25	
EPA 6010	Potassium	1970	ug/L	1000	11/13/23 13:25	
EPA 6010	Silica	17400	ug/L	450	11/13/23 13:25	N2
EPA 6010	Sodium	3680	ug/L	1000	11/13/23 13:25	
EPA 6010	Iron, Dissolved	2810	ug/L	100	11/13/23 14:19	
EPA 6010	Magnesium, Dissolved	18100	ug/L	1000	11/13/23 14:19	
EPA 6010	Potassium, Dissolved	1980	ug/L	1000	11/13/23 14:19	
EPA 6020	Aluminum	11.6	ug/L	10.0	11/07/23 05:25	
EPA 6020	Barium	75.5	ug/L	1.0	11/07/23 05:25	
EPA 6020	Manganese	520	ug/L	5.0	11/07/23 13:59	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358455002	**Blind Dup 12**					
EPA 6020	Manganese, Dissolved	537	ug/L	5.0	11/06/23 20:01	
EPA 903.1	Radium-226	1.09 ± 0.696 (0.957) C:NA T:92%	pCi/L		11/29/23 12:31	
EPA 904.0	Radium-228	1.02 ± 0.579 (1.07) C:79% T:78%	pCi/L		11/27/23 16:30	
Total Radium Calculation	Total Radium	2.11 ± 1.28 (2.03)	pCi/L		11/30/23 08:51	
SM 2320B	Alkalinity, Total as CaCO3	120	mg/L	10.0	11/03/23 23:05	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	120	mg/L	10.0	11/03/23 23:05	
SM 2540C	Total Dissolved Solids	233	mg/L	10.0	11/08/23 14:04	
SM 4500-H+B	pH at 25 Degrees C	7.2	Std. Units	0.10	11/14/23 17:03	H3
HACH 8146	Iron, Ferrous	0.45	mg/L	0.20	11/10/23 11:09	H3,N2
EPA 365.1	Phosphate as P04	0.20	mg/L	0.15	11/14/23 17:11	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Sample: MW-12A **Lab ID: 50358455001** Collected: 11/02/23 12:00 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		11/10/23 08:47	24959-67-9	
Chloride	**7.3**	mg/L	0.25	0.067	1		11/10/23 08:47	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/10/23 08:47	16984-48-8	
Sulfate	**63.9**	mg/L	2.5	1.9	10		11/10/23 09:03	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	6.2	1	11/08/23 20:56	11/13/23 13:24	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/08/23 20:56	11/13/23 13:24	7440-43-9	
Calcium	**47500**	ug/L	1000	67.7	1	11/08/23 20:56	11/13/23 13:24	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	11/08/23 20:56	11/13/23 13:24	7440-47-3	
Iron	**2860**	ug/L	100	30.0	1	11/08/23 20:56	11/13/23 13:24	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/08/23 20:56	11/13/23 13:24	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	11/08/23 20:56	11/13/23 13:24	7439-93-2	
Magnesium	**18200**	ug/L	1000	33.6	1	11/08/23 20:56	11/13/23 13:24	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	11/08/23 20:56	11/13/23 13:24	7439-98-7	
Potassium	**2000**	ug/L	1000	97.8	1	11/08/23 20:56	11/13/23 13:24	7440-09-7	
Silica	**17900**	ug/L	450		1	11/08/23 20:56	11/13/23 13:24	7631-86-9	N2
Sodium	**3740**	ug/L	1000	54.8	1	11/08/23 20:56	11/13/23 13:24	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	ND	ug/L	100	6.2	1	11/12/23 20:56	11/13/23 14:17	7440-42-8	
Iron, Dissolved	**2830**	ug/L	100	30.0	1	11/12/23 20:56	11/13/23 14:17	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	11/12/23 20:56	11/13/23 14:17	7439-93-2	
Magnesium, Dissolved	**18000**	ug/L	1000	33.6	1	11/12/23 20:56	11/13/23 14:17	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	11/12/23 20:56	11/13/23 14:17	7439-98-7	
Potassium, Dissolved	**2000**	ug/L	1000	97.8	1	11/12/23 20:56	11/13/23 14:17	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**12.9**	ug/L	10.0	2.3	1	11/05/23 10:00	11/07/23 05:21	7429-90-5	
Arsenic	ND	ug/L	1.0	0.075	1	11/05/23 10:00	11/07/23 05:21	7440-38-2	
Barium	**76.4**	ug/L	1.0	0.077	1	11/05/23 10:00	11/07/23 05:21	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/05/23 10:00	11/07/23 05:21	7440-48-4	
Manganese	**532**	ug/L	5.0	0.84	5	11/05/23 10:00	11/07/23 04:58	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	11/05/23 10:00	11/07/23 05:21	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/05/23 10:00	11/07/23 05:21	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	11/05/23 10:00	11/06/23 21:16	7429-90-5	
Manganese, Dissolved	**535**	ug/L	5.0	0.84	5	11/05/23 10:00	11/06/23 19:51	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Sample: MW-12A **Lab ID: 50358455001** Collected: 11/02/23 12:00 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	11/08/23 10:23	11/08/23 19:34	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**125**	mg/L	10.0	10.0	1		11/03/23 22:45		
Alkalinity,Bicarbonate (CaCO3)	**125**	mg/L	10.0	10.0	1		11/03/23 22:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/03/23 22:45		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**240**	mg/L	10.0	10.0	1		11/08/23 14:04		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.6**	Std. Units	0.10	0.10	1		11/14/23 15:03		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/03/23 15:41	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**0.71**	mg/L	0.20	0.035	1		11/10/23 11:22	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/04/23 00:35	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/04/23 00:35	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.18**	mg/L	0.15	0.15	1	11/09/23 16:00	11/14/23 17:10		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		11/11/23 10:53	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**3.1**	mg/L	1.0	0.24	1		11/15/23 01:04		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Sample: Blind Dup 12 **Lab ID: 50358455002** Collected: 11/02/23 08:00 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		11/10/23 09:39	24959-67-9	
Chloride	**7.3**	mg/L	0.25	0.067	1		11/10/23 09:39	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/10/23 09:39	16984-48-8	
Sulfate	**63.4**	mg/L	2.5	1.9	10		11/10/23 09:57	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	6.2	1	11/08/23 20:56	11/13/23 13:25	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/08/23 20:56	11/13/23 13:25	7440-43-9	
Calcium	**46100**	ug/L	1000	67.7	1	11/08/23 20:56	11/13/23 13:25	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	11/08/23 20:56	11/13/23 13:25	7440-47-3	
Iron	**2780**	ug/L	100	30.0	1	11/08/23 20:56	11/13/23 13:25	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/08/23 20:56	11/13/23 13:25	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	11/08/23 20:56	11/13/23 13:25	7439-93-2	
Magnesium	**17700**	ug/L	1000	33.6	1	11/08/23 20:56	11/13/23 13:25	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	11/08/23 20:56	11/13/23 13:25	7439-98-7	
Potassium	**1970**	ug/L	1000	97.8	1	11/08/23 20:56	11/13/23 13:25	7440-09-7	
Silica	**17400**	ug/L	450		1	11/08/23 20:56	11/13/23 13:25	7631-86-9	N2
Sodium	**3680**	ug/L	1000	54.8	1	11/08/23 20:56	11/13/23 13:25	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron, Dissolved	ND	ug/L	100	6.2	1	11/12/23 20:56	11/13/23 14:19	7440-42-8	
Iron, Dissolved	**2810**	ug/L	100	30.0	1	11/12/23 20:56	11/13/23 14:19	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	11/12/23 20:56	11/13/23 14:19	7439-93-2	
Magnesium, Dissolved	**18100**	ug/L	1000	33.6	1	11/12/23 20:56	11/13/23 14:19	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	11/12/23 20:56	11/13/23 14:19	7439-98-7	
Potassium, Dissolved	**1980**	ug/L	1000	97.8	1	11/12/23 20:56	11/13/23 14:19	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Aluminum	**11.6**	ug/L	10.0	2.3	1	11/05/23 10:00	11/07/23 05:25	7429-90-5	
Arsenic	ND	ug/L	1.0	0.075	1	11/05/23 10:00	11/07/23 05:25	7440-38-2	
Barium	**75.5**	ug/L	1.0	0.077	1	11/05/23 10:00	11/07/23 05:25	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/05/23 10:00	11/07/23 05:25	7440-48-4	
Manganese	**520**	ug/L	5.0	0.84	5	11/05/23 10:00	11/07/23 13:59	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	11/05/23 10:00	11/07/23 05:25	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/05/23 10:00	11/07/23 05:25	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	11/05/23 10:00	11/06/23 21:23	7429-90-5	
Manganese, Dissolved	**537**	ug/L	5.0	0.84	5	11/05/23 10:00	11/06/23 20:01	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Sample: Blind Dup 12 **Lab ID: 50358455002** Collected: 11/02/23 08:00 Received: 11/03/23 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	11/08/23 10:23	11/08/23 19:36	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**120**	mg/L	10.0	10.0	1		11/03/23 23:05		
Alkalinity,Bicarbonate (CaCO3)	**120**	mg/L	10.0	10.0	1		11/03/23 23:05		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/03/23 23:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**233**	mg/L	10.0	10.0	1		11/08/23 14:04		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.2**	Std. Units	0.10	0.10	1		11/14/23 17:03		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/03/23 15:41	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**0.45**	mg/L	0.20	0.035	1		11/10/23 11:09	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/03/23 23:58	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/03/23 23:58	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.20**	mg/L	0.15	0.15	1	11/09/23 16:00	11/14/23 17:11		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		11/11/23 11:18	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	ND	mg/L	1.0	0.24	1		11/15/23 01:15		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 761640
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3490967 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	11/09/23 12:06	
Chloride	mg/L	ND	0.25	0.067	11/09/23 12:06	
Fluoride	mg/L	ND	0.10	0.017	11/09/23 12:06	
Sulfate	mg/L	ND	0.25	0.19	11/09/23 12:06	

LABORATORY CONTROL SAMPLE: 3490968

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.97	97	80-120	
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	1.0	100	80-120	
Sulfate	mg/L	5	4.9	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490969 3490970

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.27	1	1	1.2	1.2	94	94	80-120	0	15	
Chloride	mg/L	129	25	25	152	152	91	93	80-120	0	15	
Fluoride	mg/L	0.26	1	1	1.3	1.3	101	101	80-120	0	15	
Sulfate	mg/L	85.5	50	50	131	132	92	92	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 761094
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3488635 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	11/08/23 19:04	

LABORATORY CONTROL SAMPLE: 3488636

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3488637 3488638

Parameter	Units	50358455002 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	4.4	4.3	88	85	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 761569
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3490608 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	11/13/23 13:08	
Cadmium	ug/L	ND	2.0	0.60	11/13/23 13:08	
Calcium	ug/L	ND	1000	67.7	11/13/23 13:08	
Chromium	ug/L	ND	10.0	0.42	11/13/23 13:08	
Iron	ug/L	ND	100	30.0	11/13/23 13:08	
Lead	ug/L	ND	10.0	2.5	11/13/23 13:08	
Lithium	ug/L	ND	20.0	6.8	11/13/23 13:08	
Magnesium	ug/L	ND	1000	33.6	11/13/23 13:08	
Molybdenum	ug/L	ND	10.0	0.78	11/13/23 13:08	
Potassium	ug/L	ND	1000	97.8	11/13/23 13:08	
Silica	ug/L	ND	450		11/13/23 13:08	N2
Sodium	ug/L	ND	1000	54.8	11/13/23 13:08	

LABORATORY CONTROL SAMPLE: 3490609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	912	91	80-120	
Cadmium	ug/L	1000	966	97	80-120	
Calcium	ug/L	10000	9910	99	80-120	
Chromium	ug/L	1000	970	97	80-120	
Iron	ug/L	10000	9900	99	80-120	
Lead	ug/L	1000	922	92	80-120	
Lithium	ug/L	1000	946	95	80-120	
Magnesium	ug/L	10000	9540	95	80-120	
Molybdenum	ug/L	1000	1010	101	80-120	
Potassium	ug/L	10000	9220	92	80-120	
Silica	ug/L	10700	10500	99	80-120	N2
Sodium	ug/L	10000	8980	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490610 3490611

Parameter	Units	50358454001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	13000	1000	1000	14200	13900	119	92	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	1000	994	100	99	75-125	1	20	
Calcium	ug/L	364000	10000	10000	378000	370000	139	58	75-125	2	20	P6
Chromium	ug/L	ND	1000	1000	973	964	97	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490610 3490611

Parameter	Units	50358454001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	7220	10000	10000	16900	16600	97	94	75-125	1	20	
Lead	ug/L	ND	1000	1000	880	875	88	87	75-125	1	20	
Lithium	ug/L	ND	1000	1000	967	959	97	96	75-125	1	20	
Magnesium	ug/L	29600	10000	10000	38800	38000	92	85	75-125	2	20	
Molybdenum	ug/L	362	1000	1000	1400	1380	104	102	75-125	1	20	
Potassium	ug/L	5840	10000	10000	15500	15000	96	92	75-125	3	20	
Silica	ug/L	13000	10700	10700	24000	23600	103	99	75-125	2	20	N2
Sodium	ug/L	27100	10000	10000	36500	35600	93	84	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 762143
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3493555 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	11/13/23 13:47	
Iron, Dissolved	ug/L	ND	100	30.0	11/13/23 13:47	
Lithium, Dissolved	ug/L	ND	20.0	6.8	11/13/23 13:47	
Magnesium, Dissolved	ug/L	ND	1000	33.6	11/13/23 13:47	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	11/13/23 13:47	
Potassium, Dissolved	ug/L	ND	1000	97.8	11/13/23 13:47	

LABORATORY CONTROL SAMPLE: 3493556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	2000	1770	89	80-120	
Iron, Dissolved	ug/L	20000	18600	93	80-120	
Lithium, Dissolved	ug/L	2000	1760	88	80-120	
Magnesium, Dissolved	ug/L	20000	17800	89	80-120	
Molybdenum, Dissolved	ug/L	2000	1930	96	80-120	
Potassium, Dissolved	ug/L	20000	17300	87	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493557 3493558

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	203	1000	1000	1100	1140	90	94	75-125	4	20	
Iron, Dissolved	ug/L	2210	10000	10000	11100	11600	89	94	75-125	4	20	
Lithium, Dissolved	ug/L	ND	1000	1000	844	889	84	89	75-125	5	20	
Magnesium, Dissolved	ug/L	24100	10000	10000	32500	32900	84	89	75-125	1	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	942	978	93	97	75-125	4	20	
Potassium, Dissolved	ug/L	5980	10000	10000	14200	14700	83	87	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 760849
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3487263 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.3	11/07/23 03:36	
Arsenic	ug/L	ND	1.0	0.075	11/07/23 03:36	
Barium	ug/L	ND	1.0	0.077	11/07/23 03:36	
Cobalt	ug/L	ND	1.0	0.046	11/07/23 03:36	
Manganese	ug/L	ND	1.0	0.17	11/07/23 03:36	
Selenium	ug/L	ND	1.0	0.20	11/07/23 03:36	
Thallium	ug/L	ND	1.0	0.040	11/07/23 03:36	

LABORATORY CONTROL SAMPLE: 3487264

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	407	102	80-120	
Arsenic	ug/L	40	39.7	99	80-120	
Barium	ug/L	40	39.9	100	80-120	
Cobalt	ug/L	40	42.1	105	80-120	
Manganese	ug/L	40	41.4	103	80-120	
Selenium	ug/L	40	40.7	102	80-120	
Thallium	ug/L	40	41.8	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3487265 3487266

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	406	397	101	99	75-125	2	20	
Arsenic	ug/L	2.8	40	40	41.8	41.5	97	97	75-125	1	20	
Barium	ug/L	213	40	40	258	251	111	96	75-125	2	20	E
Cobalt	ug/L	ND	40	40	39.2	39.4	98	98	75-125	1	20	
Manganese	ug/L	274	40	40	308	311	86	93	75-125	1	20	E
Selenium	ug/L	ND	40	40	40.5	39.5	101	99	75-125	2	20	
Thallium	ug/L	ND	40	40	42.7	42.7	107	107	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 760848
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3487259 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	11/06/23 18:36	
Manganese, Dissolved	ug/L	ND	1.0	0.17	11/06/23 18:36	

LABORATORY CONTROL SAMPLE: 3487260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	414	104	80-120	
Manganese, Dissolved	ug/L	40	41.8	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3487261 3487262

Parameter	Units	50358239001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	416	416	104	103	75-125	0	20	
Manganese, Dissolved	ug/L	190	40	40	227	229	93	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 760837
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001

METHOD BLANK: 3487198 Matrix: Water
Associated Lab Samples: 50358455001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/03/23 22:45	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/03/23 22:45	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/03/23 22:45	

LABORATORY CONTROL SAMPLE: 3487199

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.4	103	90-110	

SAMPLE DUPLICATE: 3487200

Parameter	Units	50358236009 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	79.8	82.2	3	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	79.8	82.2	3	20	
Alkalinity,Carbonate (CaCO3)	mg/L	<10.0	ND		20	

SAMPLE DUPLICATE: 3487201

Parameter	Units	50358317001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	176	181	3	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	176	181	3	20	
Alkalinity,Carbonate (CaCO3)	mg/L	<10.0	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 760838
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455002

METHOD BLANK: 3487203 Matrix: Water
Associated Lab Samples: 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/03/23 23:05	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/03/23 23:05	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/03/23 23:05	

LABORATORY CONTROL SAMPLE: 3487204

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.8	100	90-110	

SAMPLE DUPLICATE: 3487205

Parameter	Units	50358390001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	253	259	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	253	259	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3487206

Parameter	Units	50358403008 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	569	580	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	569	580	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 761523
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3490336 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/08/23 14:02	

LABORATORY CONTROL SAMPLE: 3490337

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	281	94	80-120	

SAMPLE DUPLICATE: 3490338

Parameter	Units	50358435001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	314	321	2	10	

SAMPLE DUPLICATE: 3490339

Parameter	Units	50358597004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	826	818	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 762884
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358455001

SAMPLE DUPLICATE: 3496538

Parameter	Units	50358390001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.8	6.8	1	2	H3

SAMPLE DUPLICATE: 3496539

Parameter	Units	50358403008 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.0	7.0	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 762920
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358455002

SAMPLE DUPLICATE: 3496667

Parameter	Units	50358455002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	1	2	H3

SAMPLE DUPLICATE: 3496668

Parameter	Units	50358484007 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	6.9	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 760793
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3486941 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/03/23 15:41	

LABORATORY CONTROL SAMPLE: 3486942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3486943 3486944

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.50	0.50	99	98	90-110	1	20	

MATRIX SPIKE SAMPLE: 3486945

Parameter	Units	50358436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.54	107	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 762067
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3493223 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/10/23 10:49	H3,N2

LABORATORY CONTROL SAMPLE: 3493224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	100	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493225 3493226

Parameter	Units	50358390001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	0.69	2.5	2.5	3.3	3.3	103	103	90-110	0	20	H3,N2

MATRIX SPIKE SAMPLE: 3493227

Parameter	Units	50358454002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.0	103	90-110	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 760854
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3487288 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/03/23 23:50	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/03/23 23:50	

LABORATORY CONTROL SAMPLE: 3487289

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.1	107	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3487290 3487291

Parameter	Units	50358423011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.0	1.1	103	105	90-110	2	20	
Nitrogen, Nitrite	mg/L	ND	1	1	1.1	1.1	106	106	90-110	0	20	

MATRIX SPIKE SAMPLE: 3487292

Parameter	Units	50358423013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.1	106	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.1	105	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 761823
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3491765 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	11/14/23 17:01	

LABORATORY CONTROL SAMPLE: 3491766

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491767 3491768

Parameter	Units	50358969001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.6	1.6				1		

MATRIX SPIKE SAMPLE: 3491769

Parameter	Units	50359113001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	6.0		7.7			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 762135
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3493531 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	11/11/23 05:59	

LABORATORY CONTROL SAMPLE: 3493532

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493533 3493534

Parameter	Units	50358403008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	4.8	40	40	44.9	44.3	100	99	80-120	1	20	

MATRIX SPIKE SAMPLE: 3493535

Parameter	Units	50358454001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.1	10	16.7	156	80-120	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 762633
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3495673 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	11/14/23 19:55	

LABORATORY CONTROL SAMPLE: 3495674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495675 3495676

Parameter	Units	50358403008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	6.8	10	10	16.1	16.2	93	94	80-120	0	20	

MATRIX SPIKE SAMPLE: 3495677

Parameter	Units	50358403009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	8.5	10	17.9	94	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Sample: MW-12A **Lab ID: 50358455001** Collected: 11/02/23 12:00 Received: 11/03/23 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.419 ± 0.526 (0.874) C:NA T:93%**	pCi/L	11/29/23 12:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.07 ± 0.532 (0.950) C:87% T:82%**	pCi/L	11/27/23 16:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.49 ± 1.06 (1.82)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Sample: Blind Dup 12 **Lab ID: 50358455002** Collected: 11/02/23 08:00 Received: 11/03/23 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.09 ± 0.696 (0.957) C:NA T:92%**	pCi/L	11/29/23 12:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.02 ± 0.579 (1.07) C:79% T:78%**	pCi/L	11/27/23 16:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.11 ± 1.28 (2.03)**	pCi/L	11/30/23 08:51	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 629058
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3066687 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0425 ± 0.194 (0.458) C:NA T:94%	pCi/L	11/29/23 12:31	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

QC Batch: 629059
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358455001, 50358455002

METHOD BLANK: 3066691 Matrix: Water
Associated Lab Samples: 50358455001, 50358455002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.194 ± 0.348 (0.762) C:80% T:84%	pCi/L	11/27/23 16:27	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50358455

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358455001	**MW-12A**	EPA 9056	761640		
50358455002	**Blind Dup 12**	EPA 9056	761640		
50358455001	**MW-12A**	EPA 3010	761569	EPA 6010	762571
50358455002	**Blind Dup 12**	EPA 3010	761569	EPA 6010	762571
50358455001	**MW-12A**	EPA 3010	762143	EPA 6010	762576
50358455002	**Blind Dup 12**	EPA 3010	762143	EPA 6010	762576
50358455001	**MW-12A**	EPA 200.2	760849	EPA 6020	760974
50358455002	**Blind Dup 12**	EPA 200.2	760849	EPA 6020	760974
50358455001	**MW-12A**	EPA 200.2	760848	EPA 6020	760976
50358455002	**Blind Dup 12**	EPA 200.2	760848	EPA 6020	760976
50358455001	**MW-12A**	EPA 7470	761094	EPA 7470	761658
50358455002	**Blind Dup 12**	EPA 7470	761094	EPA 7470	761658
50358455001	**MW-12A**	EPA 903.1	629058		
50358455002	**Blind Dup 12**	EPA 903.1	629058		
50358455001	**MW-12A**	EPA 904.0	629059		
50358455002	**Blind Dup 12**	EPA 904.0	629059		
50358455001	**MW-12A**	Total Radium Calculation	632884		
50358455002	**Blind Dup 12**	Total Radium Calculation	632884		
50358455001	**MW-12A**	SM 2320B	760837		
50358455002	**Blind Dup 12**	SM 2320B	760838		
50358455001	**MW-12A**	SM 2540C	761523		
50358455002	**Blind Dup 12**	SM 2540C	761523		
50358455001	**MW-12A**	SM 4500-H+B	762884		
50358455002	**Blind Dup 12**	SM 4500-H+B	762920		
50358455001	**MW-12A**	SM 4500-S2-D	760793		
50358455002	**Blind Dup 12**	SM 4500-S2-D	760793		
50358455001	**MW-12A**	HACH 8146	762067		
50358455002	**Blind Dup 12**	HACH 8146	762067		
50358455001	**MW-12A**	EPA 353.2	760854		
50358455002	**Blind Dup 12**	EPA 353.2	760854		
50358455001	**MW-12A**	EPA 365.1	761823	EPA 365.1	762969
50358455002	**Blind Dup 12**	EPA 365.1	761823	EPA 365.1	762969
50358455001	**MW-12A**	SM 5310C	762135		
50358455002	**Blind Dup 12**	SM 5310C	762135		
50358455001	**MW-12A**	SM 5310C	762633		
50358455002	**Blind Dup 12**	SM 5310C	762633		

50358455

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4R5 Nov 2023	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/54

Regulatory Agency	
State / Location	IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Br, Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum	Residual Chlorine (Y/N)	
	Requested Analysis Filtered (Y/N)																						Y			Y					
1	MW-12A	WT	6			11-2	1200		11	✓	✓	✓		✓																001
2	Blind Dup 12	WT	6			11-2			11	✓	✓	✓		✓																002
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li, sila) (12)	Hayley Torres	11-2	1700	Jax Williams	11/3	1400				
6020 (Al, Mn, Co, As, Se, Ba, Tl) (7) + 7470 (Hg)	Jax Williams	11-2	10:00	Nicole Shirk / PACE	11-3-23	1000	0.3	Y	Y	Y
** Dissolved FF 6010 (B, Fe, Mo, Mg, K, Li) (6) FF 6020 (Al, Mn) (2)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Hayley Torres					
SIGNATURE of SAMPLER:	Hayley Torres	DATE Signed: 11-2-23				

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: NMS 11-03-2023 1147

1. **Courier:** ☐ FED EX ☐ UPS ☒ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B (C) D E F G H
4. **Cooler Temperature(s):** 0.3 / 0.3 | | | |
   (Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**
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
   Cooler temp should be above freezing to 6°C

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)		X	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** **HNO3 (<2)** ~~H2SO4 (<2)~~ **NaOH (>10)** **NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	X		
Short Hold Time Analysis (48 hours or less)? **Analysis:** Nitrate	X					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			X
Rush TAT Requested (4 days or less):		X	Residual Chlorine Check (Total/Amenable/Free Cyanide)			X
Custody Signatures Present?	X		Headspace Wisconsin Sulfide?			X
Containers Intact?:	X		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent X
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	X		Trip Blank Present?		X	
Extra labels on Terracore Vials? (soils only)		X	Trip Blank Custody Seals?:			X

COMMENTS:

COC PAGE 1 **of** 1

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER					Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			MeOH (only)																										Red	Yellow	Green	Black
			SBS																													
			DI																													
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1												1	1			2	1	1	1	1	1		1					WT	✓	✓		✓
2												1	1			2	1	2	1	1	1		1					WT	✓	✓		✓
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 09, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 06, 2023. 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,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358714001	**MW-13**	Water	11/05/23 08:40	11/06/23 10:15
50358714002	**MW-12**	Water	11/05/23 10:35	11/06/23 10:15
50358714003	**MW-1**	Water	11/05/23 13:20	11/06/23 10:15
50358714004	**MW-11**	Water	11/05/23 15:18	11/06/23 10:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358714001	**MW-13**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	ELK	6	PASI-I
		EPA 6020	MGM	2	PASI-I
		EPA 6020	MGM	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50358714002	**MW-12**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	ELK	6	PASI-I
		EPA 6020	MGM	2	PASI-I
		EPA 6020	MGM	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50358714003	**MW-1**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	ELK	6	PASI-I
		EPA 6020	MGM	2	PASI-I
		EPA 6020	MGM	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50358714004	**MW-11**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	ELK	6	PASI-I
		EPA 6020	MGM	2	PASI-I
		EPA 6020	MGM	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358714001	**MW-13**					
EPA 9056	Bromide	0.21	mg/L	0.050	11/11/23 08:03	
EPA 6010	Iron	461	ug/L	100	11/15/23 12:02	
EPA 6010	Magnesium	35100	ug/L	1000	11/15/23 12:02	
EPA 6010	Potassium	21000	ug/L	1000	11/15/23 12:02	
EPA 6010	Silica	19000	ug/L	450	11/15/23 12:02	N2
EPA 6010	Sodium	30700	ug/L	1000	11/15/23 12:02	
EPA 6010	Boron, Dissolved	2410	ug/L	100	11/15/23 12:18	
EPA 6010	Lithium, Dissolved	437	ug/L	20.0	11/15/23 12:18	
EPA 6010	Magnesium, Dissolved	30400	ug/L	1000	11/15/23 12:18	
EPA 6010	Molybdenum, Dissolved	74.7	ug/L	10.0	11/15/23 12:18	
EPA 6010	Potassium, Dissolved	21200	ug/L	1000	11/15/23 12:18	
EPA 6020	Aluminum	313	ug/L	10.0	11/11/23 07:59	
EPA 6020	Manganese	30.9	ug/L	1.0	11/11/23 07:59	
EPA 6020	Manganese, Dissolved	5.0	ug/L	1.0	11/11/23 02:12	
SM 2320B	Alkalinity, Total as CaCO3	169	mg/L	10.0	11/07/23 22:52	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	169	mg/L	10.0	11/07/23 22:52	
SM 2540C	Total Dissolved Solids	2440	mg/L	20.0	11/10/23 16:00	
EPA 353.2	Nitrogen, Nitrate	0.37	mg/L	0.10	11/06/23 23:28	
SM 5310C	Total Organic Carbon	1.7	mg/L	1.0	11/15/23 19:08	
SM 5310C	Dissolved Organic Carbon	3.3	mg/L	1.0	11/16/23 02:57	
50358714002	**MW-12**					
EPA 6010	Iron	210	ug/L	100	11/15/23 12:09	
EPA 6010	Magnesium	21600	ug/L	1000	11/15/23 12:09	
EPA 6010	Silica	23600	ug/L	450	11/15/23 12:09	N2
EPA 6010	Sodium	3160	ug/L	1000	11/15/23 12:09	
EPA 6010	Iron, Dissolved	243	ug/L	100	11/15/23 12:20	
EPA 6010	Magnesium, Dissolved	19800	ug/L	1000	11/15/23 12:20	
EPA 6020	Aluminum	263	ug/L	10.0	11/11/23 08:03	
EPA 6020	Manganese	3.6	ug/L	1.0	11/11/23 08:03	
SM 2320B	Alkalinity, Total as CaCO3	153	mg/L	10.0	11/07/23 22:52	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	153	mg/L	10.0	11/07/23 22:52	
SM 2540C	Total Dissolved Solids	212	mg/L	10.0	11/10/23 16:00	
EPA 353.2	Nitrogen, Nitrate	8.2	mg/L	0.50	11/07/23 00:01	
SM 5310C	Dissolved Organic Carbon	2.3	mg/L	1.0	11/16/23 03:08	
50358714003	**MW-1**					
EPA 6010	Magnesium	37800	ug/L	1000	11/15/23 12:11	
EPA 6010	Potassium	1020	ug/L	1000	11/15/23 12:11	
EPA 6010	Silica	21300	ug/L	450	11/15/23 12:11	N2
EPA 6010	Sodium	3520	ug/L	1000	11/15/23 12:11	
EPA 6010	Boron, Dissolved	152	ug/L	100	11/15/23 12:21	
EPA 6010	Magnesium, Dissolved	38000	ug/L	1000	11/15/23 12:21	
EPA 6010	Potassium, Dissolved	1170	ug/L	1000	11/15/23 12:21	
EPA 6020	Aluminum	94.5	ug/L	10.0	11/11/23 08:32	
EPA 6020	Manganese	9.4	ug/L	1.0	11/11/23 08:32	
EPA 6020	Manganese, Dissolved	6.0	ug/L	1.0	11/11/23 02:20	
SM 2320B	Alkalinity, Total as CaCO3	306	mg/L	10.0	11/07/23 22:52	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358714003	**MW-1**					
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	306	mg/L	10.0	11/07/23 22:52	
SM 2540C	Total Dissolved Solids	543	mg/L	10.0	11/10/23 16:00	
EPA 353.2	Nitrogen, Nitrate	2.5	mg/L	0.10	11/07/23 00:03	
SM 5310C	Total Organic Carbon	1.8	mg/L	1.0	11/15/23 19:27	
SM 5310C	Dissolved Organic Carbon	2.3	mg/L	1.0	11/16/23 03:19	
50358714004	**MW-11**					
EPA 6010	Iron	5900	ug/L	100	11/15/23 12:12	
EPA 6010	Magnesium	49300	ug/L	1000	11/15/23 12:12	
EPA 6010	Silica	24600	ug/L	450	11/15/23 12:12	N2
EPA 6010	Sodium	2930	ug/L	1000	11/15/23 12:12	
EPA 6010	Boron, Dissolved	1020	ug/L	100	11/15/23 12:23	
EPA 6010	Iron, Dissolved	205	ug/L	100	11/15/23 12:23	
EPA 6010	Magnesium, Dissolved	47800	ug/L	1000	11/15/23 12:23	
EPA 6020	Aluminum	1110	ug/L	30.0	11/14/23 19:12	
EPA 6020	Manganese	13.6	ug/L	1.0	11/11/23 08:36	
EPA 6020	Aluminum, Dissolved	45.5	ug/L	10.0	11/11/23 02:24	
EPA 6020	Manganese, Dissolved	1.8	ug/L	1.0	11/11/23 02:24	
SM 2320B	Alkalinity, Total as CaCO3	161	mg/L	10.0	11/07/23 22:52	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	161	mg/L	10.0	11/07/23 22:52	
SM 2540C	Total Dissolved Solids	773	mg/L	10.0	11/10/23 16:00	
EPA 353.2	Nitrogen, Nitrate	1.8	mg/L	0.10	11/06/23 23:37	
EPA 365.1	Phosphate as P04	0.63	mg/L	0.30	11/14/23 19:32	
SM 5310C	Dissolved Organic Carbon	2.1	mg/L	1.0	11/16/23 03:30	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Sample: MW-13 **Lab ID: 50358714001** Collected: 11/05/23 08:40 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.21**	mg/L	0.050	0.0090	1		11/11/23 08:03	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	**461**	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:02	7439-89-6	
Magnesium	**35100**	ug/L	1000	32.8	1	11/09/23 08:28	11/15/23 12:02	7439-95-4	
Potassium	**21000**	ug/L	1000	120	1	11/09/23 08:28	11/15/23 12:02	7440-09-7	
Silica	**19000**	ug/L	450		1	11/09/23 08:28	11/15/23 12:02	7631-86-9	N2
Sodium	**30700**	ug/L	1000	48.2	1	11/09/23 08:28	11/15/23 12:02	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**2410**	ug/L	100	6.2	1	11/13/23 16:22	11/15/23 12:18	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	11/13/23 16:22	11/15/23 12:18	7439-89-6	
Lithium, Dissolved	**437**	ug/L	20.0	6.8	1	11/13/23 16:22	11/15/23 12:18	7439-93-2	
Magnesium, Dissolved	**30400**	ug/L	1000	33.6	1	11/13/23 16:22	11/15/23 12:18	7439-95-4	
Molybdenum, Dissolved	**74.7**	ug/L	10.0	0.78	1	11/13/23 16:22	11/15/23 12:18	7439-98-7	
Potassium, Dissolved	**21200**	ug/L	1000	97.8	1	11/13/23 16:22	11/15/23 12:18	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**313**	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 07:59	7429-90-5	
Manganese	**30.9**	ug/L	1.0	0.18	1	11/10/23 07:10	11/11/23 07:59	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 02:12	7429-90-5	
Manganese, Dissolved	**5.0**	ug/L	1.0	0.18	1	11/10/23 07:10	11/11/23 02:12	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**169**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Bicarbonate (CaCO3)	**169**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/07/23 22:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2440**	mg/L	20.0	20.0	1		11/10/23 16:00		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/09/23 11:13	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Sample: MW-13 **Lab ID: 50358714001** Collected: 11/05/23 08:40 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 12:30	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**0.37**	mg/L	0.10	0.011	1		11/06/23 23:28	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/06/23 23:28	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	11/10/23 13:00	11/16/23 18:44		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**1.7**	mg/L	1.0	0.24	1		11/15/23 19:08	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**3.3**	mg/L	1.0	0.24	1		11/16/23 02:57		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Sample: MW-12 **Lab ID: 50358714002** Collected: 11/05/23 10:35 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		11/11/23 08:21	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	**210**	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:09	7439-89-6	
Magnesium	**21600**	ug/L	1000	32.8	1	11/09/23 08:28	11/15/23 12:09	7439-95-4	
Potassium	ND	ug/L	1000	120	1	11/09/23 08:28	11/15/23 12:09	7440-09-7	
Silica	**23600**	ug/L	450		1	11/09/23 08:28	11/15/23 12:09	7631-86-9	N2
Sodium	**3160**	ug/L	1000	48.2	1	11/09/23 08:28	11/15/23 12:09	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	ND	ug/L	100	6.2	1	11/13/23 16:22	11/15/23 12:20	7440-42-8	
Iron, Dissolved	**243**	ug/L	100	30.0	1	11/13/23 16:22	11/15/23 12:20	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	11/13/23 16:22	11/15/23 12:20	7439-93-2	
Magnesium, Dissolved	**19800**	ug/L	1000	33.6	1	11/13/23 16:22	11/15/23 12:20	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	11/13/23 16:22	11/15/23 12:20	7439-98-7	
Potassium, Dissolved	ND	ug/L	1000	97.8	1	11/13/23 16:22	11/15/23 12:20	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**263**	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 08:03	7429-90-5	
Manganese	**3.6**	ug/L	1.0	0.18	1	11/10/23 07:10	11/11/23 08:03	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 02:16	7429-90-5	
Manganese, Dissolved	ND	ug/L	1.0	0.18	1	11/10/23 07:10	11/11/23 02:16	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**153**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Bicarbonate (CaCO3)	**153**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/07/23 22:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**212**	mg/L	10.0	10.0	1		11/10/23 16:00		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/09/23 11:13	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Sample: MW-12 **Lab ID: 50358714002** Collected: 11/05/23 10:35 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 12:30	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**8.2**	mg/L	0.50	0.055	5		11/07/23 00:01	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.50	0.020	5		11/07/23 00:01	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	11/11/23 13:30	11/14/23 19:30		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		11/15/23 19:18	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.3**	mg/L	1.0	0.24	1		11/16/23 03:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Sample: MW-1 **Lab ID: 50358714003** Collected: 11/05/23 13:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		11/11/23 08:40	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	ND	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:11	7439-89-6	
Magnesium	**37800**	ug/L	1000	32.8	1	11/09/23 08:28	11/15/23 12:11	7439-95-4	
Potassium	**1020**	ug/L	1000	120	1	11/09/23 08:28	11/15/23 12:11	7440-09-7	
Silica	**21300**	ug/L	450		1	11/09/23 08:28	11/15/23 12:11	7631-86-9	N2
Sodium	**3520**	ug/L	1000	48.2	1	11/09/23 08:28	11/15/23 12:11	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**152**	ug/L	100	6.2	1	11/13/23 16:22	11/15/23 12:21	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	11/13/23 16:22	11/15/23 12:21	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	11/13/23 16:22	11/15/23 12:21	7439-93-2	
Magnesium, Dissolved	**38000**	ug/L	1000	33.6	1	11/13/23 16:22	11/15/23 12:21	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	11/13/23 16:22	11/15/23 12:21	7439-98-7	
Potassium, Dissolved	**1170**	ug/L	1000	97.8	1	11/13/23 16:22	11/15/23 12:21	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**94.5**	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 08:32	7429-90-5	
Manganese	**9.4**	ug/L	1.0	0.18	1	11/10/23 07:10	11/11/23 08:32	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 02:20	7429-90-5	
Manganese, Dissolved	**6.0**	ug/L	1.0	0.18	1	11/10/23 07:10	11/11/23 02:20	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**306**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Bicarbonate (CaCO3)	**306**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/07/23 22:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**543**	mg/L	10.0	10.0	1		11/10/23 16:00		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/09/23 11:13	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Sample: MW-1 **Lab ID: 50358714003** Collected: 11/05/23 13:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 12:37	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**2.5**	mg/L	0.10	0.011	1		11/07/23 00:03	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/07/23 00:03	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	11/11/23 13:30	11/14/23 19:32		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**1.8**	mg/L	1.0	0.24	1		11/15/23 19:27	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.3**	mg/L	1.0	0.24	1		11/16/23 03:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Sample: MW-11 **Lab ID: 50358714004** Collected: 11/05/23 15:18 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		11/11/23 08:58	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	**5900**	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:12	7439-89-6	
Magnesium	**49300**	ug/L	1000	32.8	1	11/09/23 08:28	11/15/23 12:12	7439-95-4	
Potassium	ND	ug/L	1000	120	1	11/09/23 08:28	11/15/23 12:12	7440-09-7	
Silica	**24600**	ug/L	450		1	11/09/23 08:28	11/15/23 12:12	7631-86-9	N2
Sodium	**2930**	ug/L	1000	48.2	1	11/09/23 08:28	11/15/23 12:12	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1020**	ug/L	100	6.2	1	11/13/23 16:22	11/15/23 12:23	7440-42-8	
Iron, Dissolved	**205**	ug/L	100	30.0	1	11/13/23 16:22	11/15/23 12:23	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	11/13/23 16:22	11/15/23 12:23	7439-93-2	
Magnesium, Dissolved	**47800**	ug/L	1000	33.6	1	11/13/23 16:22	11/15/23 12:23	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	11/13/23 16:22	11/15/23 12:23	7439-98-7	
Potassium, Dissolved	ND	ug/L	1000	97.8	1	11/13/23 16:22	11/15/23 12:23	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**1110**	ug/L	30.0	8.4	3	11/10/23 07:10	11/14/23 19:12	7429-90-5	
Manganese	**13.6**	ug/L	1.0	0.18	1	11/10/23 07:10	11/11/23 08:36	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	**45.5**	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 02:24	7429-90-5	
Manganese, Dissolved	**1.8**	ug/L	1.0	0.18	1	11/10/23 07:10	11/11/23 02:24	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**161**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Bicarbonate (CaCO3)	**161**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/07/23 22:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**773**	mg/L	10.0	10.0	1		11/10/23 16:00		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/09/23 11:13	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Sample: MW-11 **Lab ID: 50358714004** Collected: 11/05/23 15:18 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 12:38	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**1.8**	mg/L	0.10	0.011	1		11/06/23 23:37	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/06/23 23:37	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.63**	mg/L	0.30	0.30	1	11/11/23 13:30	11/14/23 19:32		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	4.0	0.94	4		11/15/23 19:37	7440-44-0	D3
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.1**	mg/L	1.0	0.24	1		11/16/23 03:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 761953
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3492413 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	11/10/23 13:51	

LABORATORY CONTROL SAMPLE: 3492414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.96	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3492419 3492420

Parameter	Units	50358539001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	ND	1	1	0.96	0.96	96	96	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 761716
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3491392 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	100	18.1	11/15/23 12:00	
Magnesium	ug/L	ND	1000	32.8	11/15/23 12:00	
Potassium	ug/L	ND	1000	120	11/15/23 12:00	
Silica	ug/L	ND	450		11/15/23 12:00	N2
Sodium	ug/L	ND	1000	48.2	11/15/23 12:00	

LABORATORY CONTROL SAMPLE: 3491393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9630	96	80-120	
Magnesium	ug/L	10000	10000	100	80-120	
Potassium	ug/L	10000	9670	97	80-120	
Silica	ug/L	10700	11000	103	80-120	N2
Sodium	ug/L	10000	9680	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491394 3491395

Parameter	Units	50358714001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	461	10000	10000	10000	10300	96	98	75-125	3	20	
Magnesium	ug/L	35100	10000	10000	44900	45100	97	100	75-125	1	20	
Potassium	ug/L	21000	10000	10000	30200	31000	91	100	75-125	3	20	
Silica	ug/L	19000	10700	10700	30200	30600	105	108	75-125	1	20	N2
Sodium	ug/L	30700	10000	10000	39500	40200	88	95	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 762440
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3495049 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	11/15/23 12:06	
Iron, Dissolved	ug/L	ND	100	30.0	11/15/23 12:06	
Lithium, Dissolved	ug/L	ND	20.0	6.8	11/15/23 12:06	
Magnesium, Dissolved	ug/L	ND	1000	33.6	11/15/23 12:06	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	11/15/23 12:06	
Potassium, Dissolved	ug/L	ND	1000	97.8	11/15/23 12:06	

LABORATORY CONTROL SAMPLE: 3495050

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	995	99	80-120	
Iron, Dissolved	ug/L	10000	10300	103	80-120	
Lithium, Dissolved	ug/L	1000	1070	107	80-120	
Magnesium, Dissolved	ug/L	10000	9980	100	80-120	
Molybdenum, Dissolved	ug/L	1000	1040	104	80-120	
Potassium, Dissolved	ug/L	10000	10500	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495051 3495052

Parameter	Units	50359283003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	208	1000	1000	1220	1200	102	99	75-125	2	20	
Iron, Dissolved	ug/L	1680	10000	10000	11700	11500	101	98	75-125	2	20	
Lithium, Dissolved	ug/L	17.1J	1000	1000	1060	1030	104	102	75-125	3	20	
Magnesium, Dissolved	ug/L	43900	10000	10000	54600	53700	107	98	75-125	2	20	
Molybdenum, Dissolved	ug/L	12.5	1000	1000	1030	1010	102	99	75-125	2	20	
Potassium, Dissolved	ug/L	3570	10000	10000	13800	13400	102	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 761949
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3492386 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.8	11/11/23 07:19	
Manganese	ug/L	ND	1.0	0.18	11/11/23 07:19	

LABORATORY CONTROL SAMPLE: 3492387

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	395	99	80-120	
Manganese	ug/L	40	40.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3492388 3492389

Parameter	Units	50358771001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	15.5	400	400	402	413	97	99	75-125	3	20	
Manganese	ug/L	404	40	40	450	441	114	92	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 761945
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3492364 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.8	11/11/23 00:28	
Manganese, Dissolved	ug/L	ND	1.0	0.18	11/11/23 00:28	

LABORATORY CONTROL SAMPLE: 3492365

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	392	98	80-120	
Manganese, Dissolved	ug/L	40	41.5	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3492366 3492367

Parameter	Units	50359028002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	361	371	90	92	75-125	3	20	
Manganese, Dissolved	ug/L	1490	40	40	1530	1530	86	89	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 761422
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3489903 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/07/23 22:52	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/07/23 22:52	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/07/23 22:52	

LABORATORY CONTROL SAMPLE: 3489904

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.4	97	90-110	

SAMPLE DUPLICATE: 3489905

Parameter	Units	50358742002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	210	213	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	210	213	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3489906

Parameter	Units	50358479001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	354	363	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	354	363	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 762128
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3493491 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 15:57	

LABORATORY CONTROL SAMPLE: 3493492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	288	96	80-120	

SAMPLE DUPLICATE: 3493493

Parameter	Units	50358621001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1010	1020	1	10	

SAMPLE DUPLICATE: 3493494

Parameter	Units	50358744003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	547	543	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 761825
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3491774 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/09/23 11:13	

LABORATORY CONTROL SAMPLE: 3491775

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491776 3491777

Parameter	Units	50358714001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.29	0.30	54	55	90-110	2	20	M3

MATRIX SPIKE SAMPLE: 3491778

Parameter	Units	50358769003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.17J	0.5	0.67	99	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 762073
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3493243 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/10/23 12:17	H3,N2

LABORATORY CONTROL SAMPLE: 3493244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	104	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493245 3493246

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	ND	1	1	1.0	1.0	101	101	90-110	0	20	H3,N2

MATRIX SPIKE SAMPLE: 3493247

Parameter	Units	50358714003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.0	102	90-110	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 761177
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3488955 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/06/23 23:24	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/06/23 23:24	

LABORATORY CONTROL SAMPLE: 3488956

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	102	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3488957 3488958

Parameter	Units	50358714003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	2.5	1	1	3.4	3.4	94	93	90-110	0	20	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	104	104	90-110	0	20	

MATRIX SPIKE SAMPLE: 3488959

Parameter	Units	50358774005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.0	98	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.0	102	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 762077
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001

METHOD BLANK: 3493259 Matrix: Water
Associated Lab Samples: 50358714001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	11/16/23 18:36	

LABORATORY CONTROL SAMPLE: 3493260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493261 3493262

Parameter	Units	50358714001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.6	1.6				0		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 762328
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714002, 50358714003, 50358714004

METHOD BLANK: 3494637 Matrix: Water
Associated Lab Samples: 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	11/14/23 19:27	

LABORATORY CONTROL SAMPLE: 3494638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3494639 3494640

Parameter	Units	50359333001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	0.64			2.1	2.1				0		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 763080
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3497429 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	11/15/23 17:02	

LABORATORY CONTROL SAMPLE: 3497430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3497431 3497432

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.6	10	10	12.8	12.9	92	93	80-120	1	20	

MATRIX SPIKE SAMPLE: 3497433

Parameter	Units	50358828001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	10	12.3	97	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

QC Batch: 763087
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

METHOD BLANK: 3497510 Matrix: Water
Associated Lab Samples: 50358714001, 50358714002, 50358714003, 50358714004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	11/15/23 22:16	

LABORATORY CONTROL SAMPLE: 3497511

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3497512 3497513

Parameter	Units	50358466002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.0	10	10	11.4	11.4	94	94	80-120	0	20	

MATRIX SPIKE SAMPLE: 3497514

Parameter	Units	50358466003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	1.8	10	11.1	94	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

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

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H3	Sample was received or analysis requested beyond the recognized method holding time.
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.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358714001	**MW-13**	EPA 9056	761953		
50358714002	**MW-12**	EPA 9056	761953		
50358714003	**MW-1**	EPA 9056	761953		
50358714004	**MW-11**	EPA 9056	761953		
50358714001	**MW-13**	EPA 3010	761716	EPA 6010	763051
50358714002	**MW-12**	EPA 3010	761716	EPA 6010	763051
50358714003	**MW-1**	EPA 3010	761716	EPA 6010	763051
50358714004	**MW-11**	EPA 3010	761716	EPA 6010	763051
50358714001	**MW-13**	EPA 3010	762440	EPA 6010	763063
50358714002	**MW-12**	EPA 3010	762440	EPA 6010	763063
50358714003	**MW-1**	EPA 3010	762440	EPA 6010	763063
50358714004	**MW-11**	EPA 3010	762440	EPA 6010	763063
50358714001	**MW-13**	EPA 200.2	761949	EPA 6020	762233
50358714002	**MW-12**	EPA 200.2	761949	EPA 6020	762233
50358714003	**MW-1**	EPA 200.2	761949	EPA 6020	762233
50358714004	**MW-11**	EPA 200.2	761949	EPA 6020	762233
50358714001	**MW-13**	EPA 200.2	761945	EPA 6020	762232
50358714002	**MW-12**	EPA 200.2	761945	EPA 6020	762232
50358714003	**MW-1**	EPA 200.2	761945	EPA 6020	762232
50358714004	**MW-11**	EPA 200.2	761945	EPA 6020	762232
50358714001	**MW-13**	SM 2320B	761422		
50358714002	**MW-12**	SM 2320B	761422		
50358714003	**MW-1**	SM 2320B	761422		
50358714004	**MW-11**	SM 2320B	761422		
50358714001	**MW-13**	SM 2540C	762128		
50358714002	**MW-12**	SM 2540C	762128		
50358714003	**MW-1**	SM 2540C	762128		
50358714004	**MW-11**	SM 2540C	762128		
50358714001	**MW-13**	SM 4500-S2-D	761825		
50358714002	**MW-12**	SM 4500-S2-D	761825		
50358714003	**MW-1**	SM 4500-S2-D	761825		
50358714004	**MW-11**	SM 4500-S2-D	761825		
50358714001	**MW-13**	HACH 8146	762073		
50358714002	**MW-12**	HACH 8146	762073		
50358714003	**MW-1**	HACH 8146	762073		
50358714004	**MW-11**	HACH 8146	762073		
50358714001	**MW-13**	EPA 353.2	761177		
50358714002	**MW-12**	EPA 353.2	761177		
50358714003	**MW-1**	EPA 353.2	761177		
50358714004	**MW-11**	EPA 353.2	761177		
50358714001	**MW-13**	EPA 365.1	762077	EPA 365.1	763484
50358714002	**MW-12**	EPA 365.1	762328	EPA 365.1	762971
50358714003	**MW-1**	EPA 365.1	762328	EPA 365.1	762971

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358714

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358714004	**MW-11**	EPA 365.1	762328	EPA 365.1	762971
50358714001	**MW-13**	SM 5310C	763080		
50358714002	**MW-12**	SM 5310C	763080		
50358714003	**MW-1**	SM 5310C	763080		
50358714004	**MW-11**	SM 5310C	763080		
50358714001	**MW-13**	SM 5310C	763087		
50358714002	**MW-12**	SM 5310C	763087		
50358714003	**MW-1**	SM 5310C	763087		
50358714004	**MW-11**	SM 5310C	763087		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Do

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must

WO# : 50358714

50358714

Section A – Required Client Information:		Section B – Required Project Information:		Section C – Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P3R2 Nov 2023	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/52

Regulatory Agency	
State / Location	IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate					Residual Chlorine (Y/N)	
																							Y			Y						
1	MW-13			11-5-23	0840	11-5-23	0840		9	X	X	X		X					X	X	X	X	X	X	X	X					001
2	MW-12			11-5-23	1000	11-5-23	1035		9	X	X	X		X					X	X	X	X	X	X	X	X					002
3	MW-1			11-5-23	1200	11-5-23	1320		9	X	X	X		X					X	X	X	X	X	X	X	X					003
4	MW-11			11-5-23	1445	11-5-23	1518		9	X	X	X		X					X	X	X	X	X	X	X	X					004
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 Fe, Mg, Na, K, sila 6020 - Al, Mn		11-6-23	7:15	Jay Williams	11/6	7:15				
** Dissolved FF 6010 (B, Fe, Mo, Li, Mg, K)	Jay Williams	11-6	10:15		11/6/23	1015	1.6	Y	Y	Y
Diss 6020 - Al, Mn										
Alkalinity = (Total , Bicarb & Carb)										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brien					
SIGNATURE of SAMPLER:		DATE Signed: 11-5-23				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 11/6/23 1225

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 1.7/1.6 | 1.8/1.7 | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** ~~HNO3 (<2)~~ ~~H2SO4 (<2)~~ **NaOH (>10)** **NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? **Analysis:** NO2/NO3	✓	TW ✗				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 13:05		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:

COC PAGE \ of \

Sample Container Count

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

									AMBER GLASS							PLASTIC										OTHER								
			MeOH (only)																											Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			SBS																											Red	Yellow	Green	Black
			DI		VOA VIAL HS >6mm																												
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H		VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1												1	1				1	2	1	1	1		1				WT	✓	✓		✓
2												↓	↓				↓	↓	↓	↓	↓		↓				↓	↓	↓		↓
3												↓	↓				↓	↓	↓	↓	↓		↓				↓	↓	↓		↓
4												↓	↓				↓	↓	↓	↓	↓		↓				↓	↓	↓		↓
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 09, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 06, 2023. 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,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358742001	**Field Blank 2**	Water	11/05/23 18:20	11/06/23 10:15
50358742002	**MW-15**	Water	11/05/23 18:20	11/06/23 10:15
50358742003	**DUP 2**	Water	11/05/23 18:20	11/06/23 10:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358742001	**Field Blank 2**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	MGM	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50358742002	**MW-15**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	ELK	6	PASI-I
		EPA 6020	MGM	2	PASI-I
		EPA 6020	MGM	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50358742003	**DUP 2**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	ELK	6	PASI-I
		EPA 6020	MGM	2	PASI-I
		EPA 6020	MGM	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358742002	**MW-15**					
EPA 9056	Bromide	0.64	mg/L	0.050	11/11/23 10:12	
EPA 6010	Iron	2070	ug/L	100	11/15/23 12:18	
EPA 6010	Magnesium	39000	ug/L	1000	11/15/23 12:18	
EPA 6010	Potassium	54100	ug/L	1000	11/15/23 12:18	
EPA 6010	Silica	18200	ug/L	450	11/15/23 12:18	N2
EPA 6010	Sodium	60600	ug/L	1000	11/15/23 12:18	
EPA 6010	Boron, Dissolved	1290	ug/L	100	11/15/23 12:24	
EPA 6010	Iron, Dissolved	2290	ug/L	100	11/15/23 12:24	
EPA 6010	Lithium, Dissolved	809	ug/L	20.0	11/15/23 12:24	
EPA 6010	Magnesium, Dissolved	40200	ug/L	1000	11/15/23 12:24	
EPA 6010	Molybdenum, Dissolved	115	ug/L	10.0	11/15/23 12:24	
EPA 6010	Potassium, Dissolved	60300	ug/L	1000	11/15/23 12:24	
EPA 6020	Manganese	421	ug/L	5.0	11/11/23 07:39	
EPA 6020	Manganese, Dissolved	431	ug/L	5.0	11/11/23 00:44	
SM 2320B	Alkalinity, Total as CaCO3	210	mg/L	10.0	11/07/23 22:52	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	210	mg/L	10.0	11/07/23 22:52	
SM 2540C	Total Dissolved Solids	1290	mg/L	20.0	11/10/23 16:01	
HACH 8146	Iron, Ferrous	1.6	mg/L	0.20	11/10/23 12:38	H3,N2
EPA 365.1	Phosphate as P04	0.28	mg/L	0.15	11/14/23 19:33	
SM 5310C	Total Organic Carbon	2.1	mg/L	1.0	11/15/23 19:56	
SM 5310C	Dissolved Organic Carbon	2.4	mg/L	1.0	11/16/23 15:07	
50358742003	**DUP 2**					
EPA 9056	Bromide	0.66	mg/L	0.050	11/11/23 10:30	
EPA 6010	Iron	2110	ug/L	100	11/15/23 12:20	
EPA 6010	Magnesium	39400	ug/L	1000	11/15/23 12:20	
EPA 6010	Potassium	55000	ug/L	1000	11/15/23 12:20	
EPA 6010	Silica	18400	ug/L	450	11/15/23 12:20	N2
EPA 6010	Sodium	61400	ug/L	1000	11/15/23 12:20	
EPA 6010	Boron, Dissolved	1280	ug/L	100	11/15/23 12:25	
EPA 6010	Iron, Dissolved	2280	ug/L	100	11/15/23 12:25	
EPA 6010	Lithium, Dissolved	813	ug/L	20.0	11/15/23 12:25	
EPA 6010	Magnesium, Dissolved	39700	ug/L	1000	11/15/23 12:25	
EPA 6010	Molybdenum, Dissolved	116	ug/L	10.0	11/15/23 12:25	
EPA 6010	Potassium, Dissolved	60100	ug/L	1000	11/15/23 12:25	
EPA 6020	Manganese	419	ug/L	5.0	11/11/23 07:47	
EPA 6020	Manganese, Dissolved	428	ug/L	5.0	11/11/23 00:52	
SM 2320B	Alkalinity, Total as CaCO3	210	mg/L	10.0	11/07/23 22:52	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	210	mg/L	10.0	11/07/23 22:52	
SM 2540C	Total Dissolved Solids	1320	mg/L	20.0	11/10/23 16:01	
HACH 8146	Iron, Ferrous	1.5	mg/L	0.20	11/10/23 12:39	H3,N2
EPA 365.1	Phosphate as P04	0.41	mg/L	0.15	11/14/23 19:34	
SM 5310C	Total Organic Carbon	2.1	mg/L	1.0	11/15/23 20:06	
SM 5310C	Dissolved Organic Carbon	2.0	mg/L	1.0	11/16/23 15:39	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Sample: Field Blank 2 **Lab ID: 50358742001** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		11/11/23 09:17	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	ND	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:17	7439-89-6	
Magnesium	ND	ug/L	1000	32.8	1	11/09/23 08:28	11/15/23 12:17	7439-95-4	
Potassium	ND	ug/L	1000	120	1	11/09/23 08:28	11/15/23 12:17	7440-09-7	
Silica	ND	ug/L	450		1	11/09/23 08:28	11/15/23 12:17	7631-86-9	N2
Sodium	ND	ug/L	1000	48.2	1	11/09/23 08:28	11/15/23 12:17	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 08:48	7429-90-5	
Manganese	ND	ug/L	1.0	0.18	1	11/10/23 07:10	11/11/23 08:48	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	ND	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/07/23 22:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		11/10/23 16:01		PL
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/09/23 11:13	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 12:38	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/06/23 23:39	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/06/23 23:39	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	11/11/23 13:30	11/14/23 19:33		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Sample: Field Blank 2 **Lab ID: 50358742001** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		11/15/23 19:46	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Sample: MW-15 **Lab ID: 50358742002** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.64**	mg/L	0.050	0.0090	1		11/11/23 10:12	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	**2070**	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:18	7439-89-6	
Magnesium	**39000**	ug/L	1000	32.8	1	11/09/23 08:28	11/15/23 12:18	7439-95-4	
Potassium	**54100**	ug/L	1000	120	1	11/09/23 08:28	11/15/23 12:18	7440-09-7	
Silica	**18200**	ug/L	450		1	11/09/23 08:28	11/15/23 12:18	7631-86-9	N2
Sodium	**60600**	ug/L	1000	48.2	1	11/09/23 08:28	11/15/23 12:18	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1290**	ug/L	100	6.2	1	11/13/23 16:22	11/15/23 12:24	7440-42-8	
Iron, Dissolved	**2290**	ug/L	100	30.0	1	11/13/23 16:22	11/15/23 12:24	7439-89-6	
Lithium, Dissolved	**809**	ug/L	20.0	6.8	1	11/13/23 16:22	11/15/23 12:24	7439-93-2	
Magnesium, Dissolved	**40200**	ug/L	1000	33.6	1	11/13/23 16:22	11/15/23 12:24	7439-95-4	
Molybdenum, Dissolved	**115**	ug/L	10.0	0.78	1	11/13/23 16:22	11/15/23 12:24	7439-98-7	
Potassium, Dissolved	**60300**	ug/L	1000	97.8	1	11/13/23 16:22	11/15/23 12:24	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 08:52	7429-90-5	
Manganese	**421**	ug/L	5.0	0.91	5	11/10/23 07:10	11/11/23 07:39	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 02:36	7429-90-5	
Manganese, Dissolved	**431**	ug/L	5.0	0.91	5	11/10/23 07:10	11/11/23 00:44	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**210**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Bicarbonate (CaCO3)	**210**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/07/23 22:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1290**	mg/L	20.0	20.0	1		11/10/23 16:01		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/09/23 11:13	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Sample: MW-15 **Lab ID: 50358742002** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**1.6**	mg/L	0.20	0.035	1		11/10/23 12:38	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/06/23 23:41	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/06/23 23:41	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.28**	mg/L	0.15	0.15	1	11/11/23 13:30	11/14/23 19:33		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**2.1**	mg/L	1.0	0.24	1		11/15/23 19:56	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.4**	mg/L	1.0	0.24	1		11/16/23 15:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Sample: DUP 2 **Lab ID: 50358742003** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.66**	mg/L	0.050	0.0090	1		11/11/23 10:30	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	**2110**	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:20	7439-89-6	
Magnesium	**39400**	ug/L	1000	32.8	1	11/09/23 08:28	11/15/23 12:20	7439-95-4	
Potassium	**55000**	ug/L	1000	120	1	11/09/23 08:28	11/15/23 12:20	7440-09-7	
Silica	**18400**	ug/L	450		1	11/09/23 08:28	11/15/23 12:20	7631-86-9	N2
Sodium	**61400**	ug/L	1000	48.2	1	11/09/23 08:28	11/15/23 12:20	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1280**	ug/L	100	6.2	1	11/13/23 16:22	11/15/23 12:25	7440-42-8	
Iron, Dissolved	**2280**	ug/L	100	30.0	1	11/13/23 16:22	11/15/23 12:25	7439-89-6	
Lithium, Dissolved	**813**	ug/L	20.0	6.8	1	11/13/23 16:22	11/15/23 12:25	7439-93-2	
Magnesium, Dissolved	**39700**	ug/L	1000	33.6	1	11/13/23 16:22	11/15/23 12:25	7439-95-4	
Molybdenum, Dissolved	**116**	ug/L	10.0	0.78	1	11/13/23 16:22	11/15/23 12:25	7439-98-7	
Potassium, Dissolved	**60100**	ug/L	1000	97.8	1	11/13/23 16:22	11/15/23 12:25	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 08:56	7429-90-5	
Manganese	**419**	ug/L	5.0	0.91	5	11/10/23 07:10	11/11/23 07:47	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.8	1	11/10/23 07:10	11/11/23 02:40	7429-90-5	
Manganese, Dissolved	**428**	ug/L	5.0	0.91	5	11/10/23 07:10	11/11/23 00:52	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**210**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Bicarbonate (CaCO3)	**210**	mg/L	10.0	10.0	1		11/07/23 22:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/07/23 22:52		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1320**	mg/L	20.0	20.0	1		11/10/23 16:01		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/09/23 11:13	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Sample: DUP 2 **Lab ID: 50358742003** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**1.5**	mg/L	0.20	0.035	1		11/10/23 12:39	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/06/23 23:46	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/06/23 23:46	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.41**	mg/L	0.15	0.15	1	11/11/23 13:30	11/14/23 19:34		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**2.1**	mg/L	1.0	0.24	1		11/15/23 20:06	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.0**	mg/L	1.0	0.24	1		11/16/23 15:39		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 761953
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3492413 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	11/10/23 13:51	

LABORATORY CONTROL SAMPLE: 3492414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.96	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3492419 3492420

Parameter	Units	50358539001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	ND	1	1	0.96	0.96	96	96	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 761716
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3491392 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	100	18.1	11/15/23 12:00	
Magnesium	ug/L	ND	1000	32.8	11/15/23 12:00	
Potassium	ug/L	ND	1000	120	11/15/23 12:00	
Silica	ug/L	ND	450		11/15/23 12:00	N2
Sodium	ug/L	ND	1000	48.2	11/15/23 12:00	

LABORATORY CONTROL SAMPLE: 3491393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9630	96	80-120	
Magnesium	ug/L	10000	10000	100	80-120	
Potassium	ug/L	10000	9670	97	80-120	
Silica	ug/L	10700	11000	103	80-120	N2
Sodium	ug/L	10000	9680	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491394 3491395

Parameter	Units	50358714001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	461	10000	10000	10000	10300	96	98	75-125	3	20	
Magnesium	ug/L	35100	10000	10000	44900	45100	97	100	75-125	1	20	
Potassium	ug/L	21000	10000	10000	30200	31000	91	100	75-125	3	20	
Silica	ug/L	19000	10700	10700	30200	30600	105	108	75-125	1	20	N2
Sodium	ug/L	30700	10000	10000	39500	40200	88	95	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 762440
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742002, 50358742003

METHOD BLANK: 3495049 Matrix: Water
Associated Lab Samples: 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	11/15/23 12:06	
Iron, Dissolved	ug/L	ND	100	30.0	11/15/23 12:06	
Lithium, Dissolved	ug/L	ND	20.0	6.8	11/15/23 12:06	
Magnesium, Dissolved	ug/L	ND	1000	33.6	11/15/23 12:06	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	11/15/23 12:06	
Potassium, Dissolved	ug/L	ND	1000	97.8	11/15/23 12:06	

LABORATORY CONTROL SAMPLE: 3495050

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	995	99	80-120	
Iron, Dissolved	ug/L	10000	10300	103	80-120	
Lithium, Dissolved	ug/L	1000	1070	107	80-120	
Magnesium, Dissolved	ug/L	10000	9980	100	80-120	
Molybdenum, Dissolved	ug/L	1000	1040	104	80-120	
Potassium, Dissolved	ug/L	10000	10500	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495051 3495052

Parameter	Units	50359283003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	208	1000	1000	1220	1200	102	99	75-125	2	20	
Iron, Dissolved	ug/L	1680	10000	10000	11700	11500	101	98	75-125	2	20	
Lithium, Dissolved	ug/L	17.1J	1000	1000	1060	1030	104	102	75-125	3	20	
Magnesium, Dissolved	ug/L	43900	10000	10000	54600	53700	107	98	75-125	2	20	
Molybdenum, Dissolved	ug/L	12.5	1000	1000	1030	1010	102	99	75-125	2	20	
Potassium, Dissolved	ug/L	3570	10000	10000	13800	13400	102	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 761949
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3492386 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.8	11/11/23 07:19	
Manganese	ug/L	ND	1.0	0.18	11/11/23 07:19	

LABORATORY CONTROL SAMPLE: 3492387

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	395	99	80-120	
Manganese	ug/L	40	40.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3492388 3492389

Parameter	Units	50358771001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	15.5	400	400	402	413	97	99	75-125	3	20	
Manganese	ug/L	404	40	40	450	441	114	92	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 761945
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742002, 50358742003

METHOD BLANK: 3492364 Matrix: Water
Associated Lab Samples: 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.8	11/11/23 00:28	
Manganese, Dissolved	ug/L	ND	1.0	0.18	11/11/23 00:28	

LABORATORY CONTROL SAMPLE: 3492365

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	392	98	80-120	
Manganese, Dissolved	ug/L	40	41.5	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3492366 3492367

Parameter	Units	50359028002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	361	371	90	92	75-125	3	20	
Manganese, Dissolved	ug/L	1490	40	40	1530	1530	86	89	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 761422
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3489903 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/07/23 22:52	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/07/23 22:52	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/07/23 22:52	

LABORATORY CONTROL SAMPLE: 3489904

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.4	97	90-110	

SAMPLE DUPLICATE: 3489905

Parameter	Units	50358742002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	210	213	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	210	213	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3489906

Parameter	Units	50358479001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	354	363	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	354	363	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 762128
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3493491 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 15:57	

LABORATORY CONTROL SAMPLE: 3493492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	288	96	80-120	

SAMPLE DUPLICATE: 3493493

Parameter	Units	50358621001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1010	1020	1	10	

SAMPLE DUPLICATE: 3493494

Parameter	Units	50358744003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	547	543	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 761825
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3491774 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/09/23 11:13	

LABORATORY CONTROL SAMPLE: 3491775

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491776 3491777

Parameter	Units	50358714001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.29	0.30	54	55	90-110	2	20	M3

MATRIX SPIKE SAMPLE: 3491778

Parameter	Units	50358769003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.17J	0.5	0.67	99	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 762073
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3493243 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/10/23 12:17	H3,N2

LABORATORY CONTROL SAMPLE: 3493244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	104	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493245 3493246

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	ND	1	1	1.0	1.0	101	101	90-110	0	20	H3,N2

MATRIX SPIKE SAMPLE: 3493247

Parameter	Units	50358714003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.0	102	90-110	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 761177
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3488955 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/06/23 23:24	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/06/23 23:24	

LABORATORY CONTROL SAMPLE: 3488956

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	102	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3488957 3488958

Parameter	Units	50358714003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	2.5	1	1	3.4	3.4	94	93	90-110	0	20	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	104	104	90-110	0	20	

MATRIX SPIKE SAMPLE: 3488959

Parameter	Units	50358774005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.0	98	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.0	102	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 762328
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3494637 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	11/14/23 19:27	

LABORATORY CONTROL SAMPLE: 3494638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3494639 3494640

Parameter	Units	50359333001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	0.64			2.1	2.1				0		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 763080
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742001, 50358742002, 50358742003

METHOD BLANK: 3497429 Matrix: Water
Associated Lab Samples: 50358742001, 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	11/15/23 17:02	

LABORATORY CONTROL SAMPLE: 3497430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3497431 3497432

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.6	10	10	12.8	12.9	92	93	80-120	1	20	

MATRIX SPIKE SAMPLE: 3497433

Parameter	Units	50358828001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	10	12.3	97	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

QC Batch: 763360
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358742002, 50358742003

METHOD BLANK: 3498890 Matrix: Water
Associated Lab Samples: 50358742002, 50358742003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	11/16/23 14:43	

LABORATORY CONTROL SAMPLE: 3498891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3498892 3498893

Parameter	Units	50358742002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.4	10	10	11.5	11.4	91	90	80-120	1	20	

MATRIX SPIKE SAMPLE: 3498894

Parameter	Units	50358742003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	2.0	10	11.6	95	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

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

H3	Sample was received or analysis requested beyond the recognized method holding time.
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.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358742

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358742001	**Field Blank 2**	EPA 9056	761953		
50358742002	**MW-15**	EPA 9056	761953		
50358742003	**DUP 2**	EPA 9056	761953		
50358742001	**Field Blank 2**	EPA 3010	761716	EPA 6010	763051
50358742002	**MW-15**	EPA 3010	761716	EPA 6010	763051
50358742003	**DUP 2**	EPA 3010	761716	EPA 6010	763051
50358742002	**MW-15**	EPA 3010	762440	EPA 6010	763063
50358742003	**DUP 2**	EPA 3010	762440	EPA 6010	763063
50358742001	**Field Blank 2**	EPA 200.2	761949	EPA 6020	762233
50358742002	**MW-15**	EPA 200.2	761949	EPA 6020	762233
50358742003	**DUP 2**	EPA 200.2	761949	EPA 6020	762233
50358742002	**MW-15**	EPA 200.2	761945	EPA 6020	762232
50358742003	**DUP 2**	EPA 200.2	761945	EPA 6020	762232
50358742001	**Field Blank 2**	SM 2320B	761422		
50358742002	**MW-15**	SM 2320B	761422		
50358742003	**DUP 2**	SM 2320B	761422		
50358742001	**Field Blank 2**	SM 2540C	762128		
50358742002	**MW-15**	SM 2540C	762128		
50358742003	**DUP 2**	SM 2540C	762128		
50358742001	**Field Blank 2**	SM 4500-S2-D	761825		
50358742002	**MW-15**	SM 4500-S2-D	761825		
50358742003	**DUP 2**	SM 4500-S2-D	761825		
50358742001	**Field Blank 2**	HACH 8146	762073		
50358742002	**MW-15**	HACH 8146	762073		
50358742003	**DUP 2**	HACH 8146	762073		
50358742001	**Field Blank 2**	EPA 353.2	761177		
50358742002	**MW-15**	EPA 353.2	761177		
50358742003	**DUP 2**	EPA 353.2	761177		
50358742001	**Field Blank 2**	EPA 365.1	762328	EPA 365.1	762971
50358742002	**MW-15**	EPA 365.1	762328	EPA 365.1	762971
50358742003	**DUP 2**	EPA 365.1	762328	EPA 365.1	762971
50358742001	**Field Blank 2**	SM 5310C	763080		
50358742002	**MW-15**	SM 5310C	763080		
50358742003	**DUP 2**	SM 5310C	763080		
50358742002	**MW-15**	SM 5310C	763360		
50358742003	**DUP 2**	SM 5310C	763360		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request D

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields mus

WO# : 50358742

50358742

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P3R3 Nov 2023	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/52

Regulatory Agency
State / Location
IN

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Residual Chlorine (Y/N)	
	Requested Analysis Filtered (Y/N)																						Y			Y				
1	Field Blank 2			11-5-23	1745	11-5-23	1800		7	X	X	X		X					X	X	X	X	X	X	X	X	X		001
2	MW-15			11-5-23	1745	11-5-23	1800		9	X	X	X		X					X	X	X	X	X	X	X	X	X		002
3	DUP 2			11-5-23	1745	11-5-23	1800		9	X	X	X		X					X	X	X	X	X	X	X	X	X		003
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals: 6010 Fe, Mg, Na, K, sila 6020 - Al, Mn		11-6-23	7:15	Jay Williams	11/6	7:15				
' Dissolved FF 6010 (B, Fe, Mo, Li, Mg, K)	Jay Williams	11-6	10:15		11/6/23	1015	0.6	Y	Y	Y
)iss 6020 - Al, Mn										
lkalinity = (Total , Bicarb & Carb)										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brien					
SIGNATURE of SAMPLER:		DATE Signed: 11-5-23				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/6/23 1415 LZ

1. **Courier:** ☐ FED EX ☐ UPS ☒ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D (E) F G H

4. **Cooler Temperature(s):** 0.6/0.6 | | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		X
Short Hold Time Analysis (48 hours or less)? **Analysis:** NO_3/NO_2	X	
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 15:10	
Rush TAT Requested (4 days or less):		X
Custody Signatures Present?	X	
Containers Intact?:	X	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	X	
Extra labels on Terracore Vials? (soils only)		X

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** **HNO3 (<2)** **H2SO4 (<2)** **NaOH (>10)** **NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	X		
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			X
Residual Chlorine Check (Total/Amenable/Free Cyanide)			X
Headspace Wisconsin Sulfide?			X
	Present	Absent	No VOA Vials Sent
Headspace in VOA Vials (>6mm): See Containter Count form for details			X
Trip Blank Present?		X	
Trip Blank Custody Seals?:			X

COMMENTS:

COC PAGE 1 of 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1												1					1	2	1		1		1					SL				✓
2													1							1												
3												4	1				4	4	14	1	14		14					4	4	4		14	
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

December 29, 2023

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 06, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358744001	**MW-13**	Water	11/05/23 08:40	11/06/23 10:15
50358744002	**MW-12**	Water	11/05/23 10:35	11/06/23 10:15
50358744003	**MW-1**	Water	11/05/23 13:20	11/06/23 10:15
50358744004	**MW-11**	Water	11/05/23 15:18	11/06/23 10:15

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358744001	**MW-13**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	CAW	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
50358744002	**MW-12**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	CAW	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
50358744003	**MW-1**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	CAW	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
50358744004	**MW-11**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	CAW	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358744001	**MW-13**					
EPA 9056	Chloride	18.0	mg/L	0.25	11/11/23 10:48	
EPA 9056	Fluoride	0.82	mg/L	0.10	11/11/23 10:48	
EPA 9056	Sulfate	1430	mg/L	25.0	11/11/23 11:25	
EPA 6010	Boron	2440	ug/L	100	11/15/23 12:21	
EPA 6010	Calcium	640000	ug/L	5000	11/15/23 13:37	
EPA 6010	Lithium	463	ug/L	20.0	11/15/23 12:21	
EPA 6010	Molybdenum	79.4	ug/L	10.0	11/15/23 12:21	
EPA 6020	Barium	20.5	ug/L	1.0	11/08/23 16:36	
EPA 6020	Copper	2.5	ug/L	1.0	11/08/23 16:36	
EPA 6020	Selenium	20.0	ug/L	1.0	11/08/23 16:36	
EPA 903.1	Radium-226	0.000 ± 0.449 (0.900) C:NA T:92%	pCi/L		11/29/23 12:43	
EPA 904.0	Radium-228	0.678 ± 0.496 (0.963) C:71% T:78%	pCi/L		11/27/23 16:31	
Total Radium Calculation	Total Radium	0.678 ± 0.945 (1.86)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	2400	mg/L	20.0	11/10/23 16:01	
50358744002	**MW-12**					
EPA 9056	Chloride	7.4	mg/L	0.25	11/11/23 11:43	
EPA 9056	Fluoride	0.12	mg/L	0.10	11/11/23 11:43	
EPA 9056	Sulfate	13.6	mg/L	0.25	11/11/23 11:43	
EPA 6010	Calcium	46800	ug/L	1000	11/15/23 12:23	
EPA 6010	Iron	470	ug/L	100	11/15/23 12:23	
EPA 6020	Barium	25.0	ug/L	1.0	11/08/23 16:39	
EPA 903.1	Radium-226	-0.203 ± 0.373 (0.846) C:NA T:93%	pCi/L		11/29/23 12:43	
EPA 904.0	Radium-228	0.594 ± 0.454 (0.891) C:70% T:82%	pCi/L		11/27/23 16:31	
Total Radium Calculation	Total Radium	0.594 ± 0.827 (1.74)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	213	mg/L	10.0	11/10/23 16:01	
50358744003	**MW-1**					
EPA 9056	Chloride	3.5	mg/L	0.25	11/11/23 13:50	
EPA 9056	Fluoride	0.10	mg/L	0.10	11/11/23 13:50	
EPA 9056	Sulfate	159	mg/L	2.5	11/11/23 14:08	
EPA 6010	Boron	146	ug/L	100	11/15/23 12:24	
EPA 6010	Calcium	128000	ug/L	1000	11/15/23 12:24	
EPA 6020	Barium	40.8	ug/L	1.0	11/08/23 16:46	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358744003	**MW-1**					
EPA 903.1	Radium-226	-0.0651 ± 0.612 (1.22) C:NA T:84%	pCi/L		11/29/23 12:43	
EPA 904.0	Radium-228	0.461 ± 0.497 (1.03) C:60% T:77%	pCi/L		11/27/23 16:31	
Total Radium Calculation	Total Radium	0.461 ± 1.11 (2.25)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	547	mg/L	10.0	11/10/23 16:02	
50358744004	**MW-11**					
EPA 9056	Chloride	2.3	mg/L	0.25	11/11/23 14:26	
EPA 9056	Fluoride	0.14	mg/L	0.10	11/11/23 14:26	
EPA 9056	Sulfate	470	mg/L	2.5	11/11/23 14:45	
EPA 6010	Boron	1060	ug/L	100	11/15/23 12:26	
EPA 6010	Calcium	169000	ug/L	1000	11/15/23 12:26	
EPA 6010	Iron	13100	ug/L	100	11/15/23 12:26	
EPA 6010	Manganese	30.3	ug/L	10.0	11/15/23 12:26	
EPA 6020	Arsenic	4.7	ug/L	1.0	11/08/23 16:49	
EPA 6020	Barium	54.0	ug/L	1.0	11/08/23 16:49	
EPA 6020	Beryllium	0.30	ug/L	0.20	11/08/23 16:49	
EPA 6020	Cobalt	1.5	ug/L	1.0	11/08/23 16:49	
EPA 6020	Copper	2.7	ug/L	1.0	11/08/23 16:49	
EPA 6020	Selenium	3.4	ug/L	1.0	11/08/23 16:49	
EPA 6020	Zinc	16.0	ug/L	3.0	11/08/23 16:49	
EPA 903.1	Radium-226	0.285 ± 0.582 (1.03) C:NA T:88%	pCi/L		11/29/23 12:43	
EPA 904.0	Radium-228	0.633 ± 0.459 (0.886) C:63% T:88%	pCi/L		11/27/23 16:31	
Total Radium Calculation	Total Radium	0.918 ± 1.04 (1.92)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	804	mg/L	10.0	11/10/23 16:12	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Sample: MW-13 **Lab ID: 50358744001** Collected: 11/05/23 08:40 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**18.0**	mg/L	0.25	0.067	1		11/11/23 10:48	16887-00-6	
Fluoride	**0.82**	mg/L	0.10	0.017	1		11/11/23 10:48	16984-48-8	
Sulfate	**1430**	mg/L	25.0	19.0	100		11/11/23 11:25	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**2440**	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:21	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/09/23 08:28	11/15/23 12:21	7440-43-9	
Calcium	**640000**	ug/L	5000	284	5	11/09/23 08:28	11/15/23 13:37	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	11/09/23 08:28	11/15/23 12:21	7440-47-3	
Iron	ND	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:21	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:21	7439-92-1	
Lithium	**463**	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:21	7439-93-2	
Manganese	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:21	7439-96-5	
Molybdenum	**79.4**	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:21	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	11/08/23 07:26	11/08/23 16:36	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	11/08/23 07:26	11/08/23 16:36	7440-38-2	
Barium	**20.5**	ug/L	1.0	0.077	1	11/08/23 07:26	11/08/23 16:36	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	11/08/23 07:26	11/08/23 16:36	7440-41-7	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/08/23 16:36	7440-48-4	
Copper	**2.5**	ug/L	1.0	0.23	1	11/08/23 07:26	11/08/23 16:36	7440-50-8	
Selenium	**20.0**	ug/L	1.0	0.20	1	11/08/23 07:26	11/08/23 16:36	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/08/23 16:36	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	11/08/23 07:26	11/08/23 16:36	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	11/09/23 10:50	11/09/23 19:12	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2400**	mg/L	20.0	20.0	1		11/10/23 16:01		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Sample: MW-12 **Lab ID: 50358744002** Collected: 11/05/23 10:35 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**7.4**	mg/L	0.25	0.067	1		11/11/23 11:43	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.017	1		11/11/23 11:43	16984-48-8	
Sulfate	**13.6**	mg/L	0.25	0.19	1		11/11/23 11:43	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:23	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/09/23 08:28	11/15/23 12:23	7440-43-9	
Calcium	**46800**	ug/L	1000	56.7	1	11/09/23 08:28	11/15/23 12:23	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	11/09/23 08:28	11/15/23 12:23	7440-47-3	
Iron	**470**	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:23	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:23	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:23	7439-93-2	
Manganese	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:23	7439-96-5	
Molybdenum	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:23	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	11/08/23 07:26	11/08/23 16:39	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	11/08/23 07:26	11/08/23 16:39	7440-38-2	
Barium	**25.0**	ug/L	1.0	0.077	1	11/08/23 07:26	11/08/23 16:39	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	11/08/23 07:26	11/08/23 16:39	7440-41-7	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/08/23 16:39	7440-48-4	
Copper	ND	ug/L	1.0	0.23	1	11/08/23 07:26	11/08/23 16:39	7440-50-8	
Selenium	ND	ug/L	1.0	0.20	1	11/08/23 07:26	11/08/23 16:39	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/08/23 16:39	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	11/08/23 07:26	11/08/23 16:39	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	11/09/23 10:50	11/09/23 19:14	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**213**	mg/L	10.0	10.0	1		11/10/23 16:01		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Sample: MW-1 **Lab ID: 50358744003** Collected: 11/05/23 13:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**3.5**	mg/L	0.25	0.067	1		11/11/23 13:50	16887-00-6	
Fluoride	**0.10**	mg/L	0.10	0.017	1		11/11/23 13:50	16984-48-8	
Sulfate	**159**	mg/L	2.5	1.9	10		11/11/23 14:08	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**146**	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:24	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/09/23 08:28	11/15/23 12:24	7440-43-9	
Calcium	**128000**	ug/L	1000	56.7	1	11/09/23 08:28	11/15/23 12:24	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	11/09/23 08:28	11/15/23 12:24	7440-47-3	
Iron	ND	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:24	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:24	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:24	7439-93-2	
Manganese	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:24	7439-96-5	
Molybdenum	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:24	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	11/08/23 07:26	11/08/23 16:46	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	11/08/23 07:26	11/08/23 16:46	7440-38-2	
Barium	**40.8**	ug/L	1.0	0.077	1	11/08/23 07:26	11/08/23 16:46	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	11/08/23 07:26	11/08/23 16:46	7440-41-7	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/08/23 16:46	7440-48-4	
Copper	ND	ug/L	1.0	0.23	1	11/08/23 07:26	11/08/23 16:46	7440-50-8	
Selenium	ND	ug/L	1.0	0.20	1	11/08/23 07:26	11/08/23 16:46	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/08/23 16:46	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	11/08/23 07:26	11/08/23 16:46	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	11/09/23 10:50	11/09/23 19:17	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**547**	mg/L	10.0	10.0	1		11/10/23 16:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Sample: MW-11 **Lab ID: 50358744004** Collected: 11/05/23 15:18 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**2.3**	mg/L	0.25	0.067	1		11/11/23 14:26	16887-00-6	
Fluoride	**0.14**	mg/L	0.10	0.017	1		11/11/23 14:26	16984-48-8	
Sulfate	**470**	mg/L	2.5	1.9	10		11/11/23 14:45	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1060**	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:26	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/09/23 08:28	11/15/23 12:26	7440-43-9	
Calcium	**169000**	ug/L	1000	56.7	1	11/09/23 08:28	11/15/23 12:26	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	11/09/23 08:28	11/15/23 12:26	7440-47-3	
Iron	**13100**	ug/L	100	18.1	1	11/09/23 08:28	11/15/23 12:26	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:26	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:26	7439-93-2	
Manganese	**30.3**	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:26	7439-96-5	
Molybdenum	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:26	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	11/08/23 07:26	11/08/23 16:49	7440-36-0	
Arsenic	**4.7**	ug/L	1.0	0.075	1	11/08/23 07:26	11/08/23 16:49	7440-38-2	
Barium	**54.0**	ug/L	1.0	0.077	1	11/08/23 07:26	11/08/23 16:49	7440-39-3	
Beryllium	**0.30**	ug/L	0.20	0.035	1	11/08/23 07:26	11/08/23 16:49	7440-41-7	
Cobalt	**1.5**	ug/L	1.0	0.046	1	11/08/23 07:26	11/08/23 16:49	7440-48-4	
Copper	**2.7**	ug/L	1.0	0.23	1	11/08/23 07:26	11/08/23 16:49	7440-50-8	
Selenium	**3.4**	ug/L	1.0	0.20	1	11/08/23 07:26	11/08/23 16:49	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/08/23 16:49	7440-28-0	
Zinc	**16.0**	ug/L	3.0	1.3	1	11/08/23 07:26	11/08/23 16:49	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	11/09/23 10:50	11/09/23 19:19	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**804**	mg/L	10.0	10.0	1		11/10/23 16:12		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

QC Batch: 761953
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

METHOD BLANK: 3492413 Matrix: Water
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	11/10/23 13:51	
Fluoride	mg/L	ND	0.10	0.017	11/10/23 13:51	
Sulfate	mg/L	ND	0.25	0.19	11/10/23 13:51	

LABORATORY CONTROL SAMPLE: 3492414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	0.98	98	80-120	
Sulfate	mg/L	5	4.8	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3492419 3492420

Parameter	Units	50358539001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	11.8	2.5	2.5	14.0	14.0	88	87	80-120	0	15	
Fluoride	mg/L	ND	1	1	1.1	1.1	102	102	80-120	0	15	
Sulfate	mg/L	23.0	5	5	28.1	28.0	102	100	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

QC Batch: 761373
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

METHOD BLANK: 3489566 Matrix: Water
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	11/09/23 18:13	

LABORATORY CONTROL SAMPLE: 3489567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3489568 3489569

Parameter	Units	50358484005 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	4.4	4.5	88	90	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

QC Batch: 761716
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

METHOD BLANK: 3491392 Matrix: Water
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	11/15/23 12:00	
Cadmium	ug/L	ND	2.0	0.74	11/15/23 12:00	
Calcium	ug/L	ND	1000	56.7	11/15/23 12:00	
Chromium	ug/L	ND	10.0	1.4	11/15/23 12:00	
Iron	ug/L	ND	100	18.1	11/15/23 12:00	
Lead	ug/L	ND	10.0	4.0	11/15/23 12:00	
Lithium	ug/L	ND	20.0	5.1	11/15/23 12:00	
Manganese	ug/L	ND	10.0	1.1	11/15/23 12:00	
Molybdenum	ug/L	ND	10.0	1.1	11/15/23 12:00	

LABORATORY CONTROL SAMPLE: 3491393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	994	99	80-120	
Cadmium	ug/L	1000	986	99	80-120	
Calcium	ug/L	10000	9790	98	80-120	
Chromium	ug/L	1000	988	99	80-120	
Iron	ug/L	10000	9630	96	80-120	
Lead	ug/L	1000	947	95	80-120	
Lithium	ug/L	1000	986	99	80-120	
Manganese	ug/L	1000	983	98	80-120	
Molybdenum	ug/L	1000	1060	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491394 3491395

Parameter	Units	50358714001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	2520	1000	1000	3570	3600	106	108	75-125	1	20	
Cadmium	ug/L	ND	1000	1000	993	1020	99	102	75-125	3	20	
Calcium	ug/L	587000	10000	10000	593000	599000	69	125	75-125	1	20	E,P6
Chromium	ug/L	ND	1000	1000	983	1010	98	101	75-125	3	20	
Iron	ug/L	461	10000	10000	10000	10300	96	98	75-125	3	20	
Lead	ug/L	ND	1000	1000	898	925	90	92	75-125	3	20	
Lithium	ug/L	450	1000	1000	1430	1460	98	101	75-125	2	20	
Manganese	ug/L	27.7	1000	1000	1010	1030	98	101	75-125	2	20	
Molybdenum	ug/L	80.2	1000	1000	1140	1170	106	109	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

QC Batch: 761397
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

METHOD BLANK: 3489632 Matrix: Water
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.49	11/08/23 13:55	
Arsenic	ug/L	ND	1.0	0.075	11/08/23 13:55	
Barium	ug/L	ND	1.0	0.077	11/08/23 13:55	
Beryllium	ug/L	ND	0.20	0.035	11/08/23 13:55	
Cobalt	ug/L	ND	1.0	0.046	11/08/23 13:55	
Copper	ug/L	ND	1.0	0.23	11/08/23 13:55	
Selenium	ug/L	ND	1.0	0.20	11/08/23 13:55	
Thallium	ug/L	ND	1.0	0.040	11/08/23 13:55	
Zinc	ug/L	ND	3.0	1.3	11/08/23 13:55	

LABORATORY CONTROL SAMPLE: 3489633

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.8	104	80-120	
Arsenic	ug/L	40	39.3	98	80-120	
Barium	ug/L	40	39.7	99	80-120	
Beryllium	ug/L	40	40.7	102	80-120	
Cobalt	ug/L	40	40.8	102	80-120	
Copper	ug/L	40	39.3	98	80-120	
Selenium	ug/L	40	39.9	100	80-120	
Thallium	ug/L	40	41.2	103	80-120	
Zinc	ug/L	40	39.8	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3489634 3489635

Parameter	Units	50358714001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	41.7	42.0	104	105	75-125	1	20	
Arsenic	ug/L	ND	40	40	36.4	36.9	89	91	75-125	1	20	
Barium	ug/L	21.9	40	40	59.3	59.3	94	94	75-125	0	20	
Beryllium	ug/L	ND	40	40	40.8	40.9	102	102	75-125	0	20	CC
Cobalt	ug/L	ND	40	40	39.6	40.0	97	98	75-125	1	20	
Copper	ug/L	3.0	40	40	39.1	39.6	90	91	75-125	1	20	
Selenium	ug/L	18.8	40	40	57.8	59.0	98	101	75-125	2	20	
Thallium	ug/L	ND	40	40	42.4	42.6	106	106	75-125	1	20	
Zinc	ug/L	4.0	40	40	38.6	39.5	86	89	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

QC Batch: 762128
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358744001, 50358744002, 50358744003

METHOD BLANK: 3493491 Matrix: Water
Associated Lab Samples: 50358744001, 50358744002, 50358744003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 15:57	

LABORATORY CONTROL SAMPLE: 3493492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	288	96	80-120	

SAMPLE DUPLICATE: 3493493

Parameter	Units	50358621001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1010	1020	1	10	

SAMPLE DUPLICATE: 3493494

Parameter	Units	50358744003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	547	543	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

QC Batch: 762130
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358744004

METHOD BLANK: 3493503 Matrix: Water
Associated Lab Samples: 50358744004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 16:11	

LABORATORY CONTROL SAMPLE: 3493504

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	296	99	80-120	

SAMPLE DUPLICATE: 3493505

Parameter	Units	50358744004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	804	783	3	10	

SAMPLE DUPLICATE: 3493506

Parameter	Units	50358769013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	424	423	0	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Sample: MW-13 **Lab ID: 50358744001** Collected: 11/05/23 08:40 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.449 (0.900) C:NA T:92%**	pCi/L	11/29/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.678 ± 0.496 (0.963) C:71% T:78%**	pCi/L	11/27/23 16:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.678 ± 0.945 (1.86)**	pCi/L	11/30/23 08:51	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Sample: MW-12 **Lab ID: 50358744002** Collected: 11/05/23 10:35 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.203 ± 0.373 (0.846) C:NA T:93%**	pCi/L	11/29/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.594 ± 0.454 (0.891) C:70% T:82%**	pCi/L	11/27/23 16:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.594 ± 0.827 (1.74)**	pCi/L	11/30/23 08:51	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Sample: MW-1 **Lab ID: 50358744003** Collected: 11/05/23 13:20 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0651 ± 0.612 (1.22) C:NA T:84%**	pCi/L	11/29/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.461 ± 0.497 (1.03) C:60% T:77%**	pCi/L	11/27/23 16:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.461 ± 1.11 (2.25)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Sample: MW-11 **Lab ID: 50358744004** Collected: 11/05/23 15:18 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.285 ± 0.582 (1.03) C:NA T:88%**	pCi/L	11/29/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.633 ± 0.459 (0.886) C:63% T:88%**	pCi/L	11/27/23 16:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.918 ± 1.04 (1.92)**	pCi/L	11/30/23 08:51	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

QC Batch: 629058
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

METHOD BLANK: 3066687 Matrix: Water
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0425 ± 0.194 (0.458) C:NA T:94%	pCi/L	11/29/23 12:31	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

QC Batch: 629059
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

METHOD BLANK: 3066691 Matrix: Water
Associated Lab Samples: 50358744001, 50358744002, 50358744003, 50358744004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.194 ± 0.348 (0.762) C:80% T:84%	pCi/L	11/27/23 16:27	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

CC	The continuing calibration for this compound is outside of method control limits. The result is estimated.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358744

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358744001	**MW-13**	EPA 9056	761953		
50358744002	**MW-12**	EPA 9056	761953		
50358744003	**MW-1**	EPA 9056	761953		
50358744004	**MW-11**	EPA 9056	761953		
50358744001	**MW-13**	EPA 3010	761716	EPA 6010	763051
50358744002	**MW-12**	EPA 3010	761716	EPA 6010	763051
50358744003	**MW-1**	EPA 3010	761716	EPA 6010	763051
50358744004	**MW-11**	EPA 3010	761716	EPA 6010	763051
50358744001	**MW-13**	EPA 200.2	761397	EPA 6020	761598
50358744002	**MW-12**	EPA 200.2	761397	EPA 6020	761598
50358744003	**MW-1**	EPA 200.2	761397	EPA 6020	761598
50358744004	**MW-11**	EPA 200.2	761397	EPA 6020	761598
50358744001	**MW-13**	EPA 7470	761373	EPA 7470	761956
50358744002	**MW-12**	EPA 7470	761373	EPA 7470	761956
50358744003	**MW-1**	EPA 7470	761373	EPA 7470	761956
50358744004	**MW-11**	EPA 7470	761373	EPA 7470	761956
50358744001	**MW-13**	EPA 903.1	629058		
50358744002	**MW-12**	EPA 903.1	629058		
50358744003	**MW-1**	EPA 903.1	629058		
50358744004	**MW-11**	EPA 903.1	629058		
50358744001	**MW-13**	EPA 904.0	629059		
50358744002	**MW-12**	EPA 904.0	629059		
50358744003	**MW-1**	EPA 904.0	629059		
50358744004	**MW-11**	EPA 904.0	629059		
50358744001	**MW-13**	Total Radium Calculation	632884		
50358744002	**MW-12**	Total Radium Calculation	632884		
50358744003	**MW-1**	Total Radium Calculation	632884		
50358744004	**MW-11**	Total Radium Calculation	632884		
50358744001	**MW-13**	SM 2540C	762128		
50358744002	**MW-12**	SM 2540C	762128		
50358744003	**MW-1**	SM 2540C	762128		
50358744004	**MW-11**	SM 2540C	762130		

Pace Analytical
WWW.PACELABS.COM

WO# : 50358744

50358744

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100
	Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone:	(317)579-4082 Fax:
Requested Due Date:	

Section B

Report To:	
Copy To:	
Purchase Order #:	
Project Name:	Petersburg Nov 2023 P1R2
Project #:	

Section C — Invoice Information:

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/49

Regulatory Agency

State / Location: IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals, Total*	TDS	(Cl, F, SO4) IC	Rad-226/228 + Sum	Residual Chlorine (Y/N)	
1	MW-13			11-5-	0810	11-5-23	0840		5	X		X							X	X	X	X		001
2	MW-12			11-5	1000	11-5-23	1035		5	X		X							X	X	X	X		002
3	MW-1			11-5-23	1200	11-5-23	1320		5	X		X							X	X	X	X		003
4	MW-11			11-5-23	1445	11-5-23	1518		5	X		X							X	X	X	X		004
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)	Josh O'Brian	11-6-23	7:15	Jay Williams	11/6	7:15
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg	Jay Williams	11-6	10:15		11/6	~~1030~~ TW 1015
Rad to Pace PA						

SAMPLE CONDITIONS			
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.9	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh O'Brian

SIGNATURE of SAMPLER: Josh O'Brian DATE Signed: 11-5-23

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 11/6/23 1430

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER _____

2. **Custody Seal on Cooler/Box Present:** ☑ Yes ☒ No TW

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

3. **Thermometer:** 1 2 3 4 5 6 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 2.0/1.9 | | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other Plastic

6. **Ice Type:** ☑ Wet ☐ Blue ☐ None

7. **If temp. is over 6°C or under 0°C, was the PM notified?:** ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, 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:

COC PAGE 1 **of** 1

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER						Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			MeOH (only)																										Red	Yellow	Green	Black
			SBS																													
			DI																													
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1																2		2	1									WT	✓			
2																↓		↓	↓									↓	↓			
3																																
4																↓		↓	↓									↓	↓			
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 09, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 06, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358745001	**MW-13**	Water	11/05/23 08:40	11/06/23 10:15
50358745002	**MW-12**	Water	11/05/23 10:35	11/06/23 10:15
50358745003	**MW-1**	Water	11/05/23 13:20	11/06/23 10:15
50358745004	**MW-11**	Water	11/05/23 15:18	11/06/23 10:15

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358745001	**MW-13**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50358745002	**MW-12**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50358745003	**MW-1**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50358745004	**MW-11**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358745001	**MW-13**					
EPA 9056	Chloride	18.2	mg/L	0.25	11/11/23 02:10	
EPA 9056	Fluoride	0.86	mg/L	0.10	11/11/23 02:10	
EPA 9056	Sulfate	1450	mg/L	25.0	11/11/23 02:47	
EPA 6010	Boron	2540	ug/L	100	11/15/23 12:27	
EPA 6010	Calcium	631000	ug/L	5000	11/15/23 13:39	
EPA 6010	Lithium	456	ug/L	20.0	11/15/23 12:27	
EPA 6010	Molybdenum	82.6	ug/L	10.0	11/15/23 12:27	
EPA 6020	Barium	20.9	ug/L	1.0	11/10/23 04:36	
EPA 6020	Selenium	19.1	ug/L	1.0	11/08/23 23:58	
EPA 903.1	Radium-226	0.0606 ± 0.357 (0.728) C:NA T:88%	pCi/L		11/29/23 12:55	
EPA 904.0	Radium-228	0.352 ± 0.429 (0.904) C:71% T:81%	pCi/L		11/27/23 16:32	
Total Radium Calculation	Total Radium	0.413 ± 0.786 (1.63)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	2320	mg/L	20.0	11/10/23 16:12	
SM 4500-H+B	pH at 25 Degrees C	7.5	Std. Units	0.10	11/16/23 14:11	H3
50358745002	**MW-12**					
EPA 9056	Chloride	6.8	mg/L	0.25	11/11/23 04:01	
EPA 9056	Fluoride	0.15	mg/L	0.10	11/11/23 04:01	
EPA 9056	Sulfate	13.1	mg/L	0.25	11/11/23 04:01	
EPA 6010	Calcium	49100	ug/L	1000	11/15/23 12:28	
EPA 6020	Barium	25.0	ug/L	1.0	11/10/23 03:25	
EPA 903.1	Radium-226	0.0572 ± 0.372 (0.749) C:NA T:94%	pCi/L		11/29/23 12:55	
EPA 904.0	Radium-228	0.187 ± 0.500 (1.11) C:75% T:81%	pCi/L		11/27/23 16:32	
Total Radium Calculation	Total Radium	0.244 ± 0.872 (1.86)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	215	mg/L	10.0	11/10/23 16:12	
SM 4500-H+B	pH at 25 Degrees C	7.7	Std. Units	0.10	11/16/23 14:12	H3
50358745003	**MW-1**					
EPA 9056	Chloride	2.4	mg/L	0.25	11/11/23 04:37	
EPA 9056	Fluoride	0.13	mg/L	0.10	11/11/23 04:37	
EPA 9056	Sulfate	146	mg/L	2.5	11/11/23 04:56	
EPA 6010	Boron	145	ug/L	100	11/15/23 12:30	
EPA 6010	Calcium	128000	ug/L	1000	11/15/23 12:30	
EPA 6020	Barium	41.8	ug/L	1.0	11/10/23 03:48	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358745003	**MW-1**					
EPA 903.1	Radium-226	-0.0558 ± 0.394 (0.838) C:NA T:83%	pCi/L		11/29/23 12:55	
EPA 904.0	Radium-228	0.289 ± 0.454 (0.985) C:77% T:82%	pCi/L		11/27/23 16:32	
Total Radium Calculation	Total Radium	0.289 ± 0.848 (1.82)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	532	mg/L	10.0	11/10/23 16:13	
SM 4500-H+B	pH at 25 Degrees C	7.4	Std. Units	0.10	11/16/23 14:13	H3
50358745004	**MW-11**					
EPA 9056	Chloride	1.8	mg/L	0.25	11/11/23 05:14	
EPA 9056	Fluoride	0.17	mg/L	0.10	11/11/23 05:14	
EPA 9056	Sulfate	440	mg/L	2.5	11/11/23 05:33	
EPA 6010	Boron	1010	ug/L	100	11/15/23 12:34	
EPA 6010	Calcium	162000	ug/L	1000	11/15/23 12:34	
EPA 6020	Arsenic	1.3	ug/L	1.0	11/09/23 00:35	
EPA 6020	Barium	37.6	ug/L	1.0	11/10/23 03:52	
EPA 6020	Selenium	3.5	ug/L	1.0	11/09/23 00:35	
EPA 903.1	Radium-226	0.149 ± 0.293 (0.536) C:NA T:94%	pCi/L		11/29/23 12:55	
EPA 904.0	Radium-228	1.13 ± 0.597 (1.08) C:66% T:86%	pCi/L		11/27/23 16:32	
Total Radium Calculation	Total Radium	1.28 ± 0.890 (1.62)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	774	mg/L	10.0	11/10/23 16:13	
SM 4500-H+B	pH at 25 Degrees C	7.1	Std. Units	0.10	11/16/23 14:14	H3

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Sample: MW-13 **Lab ID: 50358745001** Collected: 11/05/23 08:40 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**18.2**	mg/L	0.25	0.067	1		11/11/23 02:10	16887-00-6	
Fluoride	**0.86**	mg/L	0.10	0.017	1		11/11/23 02:10	16984-48-8	
Sulfate	**1450**	mg/L	25.0	19.0	100		11/11/23 02:47	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	**2540**	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:27	7440-42-8	
Calcium	**631000**	ug/L	5000	284	5	11/09/23 08:28	11/15/23 13:39	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:27	7439-92-1	
Lithium	**456**	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:27	7439-93-2	
Molybdenum	**82.6**	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:27	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	0.075	1	11/08/23 07:26	11/08/23 23:58	7440-38-2	
Barium	**20.9**	ug/L	1.0	0.077	1	11/08/23 07:26	11/10/23 04:36	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/08/23 23:58	7440-48-4	
Selenium	**19.1**	ug/L	1.0	0.20	1	11/08/23 07:26	11/08/23 23:58	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/10/23 04:36	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2320**	mg/L	20.0	20.0	1		11/10/23 16:12		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
	Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.5**	Std. Units	0.10	0.10	1		11/16/23 14:11		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Sample: MW-12 **Lab ID: 50358745002** Collected: 11/05/23 10:35 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**6.8**	mg/L	0.25	0.067	1		11/11/23 04:01	16887-00-6	
Fluoride	**0.15**	mg/L	0.10	0.017	1		11/11/23 04:01	16984-48-8	
Sulfate	**13.1**	mg/L	0.25	0.19	1		11/11/23 04:01	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:28	7440-42-8	
Calcium	**49100**	ug/L	1000	56.7	1	11/09/23 08:28	11/15/23 12:28	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:28	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:28	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:28	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	0.075	1	11/08/23 07:26	11/09/23 00:01	7440-38-2	
Barium	**25.0**	ug/L	1.0	0.077	1	11/08/23 07:26	11/10/23 03:25	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/09/23 00:01	7440-48-4	
Selenium	ND	ug/L	1.0	0.20	1	11/08/23 07:26	11/09/23 00:01	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/10/23 03:25	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**215**	mg/L	10.0	10.0	1		11/10/23 16:12		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.7**	Std. Units	0.10	0.10	1		11/16/23 14:12		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Sample: MW-1 **Lab ID: 50358745003** Collected: 11/05/23 13:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**2.4**	mg/L	0.25	0.067	1		11/11/23 04:37	16887-00-6	
Fluoride	**0.13**	mg/L	0.10	0.017	1		11/11/23 04:37	16984-48-8	
Sulfate	**146**	mg/L	2.5	1.9	10		11/11/23 04:56	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	**145**	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:30	7440-42-8	
Calcium	**128000**	ug/L	1000	56.7	1	11/09/23 08:28	11/15/23 12:30	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:30	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:30	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:30	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	0.075	1	11/08/23 07:26	11/09/23 00:32	7440-38-2	
Barium	**41.8**	ug/L	1.0	0.077	1	11/08/23 07:26	11/10/23 03:48	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/09/23 00:32	7440-48-4	
Selenium	ND	ug/L	1.0	0.20	1	11/08/23 07:26	11/09/23 00:32	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/10/23 03:48	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**532**	mg/L	10.0	10.0	1		11/10/23 16:13		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
	Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.4**	Std. Units	0.10	0.10	1		11/16/23 14:13		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Sample: MW-11 **Lab ID: 50358745004** Collected: 11/05/23 15:18 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**1.8**	mg/L	0.25	0.067	1		11/11/23 05:14	16887-00-6	
Fluoride	**0.17**	mg/L	0.10	0.017	1		11/11/23 05:14	16984-48-8	
Sulfate	**440**	mg/L	2.5	1.9	10		11/11/23 05:33	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	**1010**	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:34	7440-42-8	
Calcium	**162000**	ug/L	1000	56.7	1	11/09/23 08:28	11/15/23 12:34	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:34	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:34	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:34	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Arsenic	**1.3**	ug/L	1.0	0.075	1	11/08/23 07:26	11/09/23 00:35	7440-38-2	
Barium	**37.6**	ug/L	1.0	0.077	1	11/08/23 07:26	11/10/23 03:52	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/09/23 00:35	7440-48-4	
Selenium	**3.5**	ug/L	1.0	0.20	1	11/08/23 07:26	11/09/23 00:35	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/10/23 03:52	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**774**	mg/L	10.0	10.0	1		11/10/23 16:13		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
	Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.1**	Std. Units	0.10	0.10	1		11/16/23 14:14		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

QC Batch: 762095
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

METHOD BLANK: 3493338 Matrix: Water
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	11/10/23 09:35	
Fluoride	mg/L	ND	0.10	0.017	11/10/23 09:35	
Sulfate	mg/L	ND	0.25	0.19	11/10/23 09:35	

LABORATORY CONTROL SAMPLE: 3493339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.95	95	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493340 3493341

Parameter	Units	50359253005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	61.6	25	25	84.7	84.7	93	92	80-120	0	15	
Fluoride	mg/L	0.42	1	1	1.4	1.4	97	97	80-120	0	15	
Sulfate	mg/L	0.22J	5	5	5.0	4.9	96	94	80-120	2	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

QC Batch: 761716
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

METHOD BLANK: 3491392 Matrix: Water
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	11/15/23 12:00	
Calcium	ug/L	ND	1000	56.7	11/15/23 12:00	
Lead	ug/L	ND	10.0	4.0	11/15/23 12:00	
Lithium	ug/L	ND	20.0	5.1	11/15/23 12:00	
Molybdenum	ug/L	ND	10.0	1.1	11/15/23 12:00	

LABORATORY CONTROL SAMPLE: 3491393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	994	99	80-120	
Calcium	ug/L	10000	9790	98	80-120	
Lead	ug/L	1000	947	95	80-120	
Lithium	ug/L	1000	986	99	80-120	
Molybdenum	ug/L	1000	1060	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491394 3491395

Parameter	Units	50358714001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	2520	1000	1000	3570	3600	106	108	75-125	1	20	
Calcium	ug/L	587000	10000	10000	593000	599000	69	125	75-125	1	20	E,P6
Lead	ug/L	ND	1000	1000	898	925	90	92	75-125	3	20	
Lithium	ug/L	450	1000	1000	1430	1460	98	101	75-125	2	20	
Molybdenum	ug/L	80.2	1000	1000	1140	1170	106	109	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

QC Batch: 761398
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

METHOD BLANK: 3489636 Matrix: Water
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	0.075	11/08/23 23:51	
Barium	ug/L	ND	1.0	0.077	11/10/23 03:18	
Cobalt	ug/L	ND	1.0	0.046	11/08/23 23:51	
Selenium	ug/L	ND	1.0	0.20	11/08/23 23:51	
Thallium	ug/L	ND	1.0	0.040	11/10/23 03:18	

LABORATORY CONTROL SAMPLE: 3489637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.4	99	80-120	
Barium	ug/L	40	39.0	98	80-120	
Cobalt	ug/L	40	41.1	103	80-120	
Selenium	ug/L	40	40.0	100	80-120	
Thallium	ug/L	40	40.9	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3489638 3489639

Parameter	Units	50358745002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	40	40	37.8	38.0	93	94	75-125	1	20	
Barium	ug/L	25.0	40	40	63.8	63.8	97	97	75-125	0	20	
Cobalt	ug/L	ND	40	40	38.8	38.7	96	96	75-125	0	20	
Selenium	ug/L	ND	40	40	37.4	37.1	93	93	75-125	1	20	
Thallium	ug/L	ND	40	40	41.3	40.7	103	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

QC Batch: 762130
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

METHOD BLANK: 3493503 Matrix: Water
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 16:11	

LABORATORY CONTROL SAMPLE: 3493504

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	296	99	80-120	

SAMPLE DUPLICATE: 3493505

Parameter	Units	50358744004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	804	783	3	10	

SAMPLE DUPLICATE: 3493506

Parameter	Units	50358769013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	424	423	0	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

QC Batch: 763381
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

SAMPLE DUPLICATE: 3499082

Parameter	Units	50358539002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	1	2	H3

SAMPLE DUPLICATE: 3499083

Parameter	Units	50358769003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.7	6.8	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Sample: MW-13 **Lab ID: 50358745001** Collected: 11/05/23 08:40 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0606 ± 0.357 (0.728) C:NA T:88%**	pCi/L	11/29/23 12:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.352 ± 0.429 (0.904) C:71% T:81%**	pCi/L	11/27/23 16:32	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.413 ± 0.786 (1.63)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Sample: MW-12 **Lab ID: 50358745002** Collected: 11/05/23 10:35 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0572 ± 0.372 (0.749) C:NA T:94%**	pCi/L	11/29/23 12:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.187 ± 0.500 (1.11) C:75% T:81%**	pCi/L	11/27/23 16:32	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.244 ± 0.872 (1.86)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Sample: MW-1 **Lab ID: 50358745003** Collected: 11/05/23 13:20 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0558 ± 0.394 (0.838) C:NA T:83%**	pCi/L	11/29/23 12:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.289 ± 0.454 (0.985) C:77% T:82%**	pCi/L	11/27/23 16:32	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.289 ± 0.848 (1.82)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Sample: MW-11 **Lab ID: 50358745004** Collected: 11/05/23 15:18 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.149 ± 0.293 (0.536) C:NA T:94%**	pCi/L	11/29/23 12:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.13 ± 0.597 (1.08) C:66% T:86%**	pCi/L	11/27/23 16:32	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.28 ± 0.890 (1.62)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

QC Batch: 629058
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

METHOD BLANK: 3066687 Matrix: Water
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0425 ± 0.194 (0.458) C:NA T:94%	pCi/L	11/29/23 12:31	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

QC Batch: 629059
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

METHOD BLANK: 3066691 Matrix: Water
Associated Lab Samples: 50358745001, 50358745002, 50358745003, 50358745004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.194 ± 0.348 (0.762) C:80% T:84%	pCi/L	11/27/23 16:27	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358745

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358745001	**MW-13**	EPA 9056	762095		
50358745002	**MW-12**	EPA 9056	762095		
50358745003	**MW-1**	EPA 9056	762095		
50358745004	**MW-11**	EPA 9056	762095		
50358745001	**MW-13**	EPA 3010	761716	EPA 6010	763051
50358745002	**MW-12**	EPA 3010	761716	EPA 6010	763051
50358745003	**MW-1**	EPA 3010	761716	EPA 6010	763051
50358745004	**MW-11**	EPA 3010	761716	EPA 6010	763051
50358745001	**MW-13**	EPA 200.2	761398	EPA 6020	761599
50358745002	**MW-12**	EPA 200.2	761398	EPA 6020	761599
50358745003	**MW-1**	EPA 200.2	761398	EPA 6020	761599
50358745004	**MW-11**	EPA 200.2	761398	EPA 6020	761599
50358745001	**MW-13**	EPA 903.1	629058		
50358745002	**MW-12**	EPA 903.1	629058		
50358745003	**MW-1**	EPA 903.1	629058		
50358745004	**MW-11**	EPA 903.1	629058		
50358745001	**MW-13**	EPA 904.0	629059		
50358745002	**MW-12**	EPA 904.0	629059		
50358745003	**MW-1**	EPA 904.0	629059		
50358745004	**MW-11**	EPA 904.0	629059		
50358745001	**MW-13**	Total Radium Calculation	632884		
50358745002	**MW-12**	Total Radium Calculation	632884		
50358745003	**MW-1**	Total Radium Calculation	632884		
50358745004	**MW-11**	Total Radium Calculation	632884		
50358745001	**MW-13**	SM 2540C	762130		
50358745002	**MW-12**	SM 2540C	762130		
50358745003	**MW-1**	SM 2540C	762130		
50358745004	**MW-11**	SM 2540C	762130		
50358745001	**MW-13**	SM 4500-H+B	763381		
50358745002	**MW-12**	SM 4500-H+B	763381		
50358745003	**MW-1**	SM 4500-H+B	763381		
50358745004	**MW-11**	SM 4500-H+B	763381		

REPORT OF LABORATORY ANALYSIS

WO# : 50358745

50358745

Pace Analytical
WWW.PACELABS.COM

N-OF-CUSTODY / Analytical Request Document

in-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg Nov 2023 P2R2	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/50

Regulatory Agency	
State / Location	IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals, Total*	TDS/pH	(Cl, F, SO4) IC	Rad-226/228 + Sum	Residual Chlorine (Y/N)	
1	MW-13		[redacted]	11-5-23	0810	11-5-23	0840		5	X		X						X	X	X	X			001
2	MW-12			11-5-23	1000	11-5-23	1035		5	X		X						X	X	X	X			002
3	MW-1			11-5-23	1200	11-5-23	1320		5	X		X						X	X	X	X			003
4	MW-11			11-5-23	1445	11-5-23	1518		5	X		X						X	X	X	X			004
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Pb, Mo, Ca, Li (5)	Josh O'Brian	11-6-23	7:15	Jay Williams	11/6	7:15				
6020: Co, As, Se, Ba, Tl (5)	Jay Williams	11-6	10:15	[signature]	11/6	10:15	2.2	Y	Y	Y
Rad 226/228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brian					
SIGNATURE of SAMPLER:	[signature]	DATE Signed: 11-5-23				

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 11/6/23 1445

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 2.3/2.2 | | | |

(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other Plastic

6. **Ice Type:** ☑ Wet ☐ Blue ☐ None

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

Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
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:

COC PAGE 1 **of** 1

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER								
			MeOH (only)																											Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			SBS																											Red	Yellow	Green	Black
			DI			VOA																										
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H		VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1																	2		2	1									WT	✓			
2																	↓		↓	↓									↓	↓			
3																	↓		↓	↓									↓	↓			
4																	↓		↓	↓									↓	↓			
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

Container Codes

Glass

DG9H	40mL HCl amber voa vial
DG9P	40mL TSP amber vial
DG9S	40mL H2SO4 amber vial
DG9T	40mL Na Thio amber vial
DG9U	40mL unpreserved amber vial
VG9H	40mL HCl clear vial
VG9T	40mL Na Thio. clear vial
VG9U	40mL unpreserved clear vial
I	40mL w/hexane wipe vial
WGKU	8oz unpreserved clear jar
WGFU	4oz clear soil jar
JGFU	4oz unpreserved amber wide
CG3H	250mL clear glass HCl
CG3F	250mL clear glass HCl, Field Filter
BG1H	1L HCl clear glass
BG1S	1L H2SO4 clear glass
BG1T	glass
BG1U	1L unpreserved glass
CG3U	250mL Unpres Clear Glass
AG0U	100mL unpres amber glass
AG1H	1L HCl amber glass
AG1S	1L H2SO4 amber glass
AG1T	1L Na Thiosulfate amber glass
AG1U	1liter unpres amber glass
AG2N	500mL HNO3 amber glass
AG2S	500mL H2SO4 amber glass
AG2U	500mL unpres amber glass
AG3S	250mL H2SO4 amber glass
AG3SF	250mL H2SO4 amb glass -field filtered
AG3U	250mL unpres amber glass
AG3B	250mL NaOH amber glass

Plastic

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic
BP3R	250mL Unpres. FF SO4/OH buffer
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 12, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 06, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358746001	**Field Blank 2**	Water	11/05/23 18:20	11/06/23 10:15
50358746002	**MW-15**	Water	11/05/23 18:20	11/06/23 10:15
50358746003	**DUP 2**	Water	11/05/23 18:20	11/06/23 10:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358746001	**Field Blank 2**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50358746002	**MW-15**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50358746003	**DUP 2**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358746001	**Field Blank 2**					
EPA 6020	Barium	1.6	ug/L	1.0	11/10/23 03:55	C0
EPA 903.1	Radium-226	-0.121 ± 0.277 (0.653) C:NA T:89%	pCi/L		11/29/23 12:43	
EPA 904.0	Radium-228	-0.101 ± 0.398 (0.950) C:68% T:87%	pCi/L		11/27/23 16:31	
Total Radium Calculation	Total Radium	0.000 ± 0.675 (1.60)	pCi/L		11/30/23 08:51	
SM 4500-H+B	pH at 25 Degrees C	8.2	Std. Units	0.10	11/16/23 14:15	H3
50358746002	**MW-15**					
EPA 9056	Chloride	66.8	mg/L	2.5	11/11/23 06:28	
EPA 9056	Fluoride	0.10	mg/L	0.10	11/11/23 06:09	
EPA 9056	Sulfate	638	mg/L	25.0	11/11/23 06:46	
EPA 6010	Boron	1280	ug/L	100	11/15/23 12:37	
EPA 6010	Calcium	251000	ug/L	2000	11/15/23 13:40	
EPA 6010	Lithium	757	ug/L	20.0	11/15/23 12:37	
EPA 6010	Molybdenum	117	ug/L	10.0	11/15/23 12:37	
EPA 6020	Barium	102	ug/L	1.0	11/10/23 04:22	
EPA 903.1	Radium-226	1.13 ± 0.622 (0.716) C:NA T:89%	pCi/L		11/29/23 12:43	
EPA 904.0	Radium-228	0.732 ± 0.428 (0.774) C:79% T:79%	pCi/L		11/27/23 16:31	
Total Radium Calculation	Total Radium	1.86 ± 1.05 (1.49)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	1310	mg/L	20.0	11/10/23 16:14	
SM 4500-H+B	pH at 25 Degrees C	7.0	Std. Units	0.10	11/16/23 14:17	H3
50358746003	**DUP 2**					
EPA 9056	Chloride	66.1	mg/L	2.5	11/11/23 08:18	
EPA 9056	Fluoride	0.10	mg/L	0.10	11/11/23 08:00	
EPA 9056	Sulfate	674	mg/L	25.0	11/14/23 13:44	
EPA 6010	Boron	1260	ug/L	100	11/15/23 12:39	
EPA 6010	Calcium	259000	ug/L	2000	11/15/23 13:42	
EPA 6010	Lithium	744	ug/L	20.0	11/15/23 12:39	
EPA 6010	Molybdenum	115	ug/L	10.0	11/15/23 12:39	
EPA 6020	Barium	99.6	ug/L	1.0	11/10/23 04:29	
EPA 903.1	Radium-226	0.576 ± 0.517 (0.786) C:NA T:91%	pCi/L		11/29/23 12:43	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358746003	**DUP 2**					
EPA 904.0	Radium-228	0.865 ± 0.432 (0.733) C:76% T:86%	pCi/L		11/27/23 16:31	
Total Radium Calculation	Total Radium	1.44 ± 0.949 (1.52)	pCi/L		11/30/23 08:51	
SM 2540C	Total Dissolved Solids	1330	mg/L	20.0	11/10/23 16:14	
SM 4500-H+B	pH at 25 Degrees C	7.0	Std. Units	0.10	11/16/23 14:18	H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Sample: Field Blank 2 **Lab ID: 50358746001** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	ND	mg/L	0.25	0.067	1		11/14/23 13:26	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/14/23 13:26	16984-48-8	
Sulfate	ND	mg/L	0.25	0.19	1		11/14/23 13:26	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:36	7440-42-8	
Calcium	ND	ug/L	1000	56.7	1	11/09/23 08:28	11/15/23 12:36	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:36	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:36	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:36	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	0.075	1	11/08/23 07:26	11/09/23 00:39	7440-38-2	
Barium	**1.6**	ug/L	1.0	0.077	1	11/08/23 07:26	11/10/23 03:55	7440-39-3	C0
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/09/23 00:39	7440-48-4	
Selenium	ND	ug/L	1.0	0.20	1	11/08/23 07:26	11/09/23 00:39	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/10/23 03:55	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		11/10/23 16:13		PL
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**8.2**	Std. Units	0.10	0.10	1		11/16/23 14:15		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Sample: MW-15 **Lab ID: 50358746002** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**66.8**	mg/L	2.5	0.67	10		11/11/23 06:28	16887-00-6	
Fluoride	**0.10**	mg/L	0.10	0.017	1		11/11/23 06:09	16984-48-8	
Sulfate	**638**	mg/L	25.0	19.0	100		11/11/23 06:46	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1280**	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:37	7440-42-8	
Calcium	**251000**	ug/L	2000	113	2	11/09/23 08:28	11/15/23 13:40	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:37	7439-92-1	
Lithium	**757**	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:37	7439-93-2	
Molybdenum	**117**	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:37	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	0.075	1	11/08/23 07:26	11/09/23 00:42	7440-38-2	
Barium	**102**	ug/L	1.0	0.077	1	11/08/23 07:26	11/10/23 04:22	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/09/23 00:42	7440-48-4	
Selenium	ND	ug/L	1.0	0.20	1	11/08/23 07:26	11/09/23 00:42	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/10/23 04:22	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1310**	mg/L	20.0	20.0	1		11/10/23 16:14		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.0**	Std. Units	0.10	0.10	1		11/16/23 14:17		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Sample: DUP 2 **Lab ID: 50358746003** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**66.1**	mg/L	2.5	0.67	10		11/11/23 08:18	16887-00-6	
Fluoride	**0.10**	mg/L	0.10	0.017	1		11/11/23 08:00	16984-48-8	
Sulfate	**674**	mg/L	25.0	19.0	100		11/14/23 13:44	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	**1260**	ug/L	100	11.4	1	11/09/23 08:28	11/15/23 12:39	7440-42-8	
Calcium	**259000**	ug/L	2000	113	2	11/09/23 08:28	11/15/23 13:42	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 08:28	11/15/23 12:39	7439-92-1	
Lithium	**744**	ug/L	20.0	5.1	1	11/09/23 08:28	11/15/23 12:39	7439-93-2	
Molybdenum	**115**	ug/L	10.0	1.1	1	11/09/23 08:28	11/15/23 12:39	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	0.075	1	11/08/23 07:26	11/09/23 00:52	7440-38-2	
Barium	**99.6**	ug/L	1.0	0.077	1	11/08/23 07:26	11/10/23 04:29	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 07:26	11/09/23 00:52	7440-48-4	
Selenium	ND	ug/L	1.0	0.20	1	11/08/23 07:26	11/09/23 00:52	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 07:26	11/10/23 04:29	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1330**	mg/L	20.0	20.0	1		11/10/23 16:14		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
	Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.0**	Std. Units	0.10	0.10	1		11/16/23 14:18		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

QC Batch: 762095
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358746001, 50358746002, 50358746003

METHOD BLANK: 3493338 Matrix: Water
Associated Lab Samples: 50358746001, 50358746002, 50358746003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	11/10/23 09:35	
Fluoride	mg/L	ND	0.10	0.017	11/10/23 09:35	
Sulfate	mg/L	ND	0.25	0.19	11/10/23 09:35	

LABORATORY CONTROL SAMPLE: 3493339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.95	95	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493340 3493341

Parameter	Units	50359253005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	61.6	25	25	84.7	84.7	93	92	80-120	0	15	
Fluoride	mg/L	0.42	1	1	1.4	1.4	97	97	80-120	0	15	
Sulfate	mg/L	0.22J	5	5	5.0	4.9	96	94	80-120	2	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

QC Batch: 761716
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358746001, 50358746002, 50358746003

METHOD BLANK: 3491392 Matrix: Water
Associated Lab Samples: 50358746001, 50358746002, 50358746003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	11/15/23 12:00	
Calcium	ug/L	ND	1000	56.7	11/15/23 12:00	
Lead	ug/L	ND	10.0	4.0	11/15/23 12:00	
Lithium	ug/L	ND	20.0	5.1	11/15/23 12:00	
Molybdenum	ug/L	ND	10.0	1.1	11/15/23 12:00	

LABORATORY CONTROL SAMPLE: 3491393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	994	99	80-120	
Calcium	ug/L	10000	9790	98	80-120	
Lead	ug/L	1000	947	95	80-120	
Lithium	ug/L	1000	986	99	80-120	
Molybdenum	ug/L	1000	1060	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491394 3491395

Parameter	Units	50358714001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	2520	1000	1000	3570	3600	106	108	75-125	1	20	
Calcium	ug/L	587000	10000	10000	593000	599000	69	125	75-125	1	20	E,P6
Lead	ug/L	ND	1000	1000	898	925	90	92	75-125	3	20	
Lithium	ug/L	450	1000	1000	1430	1460	98	101	75-125	2	20	
Molybdenum	ug/L	80.2	1000	1000	1140	1170	106	109	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

QC Batch: 761398
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358746001, 50358746002, 50358746003

METHOD BLANK: 3489636 Matrix: Water
Associated Lab Samples: 50358746001, 50358746002, 50358746003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	0.075	11/08/23 23:51	
Barium	ug/L	ND	1.0	0.077	11/10/23 03:18	
Cobalt	ug/L	ND	1.0	0.046	11/08/23 23:51	
Selenium	ug/L	ND	1.0	0.20	11/08/23 23:51	
Thallium	ug/L	ND	1.0	0.040	11/10/23 03:18	

LABORATORY CONTROL SAMPLE: 3489637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	39.4	99	80-120	
Barium	ug/L	40	39.0	98	80-120	
Cobalt	ug/L	40	41.1	103	80-120	
Selenium	ug/L	40	40.0	100	80-120	
Thallium	ug/L	40	40.9	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3489638 3489639

Parameter	Units	50358745002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	40	40	37.8	38.0	93	94	75-125	1	20	
Barium	ug/L	25.0	40	40	63.8	63.8	97	97	75-125	0	20	
Cobalt	ug/L	ND	40	40	38.8	38.7	96	96	75-125	0	20	
Selenium	ug/L	ND	40	40	37.4	37.1	93	93	75-125	1	20	
Thallium	ug/L	ND	40	40	41.3	40.7	103	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

QC Batch: 762130
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358746001, 50358746002, 50358746003

METHOD BLANK: 3493503 Matrix: Water
Associated Lab Samples: 50358746001, 50358746002, 50358746003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 16:11	

LABORATORY CONTROL SAMPLE: 3493504

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	296	99	80-120	

SAMPLE DUPLICATE: 3493505

Parameter	Units	50358744004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	804	783	3	10	

SAMPLE DUPLICATE: 3493506

Parameter	Units	50358769013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	424	423	0	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

QC Batch: 763381
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358746001, 50358746002, 50358746003

SAMPLE DUPLICATE: 3499082

Parameter	Units	50358539002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	1	2	H3

SAMPLE DUPLICATE: 3499083

Parameter	Units	50358769003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.7	6.8	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Sample: Field Blank 2 **Lab ID: 50358746001** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.121 ± 0.277 (0.653) C:NA T:89%**	pCi/L	11/29/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.101 ± 0.398 (0.950) C:68% T:87%**	pCi/L	11/27/23 16:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000 ± 0.675 (1.60)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Sample: MW-15 **Lab ID: 50358746002** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.13 ± 0.622 (0.716) C:NA T:89%**	pCi/L	11/29/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.732 ± 0.428 (0.774) C:79% T:79%**	pCi/L	11/27/23 16:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.86 ± 1.05 (1.49)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Sample: DUP 2 **Lab ID: 50358746003** Collected: 11/05/23 18:20 Received: 11/06/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.576 ± 0.517 (0.786) C:NA T:91%**	pCi/L	11/29/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.865 ± 0.432 (0.733) C:76% T:86%**	pCi/L	11/27/23 16:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.44 ± 0.949 (1.52)**	pCi/L	11/30/23 08:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

QC Batch: 629058
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358746001, 50358746002, 50358746003

METHOD BLANK: 3066687 Matrix: Water
Associated Lab Samples: 50358746001, 50358746002, 50358746003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0425 ± 0.194 (0.458) C:NA T:94%	pCi/L	11/29/23 12:31	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

QC Batch: 629059
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358746001, 50358746002, 50358746003

METHOD BLANK: 3066691 Matrix: Water
Associated Lab Samples: 50358746001, 50358746002, 50358746003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.194 ± 0.348 (0.762) C:80% T:84%	pCi/L	11/27/23 16:27	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

C0	Result confirmed by second analysis.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358746

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358746001	**Field Blank 2**	EPA 9056	762095		
50358746002	**MW-15**	EPA 9056	762095		
50358746003	**DUP 2**	EPA 9056	762095		
50358746001	**Field Blank 2**	EPA 3010	761716	EPA 6010	763051
50358746002	**MW-15**	EPA 3010	761716	EPA 6010	763051
50358746003	**DUP 2**	EPA 3010	761716	EPA 6010	763051
50358746001	**Field Blank 2**	EPA 200.2	761398	EPA 6020	761599
50358746002	**MW-15**	EPA 200.2	761398	EPA 6020	761599
50358746003	**DUP 2**	EPA 200.2	761398	EPA 6020	761599
50358746001	**Field Blank 2**	EPA 903.1	629058		
50358746002	**MW-15**	EPA 903.1	629058		
50358746003	**DUP 2**	EPA 903.1	629058		
50358746001	**Field Blank 2**	EPA 904.0	629059		
50358746002	**MW-15**	EPA 904.0	629059		
50358746003	**DUP 2**	EPA 904.0	629059		
50358746001	**Field Blank 2**	Total Radium Calculation	632884		
50358746002	**MW-15**	Total Radium Calculation	632884		
50358746003	**DUP 2**	Total Radium Calculation	632884		
50358746001	**Field Blank 2**	SM 2540C	762130		
50358746002	**MW-15**	SM 2540C	762130		
50358746003	**DUP 2**	SM 2540C	762130		
50358746001	**Field Blank 2**	SM 4500-H+B	763381		
50358746002	**MW-15**	SM 4500-H+B	763381		
50358746003	**DUP 2**	SM 4500-H+B	763381		

Pace Analytical
WWW.PACELABS.COM

WO# : 50358746

50358746

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg Nov 2023 P2R3	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/50

Regulatory Agency: | State / Location: IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals, Total*	TDS/pH	(Cl, F, SO4) IC	Rad-226/228 + Sum	Residual Chlorine (Y/N)	
1	Field Blank 2			11-5-23	1745	11-5-23	1820		5	X		X							X	X	X	X		001
2	MW-15			11-5-23	1745	11-5-23	1820		5	X		X							X	X	X	X		002
3	DUP 2			11-5-23	1745	11-5-23	1820		5	X		X							X	X	X	X		003
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
etals* 6010: B, Pb, Mo, Ca, Li (5)	Chris Burks	11-6-23	7:15	Jay Williams	11/6	7:15				
020: Co, As, Se, Ba, Tl (5)	Jay Williams	11-6	10:15		11/6	10:15	0.5	Y	Y	Y
ad 226/228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Chris Burks					
SIGNATURE of SAMPLER:	Chris Burks	DATE Signed: 11-5-23				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/6/23 1500 LR

1. **Courier:** ☐ FED EX ☐ UPS ☒ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D (E) F G H

4. **Cooler Temperature(s):** 0.5/0.5 | | | |

(Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**

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

Cooler temp should be above freezing to 6°C

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)		X	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** ~~HNO3 (<2)~~ **H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	X		X LR 11/6
Short Hold Time Analysis (48 hours or less)? Analysis:		X				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			X
Rush TAT Requested (4 days or less):		X	Residual Chlorine Check (Total/Amenable/Free Cyanide)			X
Custody Signatures Present?	X		Headspace Wisconsin Sulfide?			X
Containers Intact?:	X		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent X
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	X		Trip Blank Present?		X	
Extra labels on Terracore Vials? (soils only)		X	Trip Blank Custody Seals?:			X

COMMENTS:

COC PAGE 1 **of** 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1									WT	1			
2																↓		↓	↓									↓	↓				
3																↓		↓	↓									↓	↓				
4																																	
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 09, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 2023. 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,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358883001	**MW-10**	Water	11/06/23 12:05	11/07/23 12:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358883001	**MW-10**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	ELK	6	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358883001	**MW-10**					
EPA 9056	Bromide	1.8	mg/L	0.050	11/12/23 07:34	
EPA 6010	Iron	45000	ug/L	100	11/15/23 14:25	
EPA 6010	Magnesium	119000	ug/L	1000	11/15/23 14:25	
EPA 6010	Potassium	30900	ug/L	1000	11/15/23 14:25	
EPA 6010	Silica	37400	ug/L	450	11/15/23 14:25	N2
EPA 6010	Sodium	85500	ug/L	1000	11/15/23 14:25	
EPA 6010	Boron, Dissolved	20900	ug/L	100	11/15/23 11:52	
EPA 6010	Iron, Dissolved	38900	ug/L	100	11/15/23 11:52	
EPA 6010	Lithium, Dissolved	25.1	ug/L	20.0	11/15/23 11:52	
EPA 6010	Magnesium, Dissolved	108000	ug/L	1000	11/15/23 11:52	
EPA 6010	Molybdenum, Dissolved	11.9	ug/L	10.0	11/15/23 11:52	
EPA 6010	Potassium, Dissolved	31400	ug/L	1000	11/15/23 11:52	
EPA 6020	Aluminum	2900	ug/L	50.0	11/10/23 16:20	
EPA 6020	Manganese	2700	ug/L	20.0	11/10/23 15:36	
EPA 6020	Manganese, Dissolved	2510	ug/L	25.0	11/09/23 06:27	
SM 2320B	Alkalinity, Total as CaCO3	727	mg/L	10.0	11/08/23 22:51	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	727	mg/L	10.0	11/08/23 22:51	
SM 2540C	Total Dissolved Solids	2460	mg/L	20.0	11/10/23 17:38	
HACH 8146	Iron, Ferrous	1.3	mg/L	0.20	11/10/23 14:01	H3,N2
EPA 365.1	Phosphate as P04	1.7	mg/L	0.15	11/17/23 13:13	
SM 5310C	Total Organic Carbon	10.2	mg/L	2.0	11/15/23 20:26	
SM 5310C	Dissolved Organic Carbon	13.6	mg/L	1.0	11/17/23 19:01	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

Sample: MW-10 **Lab ID: 50358883001** Collected: 11/06/23 12:05 Received: 11/07/23 12:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**1.8**	mg/L	0.050	0.0090	1		11/12/23 07:34	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	**45000**	ug/L	100	18.1	1	11/09/23 20:47	11/15/23 14:25	7439-89-6	
Magnesium	**119000**	ug/L	1000	32.8	1	11/09/23 20:47	11/15/23 14:25	7439-95-4	
Potassium	**30900**	ug/L	1000	120	1	11/09/23 20:47	11/15/23 14:25	7440-09-7	
Silica	**37400**	ug/L	450		1	11/09/23 20:47	11/15/23 14:25	7631-86-9	N2
Sodium	**85500**	ug/L	1000	48.2	1	11/09/23 20:47	11/15/23 14:25	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**20900**	ug/L	100	6.2	1	11/13/23 16:22	11/15/23 11:52	7440-42-8	
Iron, Dissolved	**38900**	ug/L	100	30.0	1	11/13/23 16:22	11/15/23 11:52	7439-89-6	
Lithium, Dissolved	**25.1**	ug/L	20.0	6.8	1	11/13/23 16:22	11/15/23 11:52	7439-93-2	
Magnesium, Dissolved	**108000**	ug/L	1000	33.6	1	11/13/23 16:22	11/15/23 11:52	7439-95-4	
Molybdenum, Dissolved	**11.9**	ug/L	10.0	0.78	1	11/13/23 16:22	11/15/23 11:52	7439-98-7	
Potassium, Dissolved	**31400**	ug/L	1000	97.8	1	11/13/23 16:22	11/15/23 11:52	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**2900**	ug/L	50.0	11.7	5	11/08/23 15:12	11/10/23 16:20	7429-90-5	
Manganese	**2700**	ug/L	20.0	3.4	20	11/08/23 15:12	11/10/23 15:36	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	11/08/23 15:12	11/09/23 04:30	7429-90-5	
Manganese, Dissolved	**2510**	ug/L	25.0	1.1	25	11/08/23 15:12	11/09/23 06:27	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**727**	mg/L	10.0	10.0	1		11/08/23 22:51		
Alkalinity,Bicarbonate (CaCO3)	**727**	mg/L	10.0	10.0	1		11/08/23 22:51		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/08/23 22:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2460**	mg/L	20.0	20.0	1		11/10/23 17:38		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/09/23 11:58	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

Sample: MW-10 **Lab ID: 50358883001** Collected: 11/06/23 12:05 Received: 11/07/23 12:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**1.3**	mg/L	0.20	0.035	1		11/10/23 14:01	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/07/23 23:23	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/07/23 23:23	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**1.7**	mg/L	0.15	0.15	1	11/16/23 11:00	11/17/23 13:13		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**10.2**	mg/L	2.0	0.47	2		11/15/23 20:26	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**13.6**	mg/L	1.0	0.24	1		11/17/23 19:01		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 762350
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3494753 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	11/11/23 16:40	

LABORATORY CONTROL SAMPLE: 3494754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.98	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3494755 3494756

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.67	1	1	1.6	1.6	96	97	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 761794
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3491668 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	100	18.1	11/15/23 13:48	
Magnesium	ug/L	ND	1000	32.8	11/15/23 13:48	
Potassium	ug/L	ND	1000	120	11/15/23 13:48	
Silica	ug/L	ND	450		11/15/23 13:48	N2
Sodium	ug/L	ND	1000	48.2	11/15/23 13:48	

LABORATORY CONTROL SAMPLE: 3491669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9120	91	80-120	
Magnesium	ug/L	10000	9590	96	80-120	
Potassium	ug/L	10000	9010	90	80-120	
Silica	ug/L	10700	10200	96	80-120	N2
Sodium	ug/L	10000	9050	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491670 3491671

Parameter	Units	50358778008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	551	10000	10000	9680	9850	91	93	75-125	2	20	
Magnesium	ug/L	26500	10000	10000	36400	37300	99	108	75-125	2	20	
Potassium	ug/L	1260	10000	10000	10300	10600	91	93	75-125	2	20	
Silica	ug/L	14200	10700	10700	25000	25500	101	106	75-125	2	20	N2
Sodium	ug/L	5510	10000	10000	14600	14900	91	94	75-125	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491672 3491673

Parameter	Units	50358778011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	<100	10000	10000	9400	9200	93	91	75-125	2	20	
Magnesium	ug/L	9160	10000	10000	18800	18400	97	92	75-125	2	20	
Potassium	ug/L	3930	10000	10000	13200	12800	92	89	75-125	3	20	
Silica	ug/L	10000	10700	10700	20600	20100	99	94	75-125	2	20	N2
Sodium	ug/L	5580	10000	10000	14700	14400	91	88	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 762441
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3495053 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	11/15/23 11:25	
Iron, Dissolved	ug/L	ND	100	30.0	11/15/23 11:25	
Lithium, Dissolved	ug/L	ND	20.0	6.8	11/15/23 11:25	
Magnesium, Dissolved	ug/L	ND	1000	33.6	11/15/23 11:25	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	11/15/23 11:25	
Potassium, Dissolved	ug/L	ND	1000	97.8	11/15/23 11:25	

LABORATORY CONTROL SAMPLE: 3495054

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	961	96	80-120	
Iron, Dissolved	ug/L	10000	9980	100	80-120	
Lithium, Dissolved	ug/L	1000	1030	103	80-120	
Magnesium, Dissolved	ug/L	10000	9710	97	80-120	
Molybdenum, Dissolved	ug/L	1000	1020	102	80-120	
Potassium, Dissolved	ug/L	10000	9970	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495055 3495056

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	4200	1000	1000	5140	5210	94	101	75-125	1	20	
Iron, Dissolved	ug/L	6900	10000	10000	16500	16700	96	98	75-125	1	20	
Lithium, Dissolved	ug/L	1090	1000	1000	2120	2150	103	105	75-125	1	20	
Magnesium, Dissolved	ug/L	35700	10000	10000	44100	44700	84	90	75-125	1	20	
Molybdenum, Dissolved	ug/L	396	1000	1000	1430	1430	103	104	75-125	1	20	
Potassium, Dissolved	ug/L	190000	10000	10000	197000	196000	72	58	75-125	1	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 761473
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3490098 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.3	11/09/23 23:51	
Manganese	ug/L	ND	1.0	0.17	11/09/23 23:51	

LABORATORY CONTROL SAMPLE: 3490099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	419	105	80-120	
Manganese	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490100 3490101

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	395	400	98	99	75-125	1	20	
Manganese	ug/L	5070	40	40	5250	5170	448	241	75-125	2	20	P6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490102 3490103

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	396	397	98	98	75-125	0	20	
Manganese	ug/L	4880	40	40	4980	4910	262	77	75-125	1	20	E,P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 761472
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3490090 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	4.4	11/09/23 03:55	
Manganese, Dissolved	ug/L	ND	1.0	0.043	11/09/23 03:55	

LABORATORY CONTROL SAMPLE: 3490091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	387	97	80-120	
Manganese, Dissolved	ug/L	40	37.9	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490092 3490093

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	416	421	104	105	75-125	1	20	
Manganese, Dissolved	ug/L	5110	40	40	5010	5020	-255	-220	75-125	0	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 761693
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3491261 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/08/23 22:51	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/08/23 22:51	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/08/23 22:51	

LABORATORY CONTROL SAMPLE: 3491262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.6	97	90-110	

SAMPLE DUPLICATE: 3491263

Parameter	Units	50358877001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	214	219	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	214	219	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3491264

Parameter	Units	50358888001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	386	394	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	386	394	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 762152
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3493607 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 17:36	

LABORATORY CONTROL SAMPLE: 3493608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	299	100	80-120	

SAMPLE DUPLICATE: 3493609

Parameter	Units	50358888001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2340	2430	4	10	

SAMPLE DUPLICATE: 3493610

Parameter	Units	50358895001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2380	2430	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 761826
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3491779 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/09/23 11:58	

LABORATORY CONTROL SAMPLE: 3491780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491781 3491782

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.29	0.29	54	55	90-110	1	20	M3

MATRIX SPIKE SAMPLE: 3491783

Parameter	Units	50358828001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.42	79	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 762089
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3493307 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/10/23 13:59	H3,N2

LABORATORY CONTROL SAMPLE: 3493308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	101	90-110	H3,N2

MATRIX SPIKE SAMPLE: 3493309

Parameter	Units	50359039002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.1	106	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493310 3493311

Parameter	Units	50359028002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	2.4	25	25	27.0	27.3	99	100	90-110	1	20	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 761438
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3490021 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/07/23 23:16	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/07/23 23:16	

LABORATORY CONTROL SAMPLE: 3490022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.1	107	90-110	
Nitrogen, Nitrite	mg/L	1	1.1	106	90-110	

MATRIX SPIKE SAMPLE: 3490023

Parameter	Units	50358877003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	1	3.5	107	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.1	105	90-110	

MATRIX SPIKE SAMPLE: 3490024

Parameter	Units	50358888001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.92	91	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.0	103	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 763329
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3498741 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	11/17/23 13:04	

LABORATORY CONTROL SAMPLE: 3498742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3498743 3498744

Parameter	Units	50358877004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	0.39			1.9	1.9				1		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 763080
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3497429 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	11/15/23 17:02	

LABORATORY CONTROL SAMPLE: 3497430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3497431 3497432

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.6	10	10	12.8	12.9	92	93	80-120	1	20	

MATRIX SPIKE SAMPLE: 3497433

Parameter	Units	50358828001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	10	12.3	97	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

QC Batch: 763582
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358883001

METHOD BLANK: 3500180 Matrix: Water
Associated Lab Samples: 50358883001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	11/17/23 17:43	

LABORATORY CONTROL SAMPLE: 3500181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3500182 3500183

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	4.8	10	10	13.8	13.8	90	90	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3500184 3500185

Parameter	Units	50358928006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	4.3	10	10	12.8	12.9	85	86	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

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

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P3R2 Nov 2023
Pace Project No.: 50358883

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358883001	**MW-10**	EPA 9056	762350		
50358883001	**MW-10**	EPA 3010	761794	EPA 6010	763114
50358883001	**MW-10**	EPA 3010	762441	EPA 6010	763062
50358883001	**MW-10**	EPA 200.2	761473	EPA 6020	761728
50358883001	**MW-10**	EPA 200.2	761472	EPA 6020	761724
50358883001	**MW-10**	SM 2320B	761693		
50358883001	**MW-10**	SM 2540C	762152		
50358883001	**MW-10**	SM 4500-S2-D	761826		
50358883001	**MW-10**	HACH 8146	762089		
50358883001	**MW-10**	EPA 353.2	761438		
50358883001	**MW-10**	EPA 365.1	763329	EPA 365.1	763479
50358883001	**MW-10**	SM 5310C	763080		
50358883001	**MW-10**	SM 5310C	763582		

Pace Analytical
WWW.PACELABS.COM

WO# : 50358883

50358883

AIN-OF-CUSTODY / Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : Of

Section A
Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100
	Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone: (317)579-4082	Fax:
Requested Due Date:	

Copy To:
Purchase Order #:
Project Name: Petersburg P3R2 Nov 2023
Project #:

Section C
Invoice Information:

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/52

Regulatory Agency

State / Location
IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate				Residual Chlorine (Y/N)	
																						Y			Y						
1	MW-10			11-6-23	1140	11-6-23	1205		9	X	X	X		X					X	X	X	X	X	X	X	X				
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
* Metals: 6010 Fe, Mg, Na, K, sila 6020 - Al, Mn	Josh OB	11-7-23	9:10	Jay Williams	11-7	9:10
** Dissolved FF 6010 (B, Fe, Mo, Li, Mg, K)	Jay Williams	11-7	12:15	Josh O'Brien	11/7/23	12:15
Diss 6020 - Al, Mn						
Alkalinity = (Total , Bicarb & Carb)						

SAMPLE CONDITIONS

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh O'Brien

SIGNATURE of SAMPLER: Josh O'B

DATE Signed: 11-6-23

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/07/23 1340 GA

1. **Courier:** ☐FED EX ☐UPS ☑CLIENT ☐PACE ☐NOW/JETT ☐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 7 8 A (B) C D E F G H

4. **Cooler Temperature(s):** 1.6/1.6 | | | |
(Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**

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
Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** ~~HNO3 (<2)~~ ~~H2SO4 (<2)~~ NaOH (>10) ~~NaOH/ZnAc (>9)~~ Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? **Analysis:** Nitrates	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1745			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:

COC PAGE 1 of 1

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER								
COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1												1	1				1	2	1	1	1		1					WT	✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 09, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 2023. 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,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358888001	**MW-16**	Water	11/06/23 14:40	11/07/23 12:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358888001	**MW-16**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	ELK	6	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358888001	**MW-16**					
EPA 9056	Bromide	0.67	mg/L	0.050	11/12/23 07:53	
EPA 6010	Iron	7130	ug/L	100	11/16/23 10:54	
EPA 6010	Magnesium	35400	ug/L	1000	11/16/23 10:54	
EPA 6010	Potassium	180000	ug/L	3000	11/16/23 12:19	
EPA 6010	Silica	12300	ug/L	450	11/16/23 10:54	N2
EPA 6010	Sodium	66600	ug/L	1000	11/16/23 10:54	
EPA 6010	Boron, Dissolved	4200	ug/L	100	11/15/23 11:57	
EPA 6010	Iron, Dissolved	6900	ug/L	100	11/15/23 11:57	
EPA 6010	Lithium, Dissolved	1090	ug/L	20.0	11/15/23 11:57	
EPA 6010	Magnesium, Dissolved	35700	ug/L	1000	11/15/23 11:57	
EPA 6010	Molybdenum, Dissolved	396	ug/L	10.0	11/15/23 11:57	
EPA 6010	Potassium, Dissolved	190000	ug/L	5000	11/15/23 12:49	
EPA 6020	Manganese	5070	ug/L	50.0	11/10/23 15:49	
EPA 6020	Manganese, Dissolved	5110	ug/L	50.0	11/09/23 06:34	
SM 2320B	Alkalinity, Total as CaCO3	386	mg/L	10.0	11/08/23 22:51	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	386	mg/L	10.0	11/08/23 22:51	
SM 2540C	Total Dissolved Solids	2340	mg/L	20.0	11/10/23 17:38	
EPA 365.1	Phosphate as P04	1.6	mg/L	0.15	11/17/23 13:58	
SM 5310C	Total Organic Carbon	3.6	mg/L	1.0	11/15/23 21:14	
SM 5310C	Dissolved Organic Carbon	4.8	mg/L	1.0	11/17/23 19:24	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

Sample: MW-16 **Lab ID: 50358888001** Collected: 11/06/23 14:40 Received: 11/07/23 12:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.67**	mg/L	0.050	0.0090	1		11/12/23 07:53	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	**7130**	ug/L	100	18.1	1	11/09/23 21:16	11/16/23 10:54	7439-89-6	
Magnesium	**35400**	ug/L	1000	32.8	1	11/09/23 21:16	11/16/23 10:54	7439-95-4	
Potassium	**180000**	ug/L	3000	360	3	11/09/23 21:16	11/16/23 12:19	7440-09-7	
Silica	**12300**	ug/L	450		1	11/09/23 21:16	11/16/23 10:54	7631-86-9	N2
Sodium	**66600**	ug/L	1000	48.2	1	11/09/23 21:16	11/16/23 10:54	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**4200**	ug/L	100	6.2	1	11/13/23 16:22	11/15/23 11:57	7440-42-8	
Iron, Dissolved	**6900**	ug/L	100	30.0	1	11/13/23 16:22	11/15/23 11:57	7439-89-6	
Lithium, Dissolved	**1090**	ug/L	20.0	6.8	1	11/13/23 16:22	11/15/23 11:57	7439-93-2	
Magnesium, Dissolved	**35700**	ug/L	1000	33.6	1	11/13/23 16:22	11/15/23 11:57	7439-95-4	
Molybdenum, Dissolved	**396**	ug/L	10.0	0.78	1	11/13/23 16:22	11/15/23 11:57	7439-98-7	
Potassium, Dissolved	**190000**	ug/L	5000	489	5	11/13/23 16:22	11/15/23 12:49	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	2.3	1	11/08/23 15:12	11/11/23 01:21	7429-90-5	
Manganese	**5070**	ug/L	50.0	8.4	50	11/08/23 15:12	11/10/23 15:49	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	11/08/23 15:12	11/09/23 04:44	7429-90-5	
Manganese, Dissolved	**5110**	ug/L	50.0	2.2	50	11/08/23 15:12	11/09/23 06:34	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**386**	mg/L	10.0	10.0	1		11/08/23 22:51		
Alkalinity,Bicarbonate (CaCO3)	**386**	mg/L	10.0	10.0	1		11/08/23 22:51		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/08/23 22:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2340**	mg/L	20.0	20.0	1		11/10/23 17:38		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/09/23 11:58	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

Sample: MW-16 **Lab ID: 50358888001** Collected: 11/06/23 14:40 Received: 11/07/23 12:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 12:57	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/07/23 23:31	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/07/23 23:31	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**1.6**	mg/L	0.15	0.15	1	11/16/23 15:00	11/17/23 13:58		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**3.6**	mg/L	1.0	0.24	1		11/15/23 21:14	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**4.8**	mg/L	1.0	0.24	1		11/17/23 19:24		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 762350
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3494753 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	11/11/23 16:40	

LABORATORY CONTROL SAMPLE: 3494754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.98	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3494755 3494756

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.67	1	1	1.6	1.6	96	97	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 761798
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3491686 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	100	18.1	11/16/23 10:53	
Magnesium	ug/L	ND	1000	32.8	11/16/23 10:53	
Potassium	ug/L	ND	1000	120	11/16/23 10:53	
Silica	ug/L	ND	450		11/16/23 10:53	N2
Sodium	ug/L	ND	1000	48.2	11/16/23 10:53	

LABORATORY CONTROL SAMPLE: 3491687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9890	99	80-120	
Magnesium	ug/L	10000	9570	96	80-120	
Potassium	ug/L	10000	9670	97	80-120	
Silica	ug/L	10700	10400	97	80-120	N2
Sodium	ug/L	10000	9590	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491688 3491689

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	7130	10000	10000	16600	16700	95	96	75-125	1	20	
Magnesium	ug/L	35400	10000	10000	44000	44200	86	89	75-125	1	20	
Potassium	ug/L	180000	10000	10000	192000	191000	126	115	75-125	1	20	P6
Silica	ug/L	12300	10700	10700	22700	22800	97	98	75-125	1	20	N2
Sodium	ug/L	66600	10000	10000	75800	77100	92	104	75-125	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491690 3491691

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	7390	10000	10000	17800	16700	104	94	75-125	6	20	
Magnesium	ug/L	36100	10000	10000	48300	45100	122	90	75-125	7	20	
Potassium	ug/L	180000	10000	10000	200000	188000	200	75	75-125	6	20	E,P6
Silica	ug/L	12600	10700	10700	24400	22700	110	94	75-125	7	20	N2
Sodium	ug/L	68700	10000	10000	82500	77200	138	85	75-125	7	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 762441
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3495053 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	11/15/23 11:25	
Iron, Dissolved	ug/L	ND	100	30.0	11/15/23 11:25	
Lithium, Dissolved	ug/L	ND	20.0	6.8	11/15/23 11:25	
Magnesium, Dissolved	ug/L	ND	1000	33.6	11/15/23 11:25	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	11/15/23 11:25	
Potassium, Dissolved	ug/L	ND	1000	97.8	11/15/23 11:25	

LABORATORY CONTROL SAMPLE: 3495054

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	961	96	80-120	
Iron, Dissolved	ug/L	10000	9980	100	80-120	
Lithium, Dissolved	ug/L	1000	1030	103	80-120	
Magnesium, Dissolved	ug/L	10000	9710	97	80-120	
Molybdenum, Dissolved	ug/L	1000	1020	102	80-120	
Potassium, Dissolved	ug/L	10000	9970	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495055 3495056

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	4200	1000	1000	5140	5210	94	101	75-125	1	20	
Iron, Dissolved	ug/L	6900	10000	10000	16500	16700	96	98	75-125	1	20	
Lithium, Dissolved	ug/L	1090	1000	1000	2120	2150	103	105	75-125	1	20	
Magnesium, Dissolved	ug/L	35700	10000	10000	44100	44700	84	90	75-125	1	20	
Molybdenum, Dissolved	ug/L	396	1000	1000	1430	1430	103	104	75-125	1	20	
Potassium, Dissolved	ug/L	190000	10000	10000	197000	196000	72	58	75-125	1	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 761473
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3490098 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.3	11/09/23 23:51	
Manganese	ug/L	ND	1.0	0.17	11/09/23 23:51	

LABORATORY CONTROL SAMPLE: 3490099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	419	105	80-120	
Manganese	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490100 3490101

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	395	400	98	99	75-125	1	20	
Manganese	ug/L	5070	40	40	5250	5170	448	241	75-125	2	20	P6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490102 3490103

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	396	397	98	98	75-125	0	20	
Manganese	ug/L	4880	40	40	4980	4910	262	77	75-125	1	20	E,P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 761472
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3490090 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	4.4	11/09/23 03:55	
Manganese, Dissolved	ug/L	ND	1.0	0.043	11/09/23 03:55	

LABORATORY CONTROL SAMPLE: 3490091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	387	97	80-120	
Manganese, Dissolved	ug/L	40	37.9	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490092 3490093

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	416	421	104	105	75-125	1	20	
Manganese, Dissolved	ug/L	5110	40	40	5010	5020	-255	-220	75-125	0	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 761693
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3491261 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/08/23 22:51	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/08/23 22:51	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/08/23 22:51	

LABORATORY CONTROL SAMPLE: 3491262

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.6	97	90-110	

SAMPLE DUPLICATE: 3491263

Parameter	Units	50358877001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	214	219	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	214	219	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3491264

Parameter	Units	50358888001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	386	394	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	386	394	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 762152
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3493607 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 17:36	

LABORATORY CONTROL SAMPLE: 3493608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	299	100	80-120	

SAMPLE DUPLICATE: 3493609

Parameter	Units	50358888001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2340	2430	4	10	

SAMPLE DUPLICATE: 3493610

Parameter	Units	50358895001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2380	2430	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 761826
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3491779 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/09/23 11:58	

LABORATORY CONTROL SAMPLE: 3491780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491781 3491782

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.29	0.29	54	55	90-110	1	20	M3

MATRIX SPIKE SAMPLE: 3491783

Parameter	Units	50358828001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.42	79	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 762073
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3493243 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/10/23 12:17	H3,N2

LABORATORY CONTROL SAMPLE: 3493244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	104	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493245 3493246

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	ND	1	1	1.0	1.0	101	101	90-110	0	20	H3,N2

MATRIX SPIKE SAMPLE: 3493247

Parameter	Units	50358714003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.0	102	90-110	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 761438
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3490021 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/07/23 23:16	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/07/23 23:16	

LABORATORY CONTROL SAMPLE: 3490022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.1	107	90-110	
Nitrogen, Nitrite	mg/L	1	1.1	106	90-110	

MATRIX SPIKE SAMPLE: 3490023

Parameter	Units	50358877003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	1	3.5	107	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.1	105	90-110	

MATRIX SPIKE SAMPLE: 3490024

Parameter	Units	50358888001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.92	91	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.0	103	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 763386
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3499139 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	11/17/23 13:56	

LABORATORY CONTROL SAMPLE: 3499140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3499141 3499142

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	1.6			3.2	3.2				0		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 763080
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3497429 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	11/15/23 17:02	

LABORATORY CONTROL SAMPLE: 3497430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3497431 3497432

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.6	10	10	12.8	12.9	92	93	80-120	1	20	

MATRIX SPIKE SAMPLE: 3497433

Parameter	Units	50358828001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	10	12.3	97	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

QC Batch: 763582
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358888001

METHOD BLANK: 3500180 Matrix: Water
Associated Lab Samples: 50358888001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	11/17/23 17:43	

LABORATORY CONTROL SAMPLE: 3500181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3500182 3500183

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	4.8	10	10	13.8	13.8	90	90	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3500184 3500185

Parameter	Units	50358928006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	4.3	10	10	12.8	12.9	85	86	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

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

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50358888

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358888001	**MW-16**	EPA 9056	762350		
50358888001	**MW-16**	EPA 3010	761798	EPA 6010	763341
50358888001	**MW-16**	EPA 3010	762441	EPA 6010	763062
50358888001	**MW-16**	EPA 200.2	761473	EPA 6020	761728
50358888001	**MW-16**	EPA 200.2	761472	EPA 6020	761724
50358888001	**MW-16**	SM 2320B	761693		
50358888001	**MW-16**	SM 2540C	762152		
50358888001	**MW-16**	SM 4500-S2-D	761826		
50358888001	**MW-16**	HACH 8146	762073		
50358888001	**MW-16**	EPA 353.2	761438		
50358888001	**MW-16**	EPA 365.1	763386	EPA 365.1	763688
50358888001	**MW-16**	SM 5310C	763080		
50358888001	**MW-16**	SM 5310C	763582		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / A

The Chain-of-Custody is a LEGAL DO

WO# : 50358888

50358888

Page: Of

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P3R3 Nov 2023	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/52

Regulatory Agency	
State / Location	
	IN

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate			Residual Chlorine (Y/N)	
																			Requested Analysis Filtered (Y/N)				Y			Y						
1	MW-16				110623	1405	110623	1440		9	X	X	X		X					X	X	X	X	X	X	X	X	X			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals: 6010 Fe, Mg, Na, K, sila 6020 - Al, Mn	Josh O'Brian	11-7-23	9:10	Jay Williams	11/7/23	9:10				
* Dissolved FF 6010 (B, Fe, Mo, Li, Mg, K)	Jay Williams	11-7	12:15	Jay Francis	11/7/23	1215	1.8	Y	Y	Y
Diss 6020 - Al, Mn										
Alkalinity = (Total , Bicarb & Carb)										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brian					
SIGNATURE of SAMPLER:		DATE Signed: 11-6-23				

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/07/23 1340 GT

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A (B) C D E F G H
4. **Cooler Temperature(s):** 1.8 | 1.8 (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)
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
   Cooler temp should be above freezing to 6°C

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

	Yes	No
~~USDA Regulated Soils?~~ (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? **Analysis:** Nitrates	✓	
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1810	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		✓

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** ~~HNO3 (<2)~~ ~~H2SO4 (<2)~~ NaOH (>10) ~~NaOH/ZnAc (>9)~~ Any non-conformance to pH recommendations will be noted on the container count form	✓		
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
	Present	Absent	No VOA Vials Sent
Headspace in VOA Vials (>6mm): See Containter Count form for details			✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓

COMMENTS: MS, MSD included in cooler but not on COC - GT 11/7/23
See Container Count

COC PAGE 1 of 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1												3	3				3	6	3	3	3		3					WT	✓	✓		✓ (NS)
2																																	
3																																	
4																																	
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

December 29, 2023

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358891001	**MW-10**	Water	11/06/23 12:05	11/07/23 12:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358891001	**MW-10**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	CAW	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358891001	**MW-10**					
EPA 9056	Chloride	135	mg/L	2.5	11/12/23 09:06	
EPA 9056	Fluoride	0.50	mg/L	0.10	11/12/23 08:48	
EPA 9056	Sulfate	1020	mg/L	25.0	11/12/23 09:24	
EPA 6010	Boron	21200	ug/L	100	11/16/23 11:02	
EPA 6010	Calcium	534000	ug/L	5000	11/16/23 12:24	
EPA 6010	Chromium	12.9	ug/L	10.0	11/16/23 11:02	
EPA 6010	Iron	49500	ug/L	100	11/16/23 11:02	
EPA 6010	Lead	11.2	ug/L	10.0	11/16/23 11:02	
EPA 6010	Lithium	31.8	ug/L	20.0	11/16/23 11:02	
EPA 6010	Manganese	2580	ug/L	10.0	11/16/23 11:02	
EPA 6010	Molybdenum	11.5	ug/L	10.0	11/16/23 11:02	
EPA 6020	Arsenic	88.4	ug/L	2.0	11/10/23 16:13	
EPA 6020	Barium	98.9	ug/L	1.0	11/09/23 23:58	
EPA 6020	Beryllium	1.5	ug/L	0.40	11/10/23 16:13	
EPA 6020	Cobalt	5.2	ug/L	1.0	11/09/23 23:58	
EPA 6020	Copper	13.4	ug/L	1.0	11/09/23 23:58	
EPA 6020	Selenium	1.8	ug/L	1.0	11/09/23 23:58	
EPA 6020	Zinc	33.9	ug/L	3.0	11/09/23 23:58	
EPA 903.1	Radium-226	0.580 ± 0.513 (0.761) C:NA T:85%	pCi/L		12/01/23 12:06	
EPA 904.0	Radium-228	0.659 ± 0.354 (0.612) C:86% T:85%	pCi/L		11/22/23 11:46	
Total Radium Calculation	Total Radium	1.24 ± 0.867 (1.37)	pCi/L		12/04/23 13:53	
SM 2540C	Total Dissolved Solids	2490	mg/L	20.0	11/10/23 17:38	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

Sample: MW-10 **Lab ID: 50358891001** Collected: 11/06/23 12:05 Received: 11/07/23 12:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**135**	mg/L	2.5	0.67	10		11/12/23 09:06	16887-00-6	
Fluoride	**0.50**	mg/L	0.10	0.017	1		11/12/23 08:48	16984-48-8	
Sulfate	**1020**	mg/L	25.0	19.0	100		11/12/23 09:24	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**21200**	ug/L	100	11.4	1	11/09/23 21:16	11/16/23 11:02	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/09/23 21:16	11/16/23 11:02	7440-43-9	
Calcium	**534000**	ug/L	5000	284	5	11/09/23 21:16	11/16/23 12:24	7440-70-2	
Chromium	**12.9**	ug/L	10.0	1.4	1	11/09/23 21:16	11/16/23 11:02	7440-47-3	
Iron	**49500**	ug/L	100	18.1	1	11/09/23 21:16	11/16/23 11:02	7439-89-6	
Lead	**11.2**	ug/L	10.0	4.0	1	11/09/23 21:16	11/16/23 11:02	7439-92-1	
Lithium	**31.8**	ug/L	20.0	5.1	1	11/09/23 21:16	11/16/23 11:02	7439-93-2	
Manganese	**2580**	ug/L	10.0	1.1	1	11/09/23 21:16	11/16/23 11:02	7439-96-5	
Molybdenum	**11.5**	ug/L	10.0	1.1	1	11/09/23 21:16	11/16/23 11:02	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	11/08/23 15:12	11/09/23 23:58	7440-36-0	
Arsenic	**88.4**	ug/L	2.0	0.15	2	11/08/23 15:12	11/10/23 16:13	7440-38-2	
Barium	**98.9**	ug/L	1.0	0.077	1	11/08/23 15:12	11/09/23 23:58	7440-39-3	
Beryllium	**1.5**	ug/L	0.40	0.070	2	11/08/23 15:12	11/10/23 16:13	7440-41-7	
Cobalt	**5.2**	ug/L	1.0	0.046	1	11/08/23 15:12	11/09/23 23:58	7440-48-4	
Copper	**13.4**	ug/L	1.0	0.23	1	11/08/23 15:12	11/09/23 23:58	7440-50-8	
Selenium	**1.8**	ug/L	1.0	0.20	1	11/08/23 15:12	11/09/23 23:58	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 15:12	11/09/23 23:58	7440-28-0	
Zinc	**33.9**	ug/L	3.0	1.3	1	11/08/23 15:12	11/09/23 23:58	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	11/09/23 19:43	11/10/23 08:34	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2490**	mg/L	20.0	20.0	1		11/10/23 17:38		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

QC Batch: 762350
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358891001

METHOD BLANK: 3494753 Matrix: Water
Associated Lab Samples: 50358891001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	11/11/23 16:40	
Fluoride	mg/L	ND	0.10	0.017	11/11/23 16:40	
Sulfate	mg/L	ND	0.25	0.19	11/11/23 16:40	

LABORATORY CONTROL SAMPLE: 3494754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.94	94	80-120	
Sulfate	mg/L	5	4.8	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3494755 3494756

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	40.6	25	25	64.4	64.3	95	95	80-120	0	15	
Fluoride	mg/L	0.11	1	1	1.1	1.1	98	99	80-120	1	15	
Sulfate	mg/L	1200	500	500	1700	1670	99	93	80-120	2	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

QC Batch: 761707
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358891001

METHOD BLANK: 3491338 Matrix: Water
Associated Lab Samples: 50358891001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	11/10/23 07:45	

LABORATORY CONTROL SAMPLE: 3491339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491340 3491341

Parameter	Units	50358769004 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	4.9	5.0	98	99	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

QC Batch: 761798
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358891001

METHOD BLANK: 3491686 Matrix: Water
Associated Lab Samples: 50358891001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	11/16/23 10:53	
Cadmium	ug/L	ND	2.0	0.74	11/16/23 10:53	
Calcium	ug/L	ND	1000	56.7	11/16/23 10:53	
Chromium	ug/L	ND	10.0	1.4	11/16/23 10:53	
Iron	ug/L	ND	100	18.1	11/16/23 10:53	
Lead	ug/L	ND	10.0	4.0	11/16/23 10:53	
Lithium	ug/L	ND	20.0	5.1	11/16/23 10:53	
Manganese	ug/L	ND	10.0	1.1	11/16/23 10:53	
Molybdenum	ug/L	ND	10.0	1.1	11/16/23 10:53	

LABORATORY CONTROL SAMPLE: 3491687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	955	95	80-120	
Cadmium	ug/L	1000	941	94	80-120	
Calcium	ug/L	10000	9880	99	80-120	
Chromium	ug/L	1000	975	97	80-120	
Iron	ug/L	10000	9890	99	80-120	
Lead	ug/L	1000	908	91	80-120	
Lithium	ug/L	1000	982	98	80-120	
Manganese	ug/L	1000	955	96	80-120	
Molybdenum	ug/L	1000	1000	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491688 3491689

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4110	1000	1000	5090	5130	97	102	75-125	1	20	
Cadmium	ug/L	ND	1000	1000	924	934	92	93	75-125	1	20	
Calcium	ug/L	455000	10000	10000	460000	464000	51	89	75-125	1	20	E,P6
Chromium	ug/L	ND	1000	1000	927	938	93	94	75-125	1	20	
Iron	ug/L	7130	10000	10000	16600	16700	95	96	75-125	1	20	
Lead	ug/L	ND	1000	1000	828	833	83	83	75-125	1	20	
Lithium	ug/L	1000	1000	1000	1930	1960	93	96	75-125	2	20	
Manganese	ug/L	4890	1000	1000	5740	5800	86	91	75-125	1	20	
Molybdenum	ug/L	387	1000	1000	1370	1390	98	100	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491690 3491691

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4240	1000	1000	5530	5120	129	88	75-125	8	20	P6
Cadmium	ug/L	ND	1000	1000	981	921	98	92	75-125	6	20	
Calcium	ug/L	500000	10000	10000	547000	498000	467	-16	75-125	9	20	P6
Chromium	ug/L	ND	1000	1000	983	921	98	92	75-125	6	20	
Iron	ug/L	7390	10000	10000	17800	16700	104	94	75-125	6	20	
Lead	ug/L	ND	1000	1000	902	852	90	85	75-125	6	20	
Lithium	ug/L	1040	1000	1000	2080	1950	104	91	75-125	7	20	
Manganese	ug/L	5000	1000	1000	6240	5850	124	85	75-125	6	20	
Molybdenum	ug/L	394	1000	1000	1450	1360	106	97	75-125	6	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

QC Batch: 761473
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358891001

METHOD BLANK: 3490098 Matrix: Water
Associated Lab Samples: 50358891001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.49	11/09/23 23:51	
Arsenic	ug/L	ND	1.0	0.075	11/10/23 15:12	
Barium	ug/L	ND	1.0	0.077	11/09/23 23:51	
Beryllium	ug/L	ND	0.20	0.035	11/10/23 15:12	
Cobalt	ug/L	ND	1.0	0.046	11/09/23 23:51	
Copper	ug/L	ND	1.0	0.23	11/09/23 23:51	
Selenium	ug/L	ND	1.0	0.20	11/09/23 23:51	
Thallium	ug/L	ND	1.0	0.040	11/09/23 23:51	
Zinc	ug/L	ND	3.0	1.3	11/09/23 23:51	

LABORATORY CONTROL SAMPLE: 3490099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.7	104	80-120	
Arsenic	ug/L	40	38.9	97	80-120	
Barium	ug/L	40	38.7	97	80-120	
Beryllium	ug/L	40	39.6	99	80-120	
Cobalt	ug/L	40	41.4	104	80-120	
Copper	ug/L	40	41.1	103	80-120	
Selenium	ug/L	40	39.2	98	80-120	
Thallium	ug/L	40	41.3	103	80-120	
Zinc	ug/L	40	40.4	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490100 3490101

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	41.8	41.8	104	104	75-125	0	20	
Arsenic	ug/L	3.8	40	40	41.1	40.6	93	92	75-125	1	20	
Barium	ug/L	58.5	40	40	98.3	96.0	100	94	75-125	2	20	
Beryllium	ug/L	ND	40	40	55.4	55.5	138	139	75-125	0	20	M3
Cobalt	ug/L	ND	40	40	39.4	39.4	97	96	75-125	0	20	
Copper	ug/L	1.5	40	40	38.1	38.2	91	92	75-125	0	20	
Selenium	ug/L	ND	40	40	39.6	38.4	99	96	75-125	3	20	
Thallium	ug/L	ND	40	40	41.6	41.6	104	104	75-125	0	20	
Zinc	ug/L	ND	40	40	38.0	37.0	90	88	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490102 3490103

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	42.2	41.6	105	104	75-125	1	20	
Arsenic	ug/L	3.9	40	40	42.3	41.1	96	93	75-125	3	20	
Barium	ug/L	58.1	40	40	98.0	96.5	100	96	75-125	2	20	
Beryllium	ug/L	ND	40	40	55.5	54.4	139	136	75-125	2	20	M3
Cobalt	ug/L	ND	40	40	39.9	39.5	98	97	75-125	1	20	
Copper	ug/L	1.6	40	40	38.3	37.9	92	91	75-125	1	20	
Selenium	ug/L	ND	40	40	39.2	39.4	98	98	75-125	1	20	
Thallium	ug/L	ND	40	40	41.6	41.3	104	103	75-125	1	20	
Zinc	ug/L	ND	40	40	37.2	36.8	90	89	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

QC Batch: 762152
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358891001

METHOD BLANK: 3493607 Matrix: Water
Associated Lab Samples: 50358891001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 17:36	

LABORATORY CONTROL SAMPLE: 3493608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	299	100	80-120	

SAMPLE DUPLICATE: 3493609

Parameter	Units	50358888001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2340	2430	4	10	

SAMPLE DUPLICATE: 3493610

Parameter	Units	50358895001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2380	2430	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

Sample: MW-10 **Lab ID: 50358891001** Collected: 11/06/23 12:05 Received: 11/07/23 12:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.580 ± 0.513 (0.761) C:NA T:85%**	pCi/L	12/01/23 12:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.659 ± 0.354 (0.612) C:86% T:85%**	pCi/L	11/22/23 11:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.24 ± 0.867 (1.37)**	pCi/L	12/04/23 13:53	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

QC Batch: 629389
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358891001

METHOD BLANK: 3068340 Matrix: Water
Associated Lab Samples: 50358891001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.395 ± 0.313 (0.616) C:86% T:88%	pCi/L	11/22/23 11:45	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

QC Batch: 629387
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358891001

METHOD BLANK: 3068339 Matrix: Water
Associated Lab Samples: 50358891001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.469 ± 0.367 (0.431) C:NA T:88%	pCi/L	12/01/23 11:52	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg Nov 2023 P1R2
Pace Project No.: 50358891

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358891001	**MW-10**	EPA 9056	762350		
50358891001	**MW-10**	EPA 3010	761798	EPA 6010	763341
50358891001	**MW-10**	EPA 200.2	761473	EPA 6020	761728
50358891001	**MW-10**	EPA 7470	761707	EPA 7470	762040
50358891001	**MW-10**	EPA 903.1	629387		
50358891001	**MW-10**	EPA 904.0	629389		
50358891001	**MW-10**	Total Radium Calculation	633600		
50358891001	**MW-10**	SM 2540C	762152		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY

The Chain-of-Custody is a LEGA

WO# : 50358891

50358891

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg Nov 2023 P1R2	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/49

Regulatory Agency	
State / Location	IN

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals, Total*	TDS	(Cl, F, SO4) IC	Rad-226/228 + Sum	Residual Chlorine (Y/N)
1	MW-10			11-6-23	1140	11-6-23	1205		5	X		X							X	X	X	X	
2																							
3																							
4				3																			
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)	Josh OBrian	11-7-23	9:10	Jax Williams	11-7	9:10				
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg	Jax Williams	11-7	12:15	Josh Francis	11/7/23	1215	1.6	Y	Y	Y
Rad to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh OBrian					
SIGNATURE of SAMPLER:	Josh OBrian	DATE Signed: 11-6-23				

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/07/23 1340 JA

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A (B) C D E F G H

4. **Cooler Temperature(s):** 1.6 | 1.6 **(Initial/Corrected)** RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** ~~HNO3 (<2)~~ **H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** ~~Any~~ non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
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:

COC PAGE 1 **of** 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1									WT	✓			
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 09, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358894001	**MW-10**	Water	11/06/23 12:05	11/07/23 12:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358894001	**MW-10**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358894001	**MW-10**					
EPA 9056	Chloride	130	mg/L	2.5	11/12/23 11:15	
EPA 9056	Fluoride	0.49	mg/L	0.10	11/12/23 10:56	
EPA 9056	Sulfate	978	mg/L	25.0	11/12/23 11:33	
EPA 6010	Boron	21500	ug/L	100	11/16/23 11:06	
EPA 6010	Calcium	534000	ug/L	5000	11/16/23 12:28	
EPA 6010	Lithium	23.4	ug/L	20.0	11/16/23 11:06	
EPA 6010	Molybdenum	11.1	ug/L	10.0	11/16/23 11:06	
EPA 6020	Arsenic	84.0	ug/L	1.0	11/11/23 03:02	
EPA 6020	Barium	58.2	ug/L	1.0	11/10/23 01:33	
EPA 6020	Cobalt	2.6	ug/L	1.0	11/10/23 01:33	
EPA 903.1	Radium-226	0.408 ± 0.706 (1.23) C:NA T:83%	pCi/L		12/01/23 12:18	
EPA 904.0	Radium-228	0.655 ± 0.392 (0.722) C:86% T:83%	pCi/L		11/22/23 11:49	
Total Radium Calculation	Total Radium	1.06 ± 1.10 (1.95)	pCi/L		12/04/23 13:53	
SM 2540C	Total Dissolved Solids	2510	mg/L	20.0	11/10/23 17:39	
SM 4500-H+B	pH at 25 Degrees C	7.0	Std. Units	0.10	11/16/23 16:43	H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

Sample: MW-10 **Lab ID: 50358894001** Collected: 11/06/23 12:05 Received: 11/07/23 12:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**130**	mg/L	2.5	0.67	10		11/12/23 11:15	16887-00-6	
Fluoride	**0.49**	mg/L	0.10	0.017	1		11/12/23 10:56	16984-48-8	
Sulfate	**978**	mg/L	25.0	19.0	100		11/12/23 11:33	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	**21500**	ug/L	100	11.4	1	11/09/23 21:16	11/16/23 11:06	7440-42-8	
Calcium	**534000**	ug/L	5000	284	5	11/09/23 21:16	11/16/23 12:28	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 21:16	11/16/23 11:06	7439-92-1	
Lithium	**23.4**	ug/L	20.0	5.1	1	11/09/23 21:16	11/16/23 11:06	7439-93-2	
Molybdenum	**11.1**	ug/L	10.0	1.1	1	11/09/23 21:16	11/16/23 11:06	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Arsenic	**84.0**	ug/L	1.0	0.075	1	11/08/23 15:12	11/11/23 03:02	7440-38-2	
Barium	**58.2**	ug/L	1.0	0.077	1	11/08/23 15:12	11/10/23 01:33	7440-39-3	
Cobalt	**2.6**	ug/L	1.0	0.046	1	11/08/23 15:12	11/10/23 01:33	7440-48-4	
Selenium	ND	ug/L	1.0	0.20	1	11/08/23 15:12	11/10/23 01:33	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 15:12	11/10/23 01:33	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2510**	mg/L	20.0	20.0	1		11/10/23 17:39		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
	Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.0**	Std. Units	0.10	0.10	1		11/16/23 16:43		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

QC Batch: 762350
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358894001

METHOD BLANK: 3494753 Matrix: Water
Associated Lab Samples: 50358894001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	11/11/23 16:40	
Fluoride	mg/L	ND	0.10	0.017	11/11/23 16:40	
Sulfate	mg/L	ND	0.25	0.19	11/11/23 16:40	

LABORATORY CONTROL SAMPLE: 3494754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.94	94	80-120	
Sulfate	mg/L	5	4.8	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3494755 3494756

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	40.6	25	25	64.4	64.3	95	95	80-120	0	15	
Fluoride	mg/L	0.11	1	1	1.1	1.1	98	99	80-120	1	15	
Sulfate	mg/L	1200	500	500	1700	1670	99	93	80-120	2	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

QC Batch: 761798
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358894001

METHOD BLANK: 3491686 Matrix: Water
Associated Lab Samples: 50358894001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	11/16/23 10:53	
Calcium	ug/L	ND	1000	56.7	11/16/23 10:53	
Lead	ug/L	ND	10.0	4.0	11/16/23 10:53	
Lithium	ug/L	ND	20.0	5.1	11/16/23 10:53	
Molybdenum	ug/L	ND	10.0	1.1	11/16/23 10:53	

LABORATORY CONTROL SAMPLE: 3491687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	955	95	80-120	
Calcium	ug/L	10000	9880	99	80-120	
Lead	ug/L	1000	908	91	80-120	
Lithium	ug/L	1000	982	98	80-120	
Molybdenum	ug/L	1000	1000	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491688 3491689

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4110	1000	1000	5090	5130	97	102	75-125	1	20	
Calcium	ug/L	455000	10000	10000	460000	464000	51	89	75-125	1	20	E,P6
Lead	ug/L	ND	1000	1000	828	833	83	83	75-125	1	20	
Lithium	ug/L	1000	1000	1000	1930	1960	93	96	75-125	2	20	
Molybdenum	ug/L	387	1000	1000	1370	1390	98	100	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491690 3491691

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4240	1000	1000	5530	5120	129	88	75-125	8	20	P6
Calcium	ug/L	500000	10000	10000	547000	498000	467	-16	75-125	9	20	P6
Lead	ug/L	ND	1000	1000	902	852	90	85	75-125	6	20	
Lithium	ug/L	1040	1000	1000	2080	1950	104	91	75-125	7	20	
Molybdenum	ug/L	394	1000	1000	1450	1360	106	97	75-125	6	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

QC Batch: 761473
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358894001

METHOD BLANK: 3490098 Matrix: Water
Associated Lab Samples: 50358894001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	0.075	11/10/23 15:12	
Barium	ug/L	ND	1.0	0.077	11/09/23 23:51	
Cobalt	ug/L	ND	1.0	0.046	11/09/23 23:51	
Selenium	ug/L	ND	1.0	0.20	11/09/23 23:51	
Thallium	ug/L	ND	1.0	0.040	11/09/23 23:51	

LABORATORY CONTROL SAMPLE: 3490099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	38.9	97	80-120	
Barium	ug/L	40	38.7	97	80-120	
Cobalt	ug/L	40	41.4	104	80-120	
Selenium	ug/L	40	39.2	98	80-120	
Thallium	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490100 3490101

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	3.8	40	40	41.1	40.6	93	92	75-125	1	20	
Barium	ug/L	58.5	40	40	98.3	96.0	100	94	75-125	2	20	
Cobalt	ug/L	ND	40	40	39.4	39.4	97	96	75-125	0	20	
Selenium	ug/L	ND	40	40	39.6	38.4	99	96	75-125	3	20	
Thallium	ug/L	ND	40	40	41.6	41.6	104	104	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490102 3490103

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	3.9	40	40	42.3	41.1	96	93	75-125	3	20	
Barium	ug/L	58.1	40	40	98.0	96.5	100	96	75-125	2	20	
Cobalt	ug/L	ND	40	40	39.9	39.5	98	97	75-125	1	20	
Selenium	ug/L	ND	40	40	39.2	39.4	98	98	75-125	1	20	
Thallium	ug/L	ND	40	40	41.6	41.3	104	103	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

QC Batch: 762152
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358894001

METHOD BLANK: 3493607 Matrix: Water
Associated Lab Samples: 50358894001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 17:36	

LABORATORY CONTROL SAMPLE: 3493608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	299	100	80-120	

SAMPLE DUPLICATE: 3493609

Parameter	Units	50358888001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2340	2430	4	10	

SAMPLE DUPLICATE: 3493610

Parameter	Units	50358895001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2380	2430	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

QC Batch: 763419
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358894001

SAMPLE DUPLICATE: 3499381

Parameter	Units	50358769004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	0	2	H3

SAMPLE DUPLICATE: 3499382

Parameter	Units	50358895001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

Sample: MW-10 **Lab ID: 50358894001** Collected: 11/06/23 12:05 Received: 11/07/23 12:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.408 ± 0.706 (1.23) C:NA T:83%**	pCi/L	12/01/23 12:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.655 ± 0.392 (0.722) C:86% T:83%**	pCi/L	11/22/23 11:49	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.06 ± 1.10 (1.95)**	pCi/L	12/04/23 13:53	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

QC Batch: 629389
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358894001

METHOD BLANK: 3068340 Matrix: Water
Associated Lab Samples: 50358894001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.395 ± 0.313 (0.616) C:86% T:88%	pCi/L	11/22/23 11:45	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

QC Batch: 629387
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358894001

METHOD BLANK: 3068339 Matrix: Water
Associated Lab Samples: 50358894001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.469 ± 0.367 (0.431) C:NA T:88%	pCi/L	12/01/23 11:52	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg Nov 2023 P2R2
Pace Project No.: 50358894

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358894001	**MW-10**	EPA 9056	762350		
50358894001	**MW-10**	EPA 3010	761798	EPA 6010	763341
50358894001	**MW-10**	EPA 200.2	761473	EPA 6020	761728
50358894001	**MW-10**	EPA 903.1	629387		
50358894001	**MW-10**	EPA 904.0	629389		
50358894001	**MW-10**	Total Radium Calculation	633600		
50358894001	**MW-10**	SM 2540C	762152		
50358894001	**MW-10**	SM 4500-H+B	763419		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / A

The Chain-of-Custody is a LEGAL DOC

WO# : 50358894

50358894

1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg Nov 2023 P2R2	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/50

Regulatory Agency	
State / Location	IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals, Total*	TDS/pH	(Cl, F, SO4) IC	Rad-226/228 + Sum	Residual Chlorine (Y/N)
1	MW-10			11-6-23	1140	11-6-23	1205		5	X		X							X	X	X	X	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Pb, Mo, Ca, Li (5)	Josh O'Brian	11-7-23	9.10	Jax Williams	11-7	9.10				
6020: Co, As, Se, Ba, Tl (5)	Jax Williams	11-7	12-15	Jax Williams	11/7/23	1215	1.6	Y	Y	Y
Rad 226/228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brian					
SIGNATURE of SAMPLER:	Josh O'Brian	DATE Signed: 11-6-23				

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/07/23 1340 JA

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A (B) C D E F G H

4. **Cooler Temperature(s):** 1.6 / 1.6 | | | |

(Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**

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

Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
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:

COC PAGE 1 **of** 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1									WT	✓			
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 07, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 07, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50358895001	**MW-16**	Water	11/06/23 14:40	11/07/23 12:15
50358895002	**MW-16 MS**	Water	11/06/23 14:40	11/07/23 12:15
50358895003	**MW-16 MSD**	Water	11/06/23 14:40	11/07/23 12:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50358895001	**MW-16**	EPA 9056	KBB	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50358895002	**MW-16 MS**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
50358895003	**MW-16 MSD**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50358895001	**MW-16**					
EPA 9056	Chloride	40.4	mg/L	2.5	11/14/23 19:24	
EPA 9056	Sulfate	1130	mg/L	25.0	11/14/23 19:41	
EPA 6010	Boron	4240	ug/L	100	11/16/23 11:07	
EPA 6010	Calcium	500000	ug/L	5000	11/16/23 12:30	
EPA 6010	Lithium	1040	ug/L	20.0	11/16/23 11:07	
EPA 6010	Molybdenum	394	ug/L	10.0	11/16/23 11:07	
EPA 6020	Arsenic	3.9	ug/L	1.0	11/11/23 02:45	
EPA 6020	Barium	58.1	ug/L	1.0	11/10/23 01:16	
EPA 903.1	Radium-226	0.528 ± 0.505 (0.769) C:NA T:85%	pCi/L		12/01/23 12:18	
EPA 904.0	Radium-228	1.63 ± 0.525 (0.677) C:87% T:85%	pCi/L		11/22/23 11:48	
Total Radium Calculation	Total Radium	2.16 ± 1.03 (1.45)	pCi/L		12/04/23 13:53	
SM 2540C	Total Dissolved Solids	2380	mg/L	20.0	11/10/23 17:39	
SM 4500-H+B	pH at 25 Degrees C	7.2	Std. Units	0.10	11/16/23 16:44	H3
50358895002	**MW-16 MS**					
EPA 903.1	Radium-226	87.97 %REC ± NA (NA) C:NA T:NA	pCi/L		12/01/23 12:18	
EPA 904.0	Radium-228	83.13 %REC ± NA (NA) C:NA T:NA	pCi/L		11/22/23 11:48	
50358895003	**MW-16 MSD**					
EPA 903.1	Radium-226	87.76 %REC 0.24RPD ± NA (NA) C:NA T:NA	pCi/L		12/01/23 12:18	
EPA 904.0	Radium-228	88.30 %REC 6.04RPD ± NA (NA) C:NA T:NA	pCi/L		11/22/23 11:49	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Sample: MW-16 **Lab ID: 50358895001** Collected: 11/06/23 14:40 Received: 11/07/23 12:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**40.4**	mg/L	2.5	0.67	10		11/14/23 19:24	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/14/23 19:07	16984-48-8	
Sulfate	**1130**	mg/L	25.0	19.0	100		11/14/23 19:41	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**4240**	ug/L	100	11.4	1	11/09/23 21:16	11/16/23 11:07	7440-42-8	
Calcium	**500000**	ug/L	5000	284	5	11/09/23 21:16	11/16/23 12:30	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/09/23 21:16	11/16/23 11:07	7439-92-1	
Lithium	**1040**	ug/L	20.0	5.1	1	11/09/23 21:16	11/16/23 11:07	7439-93-2	
Molybdenum	**394**	ug/L	10.0	1.1	1	11/09/23 21:16	11/16/23 11:07	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Arsenic	**3.9**	ug/L	1.0	0.075	1	11/08/23 15:12	11/11/23 02:45	7440-38-2	
Barium	**58.1**	ug/L	1.0	0.077	1	11/08/23 15:12	11/10/23 01:16	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/08/23 15:12	11/10/23 01:16	7440-48-4	
Selenium	ND	ug/L	1.0	0.20	1	11/08/23 15:12	11/10/23 01:16	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	11/08/23 15:12	11/10/23 01:16	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2380**	mg/L	20.0	20.0	1		11/10/23 17:39		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.2**	Std. Units	0.10	0.10	1		11/16/23 16:44		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

QC Batch: 762551
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358895001

METHOD BLANK: 3495348 Matrix: Water
Associated Lab Samples: 50358895001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	11/14/23 10:07	
Fluoride	mg/L	ND	0.10	0.017	11/14/23 10:07	
Sulfate	mg/L	ND	0.25	0.19	11/14/23 10:07	

LABORATORY CONTROL SAMPLE: 3495349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	0.96	96	80-120	
Sulfate	mg/L	5	4.6	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495350 3495351

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	40.4	25	25	64.4	64.2	96	95	80-120	0	15	
Fluoride	mg/L	ND	1	1	1.0	1.0	94	95	80-120	1	15	
Sulfate	mg/L	1130	500	500	1580	1580	90	90	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

QC Batch: 761798
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358895001

METHOD BLANK: 3491686 Matrix: Water
Associated Lab Samples: 50358895001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	11/16/23 10:53	
Calcium	ug/L	ND	1000	56.7	11/16/23 10:53	
Lead	ug/L	ND	10.0	4.0	11/16/23 10:53	
Lithium	ug/L	ND	20.0	5.1	11/16/23 10:53	
Molybdenum	ug/L	ND	10.0	1.1	11/16/23 10:53	

LABORATORY CONTROL SAMPLE: 3491687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	955	95	80-120	
Calcium	ug/L	10000	9880	99	80-120	
Lead	ug/L	1000	908	91	80-120	
Lithium	ug/L	1000	982	98	80-120	
Molybdenum	ug/L	1000	1000	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491688 3491689

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4110	1000	1000	5090	5130	97	102	75-125	1	20	
Calcium	ug/L	455000	10000	10000	460000	464000	51	89	75-125	1	20	E,P6
Lead	ug/L	ND	1000	1000	828	833	83	83	75-125	1	20	
Lithium	ug/L	1000	1000	1000	1930	1960	93	96	75-125	2	20	
Molybdenum	ug/L	387	1000	1000	1370	1390	98	100	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3491690 3491691

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4240	1000	1000	5530	5120	129	88	75-125	8	20	P6
Calcium	ug/L	500000	10000	10000	547000	498000	467	-16	75-125	9	20	P6
Lead	ug/L	ND	1000	1000	902	852	90	85	75-125	6	20	
Lithium	ug/L	1040	1000	1000	2080	1950	104	91	75-125	7	20	
Molybdenum	ug/L	394	1000	1000	1450	1360	106	97	75-125	6	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

QC Batch: 761473
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358895001

METHOD BLANK: 3490098 Matrix: Water
Associated Lab Samples: 50358895001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	0.075	11/10/23 15:12	
Barium	ug/L	ND	1.0	0.077	11/09/23 23:51	
Cobalt	ug/L	ND	1.0	0.046	11/09/23 23:51	
Selenium	ug/L	ND	1.0	0.20	11/09/23 23:51	
Thallium	ug/L	ND	1.0	0.040	11/09/23 23:51	

LABORATORY CONTROL SAMPLE: 3490099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	38.9	97	80-120	
Barium	ug/L	40	38.7	97	80-120	
Cobalt	ug/L	40	41.4	104	80-120	
Selenium	ug/L	40	39.2	98	80-120	
Thallium	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490100 3490101

Parameter	Units	50358888001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	3.8	40	40	41.1	40.6	93	92	75-125	1	20	
Barium	ug/L	58.5	40	40	98.3	96.0	100	94	75-125	2	20	
Cobalt	ug/L	ND	40	40	39.4	39.4	97	96	75-125	0	20	
Selenium	ug/L	ND	40	40	39.6	38.4	99	96	75-125	3	20	
Thallium	ug/L	ND	40	40	41.6	41.6	104	104	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3490102 3490103

Parameter	Units	50358895001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	3.9	40	40	42.3	41.1	96	93	75-125	3	20	
Barium	ug/L	58.1	40	40	98.0	96.5	100	96	75-125	2	20	
Cobalt	ug/L	ND	40	40	39.9	39.5	98	97	75-125	1	20	
Selenium	ug/L	ND	40	40	39.2	39.4	98	98	75-125	1	20	
Thallium	ug/L	ND	40	40	41.6	41.3	104	103	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

QC Batch: 762152
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50358895001

METHOD BLANK: 3493607 Matrix: Water
Associated Lab Samples: 50358895001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/10/23 17:36	

LABORATORY CONTROL SAMPLE: 3493608

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	299	100	80-120	

SAMPLE DUPLICATE: 3493609

Parameter	Units	50358888001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2340	2430	4	10	

SAMPLE DUPLICATE: 3493610

Parameter	Units	50358895001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2380	2430	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

QC Batch: 763419
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50358895001

SAMPLE DUPLICATE: 3499381

Parameter	Units	50358769004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	0	2	H3

SAMPLE DUPLICATE: 3499382

Parameter	Units	50358895001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Sample: MW-16 **Lab ID: 50358895001** Collected: 11/06/23 14:40 Received: 11/07/23 12:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.528 ± 0.505 (0.769) C:NA T:85%**	pCi/L	12/01/23 12:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.63 ± 0.525 (0.677) C:87% T:85%**	pCi/L	11/22/23 11:48	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.16 ± 1.03 (1.45)**	pCi/L	12/04/23 13:53	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Sample: MW-16 MS **Lab ID: 50358895002** Collected: 11/06/23 14:40 Received: 11/07/23 12:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**87.97 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/01/23 12:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**83.13 %REC ± NA (NA) C:NA T:NA**	pCi/L	11/22/23 11:48	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Sample: MW-16 MSD **Lab ID: 50358895003** Collected: 11/06/23 14:40 Received: 11/07/23 12:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**87.76 %REC 0.24RPD ± NA (NA) C:NA T:NA**	pCi/L	12/01/23 12:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**88.30 %REC 6.04RPD ± NA (NA) C:NA T:NA**	pCi/L	11/22/23 11:49	15262-20-1	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

QC Batch: 629389
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358895001, 50358895002, 50358895003

METHOD BLANK: 3068340 Matrix: Water
Associated Lab Samples: 50358895001, 50358895002, 50358895003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.395 ± 0.313 (0.616) C:86% T:88%	pCi/L	11/22/23 11:45	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

QC Batch: 629387
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50358895001, 50358895002, 50358895003

METHOD BLANK: 3068339 Matrix: Water
Associated Lab Samples: 50358895001, 50358895002, 50358895003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.469 ± 0.367 (0.431) C:NA T:88%	pCi/L	12/01/23 11:52	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg Nov 2023 P2R3
Pace Project No.: 50358895

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50358895001	**MW-16**	EPA 9056	762551		
50358895001	**MW-16**	EPA 3010	761798	EPA 6010	763341
50358895001	**MW-16**	EPA 200.2	761473	EPA 6020	761728
50358895001	**MW-16**	EPA 903.1	629387		
50358895002	**MW-16 MS**	EPA 903.1	629387		
50358895003	**MW-16 MSD**	EPA 903.1	629387		
50358895001	**MW-16**	EPA 904.0	629389		
50358895002	**MW-16 MS**	EPA 904.0	629389		
50358895003	**MW-16 MSD**	EPA 904.0	629389		
50358895001	**MW-16**	Total Radium Calculation	633600		
50358895001	**MW-16**	SM 2540C	762152		
50358895001	**MW-16**	SM 4500-H+B	763419		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTO

The Chain-of-Custody is a LE

WO# : 50358895

50358895

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Inf	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg Nov 2023 P2R3	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/50

Regulatory Agency
State / Location
IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals, Total*	TDS/pH	(Cl, F, SO4) IC	Rad-226/228 + Sum	Residual Chlorine (Y/N)
1	MW-16			110623	1405	110623	1440		5	X		X							X	X	X	X	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Metals* 6010: B, Pb, Mo, Ca, Li (5)	Josh O'Brien	11-7-23	9:10	Jax Williams	11-7	9:10
6020: Co, As, Se, Ba, Tl (5)	Jax Williams	11-7	1215	Jax Williams	11/7/23	1215
Rad 226/228 to Pace PA						

SAMPLE CONDITIONS			
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
2.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh O'Brien

SIGNATURE of SAMPLER: Josh O'Brien DATE Signed: 11-6-23

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/07/23 1340 JA

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A (B) C D E F G H

4. **Cooler Temperature(s):** 2.2/2.2 | | | |

(Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**

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

Cooler temp should be above freezing to 6°C

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

	Yes	No
~~USDA Regulated Soils?~~ (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		✓

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		

	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓

	Present	Absent	No VOA Vials Sent
Headspace in VOA Vials (>6mm): See Containter Count form for details			✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓

COMMENTS: MS, MSD included in cooler, See container count -JA 11/7/23 (NOT ON COC)

COC PAGE 1 of 1

Sample Container Count

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

									AMBER GLASS							PLASTIC								OTHER					Nitric Red	Sulfuric Yellow	Sodium Hydroxide Green	Sodium Hydroxide/ ZnAc Black
COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1																6		6	3									WT	✓			
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 07, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 09, 2023. 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,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50359167001	**MW-4C**	Water	11/08/23 12:40	11/09/23 10:20
50359167002	**FIELD BLANK-1**	Water	11/08/23 12:40	11/09/23 10:20
50359167003	**MW-3**	Water	11/08/23 15:35	11/09/23 10:20
50359167004	**DUP-1**	Water	11/08/23 15:35	11/09/23 10:20
50359167005	**MW-2R**	Water	11/08/23 18:10	11/09/23 10:20

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50359167001	**MW-4C**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	DMT	2	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	AEL	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50359167002	**FIELD BLANK-1**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	AEL	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50359167003	**MW-3**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	DMT	2	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	AEL	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50359167004	**DUP-1**	EPA 9056	ADM	1	PASI-I

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	MTM	5	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	DMT	2	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	AEL	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50359167005	**MW-2R**	EPA 9056	ADM	1	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	DMT	2	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	AEL	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359167001	**MW-4C**					
EPA 9056	Bromide	0.50	mg/L	0.050	11/19/23 02:50	
EPA 6010	Magnesium	53100	ug/L	1000	11/17/23 17:35	
EPA 6010	Potassium	60200	ug/L	1000	11/17/23 17:35	
EPA 6010	Silica	20000	ug/L	450	11/17/23 17:35	N2
EPA 6010	Sodium	79300	ug/L	1000	11/17/23 17:35	
EPA 6010	Boron, Dissolved	4370	ug/L	100	11/18/23 02:49	
EPA 6010	Lithium, Dissolved	369	ug/L	20.0	11/18/23 02:49	
EPA 6010	Magnesium, Dissolved	53900	ug/L	1000	11/18/23 02:49	
EPA 6010	Potassium, Dissolved	63200	ug/L	1000	11/18/23 02:49	
EPA 6020	Manganese	2460	ug/L	25.0	11/16/23 10:49	
EPA 6020	Manganese, Dissolved	2490	ug/L	20.0	11/14/23 10:20	
SM 2320B	Alkalinity, Total as CaCO3	434	mg/L	10.0	11/14/23 03:46	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	434	mg/L	10.0	11/14/23 03:46	
SM 2540C	Total Dissolved Solids	2650	mg/L	20.0	11/15/23 09:45	
SM 5310C	Total Organic Carbon	2.6	mg/L	1.0	11/16/23 18:08	
SM 5310C	Dissolved Organic Carbon	4.4	mg/L	1.0	11/21/23 03:29	
50359167003	**MW-3**					
EPA 9056	Bromide	0.69	mg/L	0.050	11/19/23 05:36	
EPA 6010	Magnesium	15400	ug/L	1000	11/17/23 17:47	
EPA 6010	Potassium	206000	ug/L	3000	11/17/23 18:13	
EPA 6010	Silica	13300	ug/L	450	11/17/23 17:47	N2
EPA 6010	Sodium	85900	ug/L	1000	11/17/23 17:47	
EPA 6010	Boron, Dissolved	801	ug/L	100	11/18/23 03:00	
EPA 6010	Lithium, Dissolved	1740	ug/L	20.0	11/18/23 03:00	
EPA 6010	Magnesium, Dissolved	15800	ug/L	1000	11/18/23 03:00	
EPA 6010	Molybdenum, Dissolved	252	ug/L	10.0	11/18/23 03:00	
EPA 6010	Potassium, Dissolved	237000	ug/L	3000	11/18/23 03:05	
EPA 6020	Manganese	2080	ug/L	20.0	11/16/23 11:13	
EPA 6020	Manganese, Dissolved	2130	ug/L	20.0	11/14/23 10:44	
SM 2320B	Alkalinity, Total as CaCO3	135	mg/L	10.0	11/14/23 03:46	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	135	mg/L	10.0	11/14/23 03:46	
SM 2540C	Total Dissolved Solids	1910	mg/L	20.0	11/15/23 09:46	
EPA 365.1	Phosphate as P04	0.29	mg/L	0.15	11/20/23 14:40	
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	11/16/23 20:31	
SM 5310C	Dissolved Organic Carbon	1.8	mg/L	1.0	11/21/23 04:02	
50359167004	**DUP-1**					
EPA 9056	Bromide	0.70	mg/L	0.050	11/19/23 06:31	
EPA 6010	Magnesium	15700	ug/L	1000	11/17/23 17:48	
EPA 6010	Potassium	206000	ug/L	3000	11/17/23 18:15	
EPA 6010	Silica	13100	ug/L	450	11/17/23 17:48	N2
EPA 6010	Sodium	86400	ug/L	1000	11/17/23 17:48	
EPA 6010	Boron, Dissolved	794	ug/L	100	11/18/23 03:02	
EPA 6010	Lithium, Dissolved	1730	ug/L	20.0	11/18/23 03:02	
EPA 6010	Magnesium, Dissolved	15900	ug/L	1000	11/18/23 03:02	
EPA 6010	Molybdenum, Dissolved	249	ug/L	10.0	11/18/23 03:02	
EPA 6010	Potassium, Dissolved	235000	ug/L	3000	11/18/23 03:06	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359167004	**DUP-1**					
EPA 6020	Manganese	2050	ug/L	20.0	11/16/23 11:16	
EPA 6020	Manganese, Dissolved	2110	ug/L	20.0	11/14/23 10:48	
SM 2320B	Alkalinity, Total as CaCO3	140	mg/L	10.0	11/14/23 03:46	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	140	mg/L	10.0	11/14/23 03:46	
SM 2540C	Total Dissolved Solids	1900	mg/L	20.0	11/15/23 09:47	
EPA 365.1	Phosphate as P04	0.27	mg/L	0.15	11/20/23 14:41	
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	11/16/23 20:50	
SM 5310C	Dissolved Organic Carbon	1.7	mg/L	1.0	11/21/23 14:55	
50359167005	**MW-2R**					
EPA 9056	Bromide	0.70	mg/L	0.050	11/19/23 06:49	
EPA 6010	Iron	23200	ug/L	100	11/17/23 17:50	
EPA 6010	Magnesium	56100	ug/L	1000	11/17/23 17:50	
EPA 6010	Potassium	112000	ug/L	3000	11/17/23 18:17	
EPA 6010	Silica	33700	ug/L	450	11/17/23 17:50	N2
EPA 6010	Sodium	88500	ug/L	1000	11/17/23 17:50	
EPA 6010	Boron, Dissolved	1990	ug/L	100	11/18/23 03:03	
EPA 6010	Iron, Dissolved	9890	ug/L	100	11/18/23 03:03	
EPA 6010	Lithium, Dissolved	686	ug/L	20.0	11/18/23 03:03	
EPA 6010	Magnesium, Dissolved	60000	ug/L	1000	11/18/23 03:03	
EPA 6010	Potassium, Dissolved	99600	ug/L	1000	11/18/23 03:03	
EPA 6020	Aluminum	5980	ug/L	100	11/16/23 11:27	
EPA 6020	Manganese	5550	ug/L	50.0	11/16/23 11:20	
EPA 6020	Aluminum, Dissolved	23.3	ug/L	10.0	11/14/23 09:19	
EPA 6020	Manganese, Dissolved	5840	ug/L	50.0	11/14/23 10:51	
SM 2320B	Alkalinity, Total as CaCO3	170	mg/L	10.0	11/14/23 03:46	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	170	mg/L	10.0	11/14/23 03:46	
SM 2540C	Total Dissolved Solids	2440	mg/L	20.0	11/15/23 09:47	
EPA 365.1	Phosphate as P04	1.7	mg/L	0.75	11/20/23 14:42	
SM 5310C	Dissolved Organic Carbon	4.6	mg/L	1.0	11/21/23 15:06	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: MW-4C **Lab ID: 50359167001** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.50**	mg/L	0.050	0.0090	1		11/19/23 02:50	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	ND	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:35	7439-89-6	
Magnesium	**53100**	ug/L	1000	32.8	1	11/15/23 16:07	11/17/23 17:35	7439-95-4	
Potassium	**60200**	ug/L	1000	120	1	11/15/23 16:07	11/17/23 17:35	7440-09-7	
Silica	**20000**	ug/L	450		1	11/15/23 16:07	11/17/23 17:35	7631-86-9	N2
Sodium	**79300**	ug/L	1000	48.2	1	11/15/23 16:07	11/17/23 17:35	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**4370**	ug/L	100	6.2	1	11/17/23 08:18	11/18/23 02:49	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	11/17/23 08:18	11/18/23 02:49	7439-89-6	
Lithium, Dissolved	**369**	ug/L	20.0	6.8	1	11/17/23 08:18	11/18/23 02:49	7439-93-2	
Magnesium, Dissolved	**53900**	ug/L	1000	33.6	1	11/17/23 08:18	11/18/23 02:49	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	11/17/23 08:18	11/18/23 02:49	7439-98-7	
Potassium, Dissolved	**63200**	ug/L	1000	97.8	1	11/17/23 08:18	11/18/23 02:49	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	4.4	1	11/15/23 16:18	11/16/23 08:41	7429-90-5	
Manganese	**2460**	ug/L	25.0	1.1	25	11/15/23 16:18	11/16/23 10:49	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	11/13/23 07:41	11/14/23 06:56	7429-90-5	
Manganese, Dissolved	**2490**	ug/L	20.0	0.86	20	11/13/23 07:41	11/14/23 10:20	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**434**	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Bicarbonate (CaCO3)	**434**	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/14/23 03:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2650**	mg/L	20.0	20.0	1		11/15/23 09:45		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/14/23 10:49	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: MW-4C **Lab ID: 50359167001** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 16:54	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/10/23 01:12	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/10/23 01:12	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	11/18/23 14:30	11/20/23 14:38		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**2.6**	mg/L	1.0	0.24	1		11/16/23 18:08	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**4.4**	mg/L	1.0	0.24	1		11/21/23 03:29		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: FIELD BLANK-1 **Lab ID: 50359167002** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		11/19/23 01:55	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	ND	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:45	7439-89-6	
Magnesium	ND	ug/L	1000	32.8	1	11/15/23 16:07	11/17/23 17:45	7439-95-4	
Potassium	ND	ug/L	1000	120	1	11/15/23 16:07	11/17/23 17:45	7440-09-7	
Silica	ND	ug/L	450		1	11/15/23 16:07	11/17/23 17:45	7631-86-9	N2
Sodium	ND	ug/L	1000	48.2	1	11/15/23 16:07	11/17/23 17:45	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	4.4	1	11/15/23 16:18	11/16/23 06:20	7429-90-5	
Manganese	ND	ug/L	1.0	0.043	1	11/15/23 16:18	11/16/23 06:20	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	ND	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/14/23 03:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		11/15/23 09:46		PL
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/14/23 10:49	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 16:56	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/10/23 01:22	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/10/23 01:22	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	11/18/23 14:30	11/20/23 14:40		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: FIELD BLANK-1 **Lab ID: 50359167002** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		11/16/23 19:51	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: MW-3 **Lab ID: 50359167003** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.69**	mg/L	0.050	0.0090	1		11/19/23 05:36	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	ND	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:47	7439-89-6	
Magnesium	**15400**	ug/L	1000	32.8	1	11/15/23 16:07	11/17/23 17:47	7439-95-4	
Potassium	**206000**	ug/L	3000	360	3	11/15/23 16:07	11/17/23 18:13	7440-09-7	
Silica	**13300**	ug/L	450		1	11/15/23 16:07	11/17/23 17:47	7631-86-9	N2
Sodium	**85900**	ug/L	1000	48.2	1	11/15/23 16:07	11/17/23 17:47	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**801**	ug/L	100	6.2	1	11/17/23 08:18	11/18/23 03:00	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	11/17/23 08:18	11/18/23 03:00	7439-89-6	
Lithium, Dissolved	**1740**	ug/L	20.0	6.8	1	11/17/23 08:18	11/18/23 03:00	7439-93-2	
Magnesium, Dissolved	**15800**	ug/L	1000	33.6	1	11/17/23 08:18	11/18/23 03:00	7439-95-4	
Molybdenum, Dissolved	**252**	ug/L	10.0	0.78	1	11/17/23 08:18	11/18/23 03:00	7439-98-7	
Potassium, Dissolved	**237000**	ug/L	3000	293	3	11/17/23 08:18	11/18/23 03:05	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	4.4	1	11/15/23 16:18	11/16/23 06:42	7429-90-5	
Manganese	**2080**	ug/L	20.0	0.86	20	11/15/23 16:18	11/16/23 11:13	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	11/13/23 07:41	11/14/23 09:12	7429-90-5	
Manganese, Dissolved	**2130**	ug/L	20.0	0.86	20	11/13/23 07:41	11/14/23 10:44	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**135**	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Bicarbonate (CaCO3)	**135**	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/14/23 03:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1910**	mg/L	20.0	20.0	1		11/15/23 09:46		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/14/23 10:49	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: MW-3 **Lab ID: 50359167003** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 17:25	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/10/23 01:29	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/10/23 01:29	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.29**	mg/L	0.15	0.15	1	11/18/23 14:30	11/20/23 14:40		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**1.1**	mg/L	1.0	0.24	1		11/16/23 20:31	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.8**	mg/L	1.0	0.24	1		11/21/23 04:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: DUP-1 **Lab ID: 50359167004** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.70**	mg/L	0.050	0.0090	1		11/19/23 06:31	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	ND	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:48	7439-89-6	
Magnesium	**15700**	ug/L	1000	32.8	1	11/15/23 16:07	11/17/23 17:48	7439-95-4	
Potassium	**206000**	ug/L	3000	360	3	11/15/23 16:07	11/17/23 18:15	7440-09-7	
Silica	**13100**	ug/L	450		1	11/15/23 16:07	11/17/23 17:48	7631-86-9	N2
Sodium	**86400**	ug/L	1000	48.2	1	11/15/23 16:07	11/17/23 17:48	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**794**	ug/L	100	6.2	1	11/17/23 08:18	11/18/23 03:02	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	11/17/23 08:18	11/18/23 03:02	7439-89-6	
Lithium, Dissolved	**1730**	ug/L	20.0	6.8	1	11/17/23 08:18	11/18/23 03:02	7439-93-2	
Magnesium, Dissolved	**15900**	ug/L	1000	33.6	1	11/17/23 08:18	11/18/23 03:02	7439-95-4	
Molybdenum, Dissolved	**249**	ug/L	10.0	0.78	1	11/17/23 08:18	11/18/23 03:02	7439-98-7	
Potassium, Dissolved	**235000**	ug/L	3000	293	3	11/17/23 08:18	11/18/23 03:06	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	4.4	1	11/15/23 16:18	11/16/23 06:45	7429-90-5	
Manganese	**2050**	ug/L	20.0	0.86	20	11/15/23 16:18	11/16/23 11:16	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	11/13/23 07:41	11/14/23 09:15	7429-90-5	
Manganese, Dissolved	**2110**	ug/L	20.0	0.86	20	11/13/23 07:41	11/14/23 10:48	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**140**	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Bicarbonate (CaCO3)	**140**	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/14/23 03:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1900**	mg/L	20.0	20.0	1		11/15/23 09:47		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/14/23 10:49	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: DUP-1 **Lab ID: 50359167004** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 17:25	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/10/23 01:31	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/10/23 01:31	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.27**	mg/L	0.15	0.15	1	11/18/23 14:30	11/20/23 14:41		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**1.1**	mg/L	1.0	0.24	1		11/16/23 20:50	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.7**	mg/L	1.0	0.24	1		11/21/23 14:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: MW-2R **Lab ID: 50359167005** Collected: 11/08/23 18:10 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.70**	mg/L	0.050	0.0090	1		11/19/23 06:49	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	**23200**	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:50	7439-89-6	
Magnesium	**56100**	ug/L	1000	32.8	1	11/15/23 16:07	11/17/23 17:50	7439-95-4	
Potassium	**112000**	ug/L	3000	360	3	11/15/23 16:07	11/17/23 18:17	7440-09-7	
Silica	**33700**	ug/L	450		1	11/15/23 16:07	11/17/23 17:50	7631-86-9	N2
Sodium	**88500**	ug/L	1000	48.2	1	11/15/23 16:07	11/17/23 17:50	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1990**	ug/L	100	6.2	1	11/17/23 08:18	11/18/23 03:03	7440-42-8	
Iron, Dissolved	**9890**	ug/L	100	30.0	1	11/17/23 08:18	11/18/23 03:03	7439-89-6	
Lithium, Dissolved	**686**	ug/L	20.0	6.8	1	11/17/23 08:18	11/18/23 03:03	7439-93-2	
Magnesium, Dissolved	**60000**	ug/L	1000	33.6	1	11/17/23 08:18	11/18/23 03:03	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	11/17/23 08:18	11/18/23 03:03	7439-98-7	
Potassium, Dissolved	**99600**	ug/L	1000	97.8	1	11/17/23 08:18	11/18/23 03:03	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**5980**	ug/L	100	44.1	10	11/15/23 16:18	11/16/23 11:27	7429-90-5	
Manganese	**5550**	ug/L	50.0	2.2	50	11/15/23 16:18	11/16/23 11:20	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	**23.3**	ug/L	10.0	4.4	1	11/13/23 07:41	11/14/23 09:19	7429-90-5	
Manganese, Dissolved	**5840**	ug/L	50.0	2.2	50	11/13/23 07:41	11/14/23 10:51	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**170**	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Bicarbonate (CaCO3)	**170**	mg/L	10.0	10.0	1		11/14/23 03:46		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/14/23 03:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2440**	mg/L	20.0	20.0	1		11/15/23 09:47		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/14/23 10:49	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Sample: MW-2R **Lab ID: 50359167005** Collected: 11/08/23 18:10 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/10/23 17:25	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/10/23 01:35	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/10/23 01:35	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**1.7**	mg/L	0.75	0.75	1	11/18/23 14:30	11/20/23 14:42		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	4.0	0.94	4		11/16/23 21:09	7440-44-0	D3
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**4.6**	mg/L	1.0	0.24	1		11/21/23 15:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 762643 | Analysis Method: EPA 9056
QC Batch Method: EPA 9056 | Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3495683 Matrix: Water
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	11/19/23 14:29	

LABORATORY CONTROL SAMPLE: 3495684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.95	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495685 3495686

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.50	1	1	1.5	1.4	95	94	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 762698
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3495904 Matrix: Water
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	100	18.1	11/17/23 17:16	
Magnesium	ug/L	ND	1000	32.8	11/17/23 17:16	
Potassium	ug/L	ND	1000	120	11/17/23 17:16	
Silica	ug/L	ND	450		11/17/23 17:16	N2
Sodium	ug/L	ND	1000	48.2	11/17/23 17:16	

LABORATORY CONTROL SAMPLE: 3495905

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	9790	98	80-120	
Magnesium	ug/L	10000	9480	95	80-120	
Potassium	ug/L	10000	9470	95	80-120	
Silica	ug/L	10700	10100	94	80-120	N2
Sodium	ug/L	10000	9460	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495906 3495907

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	ND	10000	10000	9500	9380	95	94	75-125	1	20	
Magnesium	ug/L	53100	10000	10000	61100	60400	80	73	75-125	1	20	P6
Potassium	ug/L	60200	10000	10000	68800	68600	86	84	75-125	0	20	
Silica	ug/L	20000	10700	10700	30500	30400	99	98	75-125	0	20	N2
Sodium	ug/L	79300	10000	10000	87000	86700	77	75	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 763240
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3498338 Matrix: Water
Associated Lab Samples: 50359167001, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	11/18/23 02:20	
Iron, Dissolved	ug/L	ND	100	30.0	11/18/23 02:20	
Lithium, Dissolved	ug/L	ND	20.0	6.8	11/18/23 02:20	
Magnesium, Dissolved	ug/L	ND	1000	33.6	11/18/23 02:20	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	11/18/23 02:20	
Potassium, Dissolved	ug/L	ND	1000	97.8	11/18/23 02:20	

LABORATORY CONTROL SAMPLE: 3498339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	984	98	80-120	
Iron, Dissolved	ug/L	10000	9980	100	80-120	
Lithium, Dissolved	ug/L	1000	1020	102	80-120	
Magnesium, Dissolved	ug/L	10000	10000	100	80-120	
Molybdenum, Dissolved	ug/L	1000	1030	103	80-120	
Potassium, Dissolved	ug/L	10000	10000	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3498340 3498341

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	4370	1000	1000	5290	5200	92	83	75-125	2	20	
Iron, Dissolved	ug/L	ND	10000	10000	9590	9520	96	95	75-125	1	20	
Lithium, Dissolved	ug/L	369	1000	1000	1390	1380	102	101	75-125	1	20	
Magnesium, Dissolved	ug/L	53900	10000	10000	62500	61300	86	74	75-125	2	20	P6
Molybdenum, Dissolved	ug/L	ND	1000	1000	1030	1020	102	101	75-125	1	20	
Potassium, Dissolved	ug/L	63200	10000	10000	72700	70700	95	75	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 763013
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3497196 Matrix: Water
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	4.4	11/16/23 13:10	
Manganese	ug/L	ND	1.0	0.043	11/16/23 13:10	

LABORATORY CONTROL SAMPLE: 3497197

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	423	106	80-120	
Manganese	ug/L	40	39.9	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3497198 3497199

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	396	402	97	98	75-125	2	20	
Manganese	ug/L	2460	40	40	2500	2480	93	37	75-125	1	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 762361
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3494883 Matrix: Water
Associated Lab Samples: 50359167001, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	4.4	11/14/23 06:03	
Manganese, Dissolved	ug/L	ND	1.0	0.043	11/14/23 06:03	

LABORATORY CONTROL SAMPLE: 3494884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	401	100	80-120	
Manganese, Dissolved	ug/L	40	41.1	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3494885 3494886

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	426	429	106	107	75-125	1	20	
Manganese, Dissolved	ug/L	2490	40	40	2490	2530	-6	105	75-125	2	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 762686 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3495863 Matrix: Water
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/14/23 03:46	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/14/23 03:46	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/14/23 03:46	

LABORATORY CONTROL SAMPLE: 3495864

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.8	98	90-110	

SAMPLE DUPLICATE: 3495865

Parameter	Units	50359167001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	434	445	3	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	434	445	3	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3495866

Parameter	Units	50359185001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	497	510	3	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	474	487	3	20	
Alkalinity,Carbonate (CaCO3)	mg/L	23.2	23.2	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 762769 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3496163 Matrix: Water
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/15/23 09:37	

LABORATORY CONTROL SAMPLE: 3496164

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	270	90	80-120	

SAMPLE DUPLICATE: 3496165

Parameter	Units	50359133001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	500	542	8	10	

SAMPLE DUPLICATE: 3496166

Parameter	Units	50359167001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2650	2670	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 762749 | Analysis Method: SM 4500-S2-D
QC Batch Method: SM 4500-S2-D | Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3496081 Matrix: Water
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/14/23 10:49	

LABORATORY CONTROL SAMPLE: 3496082

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3496083 3496084

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.54	0.52	107	103	90-110	4	20	

MATRIX SPIKE SAMPLE: 3496085

Parameter	Units	50359185001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	5	5.8	115	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 762234
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002

METHOD BLANK: 3493977 Matrix: Water
Associated Lab Samples: 50359167001, 50359167002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/10/23 16:35	H3,N2

LABORATORY CONTROL SAMPLE: 3493978

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	0.98	98	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493979 3493980

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	ND	1	1	1.1	1.0	107	102	90-110	5	20	H3,N2

MATRIX SPIKE SAMPLE: 3493981

Parameter	Units	50359162004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.0	105	90-110	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 762238
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167003, 50359167004, 50359167005

METHOD BLANK: 3493993 Matrix: Water
Associated Lab Samples: 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/10/23 17:23	H3,N2

LABORATORY CONTROL SAMPLE: 3493994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	103	90-110	H3,N2

MATRIX SPIKE SAMPLE: 3493995

Parameter	Units	50359251004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.0	101	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3493996 3493997

Parameter	Units	50359369004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	ND	1	1	1.1	1.0	107	105	90-110	2	20	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 762010
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3492953 Matrix: Water
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/10/23 00:58	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/10/23 00:58	

LABORATORY CONTROL SAMPLE: 3492954

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	103	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3492955 3492956

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.1	1.1	102	101	90-110	0	20	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	103	104	90-110	0	20	

MATRIX SPIKE SAMPLE: 3492981

Parameter	Units	50359160001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.7	1	3.5	86	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.0	103	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 763770 — Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 — Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3501198 — Matrix: Water
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	11/20/23 14:32	

LABORATORY CONTROL SAMPLE: 3501199

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3501200 — 3501201

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.6	1.6				1		

MATRIX SPIKE SAMPLE: 3501202

Parameter	Units	50359846001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	1.5		3.0			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 763086 | Analysis Method: SM 5310C
QC Batch Method: SM 5310C | Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

METHOD BLANK: 3497484 Matrix: Water
Associated Lab Samples: 50359167001, 50359167002, 50359167003, 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	11/16/23 15:08	

LABORATORY CONTROL SAMPLE: 3497485

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.6	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3497486 3497487

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	2.6	10	10	12.4	12.4	98	98	80-120	0	20	

MATRIX SPIKE SAMPLE: 3497488

Parameter	Units	50359167002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	10	9.8	96	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 764031
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167001, 50359167003

METHOD BLANK: 3502328 Matrix: Water
Associated Lab Samples: 50359167001, 50359167003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	11/20/23 23:01	

LABORATORY CONTROL SAMPLE: 3502329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3502330 3502331

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	4.4	10	10	13.5	13.4	91	90	80-120	1	20	

MATRIX SPIKE SAMPLE: 3502332

Parameter	Units	50359167003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	1.8	10	11.5	97	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

QC Batch: 764233
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359167004, 50359167005

METHOD BLANK: 3502995 Matrix: Water
Associated Lab Samples: 50359167004, 50359167005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	11/21/23 14:35	

LABORATORY CONTROL SAMPLE: 3502996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.6	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3502997 3502998

Parameter	Units	50359253005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.3	10	10	11.9	12.0	95	97	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3503002 3503003

Parameter	Units	50359369004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.8	10	10	10.8	11.2	90	93	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

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

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H3	Sample was received or analysis requested beyond the recognized method holding time.
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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50359167001	**MW-4C**	EPA 9056	762643		
50359167002	**FIELD BLANK-1**	EPA 9056	762643		
50359167003	**MW-3**	EPA 9056	762643		
50359167004	**DUP-1**	EPA 9056	762643		
50359167005	**MW-2R**	EPA 9056	762643		
50359167001	**MW-4C**	EPA 3010	762698	EPA 6010	763695
50359167002	**FIELD BLANK-1**	EPA 3010	762698	EPA 6010	763695
50359167003	**MW-3**	EPA 3010	762698	EPA 6010	763695
50359167004	**DUP-1**	EPA 3010	762698	EPA 6010	763695
50359167005	**MW-2R**	EPA 3010	762698	EPA 6010	763695
50359167001	**MW-4C**	EPA 3010	763240	EPA 6010	763747
50359167003	**MW-3**	EPA 3010	763240	EPA 6010	763747
50359167004	**DUP-1**	EPA 3010	763240	EPA 6010	763747
50359167005	**MW-2R**	EPA 3010	763240	EPA 6010	763747
50359167001	**MW-4C**	EPA 200.2	763013	EPA 6020	763255
50359167002	**FIELD BLANK-1**	EPA 200.2	763013	EPA 6020	763255
50359167003	**MW-3**	EPA 200.2	763013	EPA 6020	763255
50359167004	**DUP-1**	EPA 200.2	763013	EPA 6020	763255
50359167005	**MW-2R**	EPA 200.2	763013	EPA 6020	763255
50359167001	**MW-4C**	EPA 200.2	762361	EPA 6020	762612
50359167003	**MW-3**	EPA 200.2	762361	EPA 6020	762612
50359167004	**DUP-1**	EPA 200.2	762361	EPA 6020	762612
50359167005	**MW-2R**	EPA 200.2	762361	EPA 6020	762612
50359167001	**MW-4C**	SM 2320B	762686		
50359167002	**FIELD BLANK-1**	SM 2320B	762686		
50359167003	**MW-3**	SM 2320B	762686		
50359167004	**DUP-1**	SM 2320B	762686		
50359167005	**MW-2R**	SM 2320B	762686		
50359167001	**MW-4C**	SM 2540C	762769		
50359167002	**FIELD BLANK-1**	SM 2540C	762769		
50359167003	**MW-3**	SM 2540C	762769		
50359167004	**DUP-1**	SM 2540C	762769		
50359167005	**MW-2R**	SM 2540C	762769		
50359167001	**MW-4C**	SM 4500-S2-D	762749		
50359167002	**FIELD BLANK-1**	SM 4500-S2-D	762749		
50359167003	**MW-3**	SM 4500-S2-D	762749		
50359167004	**DUP-1**	SM 4500-S2-D	762749		
50359167005	**MW-2R**	SM 4500-S2-D	762749		
50359167001	**MW-4C**	HACH 8146	762234		
50359167002	**FIELD BLANK-1**	HACH 8146	762234		
50359167003	**MW-3**	HACH 8146	762238		
50359167004	**DUP-1**	HACH 8146	762238		
50359167005	**MW-2R**	HACH 8146	762238		
50359167001	**MW-4C**	EPA 353.2	762010		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PETERSBURG P3R1 NOV 2023
Pace Project No.: 50359167

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50359167002	**FIELD BLANK-1**	EPA 353.2	762010		
50359167003	**MW-3**	EPA 353.2	762010		
50359167004	**DUP-1**	EPA 353.2	762010		
50359167005	**MW-2R**	EPA 353.2	762010		
50359167001	**MW-4C**	EPA 365.1	763770	EPA 365.1	764046
50359167002	**FIELD BLANK-1**	EPA 365.1	763770	EPA 365.1	764046
50359167003	**MW-3**	EPA 365.1	763770	EPA 365.1	764046
50359167004	**DUP-1**	EPA 365.1	763770	EPA 365.1	764046
50359167005	**MW-2R**	EPA 365.1	763770	EPA 365.1	764046
50359167001	**MW-4C**	SM 5310C	763086		
50359167002	**FIELD BLANK-1**	SM 5310C	763086		
50359167003	**MW-3**	SM 5310C	763086		
50359167004	**DUP-1**	SM 5310C	763086		
50359167005	**MW-2R**	SM 5310C	763086		
50359167001	**MW-4C**	SM 5310C	764031		
50359167003	**MW-3**	SM 5310C	764031		
50359167004	**DUP-1**	SM 5310C	764233		
50359167005	**MW-2R**	SM 5310C	764233		

WO# : 50359167

50359167

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : Of

Project Information:		Section C Invoice Information:	
Company: Atlas Indianapolis	Report To: Mark Breting	Attention: Accounts Payable - Paula Sedam	
Address: 7988 Centerpoint Drive Suite 100	Copy To:	Company Name: Atlas Indianapolis	
Indianapolis, IN 46256		Address:	Regulatory Agency
Email: mark.breting@oneatlas.com	Purchase Order #:	Pace Quote:	
Phone: (317)579-4082 Fax:	Project Name: Petersburg P3R1 Nov 2023	Pace Project Manager: Will Statz	State / Location
Requested Due Date:	Project #:	Pace Profile #: 10498/52	IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate			Residual Chlorine (Y/N)	
	MATRIX: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS			DATE	TIME	DATE	TIME												Requested Analysis Filtered (Y/N)			Y			Y						
1	MW-4C			11-8-23	1125	11/8/23	1240		9	X	X	X		X					X	X	X	X	X	X	X	X	X				
2	MS-1			11-8-23	1125	11/8/23	1240		9	X	X	X		X					X	X	X	X	X	X	X	X	X				
3	MSD-1			11-8-23	1125	11/8/23	1240		9	X	X	X		X					X	X	X	X	X	X	X	X	X				
4	Field Blank-1			11-8-23	1125	11/8/23	1240		7	X	X	X		X					X	X	X		X	X		X	X				
5	MW-3			11-8-23	1500	11/8/23	1535		9	X	X	X		X					X	X	X	X	X	X	X	X	X				
6	DUP-1			11/8/23	1500	11/8/23	1535		9	X	X	X		X					X	X	X	X	X	X	X	X	X				
7	MW-2R			11/8/23	1740	11/8/23	1810		9	X	X	X		X					X	X	X	X	X	X	X	X	X				
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
* Metals: 6010 Fe, Mg, Na, K, sila 6020 - Al, Mn	Josh O'Brian	11-9-23	800	Jay Wellborn	11-9	800	
** Dissolved FF 6010 (B, Fe, Mo, Li, Mg, K)	Jay Wellborn	11-9	1020	Josh O'Brian	11/9/23	820	
Diss 6020 - Al, Mn							
Alkalinity = (Total , Bicarb & Carb)							

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brian					
SIGNATURE of SAMPLER:		DATE Signed: 11-8-23				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: MR 11/9/23 1240

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 0.9/0.9 | 0.7/0.7 | 1.1/1.1 | 0.5/0.5
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** ~~HNO3 (<2)~~ ~~H2SO4 (<2)~~ **NaOH (>10)** **NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? **Analysis:** NO3	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1330			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: 1.5/1.5 0.9/0.9 0.7/0.7 0.6/0.6 1.1/1.1 0.9/0.9

COC PAGE ____ of ____

Sample Container Count

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

									AMBER GLASS							PLASTIC										OTHER							
COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T		AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1													3	3				3	6	3	3	3		3					WT	✓	✓		✓
2																																	
3																																	
4													1					1	2	1		1		1					WT	✓	✓		✓
5													1	1				1	2	1	1	1		1					WT	✓	✓		✓
6													1	1				1	2	1	1	1		1					WT	✓	✓		✓
7													1	1				1	2	1	1	1		1					WT	✓	✓		✓
8																																	
9																																	
10																																	
11																																	
12																																	

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

December 29, 2023

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 09, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50359169001	**MW-4C**	Water	11/08/23 12:40	11/09/23 10:20
50359169002	**FIELD BLANK-1**	Water	11/08/23 12:40	11/09/23 10:20
50359169003	**MW-3**	Water	11/08/23 15:35	11/09/23 10:20
50359169004	**DUP-1**	Water	11/08/23 15:35	11/09/23 10:20
50359169005	**MW-2R**	Water	11/08/23 18:10	11/09/23 10:20

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50359169001	**MW-4C**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	DMT	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	AEL	1	PASI-I
50359169002	**FIELD BLANK-1**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	DMT	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
50359169003	**MW-3**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	DMT, MGM	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
50359169004	**DUP-1**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	DMT, MGM	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
50359169005	**MW-2R**	EPA 9056	ADM	3	PASI-I
		EPA 6010	MTM	9	PASI-I
		EPA 6020	DMT, MGM	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359169001	**MW-4C**					
EPA 9056	Chloride	40.7	mg/L	2.5	11/19/23 07:26	
EPA 9056	Fluoride	0.18	mg/L	0.10	11/19/23 07:08	
EPA 9056	Sulfate	1430	mg/L	25.0	11/19/23 07:44	
EPA 6010	Boron	3890	ug/L	100	11/17/23 17:52	
EPA 6010	Calcium	586000	ug/L	5000	11/17/23 18:18	
EPA 6010	Lithium	331	ug/L	20.0	11/17/23 17:52	
EPA 6010	Manganese	2190	ug/L	10.0	11/17/23 17:52	
EPA 6020	Barium	29.8	ug/L	1.0	11/16/23 12:52	
EPA 6020	Cobalt	1.0	ug/L	1.0	11/16/23 12:52	
EPA 6020	Copper	2.4	ug/L	1.0	11/16/23 12:52	
EPA 903.1	Radium-226	-0.320 ± 0.519 (1.16) C:NA T:92%	pCi/L		11/28/23 11:55	
EPA 904.0	Radium-228	0.373 ± 0.353 (0.720) C:82% T:82%	pCi/L		11/28/23 14:46	
Total Radium Calculation	Total Radium	0.373 ± 0.872 (1.88)	pCi/L		11/29/23 10:33	
SM 2540C	Total Dissolved Solids	2630	mg/L	20.0	11/15/23 09:47	
50359169002	**FIELD BLANK-1**					
EPA 903.1	Radium-226	-0.0655 ± 0.498 (1.04) C:NA T:91%	pCi/L		11/28/23 11:55	
EPA 904.0	Radium-228	0.0601 ± 0.298 (0.682) C:83% T:88%	pCi/L		11/28/23 14:47	
Total Radium Calculation	Total Radium	0.0601 ± 0.796 (1.72)	pCi/L		11/29/23 10:33	
50359169003	**MW-3**					
EPA 9056	Chloride	69.4	mg/L	2.5	11/19/23 10:30	
EPA 9056	Sulfate	1010	mg/L	25.0	11/19/23 10:48	
EPA 6010	Boron	756	ug/L	100	11/17/23 17:55	
EPA 6010	Calcium	286000	ug/L	2000	11/17/23 18:23	
EPA 6010	Lithium	1590	ug/L	20.0	11/17/23 17:55	
EPA 6010	Manganese	1950	ug/L	10.0	11/17/23 17:55	
EPA 6010	Molybdenum	245	ug/L	10.0	11/17/23 17:55	
EPA 6020	Arsenic	63.1	ug/L	1.0	11/16/23 12:59	
EPA 6020	Barium	61.7	ug/L	1.0	11/16/23 12:59	
EPA 6020	Cobalt	2.1	ug/L	1.0	11/16/23 12:59	
EPA 6020	Copper	1.2	ug/L	1.0	11/16/23 12:59	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359169003	**MW-3**					
EPA 903.1	Radium-226	1.96 ± 0.754 (0.568) C:NA T:91%	pCi/L		11/28/23 11:55	
EPA 904.0	Radium-228	0.457 ± 0.354 (0.699) C:85% T:86%	pCi/L		11/28/23 14:47	
Total Radium Calculation	Total Radium	2.42 ± 1.11 (1.27)	pCi/L		11/29/23 10:33	
SM 2540C	Total Dissolved Solids	1860	mg/L	20.0	11/15/23 10:02	
50359169004	**DUP-1**					
EPA 9056	Chloride	69.5	mg/L	2.5	11/19/23 11:25	
EPA 9056	Sulfate	1040	mg/L	25.0	11/19/23 11:43	
EPA 6010	Boron	745	ug/L	100	11/17/23 17:56	
EPA 6010	Calcium	285000	ug/L	2000	11/17/23 18:24	
EPA 6010	Lithium	1580	ug/L	20.0	11/17/23 17:56	
EPA 6010	Manganese	1980	ug/L	10.0	11/17/23 17:56	
EPA 6010	Molybdenum	247	ug/L	10.0	11/17/23 17:56	
EPA 6020	Arsenic	61.9	ug/L	1.0	11/16/23 13:03	
EPA 6020	Barium	62.8	ug/L	1.0	11/16/23 13:03	
EPA 6020	Cobalt	2.2	ug/L	1.0	11/16/23 13:03	
EPA 6020	Copper	1.4	ug/L	1.0	11/16/23 13:03	
EPA 903.1	Radium-226	1.16 ± 0.709 (0.896) C:NA T:86%	pCi/L		11/28/23 12:07	
EPA 904.0	Radium-228	0.670 ± 0.377 (0.678) C:84% T:84%	pCi/L		11/28/23 14:47	
Total Radium Calculation	Total Radium	1.83 ± 1.09 (1.57)	pCi/L		11/29/23 10:33	
SM 2540C	Total Dissolved Solids	1820	mg/L	20.0	11/15/23 10:02	
50359169005	**MW-2R**					
EPA 9056	Chloride	63.4	mg/L	2.5	11/19/23 12:20	
EPA 9056	Sulfate	1390	mg/L	25.0	11/19/23 12:38	
EPA 6010	Boron	1970	ug/L	100	11/17/23 17:58	
EPA 6010	Calcium	463000	ug/L	5000	11/17/23 18:26	
EPA 6010	Iron	13000	ug/L	100	11/17/23 17:58	
EPA 6010	Lithium	718	ug/L	20.0	11/17/23 17:58	
EPA 6010	Manganese	5480	ug/L	10.0	11/17/23 17:58	
EPA 6010	Molybdenum	10.9	ug/L	10.0	11/17/23 17:58	
EPA 6020	Arsenic	11.8	ug/L	1.0	11/16/23 13:06	
EPA 6020	Barium	51.8	ug/L	1.0	11/16/23 13:06	
EPA 6020	Cobalt	2.3	ug/L	1.0	11/16/23 13:06	
EPA 6020	Copper	2.1	ug/L	1.0	11/16/23 13:06	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359169005	**MW-2R**					
EPA 6020	Zinc	3.9	ug/L	3.0	11/16/23 13:06	
EPA 903.1	Radium-226	0.334 ± 0.436 (0.720) C:NA T:91%	pCi/L		11/28/23 12:07	
EPA 904.0	Radium-228	0.694 ± 0.374 (0.656) C:81% T:84%	pCi/L		11/28/23 14:47	
Total Radium Calculation	Total Radium	1.03 ± 0.810 (1.38)	pCi/L		11/29/23 10:33	
SM 2540C	Total Dissolved Solids	2450	mg/L	20.0	11/15/23 10:03	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: MW-4C **Lab ID: 50359169001** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**40.7**	mg/L	2.5	0.67	10		11/19/23 07:26	16887-00-6	
Fluoride	**0.18**	mg/L	0.10	0.017	1		11/19/23 07:08	16984-48-8	
Sulfate	**1430**	mg/L	25.0	19.0	100		11/19/23 07:44	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**3890**	ug/L	100	11.4	1	11/15/23 16:07	11/17/23 17:52	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/15/23 16:07	11/17/23 17:52	7440-43-9	
Calcium	**586000**	ug/L	5000	284	5	11/15/23 16:07	11/17/23 18:18	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	11/15/23 16:07	11/17/23 17:52	7440-47-3	
Iron	ND	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:52	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 16:07	11/17/23 17:52	7439-92-1	
Lithium	**331**	ug/L	20.0	5.1	1	11/15/23 16:07	11/17/23 17:52	7439-93-2	
Manganese	**2190**	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:52	7439-96-5	
Molybdenum	ND	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:52	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.044	1	11/15/23 16:18	11/16/23 12:52	7440-36-0	
Arsenic	ND	ug/L	1.0	0.064	1	11/15/23 16:18	11/16/23 12:52	7440-38-2	
Barium	**29.8**	ug/L	1.0	0.067	1	11/15/23 16:18	11/16/23 12:52	7440-39-3	
Beryllium	ND	ug/L	0.20	0.026	1	11/15/23 16:18	11/20/23 06:15	7440-41-7	
Cobalt	**1.0**	ug/L	1.0	0.024	1	11/15/23 16:18	11/16/23 12:52	7440-48-4	
Copper	**2.4**	ug/L	1.0	0.16	1	11/15/23 16:18	11/16/23 12:52	7440-50-8	
Selenium	ND	ug/L	1.0	0.23	1	11/15/23 16:18	11/16/23 12:52	7782-49-2	
Thallium	ND	ug/L	1.0	0.042	1	11/15/23 16:18	11/16/23 12:52	7440-28-0	
Zinc	ND	ug/L	3.0	1.2	1	11/15/23 16:18	11/16/23 12:52	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	11/16/23 19:37	11/17/23 09:10	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2630**	mg/L	20.0	20.0	1		11/15/23 09:47		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: FIELD BLANK-1 **Lab ID: 50359169002** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	ND	mg/L	0.25	0.067	1		11/19/23 08:03	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/19/23 08:03	16984-48-8	
Sulfate	ND	mg/L	0.25	0.19	1		11/19/23 08:03	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	11.4	1	11/15/23 16:07	11/17/23 17:53	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/15/23 16:07	11/17/23 17:53	7440-43-9	
Calcium	ND	ug/L	1000	56.7	1	11/15/23 16:07	11/17/23 17:53	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	11/15/23 16:07	11/17/23 17:53	7440-47-3	
Iron	ND	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:53	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 16:07	11/17/23 17:53	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	11/15/23 16:07	11/17/23 17:53	7439-93-2	
Manganese	ND	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:53	7439-96-5	
Molybdenum	ND	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:53	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.044	1	11/15/23 16:18	11/16/23 12:56	7440-36-0	
Arsenic	ND	ug/L	1.0	0.064	1	11/15/23 16:18	11/16/23 12:56	7440-38-2	
Barium	ND	ug/L	1.0	0.067	1	11/15/23 16:18	11/16/23 12:56	7440-39-3	
Beryllium	ND	ug/L	0.20	0.026	1	11/15/23 16:18	11/20/23 06:18	7440-41-7	
Cobalt	ND	ug/L	1.0	0.024	1	11/15/23 16:18	11/16/23 12:56	7440-48-4	
Copper	ND	ug/L	1.0	0.16	1	11/15/23 16:18	11/16/23 12:56	7440-50-8	
Selenium	ND	ug/L	1.0	0.23	1	11/15/23 16:18	11/16/23 12:56	7782-49-2	
Thallium	ND	ug/L	1.0	0.042	1	11/15/23 16:18	11/16/23 12:56	7440-28-0	
Zinc	ND	ug/L	3.0	1.2	1	11/15/23 16:18	11/16/23 12:56	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	11/16/23 19:37	11/17/23 09:20	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		11/15/23 10:01		PL

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: MW-3 **Lab ID: 50359169003** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**69.4**	mg/L	2.5	0.67	10		11/19/23 10:30	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/19/23 10:11	16984-48-8	
Sulfate	**1010**	mg/L	25.0	19.0	100		11/19/23 10:48	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**756**	ug/L	100	11.4	1	11/15/23 16:07	11/17/23 17:55	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/15/23 16:07	11/17/23 17:55	7440-43-9	
Calcium	**286000**	ug/L	2000	113	2	11/15/23 16:07	11/17/23 18:23	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	11/15/23 16:07	11/17/23 17:55	7440-47-3	
Iron	ND	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:55	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 16:07	11/17/23 17:55	7439-92-1	
Lithium	**1590**	ug/L	20.0	5.1	1	11/15/23 16:07	11/17/23 17:55	7439-93-2	
Manganese	**1950**	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:55	7439-96-5	
Molybdenum	**245**	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:55	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.044	1	11/15/23 16:18	11/16/23 12:59	7440-36-0	
Arsenic	**63.1**	ug/L	1.0	0.064	1	11/15/23 16:18	11/16/23 12:59	7440-38-2	
Barium	**61.7**	ug/L	1.0	0.067	1	11/15/23 16:18	11/16/23 12:59	7440-39-3	
Beryllium	ND	ug/L	0.20	0.026	1	11/15/23 16:18	11/21/23 07:31	7440-41-7	
Cobalt	**2.1**	ug/L	1.0	0.024	1	11/15/23 16:18	11/16/23 12:59	7440-48-4	
Copper	**1.2**	ug/L	1.0	0.16	1	11/15/23 16:18	11/16/23 12:59	7440-50-8	
Selenium	ND	ug/L	1.0	0.23	1	11/15/23 16:18	11/16/23 12:59	7782-49-2	
Thallium	ND	ug/L	1.0	0.042	1	11/15/23 16:18	11/16/23 12:59	7440-28-0	
Zinc	ND	ug/L	3.0	1.2	1	11/15/23 16:18	11/16/23 12:59	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	11/16/23 19:37	11/17/23 09:23	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1860**	mg/L	20.0	20.0	1		11/15/23 10:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: DUP-1 **Lab ID: 50359169004** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**69.5**	mg/L	2.5	0.67	10		11/19/23 11:25	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/19/23 11:06	16984-48-8	
Sulfate	**1040**	mg/L	25.0	19.0	100		11/19/23 11:43	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	**745**	ug/L	100	11.4	1	11/15/23 16:07	11/17/23 17:56	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/15/23 16:07	11/17/23 17:56	7440-43-9	
Calcium	**285000**	ug/L	2000	113	2	11/15/23 16:07	11/17/23 18:24	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	11/15/23 16:07	11/17/23 17:56	7440-47-3	
Iron	ND	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:56	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 16:07	11/17/23 17:56	7439-92-1	
Lithium	**1580**	ug/L	20.0	5.1	1	11/15/23 16:07	11/17/23 17:56	7439-93-2	
Manganese	**1980**	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:56	7439-96-5	
Molybdenum	**247**	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:56	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.044	1	11/15/23 16:18	11/16/23 13:03	7440-36-0	
Arsenic	**61.9**	ug/L	1.0	0.064	1	11/15/23 16:18	11/16/23 13:03	7440-38-2	
Barium	**62.8**	ug/L	1.0	0.067	1	11/15/23 16:18	11/16/23 13:03	7440-39-3	
Beryllium	ND	ug/L	0.20	0.026	1	11/15/23 16:18	11/21/23 07:39	7440-41-7	
Cobalt	**2.2**	ug/L	1.0	0.024	1	11/15/23 16:18	11/16/23 13:03	7440-48-4	
Copper	**1.4**	ug/L	1.0	0.16	1	11/15/23 16:18	11/16/23 13:03	7440-50-8	
Selenium	ND	ug/L	1.0	0.23	1	11/15/23 16:18	11/16/23 13:03	7782-49-2	
Thallium	ND	ug/L	1.0	0.042	1	11/15/23 16:18	11/16/23 13:03	7440-28-0	
Zinc	ND	ug/L	3.0	1.2	1	11/15/23 16:18	11/16/23 13:03	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	11/16/23 19:37	11/17/23 09:25	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1820**	mg/L	20.0	20.0	1		11/15/23 10:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: MW-2R **Lab ID: 50359169005** Collected: 11/08/23 18:10 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**63.4**	mg/L	2.5	0.67	10		11/19/23 12:20	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/19/23 12:01	16984-48-8	
Sulfate	**1390**	mg/L	25.0	19.0	100		11/19/23 12:38	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1970**	ug/L	100	11.4	1	11/15/23 16:07	11/17/23 17:58	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	11/15/23 16:07	11/17/23 17:58	7440-43-9	
Calcium	**463000**	ug/L	5000	284	5	11/15/23 16:07	11/17/23 18:26	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	11/15/23 16:07	11/17/23 17:58	7440-47-3	
Iron	**13000**	ug/L	100	18.1	1	11/15/23 16:07	11/17/23 17:58	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 16:07	11/17/23 17:58	7439-92-1	
Lithium	**718**	ug/L	20.0	5.1	1	11/15/23 16:07	11/17/23 17:58	7439-93-2	
Manganese	**5480**	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:58	7439-96-5	
Molybdenum	**10.9**	ug/L	10.0	1.1	1	11/15/23 16:07	11/17/23 17:58	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.044	1	11/15/23 16:18	11/16/23 13:06	7440-36-0	
Arsenic	**11.8**	ug/L	1.0	0.064	1	11/15/23 16:18	11/16/23 13:06	7440-38-2	
Barium	**51.8**	ug/L	1.0	0.067	1	11/15/23 16:18	11/16/23 13:06	7440-39-3	
Beryllium	ND	ug/L	0.20	0.026	1	11/15/23 16:18	11/21/23 07:47	7440-41-7	
Cobalt	**2.3**	ug/L	1.0	0.024	1	11/15/23 16:18	11/16/23 13:06	7440-48-4	
Copper	**2.1**	ug/L	1.0	0.16	1	11/15/23 16:18	11/16/23 13:06	7440-50-8	
Selenium	ND	ug/L	1.0	0.23	1	11/15/23 16:18	11/16/23 13:06	7782-49-2	
Thallium	ND	ug/L	1.0	0.042	1	11/15/23 16:18	11/16/23 13:06	7440-28-0	
Zinc	**3.9**	ug/L	3.0	1.2	1	11/15/23 16:18	11/16/23 13:06	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	11/16/23 19:37	11/17/23 09:27	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2450**	mg/L	20.0	20.0	1		11/15/23 10:03		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

QC Batch: 762643
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

METHOD BLANK: 3495683 Matrix: Water
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	11/19/23 14:29	
Fluoride	mg/L	ND	0.10	0.017	11/19/23 14:29	
Sulfate	mg/L	ND	0.25	0.19	11/19/23 14:29	

LABORATORY CONTROL SAMPLE: 3495684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	92	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.8	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495685 3495686

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	40.7	25	25	64.8	64.7	96	96	80-120	0	15	
Fluoride	mg/L	0.18	1	1	1.2	1.2	99	99	80-120	1	15	
Sulfate	mg/L	1420	500	500	1930	1930	102	101	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

QC Batch: 762829
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

METHOD BLANK: 3496319 Matrix: Water
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	11/17/23 08:19	

LABORATORY CONTROL SAMPLE: 3496320

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3496321 3496322

Parameter	Units	50359103002 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	5.0	5.0	100	99	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

QC Batch: 762698
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

METHOD BLANK: 3495904 Matrix: Water
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	11/17/23 17:16	
Cadmium	ug/L	ND	2.0	0.74	11/17/23 17:16	
Calcium	ug/L	ND	1000	56.7	11/17/23 17:16	
Chromium	ug/L	ND	10.0	1.4	11/17/23 17:16	
Iron	ug/L	ND	100	18.1	11/17/23 17:16	
Lead	ug/L	ND	10.0	4.0	11/17/23 17:16	
Lithium	ug/L	ND	20.0	5.1	11/17/23 17:16	
Manganese	ug/L	ND	10.0	1.1	11/17/23 17:16	
Molybdenum	ug/L	ND	10.0	1.1	11/17/23 17:16	

LABORATORY CONTROL SAMPLE: 3495905

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	924	92	80-120	
Cadmium	ug/L	1000	949	95	80-120	
Calcium	ug/L	10000	9830	98	80-120	
Chromium	ug/L	1000	980	98	80-120	
Iron	ug/L	10000	9790	98	80-120	
Lead	ug/L	1000	937	94	80-120	
Lithium	ug/L	1000	957	96	80-120	
Manganese	ug/L	1000	956	96	80-120	
Molybdenum	ug/L	1000	1010	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495906 3495907

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4190	1000	1000	5110	5050	92	87	75-125	1	20	
Cadmium	ug/L	ND	1000	1000	960	956	96	96	75-125	0	20	
Calcium	ug/L	562000	10000	10000	558000	555000	-39	-74	75-125	1	20	E,P6
Chromium	ug/L	ND	1000	1000	949	941	95	94	75-125	1	20	
Iron	ug/L	ND	10000	10000	9500	9380	95	94	75-125	1	20	
Lead	ug/L	ND	1000	1000	865	862	87	86	75-125	0	20	
Lithium	ug/L	345	1000	1000	1270	1260	92	92	75-125	1	20	
Manganese	ug/L	2180	1000	1000	3050	3030	87	84	75-125	1	20	
Molybdenum	ug/L	ND	1000	1000	1010	1010	100	100	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

QC Batch: 763013
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

METHOD BLANK: 3497196 Matrix: Water
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.044	11/16/23 13:10	
Arsenic	ug/L	ND	1.0	0.064	11/16/23 13:10	
Barium	ug/L	ND	1.0	0.067	11/16/23 13:10	
Beryllium	ug/L	ND	0.20	0.026	11/20/23 06:08	
Cobalt	ug/L	ND	1.0	0.024	11/16/23 13:10	
Copper	ug/L	ND	1.0	0.16	11/16/23 13:10	
Selenium	ug/L	ND	1.0	0.23	11/16/23 13:10	
Thallium	ug/L	ND	1.0	0.042	11/16/23 13:10	
Zinc	ug/L	ND	3.0	1.2	11/16/23 13:10	

LABORATORY CONTROL SAMPLE: 3497197

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	40.8	102	80-120	
Arsenic	ug/L	40	36.5	91	80-120	
Barium	ug/L	40	39.6	99	80-120	
Beryllium	ug/L	40	43.3	108	80-120	
Cobalt	ug/L	40	40.7	102	80-120	
Copper	ug/L	40	44.3	111	80-120	
Selenium	ug/L	40	40.5	101	80-120	
Thallium	ug/L	40	40.5	101	80-120	
Zinc	ug/L	40	38.2	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3497198 3497199

Parameter	Units	50359167001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	41.9	41.4	105	103	75-125	1	20	
Arsenic	ug/L	ND	40	40	39.8	40.2	99	100	75-125	1	20	
Barium	ug/L	29.3	40	40	71.2	71.4	105	105	75-125	0	20	
Beryllium	ug/L	ND	40	40	40.3	40.9	101	102	75-125	1	20	
Cobalt	ug/L	1.0	40	40	38.7	38.8	94	95	75-125	0	20	
Copper	ug/L	2.3	40	40	36.9	37.2	87	87	75-125	1	20	
Selenium	ug/L	ND	40	40	43.6	44.6	108	111	75-125	2	20	
Thallium	ug/L	ND	40	40	42.2	42.2	105	105	75-125	0	20	
Zinc	ug/L	ND	40	40	36.2	35.8	86	85	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

QC Batch: 762769
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359169001

METHOD BLANK: 3496163 Matrix: Water
Associated Lab Samples: 50359169001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/15/23 09:37	

LABORATORY CONTROL SAMPLE: 3496164

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	270	90	80-120	

SAMPLE DUPLICATE: 3496165

Parameter	Units	50359133001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	500	542	8	10	

SAMPLE DUPLICATE: 3496166

Parameter	Units	50359167001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2650	2670	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

QC Batch: 762770
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359169002, 50359169003, 50359169004, 50359169005

METHOD BLANK: 3496167 Matrix: Water
Associated Lab Samples: 50359169002, 50359169003, 50359169004, 50359169005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/15/23 10:00	

LABORATORY CONTROL SAMPLE: 3496168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	274	91	80-120	

SAMPLE DUPLICATE: 3496169

Parameter	Units	50359169003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1860	1840	1	10	

SAMPLE DUPLICATE: 3496170

Parameter	Units	50359170001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2640	2600	2	10	C6,PP

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: MW-4C **Lab ID: 50359169001** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.320 ± 0.519 (1.16) C:NA T:92%**	pCi/L	11/28/23 11:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.373 ± 0.353 (0.720) C:82% T:82%**	pCi/L	11/28/23 14:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.373 ± 0.872 (1.88)**	pCi/L	11/29/23 10:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: FIELD BLANK-1 **Lab ID: 50359169002** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0655 ± 0.498 (1.04) C:NA T:91%**	pCi/L	11/28/23 11:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0601 ± 0.298 (0.682) C:83% T:88%**	pCi/L	11/28/23 14:47	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0601 ± 0.796 (1.72)**	pCi/L	11/29/23 10:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: MW-3 **Lab ID: 50359169003** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.96 ± 0.754 (0.568) C:NA T:91%**	pCi/L	11/28/23 11:55	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.457 ± 0.354 (0.699) C:85% T:86%**	pCi/L	11/28/23 14:47	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.42 ± 1.11 (1.27)**	pCi/L	11/29/23 10:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: DUP-1 **Lab ID: 50359169004** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.16 ± 0.709 (0.896) C:NA T:86%**	pCi/L	11/28/23 12:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.670 ± 0.377 (0.678) C:84% T:84%**	pCi/L	11/28/23 14:47	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.83 ± 1.09 (1.57)**	pCi/L	11/29/23 10:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Sample: MW-2R **Lab ID: 50359169005** Collected: 11/08/23 18:10 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.334 ± 0.436 (0.720) C:NA T:91%**	pCi/L	11/28/23 12:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.694 ± 0.374 (0.656) C:81% T:84%**	pCi/L	11/28/23 14:47	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.03 ± 0.810 (1.38)**	pCi/L	11/29/23 10:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

QC Batch: 630786
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

METHOD BLANK: 3075595 Matrix: Water
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0633 ± 0.296 (0.677) C:80% T:86%	pCi/L	11/28/23 14:46	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

QC Batch: 630785
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

METHOD BLANK: 3075593 Matrix: Water
Associated Lab Samples: 50359169001, 50359169002, 50359169003, 50359169004, 50359169005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.198 ± 0.308 (0.534) C:NA T:93%	pCi/L	11/28/23 11:55	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

C6	Result confirmed by reanalysis conducted outside of the method specified holding time.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.
PP	The mass of dried residue obtained did not meet the test method requirements based on volume used.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PETERSBURG NOV 2023 P1R1
Pace Project No.: 50359169

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50359169001	**MW-4C**	EPA 9056	762643		
50359169002	**FIELD BLANK-1**	EPA 9056	762643		
50359169003	**MW-3**	EPA 9056	762643		
50359169004	**DUP-1**	EPA 9056	762643		
50359169005	**MW-2R**	EPA 9056	762643		
50359169001	**MW-4C**	EPA 3010	762698	EPA 6010	763695
50359169002	**FIELD BLANK-1**	EPA 3010	762698	EPA 6010	763695
50359169003	**MW-3**	EPA 3010	762698	EPA 6010	763695
50359169004	**DUP-1**	EPA 3010	762698	EPA 6010	763695
50359169005	**MW-2R**	EPA 3010	762698	EPA 6010	763695
50359169001	**MW-4C**	EPA 200.2	763013	EPA 6020	763255
50359169002	**FIELD BLANK-1**	EPA 200.2	763013	EPA 6020	763255
50359169003	**MW-3**	EPA 200.2	763013	EPA 6020	763255
50359169004	**DUP-1**	EPA 200.2	763013	EPA 6020	763255
50359169005	**MW-2R**	EPA 200.2	763013	EPA 6020	763255
50359169001	**MW-4C**	EPA 7470	762829	EPA 7470	763531
50359169002	**FIELD BLANK-1**	EPA 7470	762829	EPA 7470	763531
50359169003	**MW-3**	EPA 7470	762829	EPA 7470	763531
50359169004	**DUP-1**	EPA 7470	762829	EPA 7470	763531
50359169005	**MW-2R**	EPA 7470	762829	EPA 7470	763531
50359169001	**MW-4C**	EPA 903.1	630785		
50359169002	**FIELD BLANK-1**	EPA 903.1	630785		
50359169003	**MW-3**	EPA 903.1	630785		
50359169004	**DUP-1**	EPA 903.1	630785		
50359169005	**MW-2R**	EPA 903.1	630785		
50359169001	**MW-4C**	EPA 904.0	630786		
50359169002	**FIELD BLANK-1**	EPA 904.0	630786		
50359169003	**MW-3**	EPA 904.0	630786		
50359169004	**DUP-1**	EPA 904.0	630786		
50359169005	**MW-2R**	EPA 904.0	630786		
50359169001	**MW-4C**	Total Radium Calculation	632630		
50359169002	**FIELD BLANK-1**	Total Radium Calculation	632630		
50359169003	**MW-3**	Total Radium Calculation	632630		
50359169004	**DUP-1**	Total Radium Calculation	632630		
50359169005	**MW-2R**	Total Radium Calculation	632630		
50359169001	**MW-4C**	SM 2540C	762769		
50359169002	**FIELD BLANK-1**	SM 2540C	762770		
50359169003	**MW-3**	SM 2540C	762770		
50359169004	**DUP-1**	SM 2540C	762770		
50359169005	**MW-2R**	SM 2540C	762770		

REPORT OF LABORATORY ANALYSIS

WO# : 50359169

50359169

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Required Project Information:		Section C Invoice Information:	
Company: Atlas Indianapolis	Report To: Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address: 7988 Centerpoint Drive Suite 100	Copy To:	Company Name:	Atlas Indianapolis
Indianapolis, IN 46256		Address:	
Email: mark.breting@oneatlas.com	Purchase Order #:	Pace Quote:	
Phone: (317)579-4082 Fax:	Project Name: Petersburg Nov 2023 P1R1	Pace Project Manager:	Will Statz
Requested Due Date:	Project #:	Pace Profile #:	10498/49

Regulatory Agency	
State / Location	
	IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals, Total*	TDS	(Cl, F, SO4) IC	Rad-226/228 + Sum	Residual Chlorine (Y/N)
1	MW-4C			11-8-23	1125	11-8-23	1240		5	X		X							X	X	X	X	
2	Field Blank-1			11-8-23	1125	11-8-23	1240		5	X		X							X	X	X	X	
3	MW-3			11/8/23	1500	11/8/23	1535		5	X		X							X	X	X	X	
4	DUP-1			11/8/23	1500	11/8/23	1535		5	X		X							X	X	X	X	
5	MW-2R			11/8/23	1740	11/8/23	1810		5	X		X							X	X	X	X	
6																							
7																							
8																							
9																							
10																							
11																							
12																							

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)		11-9-23	8:00 AM		11-9	8:00 AM	
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg		11-9	10:20 AM		11/9/23	1020	SEE Scan
Rad to Pace PA							

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brian					
SIGNATURE of SAMPLER:		DATE Signed: 11-8-23				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: MR 11/9/23 1240

1. **Courier:** ☐FED EX ☐UPS ☑CLIENT ☐PACE ☐NOW/JETT ☐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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 0.9/0.9 | 0.7/0.7 | 1.1/1.1 | 0.5/0.5

(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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

Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
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: 1.5/1.5 0.9/0.9 0.7/0.7 0.6/0.6 1.1/1.1 0.9/0.9

COC PAGE ____ of ____

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER								
			MeOH (only)																													
			SBS																													
			DI																													
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1									W	✓			
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 12, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 09, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50359170001	**MW-4C**	Water	11/08/23 12:40	11/09/23 10:20
50359170002	**MW-4C MS**	Water	11/08/23 12:40	11/09/23 10:20
50359170003	**MW-4C MSD**	Water	11/08/23 12:40	11/09/23 10:20
50359170004	**FIELD BLANK - 1**	Water	11/08/23 12:40	11/09/23 10:20
50359170005	**MW-3**	Water	11/08/23 15:35	11/09/23 10:20
50359170006	**DUP-1**	Water	11/08/23 15:35	11/09/23 10:20
50359170007	**MW-2R**	Water	11/08/23 18:10	11/09/23 10:20

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50359170001	**MW-4C**	EPA 9056	KBB	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	DMT	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50359170002	**MW-4C MS**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
50359170003	**MW-4C MSD**	EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
50359170004	**FIELD BLANK - 1**	EPA 9056	KBB	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	DMT	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50359170005	**MW-3**	EPA 9056	KBB	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	DMT	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50359170006	**DUP-1**	EPA 9056	KBB	3	PASI-I
		EPA 6010	MTM	5	PASI-I
		EPA 6020	DMT	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
50359170007	**MW-2R**	EPA 9056	KBB	3	PASI-I

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	MTM	5	PASI-I
		EPA 6020	DMT	5	PASI-I
		EPA 903.1	MAR1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359170001	**MW-4C**					
EPA 9056	Chloride	37.8	mg/L	2.5	11/20/23 14:30	
EPA 9056	Fluoride	0.16	mg/L	0.10	11/20/23 14:13	
EPA 9056	Sulfate	1550	mg/L	25.0	11/20/23 14:46	
EPA 6010	Boron	4010	ug/L	100	11/20/23 12:21	
EPA 6010	Calcium	593000	ug/L	5000	11/20/23 13:55	
EPA 6010	Lithium	351	ug/L	20.0	11/20/23 12:21	
EPA 6020	Barium	28.6	ug/L	1.0	11/17/23 18:03	
EPA 6020	Cobalt	1.1	ug/L	1.0	11/17/23 18:03	
EPA 903.1	Radium-226	0.0853 ± 0.265 (0.512) C:NA T:87%	pCi/L		11/27/23 12:09	
EPA 904.0	Radium-228	1.48 ± 0.546 (0.764) C:76% T:80%	pCi/L		11/21/23 14:55	
Total Radium Calculation	Total Radium	1.57 ± 0.811 (1.28)	pCi/L		11/27/23 14:27	
SM 2540C	Total Dissolved Solids	2640	mg/L	10.0	11/15/23 10:03	C6,PP
SM 4500-H+B	pH at 25 Degrees C	7.1	Std. Units	0.10	11/27/23 14:16	H3
50359170002	**MW-4C MS**					
EPA 903.1	Radium-226	92.92 %REC ± NA (NA) C:NA T:NA	pCi/L		11/27/23 12:09	
EPA 904.0	Radium-228	86.45 %REC ± NA (NA) C:NA T:NA	pCi/L		11/21/23 14:55	
50359170003	**MW-4C MSD**					
EPA 903.1	Radium-226	76.16 %REC 19.82RPD ± NA (NA) C:NA T:NA	pCi/L		11/27/23 12:09	
EPA 904.0	Radium-228	84.45 %REC 2.34RPD ± NA (NA) C:NA T:NA	pCi/L		11/21/23 14:55	
50359170004	**FIELD BLANK - 1**					
EPA 903.1	Radium-226	0.0557 ± 0.254 (0.517) C:NA T:87%	pCi/L		11/27/23 12:20	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359170004	**FIELD BLANK - 1**					
EPA 904.0	Radium-228	0.275 ± 0.300 (0.622) C:85% T:90%	pCi/L		11/21/23 14:55	
Total Radium Calculation	Total Radium	0.331 ± 0.554 (1.14)	pCi/L		11/27/23 14:27	
SM 4500-H+B	pH at 25 Degrees C	8.6	Std. Units	0.10	11/27/23 14:18	H3
50359170005	**MW-3**					
EPA 9056	Chloride	67.5	mg/L	2.5	11/20/23 18:26	
EPA 9056	Sulfate	1120	mg/L	25.0	11/20/23 18:43	
EPA 6010	Boron	758	ug/L	100	11/20/23 12:30	
EPA 6010	Calcium	286000	ug/L	2000	11/20/23 14:00	
EPA 6010	Lithium	1640	ug/L	20.0	11/20/23 12:30	
EPA 6010	Molybdenum	242	ug/L	10.0	11/20/23 12:30	
EPA 6020	Arsenic	59.3	ug/L	1.0	11/17/23 18:30	
EPA 6020	Barium	59.1	ug/L	1.0	11/17/23 18:30	
EPA 6020	Cobalt	2.2	ug/L	1.0	11/17/23 18:30	
EPA 903.1	Radium-226	1.25 ± 0.599 (0.551) C:NA T:84%	pCi/L		11/27/23 12:20	
EPA 904.0	Radium-228	0.855 ± 0.411 (0.692) C:83% T:85%	pCi/L		11/21/23 14:55	
Total Radium Calculation	Total Radium	2.11 ± 1.01 (1.24)	pCi/L		11/27/23 14:27	
SM 2540C	Total Dissolved Solids	1890	mg/L	20.0	11/15/23 10:04	
SM 4500-H+B	pH at 25 Degrees C	7.2	Std. Units	0.10	11/27/23 14:19	H3
50359170006	**DUP-1**					
EPA 9056	Chloride	68.8	mg/L	2.5	11/20/23 19:50	
EPA 9056	Sulfate	817	mg/L	25.0	11/20/23 20:07	
EPA 6010	Boron	752	ug/L	100	11/20/23 12:31	
EPA 6010	Calcium	283000	ug/L	2000	11/20/23 14:01	
EPA 6010	Lithium	1630	ug/L	20.0	11/20/23 12:31	
EPA 6010	Molybdenum	242	ug/L	10.0	11/20/23 12:31	
EPA 6020	Arsenic	58.6	ug/L	1.0	11/17/23 18:33	
EPA 6020	Barium	58.6	ug/L	1.0	11/17/23 18:33	
EPA 6020	Cobalt	2.2	ug/L	1.0	11/17/23 18:33	
EPA 903.1	Radium-226	0.743 ± 0.600 (0.873) C:NA T:90%	pCi/L		11/27/23 12:20	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359170006	**DUP-1**					
EPA 904.0	Radium-228	0.739 ± 0.402 (0.716) C:82% T:85%	pCi/L		11/21/23 14:40	
Total Radium Calculation	Total Radium	1.48 ± 1.00 (1.59)	pCi/L		11/27/23 14:27	
SM 2540C	Total Dissolved Solids	1840	mg/L	20.0	11/15/23 10:05	
SM 4500-H+B	pH at 25 Degrees C	7.3	Std. Units	0.10	11/27/23 14:19	H3
50359170007	**MW-2R**					
EPA 9056	Chloride	70.3	mg/L	2.5	11/20/23 20:41	
EPA 9056	Sulfate	1780	mg/L	25.0	11/20/23 20:58	
EPA 6010	Boron	1900	ug/L	100	11/20/23 12:33	
EPA 6010	Calcium	460000	ug/L	5000	11/20/23 14:03	
EPA 6010	Lithium	638	ug/L	20.0	11/20/23 12:33	
EPA 6010	Molybdenum	10.6	ug/L	10.0	11/20/23 12:33	
EPA 6020	Arsenic	7.5	ug/L	1.0	11/17/23 18:37	
EPA 6020	Barium	45.2	ug/L	1.0	11/17/23 18:37	
EPA 6020	Cobalt	2.7	ug/L	1.0	11/17/23 18:37	
EPA 903.1	Radium-226	0.0509 ± 0.479 (0.924) C:NA T:90%	pCi/L		11/27/23 12:20	
EPA 904.0	Radium-228	1.33 ± 0.453 (0.589) C:84% T:87%	pCi/L		11/21/23 14:40	
Total Radium Calculation	Total Radium	1.38 ± 0.932 (1.51)	pCi/L		11/27/23 14:27	
SM 2540C	Total Dissolved Solids	2510	mg/L	40.0	11/15/23 10:05	
SM 4500-H+B	pH at 25 Degrees C	7.4	Std. Units	0.10	11/27/23 14:20	H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: MW-4C **Lab ID: 50359170001** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**37.8**	mg/L	2.5	0.67	10		11/20/23 14:30	16887-00-6	
Fluoride	**0.16**	mg/L	0.10	0.017	1		11/20/23 14:13	16984-48-8	
Sulfate	**1550**	mg/L	25.0	19.0	100		11/20/23 14:46	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	**4010**	ug/L	100	11.4	1	11/15/23 20:53	11/20/23 12:21	7440-42-8	
Calcium	**593000**	ug/L	5000	284	5	11/15/23 20:53	11/20/23 13:55	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 20:53	11/21/23 11:10	7439-92-1	
Lithium	**351**	ug/L	20.0	5.1	1	11/15/23 20:53	11/20/23 12:21	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.1	1	11/15/23 20:53	11/20/23 12:21	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	0.12	1	11/16/23 07:20	11/17/23 18:03	7440-38-2	
Barium	**28.6**	ug/L	1.0	0.065	1	11/16/23 07:20	11/17/23 18:03	7440-39-3	
Cobalt	**1.1**	ug/L	1.0	0.071	1	11/16/23 07:20	11/17/23 18:03	7440-48-4	
Selenium	ND	ug/L	1.0	0.19	1	11/16/23 07:20	11/17/23 18:03	7782-49-2	
Thallium	ND	ug/L	1.0	0.060	1	11/16/23 07:20	11/17/23 18:03	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2640**	mg/L	10.0	10.0	1		11/15/23 10:03		C6,PP
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
	Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.1**	Std. Units	0.10	0.10	1		11/27/23 14:16		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: FIELD BLANK - 1 **Lab ID: 50359170004** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	ND	mg/L	0.25	0.067	1		11/20/23 15:03	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/20/23 15:03	16984-48-8	
Sulfate	ND	mg/L	0.25	0.19	1		11/20/23 15:03	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	11.4	1	11/15/23 20:53	11/20/23 12:28	7440-42-8	
Calcium	ND	ug/L	1000	56.7	1	11/15/23 20:53	11/20/23 12:28	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 20:53	11/21/23 11:14	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	11/15/23 20:53	11/20/23 12:28	7439-93-2	
Molybdenum	ND	ug/L	10.0	1.1	1	11/15/23 20:53	11/20/23 12:28	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	1.0	0.12	1	11/16/23 07:20	11/17/23 18:26	7440-38-2	
Barium	ND	ug/L	1.0	0.065	1	11/16/23 07:20	11/17/23 18:26	7440-39-3	
Cobalt	ND	ug/L	1.0	0.071	1	11/16/23 07:20	11/17/23 18:26	7440-48-4	
Selenium	ND	ug/L	1.0	0.19	1	11/16/23 07:20	11/17/23 18:26	7782-49-2	
Thallium	ND	ug/L	1.0	0.060	1	11/16/23 07:20	11/17/23 18:26	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		11/15/23 10:04		PL
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
	Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**8.6**	Std. Units	0.10	0.10	1		11/27/23 14:18		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: MW-3 **Lab ID: 50359170005** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**67.5**	mg/L	2.5	0.67	10		11/20/23 18:26	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/20/23 18:09	16984-48-8	
Sulfate	**1120**	mg/L	25.0	19.0	100		11/20/23 18:43	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**758**	ug/L	100	11.4	1	11/15/23 20:53	11/20/23 12:30	7440-42-8	
Calcium	**286000**	ug/L	2000	113	2	11/15/23 20:53	11/20/23 14:00	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 20:53	11/21/23 11:19	7439-92-1	
Lithium	**1640**	ug/L	20.0	5.1	1	11/15/23 20:53	11/20/23 12:30	7439-93-2	
Molybdenum	**242**	ug/L	10.0	1.1	1	11/15/23 20:53	11/20/23 12:30	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Arsenic	**59.3**	ug/L	1.0	0.12	1	11/16/23 07:20	11/17/23 18:30	7440-38-2	
Barium	**59.1**	ug/L	1.0	0.065	1	11/16/23 07:20	11/17/23 18:30	7440-39-3	
Cobalt	**2.2**	ug/L	1.0	0.071	1	11/16/23 07:20	11/17/23 18:30	7440-48-4	
Selenium	ND	ug/L	1.0	0.19	1	11/16/23 07:20	11/17/23 18:30	7782-49-2	
Thallium	ND	ug/L	1.0	0.060	1	11/16/23 07:20	11/17/23 18:30	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1890**	mg/L	20.0	20.0	1		11/15/23 10:04		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.2**	Std. Units	0.10	0.10	1		11/27/23 14:19		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: DUP-1 **Lab ID: 50359170006** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**68.8**	mg/L	2.5	0.67	10		11/20/23 19:50	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/20/23 19:33	16984-48-8	
Sulfate	**817**	mg/L	25.0	19.0	100		11/20/23 20:07	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	**752**	ug/L	100	11.4	1	11/15/23 20:53	11/20/23 12:31	7440-42-8	
Calcium	**283000**	ug/L	2000	113	2	11/15/23 20:53	11/20/23 14:01	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 20:53	11/21/23 11:20	7439-92-1	
Lithium	**1630**	ug/L	20.0	5.1	1	11/15/23 20:53	11/20/23 12:31	7439-93-2	
Molybdenum	**242**	ug/L	10.0	1.1	1	11/15/23 20:53	11/20/23 12:31	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Arsenic	**58.6**	ug/L	1.0	0.12	1	11/16/23 07:20	11/17/23 18:33	7440-38-2	
Barium	**58.6**	ug/L	1.0	0.065	1	11/16/23 07:20	11/17/23 18:33	7440-39-3	
Cobalt	**2.2**	ug/L	1.0	0.071	1	11/16/23 07:20	11/17/23 18:33	7440-48-4	
Selenium	ND	ug/L	1.0	0.19	1	11/16/23 07:20	11/17/23 18:33	7782-49-2	
Thallium	ND	ug/L	1.0	0.060	1	11/16/23 07:20	11/17/23 18:33	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1840**	mg/L	20.0	20.0	1		11/15/23 10:05		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
	Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.3**	Std. Units	0.10	0.10	1		11/27/23 14:19		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: MW-2R **Lab ID: 50359170007** Collected: 11/08/23 18:10 Received: 11/09/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**70.3**	mg/L	2.5	0.67	10		11/20/23 20:41	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		11/20/23 20:24	16984-48-8	
Sulfate	**1780**	mg/L	25.0	19.0	100		11/20/23 20:58	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1900**	ug/L	100	11.4	1	11/15/23 20:53	11/20/23 12:33	7440-42-8	
Calcium	**460000**	ug/L	5000	284	5	11/15/23 20:53	11/20/23 14:03	7440-70-2	
Lead	ND	ug/L	10.0	4.0	1	11/15/23 20:53	11/21/23 11:21	7439-92-1	
Lithium	**638**	ug/L	20.0	5.1	1	11/15/23 20:53	11/20/23 12:33	7439-93-2	
Molybdenum	**10.6**	ug/L	10.0	1.1	1	11/15/23 20:53	11/20/23 12:33	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Arsenic	**7.5**	ug/L	1.0	0.12	1	11/16/23 07:20	11/17/23 18:37	7440-38-2	
Barium	**45.2**	ug/L	1.0	0.065	1	11/16/23 07:20	11/17/23 18:37	7440-39-3	
Cobalt	**2.7**	ug/L	1.0	0.071	1	11/16/23 07:20	11/17/23 18:37	7440-48-4	
Selenium	ND	ug/L	1.0	0.19	1	11/16/23 07:20	11/17/23 18:37	7782-49-2	
Thallium	ND	ug/L	1.0	0.060	1	11/16/23 07:20	11/17/23 18:37	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2510**	mg/L	40.0	40.0	1		11/15/23 10:05		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.4**	Std. Units	0.10	0.10	1		11/27/23 14:20		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

QC Batch: 763630
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359170001, 50359170004, 50359170005, 50359170006, 50359170007

METHOD BLANK: 3500496 Matrix: Water
Associated Lab Samples: 50359170001, 50359170004, 50359170005, 50359170006, 50359170007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	11/20/23 10:17	
Fluoride	mg/L	ND	0.10	0.017	11/20/23 10:17	
Sulfate	mg/L	ND	0.25	0.19	11/20/23 10:17	

LABORATORY CONTROL SAMPLE: 3500497

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.95	95	80-120	
Sulfate	mg/L	5	4.6	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3500498 3500499

Parameter	Units	50359170001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	37.8	25	25	63.2	62.9	102	100	80-120	0	15	
Fluoride	mg/L	0.16	1	1	1.1	1.1	98	96	80-120	1	15	
Sulfate	mg/L	1550	500	500	1900	1780	71	47	80-120	7	15	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

QC Batch: 762703
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359170001, 50359170004, 50359170005, 50359170006, 50359170007

METHOD BLANK: 3495916 Matrix: Water
Associated Lab Samples: 50359170001, 50359170004, 50359170005, 50359170006, 50359170007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	11/20/23 11:59	
Calcium	ug/L	ND	1000	56.7	11/20/23 11:59	
Lead	ug/L	ND	10.0	4.0	11/20/23 11:59	
Lithium	ug/L	ND	20.0	5.1	11/20/23 11:59	
Molybdenum	ug/L	ND	10.0	1.1	11/20/23 11:59	

LABORATORY CONTROL SAMPLE: 3495917

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	907	91	80-120	
Calcium	ug/L	10000	9320	93	80-120	
Lead	ug/L	1000	864	86	80-120	
Lithium	ug/L	1000	935	93	80-120	
Molybdenum	ug/L	1000	933	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3495918 3495919

Parameter	Units	50359170001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4010	1000	1000	4920	4880	92	87	75-125	1	20	
Calcium	ug/L	593000	10000	10000	599000	585000	65	-77	75-125	2	20	P6
Lead	ug/L	ND	1000	1000	874	866	87	87	75-125	1	20	
Lithium	ug/L	351	1000	1000	1280	1290	93	94	75-125	1	20	
Molybdenum	ug/L	ND	1000	1000	974	968	96	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

QC Batch: 763177
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359170001, 50359170004, 50359170005, 50359170006, 50359170007

METHOD BLANK: 3497911 Matrix: Water
Associated Lab Samples: 50359170001, 50359170004, 50359170005, 50359170006, 50359170007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	0.12	11/17/23 11:21	
Barium	ug/L	ND	1.0	0.065	11/17/23 11:21	
Cobalt	ug/L	ND	1.0	0.071	11/17/23 11:21	
Selenium	ug/L	ND	1.0	0.19	11/17/23 11:21	
Thallium	ug/L	ND	1.0	0.060	11/17/23 11:21	

LABORATORY CONTROL SAMPLE: 3497912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	38.3	96	80-120	
Barium	ug/L	40	40.3	101	80-120	
Cobalt	ug/L	40	39.6	99	80-120	
Selenium	ug/L	40	39.3	98	80-120	
Thallium	ug/L	40	40.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3497913 3497914

Parameter	Units	50359170001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	40	40	38.0	37.4	94	93	75-125	1	20	
Barium	ug/L	28.6	40	40	70.2	68.2	104	99	75-125	3	20	
Cobalt	ug/L	1.1	40	40	38.4	37.8	93	92	75-125	2	20	
Selenium	ug/L	ND	40	40	41.0	41.4	102	103	75-125	1	20	
Thallium	ug/L	ND	40	40	42.2	41.7	105	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

QC Batch: 762770
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359170001, 50359170004, 50359170005, 50359170006, 50359170007

METHOD BLANK: 3496167 Matrix: Water
Associated Lab Samples: 50359170001, 50359170004, 50359170005, 50359170006, 50359170007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/15/23 10:00	

LABORATORY CONTROL SAMPLE: 3496168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	274	91	80-120	

SAMPLE DUPLICATE: 3496169

Parameter	Units	50359169003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1860	1840	1	10	

SAMPLE DUPLICATE: 3496170

Parameter	Units	50359170001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2640	2600	2	10	C6,PP

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

QC Batch: 764862
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359170001, 50359170004, 50359170005, 50359170006, 50359170007

SAMPLE DUPLICATE: 3505588

Parameter	Units	50359111028 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.7	6.7	0	2	H3

SAMPLE DUPLICATE: 3505589

Parameter	Units	50359170001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.2	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: MW-4C **Lab ID: 50359170001** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0853 ± 0.265 (0.512) C:NA T:87%**	pCi/L	11/27/23 12:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.48 ± 0.546 (0.764) C:76% T:80%**	pCi/L	11/21/23 14:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.57 ± 0.811 (1.28)**	pCi/L	11/27/23 14:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: MW-4C MS **Lab ID: 50359170002** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**92.92 %REC ± NA (NA) C:NA T:NA**	pCi/L	11/27/23 12:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**86.45 %REC ± NA (NA) C:NA T:NA**	pCi/L	11/21/23 14:55	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: MW-4C MSD **Lab ID: 50359170003** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**76.16 %REC 19.82RPD ± NA (NA) C:NA T:NA**	pCi/L	11/27/23 12:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**84.45 %REC 2.34RPD ± NA (NA) C:NA T:NA**	pCi/L	11/21/23 14:55	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: FIELD BLANK - 1 **Lab ID: 50359170004** Collected: 11/08/23 12:40 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0557 ± 0.254 (0.517) C:NA T:87%**	pCi/L	11/27/23 12:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.275 ± 0.300 (0.622) C:85% T:90%**	pCi/L	11/21/23 14:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.331 ± 0.554 (1.14)**	pCi/L	11/27/23 14:27	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: MW-3 **Lab ID: 50359170005** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.25 ± 0.599 (0.551) C:NA T:84%**	pCi/L	11/27/23 12:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.855 ± 0.411 (0.692) C:83% T:85%**	pCi/L	11/21/23 14:55	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.11 ± 1.01 (1.24)**	pCi/L	11/27/23 14:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: DUP-1 **Lab ID: 50359170006** Collected: 11/08/23 15:35 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.743 ± 0.600 (0.873) C:NA T:90%**	pCi/L	11/27/23 12:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.739 ± 0.402 (0.716) C:82% T:85%**	pCi/L	11/21/23 14:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.48 ± 1.00 (1.59)**	pCi/L	11/27/23 14:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Sample: MW-2R **Lab ID: 50359170007** Collected: 11/08/23 18:10 Received: 11/09/23 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0509 ± 0.479 (0.924) C:NA T:90%**	pCi/L	11/27/23 12:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.33 ± 0.453 (0.589) C:84% T:87%**	pCi/L	11/21/23 14:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.38 ± 0.932 (1.51)**	pCi/L	11/27/23 14:27	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

QC Batch: 630224 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50359170001, 50359170002, 50359170003, 50359170004, 50359170005, 50359170006, 50359170007

METHOD BLANK: 3072611 Matrix: Water
Associated Lab Samples: 50359170001, 50359170002, 50359170003, 50359170004, 50359170005, 50359170006, 50359170007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.123 ± 0.267 (0.492) C:NA T:90%	pCi/L	11/27/23 11:57	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

QC Batch: 630225 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50359170001, 50359170002, 50359170003, 50359170004, 50359170005, 50359170006, 50359170007

METHOD BLANK: 3072612 Matrix: Water
Associated Lab Samples: 50359170001, 50359170002, 50359170003, 50359170004, 50359170005, 50359170006, 50359170007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.237 ± 0.254 (0.525) C:86% T:93%	pCi/L	11/21/23 11:13	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

C6	Result confirmed by reanalysis conducted outside of the method specified holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.
PP	The mass of dried residue obtained did not meet the test method requirements based on volume used.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PETERSBURG NOV 2023 P2R1
Pace Project No.: 50359170

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50359170001	**MW-4C**	EPA 9056	763630		
50359170004	**FIELD BLANK - 1**	EPA 9056	763630		
50359170005	**MW-3**	EPA 9056	763630		
50359170006	**DUP-1**	EPA 9056	763630		
50359170007	**MW-2R**	EPA 9056	763630		
50359170001	**MW-4C**	EPA 3010	762703	EPA 6010	763988
50359170004	**FIELD BLANK - 1**	EPA 3010	762703	EPA 6010	763988
50359170005	**MW-3**	EPA 3010	762703	EPA 6010	763988
50359170006	**DUP-1**	EPA 3010	762703	EPA 6010	763988
50359170007	**MW-2R**	EPA 3010	762703	EPA 6010	763988
50359170001	**MW-4C**	EPA 200.2	763177	EPA 6020	763454
50359170004	**FIELD BLANK - 1**	EPA 200.2	763177	EPA 6020	763454
50359170005	**MW-3**	EPA 200.2	763177	EPA 6020	763454
50359170006	**DUP-1**	EPA 200.2	763177	EPA 6020	763454
50359170007	**MW-2R**	EPA 200.2	763177	EPA 6020	763454
50359170001	**MW-4C**	EPA 903.1	630224		
50359170002	**MW-4C MS**	EPA 903.1	630224		
50359170003	**MW-4C MSD**	EPA 903.1	630224		
50359170004	**FIELD BLANK - 1**	EPA 903.1	630224		
50359170005	**MW-3**	EPA 903.1	630224		
50359170006	**DUP-1**	EPA 903.1	630224		
50359170007	**MW-2R**	EPA 903.1	630224		
50359170001	**MW-4C**	EPA 904.0	630225		
50359170002	**MW-4C MS**	EPA 904.0	630225		
50359170003	**MW-4C MSD**	EPA 904.0	630225		
50359170004	**FIELD BLANK - 1**	EPA 904.0	630225		
50359170005	**MW-3**	EPA 904.0	630225		
50359170006	**DUP-1**	EPA 904.0	630225		
50359170007	**MW-2R**	EPA 904.0	630225		
50359170001	**MW-4C**	Total Radium Calculation	632150		
50359170004	**FIELD BLANK - 1**	Total Radium Calculation	632150		
50359170005	**MW-3**	Total Radium Calculation	632150		
50359170006	**DUP-1**	Total Radium Calculation	632150		
50359170007	**MW-2R**	Total Radium Calculation	632150		
50359170001	**MW-4C**	SM 2540C	762770		
50359170004	**FIELD BLANK - 1**	SM 2540C	762770		
50359170005	**MW-3**	SM 2540C	762770		
50359170006	**DUP-1**	SM 2540C	762770		
50359170007	**MW-2R**	SM 2540C	762770		
50359170001	**MW-4C**	SM 4500-H+B	764862		
50359170004	**FIELD BLANK - 1**	SM 4500-H+B	764862		
50359170005	**MW-3**	SM 4500-H+B	764862		
50359170006	**DUP-1**	SM 4500-H+B	764862		
50359170007	**MW-2R**	SM 4500-H+B	764862		

REPORT OF LABORATORY ANALYSIS

WO# : 50359170

50359170

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Required Project Information:		Section C Invoice Information:	
Company: Atlas Indianapolis	Report To: Mark Breting	Attention: Accounts Payable - Paula Sedam	
Address: 7988 Centerpoint Drive Suite 100	Copy To:	Company Name: Atlas Indianapolis	Regulatory Agency
Indianapolis, IN 46256		Address:	
Email: mark.breting@oneatlas.com	Purchase Order #:	Pace Quote:	
Phone: (317)579-4082 Fax	Project Name: Petersburg Nov 2023 P2R1	Pace Project Manager: Will Statz	State / Location
Requested Due Date:	Project #:	Pace Profile #: 10498/50	IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals, Total*	TDS/pH	(Cl, F, SO4) IC	Rad-226/228 + Sum	Residual Chlorine (Y/N)
1	MW-4C			11-8-23	1125	11-8-23	1240		5	X		X							X	X	X	X	
2	MS-1			11-8-23	1125	11-8-23	1240		5	X		X							X	X	X	X	
3	MSD-1			11-8-23	1125	11-8-23	1240		5	X		X							X	X	X	X	
4	Field Blank 1			11-8-23	1125	11-8-23	1240		5	X		X							X	X	X	X	
5	MW-3			11/8/23	1500	11/8/23	1535		5	X		X							X	X	X	X	
6	DUP-1			11/8/23	1500	11/8/23	1535		5	X		X							X	X	X	X	
7	MW-2R			11/8/23	1740	11/8/23	1780		5	X		X							X	X	X	X	
8																							
9																							
10																							
11																							
12																							

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Metals* 6010: B, Pb, Mo, Ca, Li (5)		11-9-23	8:00 AM		11-9	8:00 AM	
6020: Co, As, Se, Ba, Tl (5)	Jay Williams	11-9-	10:20 AM		11/9/23	1020	SEE SHEET
Rad 226/228 to Pace PA							

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brien					
SIGNATURE of SAMPLER:		DATE Signed: 11-8-23				

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: MR 11/9/23 1240

1. **Courier:** ☐FED EX ☐UPS ☑CLIENT ☐PACE ☐NOW/JETT ☐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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 0.9/0.9 | 0.7/0.7 | 1.1/1.1 | 0.5/0.5

(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
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: 1.5/1.5 0.9/0.9 0.7/0.7 0.6/0.6 1.1/1.1 0.5/0.5

COC PAGE ____ of ____

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER					Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			MeOH (only)																										Red	Yellow	Green	Black
			SBS																													
			DI		VOA VIAL HS >6mm																											
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H		VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1																6		6	3										✓			
2																																
3																																
4																2		2	1										✓			
5																|		|	|									|	|		
6																|		|	|									|	|		
7																↓		↓	↓										↓	↓		
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 12, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 16, 2023. 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,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50359841001	**MW-15B**	Water	11/15/23 14:00	11/16/23 10:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50359841001	**MW-15B**	EPA 9056	KBB	1	PASI-I
		EPA 6010	JPK	5	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	MGM	2	PASI-I
		EPA 6020	CAW	2	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	BEP	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359841001	**MW-15B**					
EPA 9056	Bromide	0.41	mg/L	0.050	12/04/23 10:08	
EPA 6010	Iron	6910	ug/L	100	11/30/23 00:06	
EPA 6010	Magnesium	32200	ug/L	1000	11/30/23 00:06	
EPA 6010	Potassium	75900	ug/L	1000	11/30/23 00:06	
EPA 6010	Silica	18000	ug/L	450	11/30/23 00:06	N2
EPA 6010	Sodium	56700	ug/L	1000	11/30/23 00:06	
EPA 6010	Boron, Dissolved	1390	ug/L	100	11/30/23 03:51	
EPA 6010	Iron, Dissolved	6660	ug/L	100	11/30/23 03:51	
EPA 6010	Lithium, Dissolved	759	ug/L	20.0	11/30/23 03:51	
EPA 6010	Magnesium, Dissolved	31600	ug/L	1000	11/30/23 03:51	
EPA 6010	Molybdenum, Dissolved	16.6	ug/L	10.0	11/30/23 03:51	
EPA 6010	Potassium, Dissolved	76400	ug/L	1000	11/30/23 03:51	
EPA 6020	Aluminum	50.8	ug/L	10.0	11/28/23 22:11	
EPA 6020	Manganese	1610	ug/L	20.0	11/29/23 16:19	
EPA 6020	Manganese, Dissolved	1690	ug/L	10.0	11/28/23 11:14	
SM 2320B	Alkalinity, Total as CaCO3	190	mg/L	10.0	11/21/23 00:02	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	190	mg/L	10.0	11/21/23 00:02	
SM 2540C	Total Dissolved Solids	1200	mg/L	20.0	11/21/23 08:12	
EPA 365.1	Phosphate as P04	0.40	mg/L	0.15	12/01/23 13:36	
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	12/02/23 02:38	
SM 5310C	Dissolved Organic Carbon	3.6	mg/L	1.0	12/03/23 06:38	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

Sample: MW-15B **Lab ID: 50359841001** Collected: 11/15/23 14:00 Received: 11/16/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.41**	mg/L	0.050	0.0090	1		12/04/23 10:08	24959-67-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Iron	**6910**	ug/L	100	30.0	1	11/25/23 22:05	11/30/23 00:06	7439-89-6	
Magnesium	**32200**	ug/L	1000	33.6	1	11/25/23 22:05	11/30/23 00:06	7439-95-4	
Potassium	**75900**	ug/L	1000	97.8	1	11/25/23 22:05	11/30/23 00:06	7440-09-7	
Silica	**18000**	ug/L	450		1	11/25/23 22:05	11/30/23 00:06	7631-86-9	N2
Sodium	**56700**	ug/L	1000	54.8	1	11/25/23 22:05	11/30/23 00:06	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1390**	ug/L	100	6.2	1	11/29/23 16:11	11/30/23 03:51	7440-42-8	
Iron, Dissolved	**6660**	ug/L	100	30.0	1	11/29/23 16:11	11/30/23 03:51	7439-89-6	
Lithium, Dissolved	**759**	ug/L	20.0	6.8	1	11/29/23 16:11	11/30/23 03:51	7439-93-2	
Magnesium, Dissolved	**31600**	ug/L	1000	33.6	1	11/29/23 16:11	11/30/23 03:51	7439-95-4	
Molybdenum, Dissolved	**16.6**	ug/L	10.0	0.78	1	11/29/23 16:11	11/30/23 03:51	7439-98-7	
Potassium, Dissolved	**76400**	ug/L	1000	97.8	1	11/29/23 16:11	11/30/23 03:51	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**50.8**	ug/L	10.0	2.8	1	11/27/23 07:13	11/28/23 22:11	7429-90-5	
Manganese	**1610**	ug/L	20.0	3.6	20	11/27/23 07:13	11/29/23 16:19	7439-96-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	11/22/23 07:28	11/28/23 17:25	7429-90-5	
Manganese, Dissolved	**1690**	ug/L	10.0	1.7	10	11/22/23 07:28	11/28/23 11:14	7439-96-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**190**	mg/L	10.0	10.0	1		11/21/23 00:02		
Alkalinity,Bicarbonate (CaCO3)	**190**	mg/L	10.0	10.0	1		11/21/23 00:02		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/21/23 00:02		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1200**	mg/L	20.0	20.0	1		11/21/23 08:12		
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		11/16/23 16:55	18496-25-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

Sample: MW-15B **Lab ID: 50359841001** Collected: 11/15/23 14:00 Received: 11/16/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/28/23 14:19	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/17/23 01:32	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/17/23 01:32	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.40**	mg/L	0.15	0.15	1	12/01/23 10:00	12/01/23 13:36		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**1.1**	mg/L	1.0	0.24	1		12/02/23 02:38	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**3.6**	mg/L	1.0	0.24	1		12/03/23 06:38		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 765133
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3506567 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	12/03/23 19:20	

LABORATORY CONTROL SAMPLE: 3506568

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.93	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506569 3506570

Parameter	Units	50359760005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.12	1	1	1.0	1.0	93	89	80-120	4	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 764435
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3503916 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron	ug/L	ND	100	30.0	11/29/23 23:48	
Magnesium	ug/L	ND	1000	33.6	11/29/23 23:48	
Potassium	ug/L	ND	1000	97.8	11/29/23 23:48	
Silica	ug/L	ND	450		11/29/23 23:48	N2
Sodium	ug/L	ND	1000	54.8	11/29/23 23:48	

LABORATORY CONTROL SAMPLE: 3503917

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	10000	10300	103	80-120	
Magnesium	ug/L	10000	9820	98	80-120	
Potassium	ug/L	10000	10200	102	80-120	
Silica	ug/L	10700	11000	103	80-120	N2
Sodium	ug/L	10000	9990	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3503918 3503919

Parameter	Units	50359836001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	ND	10000	10000	10000	10400	100	103	75-125	3	20	
Magnesium	ug/L	36900	10000	10000	45900	47200	91	104	75-125	3	20	
Potassium	ug/L	ND	10000	10000	10500	10900	102	106	75-125	4	20	
Silica	ug/L	13300	10700	10700	24100	24900	101	108	75-125	3	20	N2
Sodium	ug/L	7630	10000	10000	17400	17900	98	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 765309
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3507186 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	11/30/23 03:22	
Iron, Dissolved	ug/L	ND	100	30.0	11/30/23 03:22	
Lithium, Dissolved	ug/L	ND	20.0	6.8	11/30/23 03:22	
Magnesium, Dissolved	ug/L	ND	1000	33.6	11/30/23 03:22	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	11/30/23 03:22	
Potassium, Dissolved	ug/L	ND	1000	97.8	11/30/23 03:22	

LABORATORY CONTROL SAMPLE: 3507187

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	954	95	80-120	
Iron, Dissolved	ug/L	10000	10200	102	80-120	
Lithium, Dissolved	ug/L	1000	1010	101	80-120	
Magnesium, Dissolved	ug/L	10000	9720	97	80-120	
Molybdenum, Dissolved	ug/L	1000	1040	104	80-120	
Potassium, Dissolved	ug/L	10000	10100	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3507188 3507189

Parameter	Units	50359760001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	1190	1000	1000	2130	2110	94	92	75-125	1	20	
Iron, Dissolved	ug/L	4440	10000	10000	13900	13900	94	95	75-125	1	20	
Lithium, Dissolved	ug/L	ND	1000	1000	974	977	96	96	75-125	0	20	
Magnesium, Dissolved	ug/L	42100	10000	10000	49800	50100	77	80	75-125	1	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1000	1010	100	101	75-125	1	20	
Potassium, Dissolved	ug/L	5380	10000	10000	15000	15000	96	97	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3507190 3507191

Parameter	Units	50359760005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	2850	1000	1000	3780	3760	93	91	75-125	1	20	
Iron, Dissolved	ug/L	2290	10000	10000	11800	11900	95	96	75-125	1	20	
Lithium, Dissolved	ug/L	57.1	1000	1000	1010	1020	96	96	75-125	0	20	
Magnesium, Dissolved	ug/L	54000	10000	10000	61900	61900	79	79	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3507190 3507191

Parameter	Units	50359760005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Molybdenum, Dissolved	ug/L	18.8	1000	1000	1020	1030	101	101	75-125	1	20	
Potassium, Dissolved	ug/L	10200	10000	10000	19800	19700	95	95	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 764730
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3505199 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.8	11/28/23 20:07	
Manganese	ug/L	ND	1.0	0.18	11/28/23 20:07	

LABORATORY CONTROL SAMPLE: 3505200

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	378	95	80-120	
Manganese	ug/L	40	41.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3505201 3505202

Parameter	Units	50359836001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	13.9	400	400	388	392	94	95	75-125	1	20	
Manganese	ug/L	1.5	40	40	41.2	40.9	99	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 764330
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3503429 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	11/27/23 22:57	
Manganese, Dissolved	ug/L	ND	1.0	0.17	11/27/23 22:57	

LABORATORY CONTROL SAMPLE: 3503430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	400	100	80-120	
Manganese, Dissolved	ug/L	40	40.7	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3503431 3503432

Parameter	Units	50359710001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	394	397	98	99	75-125	1	20	
Manganese, Dissolved	ug/L	ND	40	40	40.4	40.8	100	101	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 764115
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3502582 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/21/23 00:02	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/21/23 00:02	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/21/23 00:02	

LABORATORY CONTROL SAMPLE: 3502583

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.1	100	90-110	

SAMPLE DUPLICATE: 3502584

Parameter	Units	50359836001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	298	305	3	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	298	305	3	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 764109
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3502516 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/21/23 08:07	

LABORATORY CONTROL SAMPLE: 3502517

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	294	98	80-120	

SAMPLE DUPLICATE: 3502518

Parameter	Units	50359829001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	11600	11800	1	10	

SAMPLE DUPLICATE: 3502519

Parameter	Units	50359843002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	737	733	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 763457
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3499503 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/16/23 16:55	

LABORATORY CONTROL SAMPLE: 3499504

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3499505 3499506

Parameter	Units	50359843002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.53	0.52	105	103	90-110	2	20	

MATRIX SPIKE SAMPLE: 3499507

Parameter	Units	50359859002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.59	111	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 765058
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3506112 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/28/23 14:17	H3,N2

LABORATORY CONTROL SAMPLE: 3506113

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	0.98	98	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506114 3506115

Parameter	Units	50359882002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	ND	1	1	1.1	1.1	106	106	90-110	0	20	H3,N2

MATRIX SPIKE SAMPLE: 3506116

Parameter	Units	50360217001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	ND	1	1.1	106	90-110	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 763504
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3499830 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/17/23 02:41	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/17/23 02:41	

LABORATORY CONTROL SAMPLE: 3499831

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	102	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE SAMPLE: 3499832

Parameter	Units	50359827002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.012J	1	1.0	100	90-110	
Nitrogen, Nitrite	mg/L	0.010J	1	1.0	103	90-110	

MATRIX SPIKE SAMPLE: 3499833

Parameter	Units	50359827005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	5	5.0	99	90-110	
Nitrogen, Nitrite	mg/L	ND	5	5.3	105	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 765749
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3509048 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	12/01/23 13:24	

LABORATORY CONTROL SAMPLE: 3509049

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3509050 3509051

Parameter	Units	50359827005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.7	1.6				2		

MATRIX SPIKE SAMPLE: 3509052

Parameter	Units	50359827006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	ND		1.6			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 765881
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3509596 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	12/01/23 21:09	

LABORATORY CONTROL SAMPLE: 3509597

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.3	93	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3509598 3509599

Parameter	Units	50359760001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	3.5	10	10	12.9	13.1	93	95	80-120	2	20	

MATRIX SPIKE SAMPLE: 3509601

Parameter	Units	50359760002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.3	10	10.5	92	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

QC Batch: 765968
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359841001

METHOD BLANK: 3510138 Matrix: Water
Associated Lab Samples: 50359841001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	12/03/23 03:58	

LABORATORY CONTROL SAMPLE: 3510139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510140 3510141

Parameter	Units	50359760005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.5	10	10	11.8	11.9	94	94	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510142 3510143

Parameter	Units	50359882002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.7	10	10	11.4	11.5	97	98	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

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

H3	Sample was received or analysis requested beyond the recognized method holding time.
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.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P3R3 Nov 2023
Pace Project No.: 50359841

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50359841001	**MW-15B**	EPA 9056	765133		
50359841001	**MW-15B**	EPA 3010	764435	EPA 6010	765468
50359841001	**MW-15B**	EPA 3010	765309	EPA 6010	765474
50359841001	**MW-15B**	EPA 200.2	764730	EPA 6020	764888
50359841001	**MW-15B**	EPA 200.2	764330	EPA 6020	764576
50359841001	**MW-15B**	SM 2320B	764115		
50359841001	**MW-15B**	SM 2540C	764109		
50359841001	**MW-15B**	SM 4500-S2-D	763457		
50359841001	**MW-15B**	HACH 8146	765058		
50359841001	**MW-15B**	EPA 353.2	763504		
50359841001	**MW-15B**	EPA 365.1	765749	EPA 365.1	765840
50359841001	**MW-15B**	SM 5310C	765881		
50359841001	**MW-15B**	SM 5310C	765968		

WO# : 50359841

50359841

Pace Analytical
WWW.PACELABS.COM

uest Document

t fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100
	Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone:	(317)579-4082 Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Mark Breting
Copy To:	
Purchase Order #:	
Project Name:	Petersburg P3R3 Nov 2023
Project #:	

Invoice Information:

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/52

Regulatory Agency

State / Location
IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Residual Chlorine (Y/N)
																		Requested Analysis Filtered (Y/N)				Y			Y				
1	AP MW-15 B	WT	G			11-15	1400		9										✓	✓	✓	✓	✓	✓	✓✓	✓		
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 Fe, Mg, Na, K, sila 6020 - Al, Mn	Mayley Torres	11-15	1600		11-16	7.45AM				
** Dissolved FF 6010 (B, Fe, Mo, Li, Mg, K)		11-16	10:15AM		11/16/23	1015	0.7	Y	Y	Y
Diss 6020 - Al, Mn							1.3			
Alkalinity = (Total , Bicarb & Carb)							0.9			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mayley Torres

SIGNATURE of SAMPLER: [signature] DATE Signed: 11-15-23

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/16/23 1140 JT

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** (Initial/Corrected)

0.7/0.7	1.3/1.3	0.9/0.9	1.4/1.4

RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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

Cooler temp should be above freezing to 6°C

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

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis: Nitrates	✓	
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 13:50	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		✓

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: ~~HNO3 (<2)~~ ~~H2SO4 (<2)~~ NaOH (>10) ~~NaOH/ZnAc (>9)~~** Any non-conformance to pH recommendations will be noted on the container count form	✓		
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
	Present	Absent	No VOA Vials Sent
Headspace in VOA Vials (>6mm): See Containter Count form for details			✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓

COMMENTS: Cooler 5 - 1.9/1.9, Cooler 6 - 1.4/1.4

COC PAGE 1 **of** 1

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER								
			MeOH (only)																											Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			SBS																											Red	Yellow	Green	Black
			DI																													
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1												1	1				1	2	1	1	1		1					WT	✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 07, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 16, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50359844001	**MW-15B**	Water	11/15/23 14:00	11/16/23 10:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50359844001	**MW-15B**	EPA 9056	ADM, KBB	3	PASI-I
		EPA 6010	JPK	5	PASI-I
		EPA 6020	CAW	4	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50359844001	**MW-15B**					
EPA 9056	Chloride	41.5	mg/L	2.5	12/03/23 18:59	
EPA 9056	Fluoride	0.11	mg/L	0.10	12/03/23 18:41	
EPA 9056	Sulfate	828	mg/L	25.0	12/05/23 15:23	
EPA 6010	Boron	1380	ug/L	100	11/30/23 00:19	
EPA 6010	Calcium	227000	ug/L	2000	11/30/23 00:28	
EPA 6010	Lithium	785	ug/L	20.0	11/30/23 00:19	
EPA 6010	Molybdenum	16.4	ug/L	10.0	11/30/23 00:19	
EPA 6020	Arsenic	1.2	ug/L	1.0	11/30/23 04:15	
EPA 6020	Barium	51.3	ug/L	1.0	11/30/23 04:15	
EPA 903.1	Radium-226	0.203 ± 0.663 (1.23) C:NA T:84%	pCi/L		12/12/23 13:09	
EPA 904.0	Radium-228	1.40 ± 0.646 (1.12) C:78% T:66%	pCi/L		12/07/23 11:27	
Total Radium Calculation	Total Radium	1.60 ± 1.31 (2.35)	pCi/L		12/12/23 15:33	
SM 2540C	Total Dissolved Solids	1260	mg/L	20.0	11/21/23 08:17	
SM 4500-H+B	pH at 25 Degrees C	7.0	Std. Units	0.10	12/04/23 12:46	H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

Sample: MW-15B **Lab ID: 50359844001** Collected: 11/15/23 14:00 Received: 11/16/23 10:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**41.5**	mg/L	2.5	0.67	10		12/03/23 18:59	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	0.017	1		12/03/23 18:41	16984-48-8	
Sulfate	**828**	mg/L	25.0	19.0	100		12/05/23 15:23	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1380**	ug/L	100	6.2	1	11/25/23 22:05	11/30/23 00:19	7440-42-8	
Calcium	**227000**	ug/L	2000	135	2	11/25/23 22:05	11/30/23 00:28	7440-70-2	
Lead	ND	ug/L	10.0	2.5	1	11/25/23 22:05	11/30/23 00:19	7439-92-1	
Lithium	**785**	ug/L	20.0	6.8	1	11/25/23 22:05	11/30/23 00:19	7439-93-2	
Molybdenum	**16.4**	ug/L	10.0	0.78	1	11/25/23 22:05	11/30/23 00:19	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Arsenic	**1.2**	ug/L	1.0	0.075	1	11/28/23 16:23	11/30/23 04:15	7440-38-2	
Barium	**51.3**	ug/L	1.0	0.077	1	11/28/23 16:23	11/30/23 04:15	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	11/28/23 16:23	11/30/23 04:15	7440-48-4	
Selenium	ND	ug/L	1.0	0.20	1	11/28/23 16:23	11/30/23 04:15	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1260**	mg/L	20.0	20.0	1		11/21/23 08:17		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.0**	Std. Units	0.10	0.10	1		12/04/23 12:46		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

QC Batch: 765136
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359844001

METHOD BLANK: 3506579 Matrix: Water
Associated Lab Samples: 50359844001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	12/03/23 13:38	
Fluoride	mg/L	ND	0.10	0.017	12/03/23 13:38	
Sulfate	mg/L	ND	0.25	0.19	12/03/23 13:38	

LABORATORY CONTROL SAMPLE: 3506580

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	0.98	98	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506581 3506582

Parameter	Units	50359849001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	25.5	25	25	49.7	49.7	97	97	80-120	0	15	
Fluoride	mg/L	0.28	1	1	1.3	1.3	99	99	80-120	0	15	
Sulfate	mg/L	40.2	5	5	45.4	45.4	103	103	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3507426 3507427

Parameter	Units	50359760001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	90.3	25	25	116	113	103	92	80-120	2	15	
Fluoride	mg/L	0.11	1	1	1.1	1.1	101	102	80-120	1	15	
Sulfate	mg/L	174	50	50	222	219	97	91	80-120	2	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

QC Batch: 764435
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359844001

METHOD BLANK: 3503916 Matrix: Water
Associated Lab Samples: 50359844001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	11/29/23 23:48	
Calcium	ug/L	ND	1000	67.7	11/29/23 23:48	
Lead	ug/L	ND	10.0	2.5	11/29/23 23:48	
Lithium	ug/L	ND	20.0	6.8	11/29/23 23:48	
Molybdenum	ug/L	ND	10.0	0.78	11/29/23 23:48	

LABORATORY CONTROL SAMPLE: 3503917

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	978	98	80-120	
Calcium	ug/L	10000	10300	103	80-120	
Lead	ug/L	1000	956	96	80-120	
Lithium	ug/L	1000	1010	101	80-120	
Molybdenum	ug/L	1000	1050	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3503918 3503919

Parameter	Units	50359836001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	650	1000	1000	1660	1710	100	106	75-125	3	20	
Calcium	ug/L	187000	10000	10000	194000	200000	70	134	75-125	3	20	E,P6
Lead	ug/L	ND	1000	1000	919	952	92	95	75-125	4	20	
Lithium	ug/L	ND	1000	1000	1020	1050	102	105	75-125	3	20	
Molybdenum	ug/L	ND	1000	1000	1040	1090	104	108	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

QC Batch: 764968
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359844001

METHOD BLANK: 3505861 Matrix: Water
Associated Lab Samples: 50359844001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	0.075	11/30/23 03:41	
Barium	ug/L	ND	1.0	0.077	11/30/23 03:41	
Cobalt	ug/L	ND	1.0	0.046	11/30/23 03:41	
Selenium	ug/L	ND	1.0	0.20	11/30/23 03:41	

LABORATORY CONTROL SAMPLE: 3505862

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	38.9	97	80-120	
Barium	ug/L	40	39.1	98	80-120	
Cobalt	ug/L	40	40.8	102	80-120	
Selenium	ug/L	40	39.9	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3505863 3505864

Parameter	Units	50359844001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	1.2	40	40	40.2	39.8	97	96	75-125	1	20	
Barium	ug/L	51.3	40	40	92.0	92.4	102	103	75-125	1	20	
Cobalt	ug/L	ND	40	40	39.0	39.1	97	97	75-125	0	20	
Selenium	ug/L	ND	40	40	39.9	40.8	99	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

QC Batch: 764109
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50359844001

METHOD BLANK: 3502516 Matrix: Water
Associated Lab Samples: 50359844001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/21/23 08:07	

LABORATORY CONTROL SAMPLE: 3502517

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	294	98	80-120	

SAMPLE DUPLICATE: 3502518

Parameter	Units	50359829001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	11600	11800	1	10	

SAMPLE DUPLICATE: 3502519

Parameter	Units	50359843002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	737	733	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

QC Batch: 766081
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50359844001

SAMPLE DUPLICATE: 3510400

Parameter	Units	50359760006 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.0	7.1	1	2	H3

SAMPLE DUPLICATE: 3510401

Parameter	Units	50359849001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.4	8.3	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

Sample: MW-15B **Lab ID: 50359844001** Collected: 11/15/23 14:00 Received: 11/16/23 10:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.203 ± 0.663 (1.23) C:NA T:84%**	pCi/L	12/12/23 13:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.40 ± 0.646 (1.12) C:78% T:66%**	pCi/L	12/07/23 11:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.60 ± 1.31 (2.35)**	pCi/L	12/12/23 15:33	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

QC Batch: 631080
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50359844001

METHOD BLANK: 3076877 Matrix: Water
Associated Lab Samples: 50359844001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.107 ± 0.256 (0.495) C:NA T:89%	pCi/L	12/12/23 13:09	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

QC Batch: 631081
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50359844001

METHOD BLANK: 3076878 Matrix: Water
Associated Lab Samples: 50359844001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0919 ± 0.296 (0.669) C:83% T:82%	pCi/L	12/07/23 11:25	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P2R3 Nov 2023
Pace Project No.: 50359844

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50359844001	**MW-15B**	EPA 9056	765136		
50359844001	**MW-15B**	EPA 3010	764435	EPA 6010	765468
50359844001	**MW-15B**	EPA 200.2	764968	EPA 6020	765197
50359844001	**MW-15B**	EPA 903.1	631080		
50359844001	**MW-15B**	EPA 904.0	631081		
50359844001	**MW-15B**	Total Radium Calculation	635562		
50359844001	**MW-15B**	SM 2540C	764109		
50359844001	**MW-15B**	SM 4500-H+B	766081		

WO# : 50359844

50359844

Pace Analytical
WWW.PACELABS.COM

Request Document

ant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg Nov 2023 P2R3	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/50

Regulatory Agency	State / Location
	IN

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique AP	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals, Total*	TDS/pH	(Cl, F, SO4) IC	Rad-226/228 + Sum	Residual Chlorine (Y/N)	
1	~~DW~~ - 15B	WT	G			11-15	1400		5	✓		✓							✓	✓	✓	✓		001
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Pb, Mo, Ca, Li (5)	Mary Lou Tolles	11-15	1600		11/16	7:45	0.7			
020: Co, As, Se, Ba, Tl (5)		11-16	1015		11/16/23	1015	1.3	Y	Y	Y
Rad 226/228 to Pace PA							0.9			

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Mary Lou Tolles					
SIGNATURE of SAMPLER:		DATE Signed: 11-15-23				

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/16/23 1140 JT

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 0.7/0.7 | 1.3/1.3 | 0.9/0.9 | 1.4/1.4

(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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

Cooler temp should be above freezing to 6°C

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

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		✓

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
	Present	Absent	No VOA Vials Sent
Headspace in VOA Vials (>6mm): See Containter Count form for details			✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓

COMMENTS: Cooler 5 - 1.9/1.9, Cooler 6 - 1.4/1.4

COC PAGE 1 **of** 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1									WT	✓	✓		
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 12, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 21, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50360237001	**MW-33D2**	Water	11/21/23 12:00	11/21/23 16:35
50360237002	**DUP-13**	Water	11/21/23 08:00	11/21/23 16:35

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50360237001	**MW-33D2**	EPA 9056	KBB	4	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	DMT	7	PASI-I
		EPA 6020	DMT	2	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	BEP	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50360237002	**DUP-13**	EPA 9056	KBB	4	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	DMT	7	PASI-I
		EPA 6020	DMT	2	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	BEP	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50360237001	**MW-33D2**					
EPA 9056	Bromide	0.17	mg/L	0.050	12/08/23 10:59	
EPA 9056	Chloride	47.2	mg/L	2.5	12/08/23 11:18	
EPA 9056	Fluoride	3.4	mg/L	0.10	12/08/23 10:59	
EPA 9056	Sulfate	11.4	mg/L	0.25	12/08/23 10:59	
EPA 6010	Boron	1120	ug/L	100	12/05/23 22:02	
EPA 6010	Calcium	4220	ug/L	1000	12/05/23 22:02	
EPA 6010	Lithium	28.9	ug/L	20.0	12/05/23 22:02	
EPA 6010	Magnesium	1220	ug/L	1000	12/05/23 22:02	
EPA 6010	Potassium	1590	ug/L	1000	12/05/23 22:02	
EPA 6010	Silica	9250	ug/L	450	12/05/23 22:02	N2
EPA 6010	Sodium	259000	ug/L	2000	12/05/23 22:28	
EPA 6010	Boron, Dissolved	1120	ug/L	100	12/04/23 22:07	
EPA 6010	Lithium, Dissolved	25.9	ug/L	20.0	12/04/23 22:07	
EPA 6010	Potassium, Dissolved	1470	ug/L	1000	12/04/23 22:07	
EPA 6020	Aluminum	29.6	ug/L	10.0	12/04/23 06:54	
EPA 6020	Barium	127	ug/L	1.0	12/04/23 06:54	
EPA 6020	Manganese	15.3	ug/L	1.0	12/04/23 06:54	
EPA 6020	Manganese, Dissolved	12.1	ug/L	1.0	12/04/23 00:26	
EPA 903.1	Radium-226	0.211 ± 0.388 (0.693) C:NA T:88%	pCi/L		12/19/23 12:31	
EPA 904.0	Radium-228	-0.145 ± 0.229 (0.581) C:85% T:91%	pCi/L		12/13/23 14:13	
Total Radium Calculation	Total Radium	0.211 ± 0.617 (1.27)	pCi/L		12/19/23 15:26	
SM 2320B	Alkalinity, Total as CaCO3	520	mg/L	10.0	11/29/23 21:23	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	477	mg/L	10.0	11/29/23 21:23	
SM 2320B	Alkalinity,Carbonate (CaCO3)	42.8	mg/L	10.0	11/29/23 21:23	
SM 2540C	Total Dissolved Solids	633	mg/L	10.0	11/27/23 10:31	
SM 4500-H+B	pH at 25 Degrees C	7.6	Std. Units	0.10	12/07/23 14:37	H3
SM 4500-S2-D	Sulfide	0.065J	mg/L	0.10	11/23/23 17:29	
SM 5310C	Dissolved Organic Carbon	2.2	mg/L	1.0	12/04/23 22:00	
50360237002	**DUP-13**					
EPA 9056	Bromide	0.20	mg/L	0.050	12/08/23 12:35	
EPA 9056	Chloride	47.2	mg/L	2.5	12/08/23 12:55	
EPA 9056	Fluoride	3.4	mg/L	0.10	12/08/23 12:35	
EPA 9056	Sulfate	11.4	mg/L	0.25	12/08/23 12:35	
EPA 6010	Boron	1120	ug/L	100	12/05/23 22:03	
EPA 6010	Calcium	4200	ug/L	1000	12/05/23 22:03	
EPA 6010	Lithium	28.5	ug/L	20.0	12/05/23 22:03	
EPA 6010	Magnesium	1210	ug/L	1000	12/05/23 22:03	
EPA 6010	Potassium	1590	ug/L	1000	12/05/23 22:03	
EPA 6010	Silica	9220	ug/L	450	12/05/23 22:03	N2
EPA 6010	Sodium	262000	ug/L	2000	12/05/23 22:29	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50360237002	**DUP-13**					
EPA 6010	Boron, Dissolved	1120	ug/L	100	12/04/23 22:14	
EPA 6010	Lithium, Dissolved	25.4	ug/L	20.0	12/04/23 22:14	
EPA 6010	Potassium, Dissolved	1470	ug/L	1000	12/04/23 22:14	
EPA 6020	Aluminum	29.4	ug/L	10.0	12/04/23 06:58	
EPA 6020	Barium	127	ug/L	1.0	12/04/23 06:58	
EPA 6020	Manganese	15.2	ug/L	1.0	12/04/23 06:58	
EPA 6020	Manganese, Dissolved	12.0	ug/L	1.0	12/04/23 00:29	
EPA 903.1	Radium-226	0.433 ± 0.500 (0.812) C:NA T:94%	pCi/L		12/19/23 12:31	
EPA 904.0	Radium-228	0.699 ± 0.336 (0.561) C:91% T:84%	pCi/L		12/13/23 14:13	
Total Radium Calculation	Total Radium	1.13 ± 0.836 (1.37)	pCi/L		12/19/23 15:26	
SM 2320B	Alkalinity, Total as CaCO3	520	mg/L	10.0	11/28/23 19:57	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	474	mg/L	10.0	11/28/23 19:57	
SM 2320B	Alkalinity,Carbonate (CaCO3)	45.6	mg/L	10.0	11/28/23 19:57	
SM 2540C	Total Dissolved Solids	619	mg/L	10.0	11/27/23 10:31	
SM 4500-H+B	pH at 25 Degrees C	8.1	Std. Units	0.10	12/07/23 14:37	H3
SM 4500-S2-D	Sulfide	0.036J	mg/L	0.10	11/23/23 17:29	
SM 5310C	Dissolved Organic Carbon	1.7	mg/L	1.0	12/04/23 22:10	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Sample: MW-33D2 **Lab ID: 50360237001** Collected: 11/21/23 12:00 Received: 11/21/23 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.17**	mg/L	0.050	0.0090	1		12/08/23 10:59	24959-67-9	
Chloride	**47.2**	mg/L	2.5	0.67	10		12/08/23 11:18	16887-00-6	
Fluoride	**3.4**	mg/L	0.10	0.017	1		12/08/23 10:59	16984-48-8	
Sulfate	**11.4**	mg/L	0.25	0.19	1		12/08/23 10:59	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1120**	ug/L	100	6.2	1	11/28/23 21:33	12/05/23 22:02	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/28/23 21:33	12/05/23 22:02	7440-43-9	
Calcium	**4220**	ug/L	1000	67.7	1	11/28/23 21:33	12/05/23 22:02	7440-70-2	
Iron	ND	ug/L	100	30.0	1	11/28/23 21:33	12/05/23 22:02	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/28/23 21:33	12/05/23 22:02	7439-92-1	
Lithium	**28.9**	ug/L	20.0	6.8	1	11/28/23 21:33	12/05/23 22:02	7439-93-2	
Magnesium	**1220**	ug/L	1000	33.6	1	11/28/23 21:33	12/05/23 22:02	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	11/28/23 21:33	12/05/23 22:02	7439-98-7	
Potassium	**1590**	ug/L	1000	97.8	1	11/28/23 21:33	12/05/23 22:02	7440-09-7	
Silica	**9250**	ug/L	450		1	11/28/23 21:33	12/05/23 22:02	7631-86-9	N2
Sodium	**259000**	ug/L	2000	110	2	11/28/23 21:33	12/05/23 22:28	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1120**	ug/L	100	6.2	1	12/04/23 07:59	12/04/23 22:07	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	12/04/23 07:59	12/04/23 22:07	7439-89-6	
Lithium, Dissolved	**25.9**	ug/L	20.0	6.8	1	12/04/23 07:59	12/04/23 22:07	7439-93-2	
Magnesium, Dissolved	ND	ug/L	1000	33.6	1	12/04/23 07:59	12/04/23 22:07	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	12/04/23 07:59	12/04/23 22:07	7439-98-7	
Potassium, Dissolved	**1470**	ug/L	1000	97.8	1	12/04/23 07:59	12/04/23 22:07	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**29.6**	ug/L	10.0	2.0	1	12/01/23 06:20	12/04/23 06:54	7429-90-5	
Arsenic	ND	ug/L	1.0	0.12	1	12/01/23 06:20	12/04/23 06:54	7440-38-2	
Barium	**127**	ug/L	1.0	0.065	1	12/01/23 06:20	12/04/23 06:54	7440-39-3	
Cobalt	ND	ug/L	1.0	0.071	1	12/01/23 06:20	12/04/23 06:54	7440-48-4	
Manganese	**15.3**	ug/L	1.0	0.16	1	12/01/23 06:20	12/04/23 06:54	7439-96-5	
Selenium	ND	ug/L	1.0	0.19	1	12/01/23 06:20	12/04/23 06:54	7782-49-2	
Thallium	ND	ug/L	1.0	0.060	1	12/01/23 06:20	12/04/23 06:54	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.0	1	12/01/23 06:20	12/04/23 00:26	7429-90-5	
Manganese, Dissolved	**12.1**	ug/L	1.0	0.16	1	12/01/23 06:20	12/04/23 00:26	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Sample: MW-33D2 **Lab ID: 50360237001** Collected: 11/21/23 12:00 Received: 11/21/23 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**520**	mg/L	10.0	10.0	1		11/29/23 21:23		
Alkalinity,Bicarbonate (CaCO3)	**477**	mg/L	10.0	10.0	1		11/29/23 21:23		
Alkalinity,Carbonate (CaCO3)	**42.8**	mg/L	10.0	10.0	1		11/29/23 21:23		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**633**	mg/L	10.0	10.0	1		11/27/23 10:31		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.6**	Std. Units	0.10	0.10	1		12/07/23 14:37		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	**0.065J**	mg/L	0.10	0.025	1		11/23/23 17:29	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/28/23 14:57	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/21/23 23:32	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/21/23 23:32	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	12/05/23 11:30	12/06/23 07:09		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		12/04/23 20:31	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.2**	mg/L	1.0	0.24	1		12/04/23 22:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Sample: DUP-13 **Lab ID: 50360237002** Collected: 11/21/23 08:00 Received: 11/21/23 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.20**	mg/L	0.050	0.0090	1		12/08/23 12:35	24959-67-9	
Chloride	**47.2**	mg/L	2.5	0.67	10		12/08/23 12:55	16887-00-6	
Fluoride	**3.4**	mg/L	0.10	0.017	1		12/08/23 12:35	16984-48-8	
Sulfate	**11.4**	mg/L	0.25	0.19	1		12/08/23 12:35	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1120**	ug/L	100	6.2	1	11/28/23 21:33	12/05/23 22:03	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/28/23 21:33	12/05/23 22:03	7440-43-9	
Calcium	**4200**	ug/L	1000	67.7	1	11/28/23 21:33	12/05/23 22:03	7440-70-2	
Iron	ND	ug/L	100	30.0	1	11/28/23 21:33	12/05/23 22:03	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/28/23 21:33	12/05/23 22:03	7439-92-1	
Lithium	**28.5**	ug/L	20.0	6.8	1	11/28/23 21:33	12/05/23 22:03	7439-93-2	
Magnesium	**1210**	ug/L	1000	33.6	1	11/28/23 21:33	12/05/23 22:03	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	11/28/23 21:33	12/05/23 22:03	7439-98-7	
Potassium	**1590**	ug/L	1000	97.8	1	11/28/23 21:33	12/05/23 22:03	7440-09-7	
Silica	**9220**	ug/L	450		1	11/28/23 21:33	12/05/23 22:03	7631-86-9	N2
Sodium	**262000**	ug/L	2000	110	2	11/28/23 21:33	12/05/23 22:29	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1120**	ug/L	100	6.2	1	12/04/23 07:59	12/04/23 22:14	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	12/04/23 07:59	12/04/23 22:14	7439-89-6	
Lithium, Dissolved	**25.4**	ug/L	20.0	6.8	1	12/04/23 07:59	12/04/23 22:14	7439-93-2	
Magnesium, Dissolved	ND	ug/L	1000	33.6	1	12/04/23 07:59	12/04/23 22:14	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	12/04/23 07:59	12/04/23 22:14	7439-98-7	
Potassium, Dissolved	**1470**	ug/L	1000	97.8	1	12/04/23 07:59	12/04/23 22:14	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**29.4**	ug/L	10.0	2.0	1	12/01/23 06:20	12/04/23 06:58	7429-90-5	
Arsenic	ND	ug/L	1.0	0.12	1	12/01/23 06:20	12/04/23 06:58	7440-38-2	
Barium	**127**	ug/L	1.0	0.065	1	12/01/23 06:20	12/04/23 06:58	7440-39-3	
Cobalt	ND	ug/L	1.0	0.071	1	12/01/23 06:20	12/04/23 06:58	7440-48-4	
Manganese	**15.2**	ug/L	1.0	0.16	1	12/01/23 06:20	12/04/23 06:58	7439-96-5	
Selenium	ND	ug/L	1.0	0.19	1	12/01/23 06:20	12/04/23 06:58	7782-49-2	
Thallium	ND	ug/L	1.0	0.060	1	12/01/23 06:20	12/04/23 06:58	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.0	1	12/01/23 06:20	12/04/23 00:29	7429-90-5	
Manganese, Dissolved	**12.0**	ug/L	1.0	0.16	1	12/01/23 06:20	12/04/23 00:29	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Sample: DUP-13 **Lab ID: 50360237002** Collected: 11/21/23 08:00 Received: 11/21/23 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**520**	mg/L	10.0	10.0	1		11/28/23 19:57		
Alkalinity,Bicarbonate (CaCO3)	**474**	mg/L	10.0	10.0	1		11/28/23 19:57		
Alkalinity,Carbonate (CaCO3)	**45.6**	mg/L	10.0	10.0	1		11/28/23 19:57		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**619**	mg/L	10.0	10.0	1		11/27/23 10:31		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**8.1**	Std. Units	0.10	0.10	1		12/07/23 14:37		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	**0.036J**	mg/L	0.10	0.025	1		11/23/23 17:29	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/28/23 14:57	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/21/23 23:27	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/21/23 23:27	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	12/05/23 11:30	12/06/23 07:10		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		12/04/23 20:56	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.7**	mg/L	1.0	0.24	1		12/04/23 22:10		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 766572
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3512196 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	12/08/23 02:19	
Chloride	mg/L	ND	0.25	0.067	12/08/23 02:19	
Fluoride	mg/L	ND	0.10	0.017	12/08/23 02:19	
Sulfate	mg/L	ND	0.25	0.19	12/08/23 02:19	

LABORATORY CONTROL SAMPLE: 3512197

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.94	94	80-120	
Chloride	mg/L	2.5	2.4	97	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3512198 3512199

Parameter	Units	50360237001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.17	1	1	1.1	1.1	97	93	80-120	4	15	
Chloride	mg/L	47.2	25	25	69.5	69.3	89	89	80-120	0	15	
Fluoride	mg/L	3.4	1	1	4.3	4.3	95	94	80-120	0	15	
Sulfate	mg/L	11.4	5	5	16.0	16.0	92	92	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3512200 3512201

Parameter	Units	50361001003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.074	1	1	1.0	1.0	93	92	80-120	1	15	
Chloride	mg/L	22.2	2.5	2.5	24.3	24.3	81	82	80-120	0	15	
Fluoride	mg/L	0.36	1	1	1.3	1.3	98	98	80-120	0	15	
Sulfate	mg/L	34.7	5	5	39.2	39.3	90	92	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 764641
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3504875 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	12/05/23 21:42	
Cadmium	ug/L	ND	2.0	0.60	12/05/23 21:42	
Calcium	ug/L	ND	1000	67.7	12/05/23 21:42	
Iron	ug/L	ND	100	30.0	12/05/23 21:42	
Lead	ug/L	ND	10.0	2.5	12/05/23 21:42	
Lithium	ug/L	ND	20.0	6.8	12/05/23 21:42	
Magnesium	ug/L	ND	1000	33.6	12/05/23 21:42	
Molybdenum	ug/L	ND	10.0	0.78	12/05/23 21:42	
Potassium	ug/L	ND	1000	97.8	12/05/23 21:42	
Silica	ug/L	ND	450		12/05/23 21:42	N2
Sodium	ug/L	ND	1000	54.8	12/05/23 21:42	

LABORATORY CONTROL SAMPLE: 3504876

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	978	98	80-120	
Cadmium	ug/L	1000	958	96	80-120	
Calcium	ug/L	10000	10300	103	80-120	
Iron	ug/L	10000	9980	100	80-120	
Lead	ug/L	1000	910	91	80-120	
Lithium	ug/L	1000	1020	102	80-120	
Magnesium	ug/L	10000	9810	98	80-120	
Molybdenum	ug/L	1000	1020	102	80-120	
Potassium	ug/L	10000	10100	101	80-120	
Silica	ug/L	10700	10800	101	80-120	N2
Sodium	ug/L	10000	9990	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3504877 3504878

Parameter	Units	50360217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	1710	1000	1000	2810	2700	110	100	75-125	4	20	
Cadmium	ug/L	ND	1000	1000	993	956	99	96	75-125	4	20	
Calcium	ug/L	226000	10000	10000	235000	229000	86	28	75-125	3	20	P6
Iron	ug/L	2340	10000	10000	12400	12000	100	96	75-125	3	20	
Lead	ug/L	ND	1000	1000	877	849	88	85	75-125	3	20	
Lithium	ug/L	55.6	1000	1000	1080	1040	103	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3504877 3504878

Parameter	Units	50360217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	70800	10000	10000	82400	79500	116	87	75-125	4	20	
Molybdenum	ug/L	103	1000	1000	1150	1100	104	100	75-125	4	20	
Potassium	ug/L	10600	10000	10000	21500	20700	108	101	75-125	3	20	
Silica	ug/L	15400	10700	10700	27100	26100	110	100	75-125	4	20	N2
Sodium	ug/L	219000	10000	10000	230000	223000	108	38	75-125	3	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 765722
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3509000 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	12/04/23 21:48	
Iron, Dissolved	ug/L	ND	100	30.0	12/04/23 21:48	
Lithium, Dissolved	ug/L	ND	20.0	6.8	12/04/23 21:48	
Magnesium, Dissolved	ug/L	ND	1000	33.6	12/04/23 21:48	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	12/04/23 21:48	
Potassium, Dissolved	ug/L	ND	1000	97.8	12/04/23 21:48	

LABORATORY CONTROL SAMPLE: 3509001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	923	92	80-120	
Iron, Dissolved	ug/L	10000	9520	95	80-120	
Lithium, Dissolved	ug/L	1000	969	97	80-120	
Magnesium, Dissolved	ug/L	10000	9190	92	80-120	
Molybdenum, Dissolved	ug/L	1000	979	98	80-120	
Potassium, Dissolved	ug/L	10000	9680	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3509004 3509005

Parameter	Units	50360237001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	1120	1000	1000	2100	2090	98	97	75-125	0	20	
Iron, Dissolved	ug/L	ND	10000	10000	9800	9930	98	99	75-125	1	20	
Lithium, Dissolved	ug/L	25.9	1000	1000	992	1010	97	98	75-125	1	20	
Magnesium, Dissolved	ug/L	ND	10000	10000	10300	10400	94	94	75-125	1	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1000	1010	100	101	75-125	1	20	
Potassium, Dissolved	ug/L	1470	10000	10000	11300	11400	98	99	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 765677
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3508713 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.0	12/04/23 06:47	
Arsenic	ug/L	ND	1.0	0.12	12/04/23 06:47	
Barium	ug/L	ND	1.0	0.065	12/04/23 06:47	
Cobalt	ug/L	ND	1.0	0.071	12/04/23 06:47	
Manganese	ug/L	ND	1.0	0.16	12/04/23 06:47	
Selenium	ug/L	ND	1.0	0.19	12/04/23 06:47	
Thallium	ug/L	ND	1.0	0.060	12/04/23 06:47	

LABORATORY CONTROL SAMPLE: 3508714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	388	97	80-120	
Arsenic	ug/L	40	37.9	95	80-120	
Barium	ug/L	40	39.0	98	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Manganese	ug/L	40	40.5	101	80-120	
Selenium	ug/L	40	38.9	97	80-120	
Thallium	ug/L	40	40.6	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3508715 3508716

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	382	378	95	94	75-125	1	20	
Arsenic	ug/L	ND	40	40	39.5	38.8	96	95	75-125	2	20	
Barium	ug/L	89.7	40	40	129	129	99	98	75-125	0	20	
Cobalt	ug/L	2.0	40	40	39.8	40.2	95	95	75-125	1	20	
Manganese	ug/L	847	40	40	861	859	35	30	75-125	0	20	P6
Selenium	ug/L	ND	40	40	40.3	39.5	100	98	75-125	2	20	
Thallium	ug/L	ND	40	40	41.8	41.5	104	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 765680
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3508727 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.0	12/03/23 23:38	
Manganese, Dissolved	ug/L	ND	1.0	0.16	12/03/23 23:38	

LABORATORY CONTROL SAMPLE: 3508728

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	390	98	80-120	
Manganese, Dissolved	ug/L	40	43.0	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3508729 3508730

Parameter	Units	50360335003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	393	404	97	100	75-125	3	20	
Manganese, Dissolved	ug/L	1200	40	40	1240	1260	111	162	75-125	2	20	E,P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 765169
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237002

METHOD BLANK: 3506773 Matrix: Water
Associated Lab Samples: 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/28/23 19:57	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/28/23 19:57	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/28/23 19:57	

LABORATORY CONTROL SAMPLE: 3506774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.5	97	90-110	

SAMPLE DUPLICATE: 3506775

Parameter	Units	50360217001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	309	315	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	309	315	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 765452
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001

METHOD BLANK: 3507832 Matrix: Water
Associated Lab Samples: 50360237001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/29/23 21:23	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/29/23 21:23	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/29/23 21:23	

LABORATORY CONTROL SAMPLE: 3507833

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.2	98	90-110	

SAMPLE DUPLICATE: 3507834

Parameter	Units	50360279001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	61.4	62.6	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	61.4	62.6	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3507835

Parameter	Units	50360299001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	102	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	100	102	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 764797
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3505395 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/27/23 10:27	

LABORATORY CONTROL SAMPLE: 3505396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	285	95	80-120	

SAMPLE DUPLICATE: 3505397

Parameter	Units	50360317004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	601	604	0	10	

SAMPLE DUPLICATE: 3505398

Parameter	Units	50360282001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	PL

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 766729
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

SAMPLE DUPLICATE: 3513036

Parameter	Units	50360667005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	1	2	H3

SAMPLE DUPLICATE: 3513037

Parameter	Units	50360283003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.3	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 764696
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3505134 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/23/23 17:29	

LABORATORY CONTROL SAMPLE: 3505135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.49	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3505136 3505137

Parameter	Units	50360217002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.46	0.46	86	86	90-110	0	20	M3

MATRIX SPIKE SAMPLE: 3505138

Parameter	Units	50360238001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.11	0.5	0.25	28	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 765059
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3506117 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/28/23 14:56	H3,N2

LABORATORY CONTROL SAMPLE: 3506118

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	101	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506119 3506120

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	1.2	5	5	6.2	6.1	100	98	90-110	2	20	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506121 3506122

Parameter	Units	50360416003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	1.7	5	5	6.6	6.7	97	99	90-110	1	20	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 764414
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3503859 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/21/23 23:10	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/21/23 23:10	

LABORATORY CONTROL SAMPLE: 3503860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	103	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3503861 3503862

Parameter	Units	50360157001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	2.0	1	1	3.0	3.0	96	97	90-110	0	20	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	104	104	90-110	0	20	

MATRIX SPIKE SAMPLE: 3503863

Parameter	Units	50360237001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.0	101	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.0	103	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 766235
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3510923 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	12/06/23 07:06	

LABORATORY CONTROL SAMPLE: 3510924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510925 3510926

Parameter	Units	50360301002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	0.27			1.8	1.7				5		

MATRIX SPIKE SAMPLE: 3510927

Parameter	Units	50360237001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	ND		1.7			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 765965
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3510124 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	12/04/23 15:20	

LABORATORY CONTROL SAMPLE: 3510125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.5	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510126 3510127

Parameter	Units	50360090001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	2.0	10	10	11.5	11.6	95	96	80-120	1	20	

MATRIX SPIKE SAMPLE: 3510128

Parameter	Units	50360219003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.1	10	10.7	96	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 765969
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3510144 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	12/04/23 20:13	

LABORATORY CONTROL SAMPLE: 3510145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510146 3510147

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.6	10	10	12.2	12.3	96	96	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510148 3510149

Parameter	Units	50360416003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.3	10	10	11.8	11.9	94	95	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Sample: MW-33D2 **Lab ID: 50360237001** Collected: 11/21/23 12:00 Received: 11/21/23 16:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.211 ± 0.388 (0.693) C:NA T:88%**	pCi/L	12/19/23 12:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.145 ± 0.229 (0.581) C:85% T:91%**	pCi/L	12/13/23 14:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.211 ± 0.617 (1.27)**	pCi/L	12/19/23 15:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Sample: DUP-13 **Lab ID: 50360237002** Collected: 11/21/23 08:00 Received: 11/21/23 16:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.433 ± 0.500 (0.812) C:NA T:94%**	pCi/L	12/19/23 12:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.699 ± 0.336 (0.561) C:91% T:84%**	pCi/L	12/13/23 14:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.13 ± 0.836 (1.37)**	pCi/L	12/19/23 15:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 633513
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3088468 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.219 ± 0.229 (0.323) C:NA T:85%	pCi/L	12/19/23 12:31	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

QC Batch: 633515
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50360237001, 50360237002

METHOD BLANK: 3088473 Matrix: Water
Associated Lab Samples: 50360237001, 50360237002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.517 ± 0.300 (0.541) C:94% T:87%	pCi/L	12/13/23 14:12	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P5R1 Nov 2023
Pace Project No.: 50360237

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50360237001	**MW-33D2**	EPA 9056	766572		
50360237002	**DUP-13**	EPA 9056	766572		
50360237001	**MW-33D2**	EPA 3010	764641	EPA 6010	766423
50360237002	**DUP-13**	EPA 3010	764641	EPA 6010	766423
50360237001	**MW-33D2**	EPA 3010	765722	EPA 6010	766200
50360237002	**DUP-13**	EPA 3010	765722	EPA 6010	766200
50360237001	**MW-33D2**	EPA 200.2	765677	EPA 6020	765904
50360237002	**DUP-13**	EPA 200.2	765677	EPA 6020	765904
50360237001	**MW-33D2**	EPA 200.2	765680	EPA 6020	765903
50360237002	**DUP-13**	EPA 200.2	765680	EPA 6020	765903
50360237001	**MW-33D2**	EPA 903.1	633513		
50360237002	**DUP-13**	EPA 903.1	633513		
50360237001	**MW-33D2**	EPA 904.0	633515		
50360237002	**DUP-13**	EPA 904.0	633515		
50360237001	**MW-33D2**	Total Radium Calculation	637206		
50360237002	**DUP-13**	Total Radium Calculation	637206		
50360237001	**MW-33D2**	SM 2320B	765452		
50360237002	**DUP-13**	SM 2320B	765169		
50360237001	**MW-33D2**	SM 2540C	764797		
50360237002	**DUP-13**	SM 2540C	764797		
50360237001	**MW-33D2**	SM 4500-H+B	766729		
50360237002	**DUP-13**	SM 4500-H+B	766729		
50360237001	**MW-33D2**	SM 4500-S2-D	764696		
50360237002	**DUP-13**	SM 4500-S2-D	764696		
50360237001	**MW-33D2**	HACH 8146	765059		
50360237002	**DUP-13**	HACH 8146	765059		
50360237001	**MW-33D2**	EPA 353.2	764414		
50360237002	**DUP-13**	EPA 353.2	764414		
50360237001	**MW-33D2**	EPA 365.1	766235	EPA 365.1	766445
50360237002	**DUP-13**	EPA 365.1	766235	EPA 365.1	766445
50360237001	**MW-33D2**	SM 5310C	765965		
50360237002	**DUP-13**	SM 5310C	765965		
50360237001	**MW-33D2**	SM 5310C	765969		
50360237002	**DUP-13**	SM 5310C	765969		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields

WO# : 50360237

50360237

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sec
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P5R1 Nov 2023	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/55

Regulatory Agency	
State / Location	
	IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Br, Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum			Residual Chlorine (Y/N)
	Requested Analysis Filtered (Y/N)																					Y			Y						
1	MW-33D2	WT	G	11/21	12:00				11	3	3	4		1					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
2	DUP-13	WT	G	11/21	—				11	3	3	4		1					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 (B, Cd, Fe, Pb, Mo, Ca, Mg, Na, K, Li, sila) (11)	Mohammed Bazlamit	11/21	1635	/PACE	11/21/23	1635	1.1	Y	N	Y
6020 (Al, Mn, Co, As, Se, Ba, Tl) (7) + 7470 (Hg)										
** Dissolved FF 6010 (B, Fe, Mo, Mg, K, Li) (6) FF 6020 (Al, Mn) (2)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Mohammed Bazlamit					
SIGNATURE of SAMPLER:		DATE Signed: 11/21/23				

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 11/21/23 1730

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 1.1/1.1 | | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? **Analysis:** NO2/NO3		✓				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 18:05			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:

COC PAGE 1 **of** 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix
1												1	1			2	1	2	1	1	1		1					WT
2												1	1			2	1	2	1	1	1		1					WT
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
Red	Yellow	Green	Black
HNO3 <2	H2SO4 <2	NaOH >10	NaOH/ZnAc >9

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic
BP3R	250mL Unpres. FF SO4/OH buffer
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 12, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 21, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50360238001	**MW-24**	Water	11/21/23 12:00	11/21/23 16:35

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50360238001	**MW-24**	EPA 9056	KBB	4	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	DMT	6	PASI-I
		EPA 6020	DMT	2	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	IRH	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	BEP	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50360238001	**MW-24**					
EPA 9056	Bromide	0.49	mg/L	0.050	12/08/23 16:07	
EPA 9056	Chloride	48.3	mg/L	2.5	12/08/23 16:27	
EPA 9056	Fluoride	0.11	mg/L	0.10	12/08/23 16:07	
EPA 9056	Sulfate	751	mg/L	25.0	12/08/23 16:46	
EPA 6010	Boron	906	ug/L	100	12/05/23 22:04	
EPA 6010	Calcium	261000	ug/L	2000	12/05/23 22:31	
EPA 6010	Lithium	1060	ug/L	20.0	12/05/23 22:04	
EPA 6010	Magnesium	26600	ug/L	1000	12/05/23 22:04	
EPA 6010	Molybdenum	345	ug/L	10.0	12/05/23 22:04	
EPA 6010	Potassium	149000	ug/L	2000	12/05/23 22:31	
EPA 6010	Silica	17600	ug/L	450	12/05/23 22:04	N2
EPA 6010	Sodium	57000	ug/L	1000	12/05/23 22:04	
EPA 6010	Boron, Dissolved	921	ug/L	100	12/04/23 22:16	
EPA 6010	Lithium, Dissolved	1080	ug/L	20.0	12/04/23 22:16	
EPA 6010	Magnesium, Dissolved	27000	ug/L	1000	12/04/23 22:16	
EPA 6010	Molybdenum, Dissolved	344	ug/L	10.0	12/04/23 22:16	
EPA 6010	Potassium, Dissolved	149000	ug/L	2000	12/04/23 22:30	
EPA 6020	Aluminum	13.2	ug/L	10.0	12/04/23 07:08	
EPA 6020	Barium	35.7	ug/L	1.0	12/04/23 07:08	
EPA 6020	Cobalt	1.4	ug/L	1.0	12/04/23 07:08	
EPA 6020	Manganese	744	ug/L	5.0	12/06/23 02:12	
EPA 6020	Manganese, Dissolved	783	ug/L	5.0	12/04/23 01:27	
EPA 903.1	Radium-226	0.477 ± 0.329 (0.351) C:NA T:96%	pCi/L		12/19/23 12:31	
EPA 904.0	Radium-228	1.15 ± 0.433 (0.622) C:86% T:82%	pCi/L		12/13/23 14:12	
Total Radium Calculation	Total Radium	1.63 ± 0.762 (0.973)	pCi/L		12/19/23 15:26	
SM 2320B	Alkalinity, Total as CaCO3	186	mg/L	10.0	11/28/23 19:57	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	186	mg/L	10.0	11/28/23 19:57	
SM 2540C	Total Dissolved Solids	1350	mg/L	20.0	11/27/23 10:32	
SM 4500-H+B	pH at 25 Degrees C	7.6	Std. Units	0.10	12/07/23 14:38	H3
SM 4500-S2-D	Sulfide	0.11	mg/L	0.10	11/23/23 17:29	
SM 5310C	Dissolved Organic Carbon	3.4	mg/L	1.0	12/04/23 22:21	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

Sample: MW-24 **Lab ID: 50360238001** Collected: 11/21/23 12:00 Received: 11/21/23 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.49**	mg/L	0.050	0.0090	1		12/08/23 16:07	24959-67-9	
Chloride	**48.3**	mg/L	2.5	0.67	10		12/08/23 16:27	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	0.017	1		12/08/23 16:07	16984-48-8	
Sulfate	**751**	mg/L	25.0	19.0	100		12/08/23 16:46	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**906**	ug/L	100	6.2	1	11/28/23 21:33	12/05/23 22:04	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/28/23 21:33	12/05/23 22:04	7440-43-9	
Calcium	**261000**	ug/L	2000	135	2	11/28/23 21:33	12/05/23 22:31	7440-70-2	
Iron	ND	ug/L	100	30.0	1	11/28/23 21:33	12/05/23 22:04	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/28/23 21:33	12/05/23 22:04	7439-92-1	
Lithium	**1060**	ug/L	20.0	6.8	1	11/28/23 21:33	12/05/23 22:04	7439-93-2	
Magnesium	**26600**	ug/L	1000	33.6	1	11/28/23 21:33	12/05/23 22:04	7439-95-4	
Molybdenum	**345**	ug/L	10.0	0.78	1	11/28/23 21:33	12/05/23 22:04	7439-98-7	
Potassium	**149000**	ug/L	2000	196	2	11/28/23 21:33	12/05/23 22:31	7440-09-7	
Silica	**17600**	ug/L	450		1	11/28/23 21:33	12/05/23 22:04	7631-86-9	N2
Sodium	**57000**	ug/L	1000	54.8	1	11/28/23 21:33	12/05/23 22:04	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**921**	ug/L	100	6.2	1	12/04/23 07:59	12/04/23 22:16	7440-42-8	
Iron, Dissolved	ND	ug/L	100	30.0	1	12/04/23 07:59	12/04/23 22:16	7439-89-6	
Lithium, Dissolved	**1080**	ug/L	20.0	6.8	1	12/04/23 07:59	12/04/23 22:16	7439-93-2	
Magnesium, Dissolved	**27000**	ug/L	1000	33.6	1	12/04/23 07:59	12/04/23 22:16	7439-95-4	
Molybdenum, Dissolved	**344**	ug/L	10.0	0.78	1	12/04/23 07:59	12/04/23 22:16	7439-98-7	
Potassium, Dissolved	**149000**	ug/L	2000	196	2	12/04/23 07:59	12/04/23 22:30	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**13.2**	ug/L	10.0	2.0	1	12/01/23 06:20	12/04/23 07:08	7429-90-5	
Arsenic	ND	ug/L	1.0	0.12	1	12/01/23 06:20	12/04/23 07:08	7440-38-2	
Barium	**35.7**	ug/L	1.0	0.065	1	12/01/23 06:20	12/04/23 07:08	7440-39-3	
Cobalt	**1.4**	ug/L	1.0	0.071	1	12/01/23 06:20	12/04/23 07:08	7440-48-4	
Manganese	**744**	ug/L	5.0	0.80	5	12/01/23 06:20	12/06/23 02:12	7439-96-5	
Selenium	ND	ug/L	1.0	0.19	1	12/01/23 06:20	12/04/23 07:08	7782-49-2	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.0	1	12/01/23 06:20	12/04/23 00:33	7429-90-5	
Manganese, Dissolved	**783**	ug/L	5.0	0.80	5	12/01/23 06:20	12/04/23 01:27	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

Sample: MW-24 **Lab ID: 50360238001** Collected: 11/21/23 12:00 Received: 11/21/23 16:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**186**	mg/L	10.0	10.0	1		11/28/23 19:57		
Alkalinity,Bicarbonate (CaCO3)	**186**	mg/L	10.0	10.0	1		11/28/23 19:57		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/28/23 19:57		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1350**	mg/L	20.0	20.0	1		11/27/23 10:32		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.6**	Std. Units	0.10	0.10	1		12/07/23 14:38		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	**0.11**	mg/L	0.10	0.025	1		11/23/23 17:29	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.035	1		11/28/23 14:57	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/21/23 23:36	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/21/23 23:36	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	12/05/23 11:30	12/06/23 07:11		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.24	1		12/04/23 21:22	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**3.4**	mg/L	1.0	0.24	1		12/04/23 22:21		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 766572
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3512196 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	12/08/23 02:19	
Chloride	mg/L	ND	0.25	0.067	12/08/23 02:19	
Fluoride	mg/L	ND	0.10	0.017	12/08/23 02:19	
Sulfate	mg/L	ND	0.25	0.19	12/08/23 02:19	

LABORATORY CONTROL SAMPLE: 3512197

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.94	94	80-120	
Chloride	mg/L	2.5	2.4	97	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3512198 3512199

Parameter	Units	50360237001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.17	1	1	1.1	1.1	97	93	80-120	4	15	
Chloride	mg/L	47.2	25	25	69.5	69.3	89	89	80-120	0	15	
Fluoride	mg/L	3.4	1	1	4.3	4.3	95	94	80-120	0	15	
Sulfate	mg/L	11.4	5	5	16.0	16.0	92	92	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3512200 3512201

Parameter	Units	50361001003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.074	1	1	1.0	1.0	93	92	80-120	1	15	
Chloride	mg/L	22.2	2.5	2.5	24.3	24.3	81	82	80-120	0	15	
Fluoride	mg/L	0.36	1	1	1.3	1.3	98	98	80-120	0	15	
Sulfate	mg/L	34.7	5	5	39.2	39.3	90	92	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 764641
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3504875 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	12/05/23 21:42	
Cadmium	ug/L	ND	2.0	0.60	12/05/23 21:42	
Calcium	ug/L	ND	1000	67.7	12/05/23 21:42	
Iron	ug/L	ND	100	30.0	12/05/23 21:42	
Lead	ug/L	ND	10.0	2.5	12/05/23 21:42	
Lithium	ug/L	ND	20.0	6.8	12/05/23 21:42	
Magnesium	ug/L	ND	1000	33.6	12/05/23 21:42	
Molybdenum	ug/L	ND	10.0	0.78	12/05/23 21:42	
Potassium	ug/L	ND	1000	97.8	12/05/23 21:42	
Silica	ug/L	ND	450		12/05/23 21:42	N2
Sodium	ug/L	ND	1000	54.8	12/05/23 21:42	

LABORATORY CONTROL SAMPLE: 3504876

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	978	98	80-120	
Cadmium	ug/L	1000	958	96	80-120	
Calcium	ug/L	10000	10300	103	80-120	
Iron	ug/L	10000	9980	100	80-120	
Lead	ug/L	1000	910	91	80-120	
Lithium	ug/L	1000	1020	102	80-120	
Magnesium	ug/L	10000	9810	98	80-120	
Molybdenum	ug/L	1000	1020	102	80-120	
Potassium	ug/L	10000	10100	101	80-120	
Silica	ug/L	10700	10800	101	80-120	N2
Sodium	ug/L	10000	9990	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3504877 3504878

Parameter	Units	50360217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	1710	1000	1000	2810	2700	110	100	75-125	4	20	
Cadmium	ug/L	ND	1000	1000	993	956	99	96	75-125	4	20	
Calcium	ug/L	226000	10000	10000	235000	229000	86	28	75-125	3	20	P6
Iron	ug/L	2340	10000	10000	12400	12000	100	96	75-125	3	20	
Lead	ug/L	ND	1000	1000	877	849	88	85	75-125	3	20	
Lithium	ug/L	55.6	1000	1000	1080	1040	103	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3504877 3504878

Parameter	Units	50360217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	70800	10000	10000	82400	79500	116	87	75-125	4	20	
Molybdenum	ug/L	103	1000	1000	1150	1100	104	100	75-125	4	20	
Potassium	ug/L	10600	10000	10000	21500	20700	108	101	75-125	3	20	
Silica	ug/L	15400	10700	10700	27100	26100	110	100	75-125	4	20	N2
Sodium	ug/L	219000	10000	10000	230000	223000	108	38	75-125	3	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 765722
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3509000 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	12/04/23 21:48	
Iron, Dissolved	ug/L	ND	100	30.0	12/04/23 21:48	
Lithium, Dissolved	ug/L	ND	20.0	6.8	12/04/23 21:48	
Magnesium, Dissolved	ug/L	ND	1000	33.6	12/04/23 21:48	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	12/04/23 21:48	
Potassium, Dissolved	ug/L	ND	1000	97.8	12/04/23 21:48	

LABORATORY CONTROL SAMPLE: 3509001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	923	92	80-120	
Iron, Dissolved	ug/L	10000	9520	95	80-120	
Lithium, Dissolved	ug/L	1000	969	97	80-120	
Magnesium, Dissolved	ug/L	10000	9190	92	80-120	
Molybdenum, Dissolved	ug/L	1000	979	98	80-120	
Potassium, Dissolved	ug/L	10000	9680	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3509004 3509005

Parameter	Units	50360237001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	1120	1000	1000	2100	2090	98	97	75-125	0	20	
Iron, Dissolved	ug/L	ND	10000	10000	9800	9930	98	99	75-125	1	20	
Lithium, Dissolved	ug/L	25.9	1000	1000	992	1010	97	98	75-125	1	20	
Magnesium, Dissolved	ug/L	ND	10000	10000	10300	10400	94	94	75-125	1	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1000	1010	100	101	75-125	1	20	
Potassium, Dissolved	ug/L	1470	10000	10000	11300	11400	98	99	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 765677
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3508713 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.0	12/04/23 06:47	
Arsenic	ug/L	ND	1.0	0.12	12/04/23 06:47	
Barium	ug/L	ND	1.0	0.065	12/04/23 06:47	
Cobalt	ug/L	ND	1.0	0.071	12/04/23 06:47	
Manganese	ug/L	ND	1.0	0.16	12/04/23 06:47	
Selenium	ug/L	ND	1.0	0.19	12/04/23 06:47	

LABORATORY CONTROL SAMPLE: 3508714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	388	97	80-120	
Arsenic	ug/L	40	37.9	95	80-120	
Barium	ug/L	40	39.0	98	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Manganese	ug/L	40	40.5	101	80-120	
Selenium	ug/L	40	38.9	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3508715 3508716

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	382	378	95	94	75-125	1	20	
Arsenic	ug/L	ND	40	40	39.5	38.8	96	95	75-125	2	20	
Barium	ug/L	89.7	40	40	129	129	99	98	75-125	0	20	
Cobalt	ug/L	2.0	40	40	39.8	40.2	95	95	75-125	1	20	
Manganese	ug/L	847	40	40	861	859	35	30	75-125	0	20	P6
Selenium	ug/L	ND	40	40	40.3	39.5	100	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 765680
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3508727 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.0	12/03/23 23:38	
Manganese, Dissolved	ug/L	ND	1.0	0.16	12/03/23 23:38	

LABORATORY CONTROL SAMPLE: 3508728

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	390	98	80-120	
Manganese, Dissolved	ug/L	40	43.0	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3508729 3508730

Parameter	Units	50360335003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	393	404	97	100	75-125	3	20	
Manganese, Dissolved	ug/L	1200	40	40	1240	1260	111	162	75-125	2	20	E,P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 765169
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3506773 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/28/23 19:57	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/28/23 19:57	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/28/23 19:57	

LABORATORY CONTROL SAMPLE: 3506774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	48.5	97	90-110	

SAMPLE DUPLICATE: 3506775

Parameter	Units	50360217001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	309	315	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	309	315	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 764797
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3505395 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/27/23 10:27	

LABORATORY CONTROL SAMPLE: 3505396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	285	95	80-120	

SAMPLE DUPLICATE: 3505397

Parameter	Units	50360317004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	601	604	0	10	

SAMPLE DUPLICATE: 3505398

Parameter	Units	50360282001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	PL

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 766729
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360238001

SAMPLE DUPLICATE: 3513036

Parameter	Units	50360667005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	1	2	H3

SAMPLE DUPLICATE: 3513037

Parameter	Units	50360283003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.3	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 764696
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3505134 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/23/23 17:29	

LABORATORY CONTROL SAMPLE: 3505135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.49	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3505136 3505137

Parameter	Units	50360217002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.46	0.46	86	86	90-110	0	20	M3

MATRIX SPIKE SAMPLE: 3505138

Parameter	Units	50360238001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.11	0.5	0.25	28	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 765059
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360238001

METHOD BLANK: 3506117 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/28/23 14:56	H3,N2

LABORATORY CONTROL SAMPLE: 3506118

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	101	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506119 3506120

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	1.2	5	5	6.2	6.1	100	98	90-110	2	20	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506121 3506122

Parameter	Units	50360416003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	1.7	5	5	6.6	6.7	97	99	90-110	1	20	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 764414
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3503859 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/21/23 23:10	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/21/23 23:10	

LABORATORY CONTROL SAMPLE: 3503860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	103	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3503861 3503862

Parameter	Units	50360157001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	2.0	1	1	3.0	3.0	96	97	90-110	0	20	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	104	104	90-110	0	20	

MATRIX SPIKE SAMPLE: 3503863

Parameter	Units	50360237001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.0	101	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.0	103	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 766235
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3510923 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	12/06/23 07:06	

LABORATORY CONTROL SAMPLE: 3510924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510925 3510926

Parameter	Units	50360301002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	0.27			1.8	1.7				5		

MATRIX SPIKE SAMPLE: 3510927

Parameter	Units	50360237001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	ND		1.7			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 765965
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3510124 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	12/04/23 15:20	

LABORATORY CONTROL SAMPLE: 3510125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.5	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510126 3510127

Parameter	Units	50360090001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	2.0	10	10	11.5	11.6	95	96	80-120	1	20	

MATRIX SPIKE SAMPLE: 3510128

Parameter	Units	50360219003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.1	10	10.7	96	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 765969
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360238001

METHOD BLANK: 3510144 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	12/04/23 20:13	

LABORATORY CONTROL SAMPLE: 3510145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510146 3510147

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.6	10	10	12.2	12.3	96	96	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510148 3510149

Parameter	Units	50360416003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.3	10	10	11.8	11.9	94	95	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

Sample: MW-24 **Lab ID: 50360238001** Collected: 11/21/23 12:00 Received: 11/21/23 16:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.477 ± 0.329 (0.351) C:NA T:96%**	pCi/L	12/19/23 12:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.15 ± 0.433 (0.622) C:86% T:82%**	pCi/L	12/13/23 14:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.63 ± 0.762 (0.973)**	pCi/L	12/19/23 15:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 633513
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50360238001

METHOD BLANK: 3088468 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.219 ± 0.229 (0.323) C:NA T:85%	pCi/L	12/19/23 12:31	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

QC Batch: 633515
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50360238001

METHOD BLANK: 3088473 Matrix: Water
Associated Lab Samples: 50360238001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.517 ± 0.300 (0.541) C:94% T:87%	pCi/L	12/13/23 14:12	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P4R2 Nov 2023
Pace Project No.: 50360238

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50360238001	**MW-24**	EPA 9056	766572		
50360238001	**MW-24**	EPA 3010	764641	EPA 6010	766423
50360238001	**MW-24**	EPA 3010	765722	EPA 6010	766200
50360238001	**MW-24**	EPA 200.2	765677	EPA 6020	765904
50360238001	**MW-24**	EPA 200.2	765680	EPA 6020	765903
50360238001	**MW-24**	EPA 903.1	633513		
50360238001	**MW-24**	EPA 904.0	633515		
50360238001	**MW-24**	Total Radium Calculation	637206		
50360238001	**MW-24**	SM 2320B	765169		
50360238001	**MW-24**	SM 2540C	764797		
50360238001	**MW-24**	SM 4500-H+B	766729		
50360238001	**MW-24**	SM 4500-S2-D	764696		
50360238001	**MW-24**	HACH 8146	765059		
50360238001	**MW-24**	EPA 353.2	764414		
50360238001	**MW-24**	EPA 365.1	766235	EPA 365.1	766445
50360238001	**MW-24**	SM 5310C	765965		
50360238001	**MW-24**	SM 5310C	765969		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request D

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields mu

WO# : 50360238

50360238

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4R2 Nov 2023	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/53

Regulatory Agency
State / Location
IN

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Y/N	Analyses Test: TDS/ NO2, NO3 Wet	(Br, Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum			Residual Chlorine (Y/N)	
																			Requested Analysis Filtered (Y/N)				Y			Y								
1	MW-24	WT	G			11-21	1200		11	✓	✓	✓		✓					✓									✓				
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 (B, Cd, Fe, Pb, Mo, Ca, Mg, Na, K, Li, sila) (11)	Hayley Tolles/ATLAS	11-21	1635	/PACE	11/21/23	1635	1.1	Y	N	Y
6020 (Al, Mn, Co, As, Se, Ba) (6)										
** Dissolved FF 6010 (B, Fe, Mo, Mg, K, Li) (6) FF 6020 (Al, Mn) (2)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Hayley Tolles					
SIGNATURE of SAMPLER:		DATE Signed: 11-21-2023				

F-IN-Q-290-rev.23, 26Jun2023

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 11/21/23 1730

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G (H)

4. **Cooler Temperature(s):** 1.1/1.1 | | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? **Analysis:** NO3/NO2	✓	
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 18:05	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
Headspace in VOA Vials (>6mm): See Containter Count form for details			No VOA Vials Sent ✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE 1 **of** 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1												1	1			2	1	2	1	1	1		1					WT	✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 07, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on November 22, 2023. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50360386001	**MW-35D1**	Water	11/22/23 13:15	11/22/23 15:20
50360386002	**MW-35D1 MS**	Water	11/22/23 13:15	11/22/23 15:20
50360386003	**MW-35D1 MSD**	Water	11/22/23 13:15	11/22/23 15:20

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50360386001	**MW-35D1**	EPA 9056	ADM	4	PASI-I
		EPA 6010	MTM	11	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	DMT	7	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	BEP	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	ATS	1	PASI-I
		SM 5310C	ATS	1	PASI-I
50360386002	**MW-35D1 MS**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
50360386003	**MW-35D1 MSD**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50360386001	**MW-35D1**					
EPA 9056	Bromide	0.22	mg/L	0.050	12/07/23 18:10	
EPA 9056	Chloride	35.6	mg/L	2.5	12/07/23 18:28	
EPA 9056	Fluoride	0.32	mg/L	0.10	12/07/23 18:10	
EPA 9056	Sulfate	720	mg/L	25.0	12/07/23 18:46	
EPA 6010	Calcium	241000	ug/L	2000	12/07/23 15:57	
EPA 6010	Iron	8140	ug/L	100	12/07/23 14:22	
EPA 6010	Lithium	382	ug/L	20.0	12/07/23 14:22	
EPA 6010	Magnesium	61300	ug/L	1000	12/07/23 14:22	
EPA 6010	Molybdenum	36.4	ug/L	10.0	12/07/23 14:22	
EPA 6010	Potassium	8890	ug/L	1000	12/07/23 14:22	
EPA 6010	Silica	19900	ug/L	450	12/07/23 14:22	N2
EPA 6010	Sodium	58800	ug/L	1000	12/07/23 14:22	
EPA 6010	Iron, Dissolved	9010	ug/L	100	12/06/23 23:02	
EPA 6010	Lithium, Dissolved	421	ug/L	20.0	12/06/23 23:02	
EPA 6010	Magnesium, Dissolved	70200	ug/L	1000	12/06/23 23:02	
EPA 6010	Molybdenum, Dissolved	37.8	ug/L	10.0	12/06/23 23:02	
EPA 6010	Potassium, Dissolved	9670	ug/L	1000	12/06/23 23:02	
EPA 6020	Barium	89.7	ug/L	1.0	12/04/23 07:39	
EPA 6020	Cobalt	2.0	ug/L	1.0	12/04/23 07:39	
EPA 6020	Manganese	847	ug/L	10.0	12/06/23 02:15	
EPA 6020	Manganese, Dissolved	846	ug/L	10.0	12/03/23 17:44	
EPA 903.1	Radium-226	0.978 ± 0.432 (0.405) C:NA T:94%	pCi/L		12/19/23 12:31	
EPA 904.0	Radium-228	0.107 ± 0.292 (0.655) C:90% T:84%	pCi/L		12/13/23 14:13	
Total Radium Calculation	Total Radium	1.09 ± 0.724 (1.06)	pCi/L		12/19/23 15:26	
SM 2320B	Alkalinity, Total as CaCO3	289	mg/L	10.0	11/28/23 21:22	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	289	mg/L	10.0	11/28/23 21:22	
SM 2540C	Total Dissolved Solids	1350	mg/L	20.0	11/28/23 13:26	
SM 4500-H+B	pH at 25 Degrees C	7.8	Std. Units	0.10	12/08/23 13:13	H3
SM 4500-S2-D	Sulfide	0.26	mg/L	0.10	11/23/23 17:31	
HACH 8146	Iron, Ferrous	1.2	mg/L	0.20	11/28/23 15:00	H3,N2
EPA 365.1	Phosphate as P04	1.6	mg/L	0.15	12/07/23 15:35	
SM 5310C	Total Organic Carbon	2.6	mg/L	1.0	12/05/23 15:43	
SM 5310C	Dissolved Organic Carbon	2.6	mg/L	1.0	12/05/23 00:00	
50360386002	**MW-35D1 MS**					
EPA 903.1	Radium-226	101.91 %REC ± NA (NA) C:NA T:NA	pCi/L		12/19/23 12:43	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50360386002	**MW-35D1 MS**					
EPA 904.0	Radium-228	108.80 %REC ± NA (NA) C:NA T:NA	pCi/L		12/13/23 14:14	
50360386003	**MW-35D1 MSD**					
EPA 903.1	Radium-226	105.32 %REC 3.30RPD ± NA (NA) C:NA T:NA	pCi/L		12/19/23 12:43	
EPA 904.0	Radium-228	103.91 %REC 4.60RPD ± NA (NA) C:NA T:NA	pCi/L		12/13/23 14:14	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Sample: MW-35D1 **Lab ID: 50360386001** Collected: 11/22/23 13:15 Received: 11/22/23 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.22**	mg/L	0.050	0.0090	1		12/07/23 18:10	24959-67-9	
Chloride	**35.6**	mg/L	2.5	0.67	10		12/07/23 18:28	16887-00-6	
Fluoride	**0.32**	mg/L	0.10	0.017	1		12/07/23 18:10	16984-48-8	
Sulfate	**720**	mg/L	25.0	19.0	100		12/07/23 18:46	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	6.2	1	11/30/23 21:05	12/07/23 14:22	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	11/30/23 21:05	12/07/23 14:22	7440-43-9	
Calcium	**241000**	ug/L	2000	135	2	11/30/23 21:05	12/07/23 15:57	7440-70-2	
Iron	**8140**	ug/L	100	30.0	1	11/30/23 21:05	12/07/23 14:22	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	11/30/23 21:05	12/07/23 14:22	7439-92-1	
Lithium	**382**	ug/L	20.0	6.8	1	11/30/23 21:05	12/07/23 14:22	7439-93-2	
Magnesium	**61300**	ug/L	1000	33.6	1	11/30/23 21:05	12/07/23 14:22	7439-95-4	
Molybdenum	**36.4**	ug/L	10.0	0.78	1	11/30/23 21:05	12/07/23 14:22	7439-98-7	
Potassium	**8890**	ug/L	1000	97.8	1	11/30/23 21:05	12/07/23 14:22	7440-09-7	
Silica	**19900**	ug/L	450		1	11/30/23 21:05	12/07/23 14:22	7631-86-9	N2
Sodium	**58800**	ug/L	1000	54.8	1	11/30/23 21:05	12/07/23 14:22	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	ND	ug/L	100	6.2	1	12/04/23 16:22	12/06/23 23:02	7440-42-8	
Iron, Dissolved	**9010**	ug/L	100	30.0	1	12/04/23 16:22	12/06/23 23:02	7439-89-6	
Lithium, Dissolved	**421**	ug/L	20.0	6.8	1	12/04/23 16:22	12/06/23 23:02	7439-93-2	
Magnesium, Dissolved	**70200**	ug/L	1000	33.6	1	12/04/23 16:22	12/06/23 23:02	7439-95-4	
Molybdenum, Dissolved	**37.8**	ug/L	10.0	0.78	1	12/04/23 16:22	12/06/23 23:02	7439-98-7	
Potassium, Dissolved	**9670**	ug/L	1000	97.8	1	12/04/23 16:22	12/06/23 23:02	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	2.0	1	12/01/23 06:20	12/04/23 07:39	7429-90-5	
Arsenic	ND	ug/L	1.0	0.12	1	12/01/23 06:20	12/04/23 07:39	7440-38-2	
Barium	**89.7**	ug/L	1.0	0.065	1	12/01/23 06:20	12/04/23 07:39	7440-39-3	
Cobalt	**2.0**	ug/L	1.0	0.071	1	12/01/23 06:20	12/04/23 07:39	7440-48-4	
Manganese	**847**	ug/L	10.0	1.6	10	12/01/23 06:20	12/06/23 02:15	7439-96-5	
Selenium	ND	ug/L	1.0	0.19	1	12/01/23 06:20	12/04/23 07:39	7782-49-2	
Thallium	ND	ug/L	1.0	0.060	1	12/01/23 06:20	12/04/23 07:39	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	11/29/23 15:15	12/03/23 19:02	7429-90-5	
Manganese, Dissolved	**846**	ug/L	10.0	1.7	10	11/29/23 15:15	12/03/23 17:44	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Sample: MW-35D1 **Lab ID: 50360386001** Collected: 11/22/23 13:15 Received: 11/22/23 15:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**289**	mg/L	10.0	10.0	1		11/28/23 21:22		
Alkalinity,Bicarbonate (CaCO3)	**289**	mg/L	10.0	10.0	1		11/28/23 21:22		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		11/28/23 21:22		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1350**	mg/L	20.0	20.0	1		11/28/23 13:26		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.8**	Std. Units	0.10	0.10	1		12/08/23 13:13		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	**0.26**	mg/L	0.10	0.025	1		11/23/23 17:31	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**1.2**	mg/L	0.20	0.035	1		11/28/23 15:00	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.011	1		11/23/23 01:38	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		11/23/23 01:38	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**1.6**	mg/L	0.15	0.15	1	12/06/23 09:30	12/07/23 15:35		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**2.6**	mg/L	1.0	0.24	1		12/05/23 15:43	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.6**	mg/L	1.0	0.24	1		12/05/23 00:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 766740
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3513114 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	12/07/23 17:33	
Chloride	mg/L	ND	0.25	0.067	12/07/23 17:33	
Fluoride	mg/L	ND	0.10	0.017	12/07/23 17:33	
Sulfate	mg/L	ND	0.25	0.19	12/07/23 17:33	

LABORATORY CONTROL SAMPLE: 3513115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.95	95	80-120	
Chloride	mg/L	2.5	2.3	92	80-120	
Fluoride	mg/L	1	0.98	98	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3513116 3513117

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.22	1	1	1.2	1.2	93	94	80-120	1	15	
Chloride	mg/L	35.6	25	25	58.5	58.5	92	92	80-120	0	15	
Fluoride	mg/L	0.32	1	1	1.3	1.3	100	102	80-120	1	15	
Sulfate	mg/L	720	500	500	1120	1120	80	80	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3513118 3513119

Parameter	Units	50360416003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.080	1	1	1.0	1.0	95	94	80-120	0	15	
Chloride	mg/L	122	25	25	147	147	103	100	80-120	1	15	
Fluoride	mg/L	0.16	1	1	1.2	1.2	102	101	80-120	1	15	
Sulfate	mg/L	185	50	50	236	236	102	102	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3513120 3513121

Parameter	Units	50360446003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	ND	1	1	0.95	0.95	95	95	80-120	0	15	
Chloride	mg/L	7.7	2.5	2.5	10.1	10.1	96	96	80-120	0	15	
Fluoride	mg/L	0.65	1	1	1.7	1.7	102	102	80-120	0	15	
Sulfate	mg/L	61.6	50	50	108	108	93	93	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 765476
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3507938 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	12/07/23 14:21	
Cadmium	ug/L	ND	2.0	0.60	12/07/23 14:21	
Calcium	ug/L	ND	1000	67.7	12/07/23 14:21	
Iron	ug/L	ND	100	30.0	12/07/23 14:21	
Lead	ug/L	ND	10.0	2.5	12/07/23 14:21	
Lithium	ug/L	ND	20.0	6.8	12/07/23 14:21	
Magnesium	ug/L	ND	1000	33.6	12/07/23 14:21	
Molybdenum	ug/L	ND	10.0	0.78	12/07/23 14:21	
Potassium	ug/L	ND	1000	97.8	12/07/23 14:21	
Silica	ug/L	ND	450		12/07/23 14:21	N2
Sodium	ug/L	ND	1000	54.8	12/07/23 14:21	

LABORATORY CONTROL SAMPLE: 3507939

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	892	89	80-120	
Cadmium	ug/L	1000	921	92	80-120	
Calcium	ug/L	10000	9940	99	80-120	
Iron	ug/L	10000	9250	92	80-120	
Lead	ug/L	1000	884	88	80-120	
Lithium	ug/L	1000	959	96	80-120	
Magnesium	ug/L	10000	8930	89	80-120	
Molybdenum	ug/L	1000	965	96	80-120	
Potassium	ug/L	10000	9330	93	80-120	
Silica	ug/L	10700	10300	96	80-120	N2
Sodium	ug/L	10000	8990	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3507940 3507941

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	1000	1000	914	976	90	96	75-125	7	20	
Cadmium	ug/L	ND	1000	1000	922	988	92	99	75-125	7	20	
Calcium	ug/L	241000	10000	10000	262000	260000	215	190	75-125	1	20	P6
Iron	ug/L	8140	10000	10000	16900	18000	87	99	75-125	7	20	
Lead	ug/L	ND	1000	1000	823	885	82	88	75-125	7	20	
Lithium	ug/L	382	1000	1000	1320	1400	94	102	75-125	6	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3507940 3507941

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	61300	10000	10000	69500	74300	82	130	75-125	7	20	P6
Molybdenum	ug/L	36.4	1000	1000	987	1050	95	102	75-125	6	20	
Potassium	ug/L	8890	10000	10000	18300	19200	94	103	75-125	5	20	
Silica	ug/L	19900	10700	10700	30000	31700	94	111	75-125	6	20	N2
Sodium	ug/L	58800	10000	10000	67800	72000	90	132	75-125	6	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 765839
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3509363 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	12/06/23 23:01	
Iron, Dissolved	ug/L	ND	100	30.0	12/06/23 23:01	
Lithium, Dissolved	ug/L	ND	20.0	6.8	12/06/23 23:01	
Magnesium, Dissolved	ug/L	ND	1000	33.6	12/06/23 23:01	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	12/06/23 23:01	
Potassium, Dissolved	ug/L	ND	1000	97.8	12/06/23 23:01	

LABORATORY CONTROL SAMPLE: 3509364

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	900	90	80-120	
Iron, Dissolved	ug/L	10000	9410	94	80-120	
Lithium, Dissolved	ug/L	1000	978	98	80-120	
Magnesium, Dissolved	ug/L	10000	9220	92	80-120	
Molybdenum, Dissolved	ug/L	1000	959	96	80-120	
Potassium, Dissolved	ug/L	10000	9470	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3509365 3509366

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	ND	1000	1000	1030	1040	101	102	75-125	0	20	
Iron, Dissolved	ug/L	9010	10000	10000	18800	19000	98	100	75-125	1	20	
Lithium, Dissolved	ug/L	421	1000	1000	1490	1480	107	106	75-125	0	20	
Magnesium, Dissolved	ug/L	70200	10000	10000	79200	80000	90	99	75-125	1	20	
Molybdenum, Dissolved	ug/L	37.8	1000	1000	1090	1080	105	104	75-125	1	20	
Potassium, Dissolved	ug/L	9670	10000	10000	19900	20100	103	104	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3509367 3509368

Parameter	Units	50360416003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	801	1000	1000	1790	1800	99	100	75-125	0	20	
Iron, Dissolved	ug/L	1950	10000	10000	11800	11700	99	98	75-125	1	20	
Lithium, Dissolved	ug/L	ND	1000	1000	1050	1040	104	103	75-125	1	20	
Magnesium, Dissolved	ug/L	30800	10000	10000	39800	40000	89	92	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3509367 3509368

Parameter	Units	50360416003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Molybdenum, Dissolved	ug/L	ND	1000	1000	1020	1010	101	100	75-125	1	20	
Potassium, Dissolved	ug/L	3660	10000	10000	13600	13600	100	99	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3509369 3509370

Parameter	Units	50360527003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	139	1000	1000	1200	1180	106	104	75-125	1	20	
Iron, Dissolved	ug/L	32400	10000	10000	42800	42400	104	100	75-125	1	20	
Lithium, Dissolved	ug/L	72.5	1000	1000	1160	1150	109	108	75-125	0	20	
Magnesium, Dissolved	ug/L	177000	10000	10000	188000	186000	110	98	75-125	1	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1090	1080	108	107	75-125	1	20	
Potassium, Dissolved	ug/L	6910	10000	10000	17800	17700	109	108	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 765677
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360386001

METHOD BLANK: 3508713 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.0	12/04/23 06:47	
Arsenic	ug/L	ND	1.0	0.12	12/04/23 06:47	
Barium	ug/L	ND	1.0	0.065	12/04/23 06:47	
Cobalt	ug/L	ND	1.0	0.071	12/04/23 06:47	
Manganese	ug/L	ND	1.0	0.16	12/04/23 06:47	
Selenium	ug/L	ND	1.0	0.19	12/04/23 06:47	
Thallium	ug/L	ND	1.0	0.060	12/04/23 06:47	

LABORATORY CONTROL SAMPLE: 3508714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	388	97	80-120	
Arsenic	ug/L	40	37.9	95	80-120	
Barium	ug/L	40	39.0	98	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Manganese	ug/L	40	40.5	101	80-120	
Selenium	ug/L	40	38.9	97	80-120	
Thallium	ug/L	40	40.6	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3508715 3508716

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	382	378	95	94	75-125	1	20	
Arsenic	ug/L	ND	40	40	39.5	38.8	96	95	75-125	2	20	
Barium	ug/L	89.7	40	40	129	129	99	98	75-125	0	20	
Cobalt	ug/L	2.0	40	40	39.8	40.2	95	95	75-125	1	20	
Manganese	ug/L	847	40	40	861	859	35	30	75-125	0	20	P6
Selenium	ug/L	ND	40	40	40.3	39.5	100	98	75-125	2	20	
Thallium	ug/L	ND	40	40	41.8	41.5	104	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 765225
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3506969 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	12/01/23 17:42	
Manganese, Dissolved	ug/L	ND	1.0	0.17	12/01/23 17:42	

LABORATORY CONTROL SAMPLE: 3506970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	396	99	80-120	
Manganese, Dissolved	ug/L	40	41.2	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506971 3506972

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	380	384	94	96	75-125	1	20	
Manganese, Dissolved	ug/L	846	40	40	879	897	84	130	75-125	2	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 765170
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3506781 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	11/28/23 21:22	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	11/28/23 21:22	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	11/28/23 21:22	

LABORATORY CONTROL SAMPLE: 3506782

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.6	99	90-110	

SAMPLE DUPLICATE: 3506783

Parameter	Units	50360301002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	241	245	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	219	222	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	22.0	22.8	4	20	

SAMPLE DUPLICATE: 3506784

Parameter	Units	50360386001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	289	298	3	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	289	298	3	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 764991
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3505919 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/28/23 13:17	

LABORATORY CONTROL SAMPLE: 3505918

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	274	91	80-120	

SAMPLE DUPLICATE: 3505920

Parameter	Units	50360341007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3690	3610	2	10	

SAMPLE DUPLICATE: 3505921

Parameter	Units	50360386001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1350	1320	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 766938
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360386001

SAMPLE DUPLICATE: 3514249

Parameter	Units	50360305001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.5	7.5	0	2	H3

SAMPLE DUPLICATE: 3514250

Parameter	Units	50360386001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.8	7.7	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 764697
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3505139 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	11/23/23 17:31	

LABORATORY CONTROL SAMPLE: 3505140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.49	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3505141 3505142

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	0.26	0.5	0.5	0.47	0.47	40	41	90-110	0	20	M3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 765059
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3506117 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.035	11/28/23 14:56	H3,N2

LABORATORY CONTROL SAMPLE: 3506118

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	101	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506119 3506120

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	1.2	5	5	6.2	6.1	100	98	90-110	2	20	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506121 3506122

Parameter	Units	50360416003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	1.7	5	5	6.6	6.7	97	99	90-110	1	20	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 764684
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3505105 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.011	11/23/23 01:13	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	11/23/23 01:13	

LABORATORY CONTROL SAMPLE: 3505106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	102	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3505107 3505108

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	0.74	0.74	74	74	90-110	0	20	
Nitrogen, Nitrite	mg/L	ND	1	1	0.99	1.0	97	98	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 766451
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3511720 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	12/07/23 15:32	

LABORATORY CONTROL SAMPLE: 3511721

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3511722 3511723

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	1.6			3.3	3.2				1		

MATRIX SPIKE SAMPLE: 3511724

Parameter	Units	50360416001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	0.97		2.4			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 766137
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3510585 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.24	12/05/23 14:42	

LABORATORY CONTROL SAMPLE: 3510586

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510587 3510588

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	2.6	10	10	12.3	12.4	97	98	80-120	1	20	

MATRIX SPIKE SAMPLE: 3510589

Parameter	Units	50360416001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	6.2	10	14.8	86	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 765969
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50360386001

METHOD BLANK: 3510144 Matrix: Water
Associated Lab Samples: 50360386001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.24	12/04/23 20:13	

LABORATORY CONTROL SAMPLE: 3510145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510146 3510147

Parameter	Units	50360386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.6	10	10	12.2	12.3	96	96	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510148 3510149

Parameter	Units	50360416003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.3	10	10	11.8	11.9	94	95	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Sample: MW-35D1 **Lab ID: 50360386001** Collected: 11/22/23 13:15 Received: 11/22/23 15:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.978 ± 0.432 (0.405) C:NA T:94%**	pCi/L	12/19/23 12:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.107 ± 0.292 (0.655) C:90% T:84%**	pCi/L	12/13/23 14:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.09 ± 0.724 (1.06)**	pCi/L	12/19/23 15:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Sample: MW-35D1 MS **Lab ID: 50360386002** Collected: 11/22/23 13:15 Received: 11/22/23 15:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**101.91 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/19/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**108.80 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/13/23 14:14	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Sample: MW-35D1 MSD **Lab ID: 50360386003** Collected: 11/22/23 13:15 Received: 11/22/23 15:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**105.32 %REC 3.30RPD ± NA (NA) C:NA T:NA**	pCi/L	12/19/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**103.91 %REC 4.60RPD ± NA (NA) C:NA T:NA**	pCi/L	12/13/23 14:14	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 633513
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50360386001, 50360386002, 50360386003

METHOD BLANK: 3088468
Matrix: Water
Associated Lab Samples: 50360386001, 50360386002, 50360386003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.219 ± 0.229 (0.323) C:NA T:85%	pCi/L	12/19/23 12:31	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

QC Batch: 633515
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50360386001, 50360386002, 50360386003

METHOD BLANK: 3088473 Matrix: Water
Associated Lab Samples: 50360386001, 50360386002, 50360386003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.517 ± 0.300 (0.541) C:94% T:87%	pCi/L	12/13/23 14:12	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H3	Sample was received or analysis requested beyond the recognized method holding time.
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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P5R1 2023
Pace Project No.: 50360386

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50360386001	**MW-35D1**	EPA 9056	766740		
50360386001	**MW-35D1**	EPA 3010	765476	EPA 6010	766745
50360386001	**MW-35D1**	EPA 3010	765839	EPA 6010	766618
50360386001	**MW-35D1**	EPA 200.2	765677	EPA 6020	765904
50360386001	**MW-35D1**	EPA 200.2	765225	EPA 6020	765683
50360386001	**MW-35D1**	EPA 903.1	633513		
50360386002	**MW-35D1 MS**	EPA 903.1	633513		
50360386003	**MW-35D1 MSD**	EPA 903.1	633513		
50360386001	**MW-35D1**	EPA 904.0	633515		
50360386002	**MW-35D1 MS**	EPA 904.0	633515		
50360386003	**MW-35D1 MSD**	EPA 904.0	633515		
50360386001	**MW-35D1**	Total Radium Calculation	637206		
50360386001	**MW-35D1**	SM 2320B	765170		
50360386001	**MW-35D1**	SM 2540C	764991		
50360386001	**MW-35D1**	SM 4500-H+B	766938		
50360386001	**MW-35D1**	SM 4500-S2-D	764697		
50360386001	**MW-35D1**	HACH 8146	765059		
50360386001	**MW-35D1**	EPA 353.2	764684		
50360386001	**MW-35D1**	EPA 365.1	766451	EPA 365.1	766899
50360386001	**MW-35D1**	SM 5310C	766137		
50360386001	**MW-35D1**	SM 5310C	765969		

Pace Analytical
WWW.PACELABS.COM

WO# : 50360386

50360386

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : Of

Section A — Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100
	Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone:	(317)579-4082 Fax:
Requested Due Date:	

Section B

Report To:	Mark Breting
Copy To:	
Purchase Order #:	
Project Name:	Petersburg P5R1 Nov 2023
Project #:	

Section C — Invoice Information:

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/55

Regulatory Agency
State / Location
IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Br, Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum			Residual Chlorine (Y/N)	
	Requested Analysis Filtered (Y/N)																					Y			Y						
1	MW-3501	WT	G	11/22	1315				11	3	3	4		1					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				[illegible]
2	MS 8	WT	G	11/22	1315				11	3	3	4		1					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
3	MSD 8	WT	G	11/22	1315				11	3	3	4		1					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 (B, Cd, Fe, Pb, Mo, Ca, Mg, Na, K, Li, sila) (11)	Mohammed Bazlamit	11/22/23	1520	[signature]	11/22/23	15:20	1.7	Y	Y	Y
6020 (Al, Mn, Co, As, Se, Ba, Tl) (7) + 7470 (Hg)							1.5			
** Dissolved FF 6010 (B, Fe, Mo, Mg, K, Li) (6) FF 6020 (Al, Mn) (2)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Mohammed Bazlamit				
SIGNATURE of SAMPLER:	[signature]	DATE Signed:	11/22/23		

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/22/23 17:53 JG

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 1.7/1.7 | 1.5/1.5 | | |

(Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**

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

Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** ~~HNO3 (<2)~~ ~~H2SO4 (<2)~~ **NaOH (>10)** **NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		✓ JG 11/22/23
Short Hold Time Analysis (48 hours or less)? **Analysis:** NO2, NO3	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1859		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:

COC PAGE ____ of ____

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1												3	3			6	3	6	3	3	3		3					WT	✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL	Oil
NAL	Non-aqueous liquid
WP	Wipe

January 2024

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 06, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on January 26, 2024. 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,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50364396001	**MW-10**	Water	01/24/24 09:16	01/26/24 15:15
50364396002	**MW-13**	Water	01/24/24 10:40	01/26/24 15:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50364396001	**MW-10**	EPA 6010	JPK	2	PASI-I
50364396002	**MW-13**	EPA 6020	MGM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50364396002	**MW-13**					
EPA 6020	Selenium	1.7	ug/L	1.0	02/01/24 19:42	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

Sample: MW-10 **Lab ID: 50364396001** Collected: 01/24/24 09:16 Received: 01/26/24 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Chromium	ND	ug/L	10.0	0.42	1	01/30/24 08:06	02/01/24 23:05	7440-47-3	
Lead	ND	ug/L	10.0	2.5	1	01/30/24 08:06	02/01/24 23:05	7439-92-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

Sample: MW-13 **Lab ID: 50364396002** Collected: 01/24/24 10:40 Received: 01/26/24 15:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Selenium	**1.7**	ug/L	1.0	0.22	1	01/31/24 15:22	02/01/24 19:42	7782-49-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

QC Batch: 773261
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50364396001

METHOD BLANK: 3540201 Matrix: Water
Associated Lab Samples: 50364396001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium	ug/L	ND	10.0	0.42	02/01/24 22:36	
Lead	ug/L	ND	10.0	2.5	02/01/24 22:36	

LABORATORY CONTROL SAMPLE: 3540202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	1000	983	98	80-120	
Lead	ug/L	1000	943	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540203 3540204

Parameter	Units	50364472003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	7.2J	1000	1000	972	975	97	97	75-125	0	20	
Lead	ug/L	26.4	1000	1000	936	938	91	91	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

QC Batch: 773432
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50364396002

METHOD BLANK: 3540876 Matrix: Water
Associated Lab Samples: 50364396002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Selenium	ug/L	ND	1.0	0.22	02/01/24 19:05	

LABORATORY CONTROL SAMPLE: 3540877

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Selenium	ug/L	40	40.1	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540878 3540879

Parameter	Units	50364396002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Selenium	ug/L	1.7	40	40	42.7	43.2	102	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

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.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg Jan 2024 P1R2
Pace Project No.: 50364396

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50364396001	**MW-10**	EPA 3010	773261	EPA 6010	773818
50364396002	**MW-13**	EPA 200.2	773432	EPA 6020	773668

WO# : 50364396

50364396

Pace Analytical
WWW.PACELABS.COM

OF-CUSTODY / Analytical Request Document

f-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100
	Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone: (317)579-4082	Fax:
Requested Due Date:	

Section B

Report To:	Mark Breting
Copy To:	
Purchase Order #:	
Project Name:	Petersburg Jan 2024 P1R2
Project #:	

Section C
Invoice Information:

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/49

Regulatory Agency
State / Location
IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Chromium, Total*	Lead, Total*	Selenium, Total**	Residual Chlorine (Y/N)	
1	MW-10					1.24.24	0916		1			1							X	X			001
2	MW-13					↓	1040		1			1									X		002
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: Cr, Pb	[signature] / Atlas	1.26.24	0800	[signature] Pace	1/26/24	1450				
Metals**6020: Se	[signature] Pace	1/26/24	1515	[signature]	1/26/24	1515	2.0	Y	N	Y

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Jon Hill	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
SIGNATURE of SAMPLER: [signature]	DATE Signed: 1.24.24				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 11/26/24 1540 mw

1. **Courier:** ☐ FED EX ☐ UPS ☐ CLIENT ☑ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F (G) H

4. **Cooler Temperature(s):** 2.0/2.0 | | | |

(Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**

5. **Packing Material:** ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other Ziploc

6. **Ice Type:** ☑ Wet ☐ Blue ☐ None

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

Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: **HNO3 (<2)** **H2SO4 (<2)** **NaOH (>10)** **NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
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:

COC PAGE ____ of ____

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER					Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit							
1																			I									W	✓			
2																			I									W	I			
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

February 2024

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

May 22, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on February 15, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50365894001	**AP-11B**	Water	02/14/24 12:15	02/15/24 09:25
50365894002	**AP-11I**	Water	02/14/24 14:20	02/15/24 09:25

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50365894001	**AP-11B**	EPA 9056	KBB	4	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	CAW	6	PASI-I
		EPA 6020	CAW	2	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	ZM	1	PASI-I
		SM 5310C	YAM	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50365894002	**AP-11I**	EPA 9056	KBB	4	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	CAW	6	PASI-I
		EPA 6020	CAW, MTM	2	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	DAW	2	PASI-I
		EPA 365.1	ZM	1	PASI-I
		SM 5310C	YAM	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50365894001	**AP-11B**					
EPA 9056	Chloride	4.8	mg/L	0.25	02/23/24 14:40	
EPA 9056	Fluoride	0.15	mg/L	0.10	02/23/24 14:40	
EPA 9056	Sulfate	344	mg/L	2.5	02/23/24 14:59	
EPA 6010	Boron	863	ug/L	100	02/20/24 23:09	
EPA 6010	Calcium	139000	ug/L	1000	02/20/24 23:09	
EPA 6010	Iron	899	ug/L	100	02/20/24 23:09	
EPA 6010	Magnesium	49700	ug/L	1000	02/20/24 23:09	
EPA 6010	Silica	20300	ug/L	450	02/20/24 23:09	N2
EPA 6010	Sodium	9220	ug/L	1000	02/20/24 23:09	
EPA 6010	Boron, Dissolved	862	ug/L	100	02/22/24 23:30	
EPA 6010	Iron, Dissolved	266	ug/L	100	02/22/24 23:30	
EPA 6010	Magnesium, Dissolved	49800	ug/L	1000	02/22/24 23:30	
EPA 6020	Aluminum	221	ug/L	10.0	02/20/24 01:35	
EPA 6020	Barium	16.1	ug/L	1.0	02/20/24 01:35	
EPA 6020	Manganese	264	ug/L	2.0	02/20/24 11:27	
EPA 6020	Manganese, Dissolved	264	ug/L	2.0	02/21/24 15:33	
EPA 903.1	Radium-226	0.0554 ± 0.360 (0.726) C:NA T:90%	pCi/L		03/04/24 14:40	
EPA 904.0	Radium-228	0.434 ± 0.450 (0.933) C:65% T:81%	pCi/L		03/01/24 14:17	
Total Radium Calculation	Total Radium	0.489 ± 0.810 (1.66)	pCi/L		03/06/24 10:30	
SM 2320B	Alkalinity, Total as CaCO3	221	mg/L	10.0	02/19/24 21:30	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	221	mg/L	10.0	02/19/24 21:30	
SM 2540C	Total Dissolved Solids	657	mg/L	10.0	02/20/24 07:25	
SM 4500-H+B	pH at 25 Degrees C	6.8	Std. Units	0.10	02/29/24 13:15	H3
HACH 8146	Iron, Ferrous	0.32	mg/L	0.20	02/16/24 15:01	H3,N2
EPA 365.1	Phosphate as P04	0.26	mg/L	0.15	02/28/24 19:13	
SM 5310C	Total Organic Carbon	1.3	mg/L	1.0	02/27/24 20:31	
SM 5310C	Dissolved Organic Carbon	1.4	mg/L	1.0	02/26/24 20:52	
50365894002	**AP-11I**					
EPA 9056	Bromide	0.089	mg/L	0.050	02/23/24 15:57	
EPA 9056	Chloride	8.1	mg/L	0.25	02/23/24 15:57	
EPA 9056	Fluoride	0.12	mg/L	0.10	02/23/24 15:57	
EPA 9056	Sulfate	391	mg/L	2.5	02/23/24 16:17	
EPA 6010	Boron	1100	ug/L	100	02/20/24 23:11	
EPA 6010	Calcium	177000	ug/L	1000	02/20/24 23:11	
EPA 6010	Iron	22200	ug/L	100	02/20/24 23:11	
EPA 6010	Magnesium	56500	ug/L	1000	02/20/24 23:11	
EPA 6010	Silica	29900	ug/L	450	02/20/24 23:11	N2
EPA 6010	Sodium	8320	ug/L	1000	02/20/24 23:11	
EPA 6010	Boron, Dissolved	1100	ug/L	100	02/22/24 23:31	
EPA 6010	Iron, Dissolved	21500	ug/L	100	02/22/24 23:31	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50365894002	**AP-11I**					
EPA 6010	Magnesium, Dissolved	56100	ug/L	1000	02/22/24 23:31	
EPA 6020	Aluminum	128	ug/L	10.0	02/20/24 01:38	
EPA 6020	Arsenic	1.6	ug/L	1.0	02/20/24 01:38	
EPA 6020	Barium	61.7	ug/L	1.0	02/20/24 01:38	
EPA 6020	Manganese	6150	ug/L	50.0	02/20/24 01:21	
EPA 6020	Aluminum, Dissolved	126	ug/L	10.0	02/22/24 15:54	
EPA 6020	Manganese, Dissolved	6220	ug/L	50.0	02/20/24 22:36	
EPA 903.1	Radium-226	0.143 ± 0.337 (0.625) C:NA T:91%	pCi/L		03/04/24 14:40	
EPA 904.0	Radium-228	0.405 ± 0.406 (0.832) C:65% T:81%	pCi/L		03/01/24 14:17	
Total Radium Calculation	Total Radium	0.548 ± 0.743 (1.46)	pCi/L		03/06/24 10:30	
SM 2320B	Alkalinity, Total as CaCO3	308	mg/L	10.0	02/19/24 21:30	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	308	mg/L	10.0	02/19/24 21:30	
SM 2540C	Total Dissolved Solids	871	mg/L	10.0	02/20/24 07:25	
SM 4500-H+B	pH at 25 Degrees C	6.8	Std. Units	0.10	02/29/24 13:16	H3
HACH 8146	Iron, Ferrous	8.8	mg/L	1.0	02/16/24 15:01	H3,N2
EPA 365.1	Phosphate as P04	1.6	mg/L	0.15	02/28/24 19:13	
SM 5310C	Total Organic Carbon	2.3	mg/L	1.0	02/27/24 20:41	
SM 5310C	Dissolved Organic Carbon	2.5	mg/L	1.0	02/26/24 21:02	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Sample: AP-11B **Lab ID: 50365894001** Collected: 02/14/24 12:15 Received: 02/15/24 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		02/23/24 14:40	24959-67-9	
Chloride	**4.8**	mg/L	0.25	0.067	1		02/23/24 14:40	16887-00-6	
Fluoride	**0.15**	mg/L	0.10	0.017	1		02/23/24 14:40	16984-48-8	
Sulfate	**344**	mg/L	2.5	1.9	10		02/23/24 14:59	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**863**	ug/L	100	6.2	1	02/20/24 08:01	02/20/24 23:09	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	02/20/24 08:01	02/20/24 23:09	7440-43-9	
Calcium	**139000**	ug/L	1000	67.7	1	02/20/24 08:01	02/20/24 23:09	7440-70-2	
Iron	**899**	ug/L	100	30.0	1	02/20/24 08:01	02/20/24 23:09	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	02/20/24 08:01	02/20/24 23:09	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	02/20/24 08:01	02/20/24 23:09	7439-93-2	
Magnesium	**49700**	ug/L	1000	33.6	1	02/20/24 08:01	02/20/24 23:09	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	02/20/24 08:01	02/20/24 23:09	7439-98-7	
Potassium	ND	ug/L	1000	97.8	1	02/20/24 08:01	02/20/24 23:09	7440-09-7	
Silica	**20300**	ug/L	450		1	02/20/24 08:01	02/20/24 23:09	7631-86-9	N2
Sodium	**9220**	ug/L	1000	54.8	1	02/20/24 08:01	02/20/24 23:09	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**862**	ug/L	100	6.2	1	02/21/24 20:26	02/22/24 23:30	7440-42-8	
Iron, Dissolved	**266**	ug/L	100	30.0	1	02/21/24 20:26	02/22/24 23:30	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	02/21/24 20:26	02/22/24 23:30	7439-93-2	
Magnesium, Dissolved	**49800**	ug/L	1000	33.6	1	02/21/24 20:26	02/22/24 23:30	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	02/21/24 20:26	02/22/24 23:30	7439-98-7	
Potassium, Dissolved	ND	ug/L	1000	97.8	1	02/21/24 20:26	02/22/24 23:30	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**221**	ug/L	10.0	2.3	1	02/17/24 10:04	02/20/24 01:35	7429-90-5	
Arsenic	ND	ug/L	1.0	0.075	1	02/17/24 10:04	02/20/24 01:35	7440-38-2	
Barium	**16.1**	ug/L	1.0	0.077	1	02/17/24 10:04	02/20/24 01:35	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	02/17/24 10:04	02/20/24 01:35	7440-48-4	
Manganese	**264**	ug/L	2.0	0.34	2	02/17/24 10:04	02/20/24 11:27	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	02/17/24 10:04	02/20/24 01:35	7782-49-2	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.6	1	02/20/24 09:45	02/21/24 00:19	7429-90-5	
Manganese, Dissolved	**264**	ug/L	2.0	0.30	2	02/20/24 09:45	02/21/24 15:33	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Sample: AP-11B **Lab ID: 50365894001** Collected: 02/14/24 12:15 Received: 02/15/24 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**221**	mg/L	10.0	10.0	1		02/19/24 21:30		
Alkalinity,Bicarbonate (CaCO3)	**221**	mg/L	10.0	10.0	1		02/19/24 21:30		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		02/19/24 21:30		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**657**	mg/L	10.0	10.0	1		02/20/24 07:25		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.8**	Std. Units	0.10	0.10	1		02/29/24 13:15		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		02/16/24 09:03	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**0.32**	mg/L	0.20	0.14	1		02/16/24 15:01	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		02/16/24 02:40	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		02/16/24 02:40	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.26**	mg/L	0.15	0.15	1	02/28/24 12:03	02/28/24 19:13		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**1.3**	mg/L	1.0	0.25	1		02/27/24 20:31	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.4**	mg/L	1.0	0.25	1		02/26/24 20:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Sample: AP-11I **Lab ID: 50365894002** Collected: 02/14/24 14:20 Received: 02/15/24 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	**0.089**	mg/L	0.050	0.0090	1		02/23/24 15:57	24959-67-9	
Chloride	**8.1**	mg/L	0.25	0.067	1		02/23/24 15:57	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.017	1		02/23/24 15:57	16984-48-8	
Sulfate	**391**	mg/L	2.5	1.9	10		02/23/24 16:17	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1100**	ug/L	100	6.2	1	02/20/24 08:01	02/20/24 23:11	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	02/20/24 08:01	02/20/24 23:11	7440-43-9	
Calcium	**177000**	ug/L	1000	67.7	1	02/20/24 08:01	02/20/24 23:11	7440-70-2	
Iron	**22200**	ug/L	100	30.0	1	02/20/24 08:01	02/20/24 23:11	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	02/20/24 08:01	02/20/24 23:11	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	02/20/24 08:01	02/20/24 23:11	7439-93-2	
Magnesium	**56500**	ug/L	1000	33.6	1	02/20/24 08:01	02/20/24 23:11	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	02/20/24 08:01	02/20/24 23:11	7439-98-7	
Potassium	ND	ug/L	1000	97.8	1	02/20/24 08:01	02/20/24 23:11	7440-09-7	
Silica	**29900**	ug/L	450		1	02/20/24 08:01	02/20/24 23:11	7631-86-9	N2
Sodium	**8320**	ug/L	1000	54.8	1	02/20/24 08:01	02/20/24 23:11	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1100**	ug/L	100	6.2	1	02/21/24 20:26	02/22/24 23:31	7440-42-8	
Iron, Dissolved	**21500**	ug/L	100	30.0	1	02/21/24 20:26	02/22/24 23:31	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	02/21/24 20:26	02/22/24 23:31	7439-93-2	
Magnesium, Dissolved	**56100**	ug/L	1000	33.6	1	02/21/24 20:26	02/22/24 23:31	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	02/21/24 20:26	02/22/24 23:31	7439-98-7	
Potassium, Dissolved	ND	ug/L	1000	97.8	1	02/21/24 20:26	02/22/24 23:31	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**128**	ug/L	10.0	2.3	1	02/17/24 10:04	02/20/24 01:38	7429-90-5	
Arsenic	**1.6**	ug/L	1.0	0.075	1	02/17/24 10:04	02/20/24 01:38	7440-38-2	
Barium	**61.7**	ug/L	1.0	0.077	1	02/17/24 10:04	02/20/24 01:38	7440-39-3	
Cobalt	ND	ug/L	1.0	0.046	1	02/17/24 10:04	02/20/24 01:38	7440-48-4	
Manganese	**6150**	ug/L	50.0	8.4	50	02/17/24 10:04	02/20/24 01:21	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	02/17/24 10:04	02/20/24 01:38	7782-49-2	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	**126**	ug/L	10.0	2.6	1	02/20/24 09:45	02/22/24 15:54	7429-90-5	
Manganese, Dissolved	**6220**	ug/L	50.0	7.4	50	02/20/24 09:45	02/20/24 22:36	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Sample: AP-11I **Lab ID: 50365894002** Collected: 02/14/24 14:20 Received: 02/15/24 09:25 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**308**	mg/L	10.0	10.0	1		02/19/24 21:30		
Alkalinity,Bicarbonate (CaCO3)	**308**	mg/L	10.0	10.0	1		02/19/24 21:30		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		02/19/24 21:30		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**871**	mg/L	10.0	10.0	1		02/20/24 07:25		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.8**	Std. Units	0.10	0.10	1		02/29/24 13:16		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		02/16/24 09:03	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	**8.8**	mg/L	1.0	0.68	5		02/16/24 15:01	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		02/16/24 02:45	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		02/16/24 02:45	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**1.6**	mg/L	0.15	0.15	1	02/28/24 12:03	02/28/24 19:13		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**2.3**	mg/L	1.0	0.25	1		02/27/24 20:41	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.5**	mg/L	1.0	0.25	1		02/26/24 21:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 775813
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3551522 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	02/23/24 12:05	
Chloride	mg/L	ND	0.25	0.067	02/23/24 12:05	
Fluoride	mg/L	ND	0.10	0.017	02/23/24 12:05	
Sulfate	mg/L	ND	0.25	0.19	02/23/24 12:05	

LABORATORY CONTROL SAMPLE: 3551523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.98	98	80-120	
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.93	93	80-120	
Sulfate	mg/L	5	4.7	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3551524 3551525

Parameter	Units	50365972002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	0.66	1	1	1.6	1.6	96	96	80-120	0	15	
Chloride	mg/L	92.0	25	25	114	114	88	89	80-120	0	15	
Fluoride	mg/L	0.37	1	1	1.3	1.3	97	96	80-120	1	15	
Sulfate	mg/L	ND	5	5	4.8	4.8	92	91	80-120	1	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 776091
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3553016 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	02/20/24 22:26	
Cadmium	ug/L	ND	2.0	0.60	02/20/24 22:26	
Calcium	ug/L	ND	1000	67.7	02/20/24 22:26	
Iron	ug/L	ND	100	30.0	02/20/24 22:26	
Lead	ug/L	ND	10.0	2.5	02/20/24 22:26	
Lithium	ug/L	ND	20.0	6.8	02/20/24 22:26	
Magnesium	ug/L	ND	1000	33.6	02/20/24 22:26	
Molybdenum	ug/L	ND	10.0	0.78	02/20/24 22:26	
Potassium	ug/L	ND	1000	97.8	02/20/24 22:26	
Silica	ug/L	ND	450		02/20/24 22:26	N2
Sodium	ug/L	ND	1000	54.8	02/20/24 22:26	

LABORATORY CONTROL SAMPLE: 3553017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	978	98	80-120	
Cadmium	ug/L	1000	1000	100	80-120	
Calcium	ug/L	10000	10100	101	80-120	
Iron	ug/L	10000	10000	100	80-120	
Lead	ug/L	1000	961	96	80-120	
Lithium	ug/L	1000	1020	102	80-120	
Magnesium	ug/L	10000	9840	98	80-120	
Molybdenum	ug/L	1000	1030	103	80-120	
Potassium	ug/L	10000	9950	99	80-120	
Silica	ug/L	10700	10700	100	80-120	N2
Sodium	ug/L	10000	9720	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553018 3553019

Parameter	Units	50365849002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	<100	1000	1000	1030	1020	101	100	75-125	1	20	
Cadmium	ug/L	<2.0	1000	1000	1020	1010	102	101	75-125	1	20	
Calcium	ug/L	32000	10000	10000	41500	41100	95	91	75-125	1	20	
Iron	ug/L	<100	10000	10000	10200	10000	101	100	75-125	1	20	
Lead	ug/L	<10.0	1000	1000	964	956	96	96	75-125	1	20	
Lithium	ug/L	<20.0	1000	1000	1040	1020	104	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553018 3553019

Parameter	Units	50365849002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Magnesium	ug/L	9910	10000	10000	19600	19400	97	95	75-125	1	20	
Molybdenum	ug/L	<10.0	1000	1000	1060	1050	106	105	75-125	1	20	
Potassium	ug/L	7330	10000	10000	17200	17000	99	97	75-125	1	20	
Silica	ug/L	6050	10700	10700	17000	16900	103	101	75-125	1	20	N2
Sodium	ug/L	1610	10000	10000	11400	11300	98	97	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 776455
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3554264 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	02/22/24 23:10	
Iron, Dissolved	ug/L	ND	100	30.0	02/22/24 23:10	
Lithium, Dissolved	ug/L	ND	20.0	6.8	02/22/24 23:10	
Magnesium, Dissolved	ug/L	ND	1000	33.6	02/22/24 23:10	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	02/22/24 23:10	
Potassium, Dissolved	ug/L	ND	1000	97.8	02/22/24 23:10	

LABORATORY CONTROL SAMPLE: 3554265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	973	97	80-120	
Iron, Dissolved	ug/L	10000	9840	98	80-120	
Lithium, Dissolved	ug/L	1000	1010	101	80-120	
Magnesium, Dissolved	ug/L	10000	9780	98	80-120	
Molybdenum, Dissolved	ug/L	1000	1020	102	80-120	
Potassium, Dissolved	ug/L	10000	9540	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554266 3554267

Parameter	Units	50365972002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	379	1000	1000	1320	1330	94	96	75-125	1	20	
Iron, Dissolved	ug/L	9070	10000	10000	18500	18700	94	96	75-125	1	20	
Lithium, Dissolved	ug/L	15.2	1000	1000	984	993	97	98	75-125	1	20	
Magnesium, Dissolved	ug/L	41900	10000	10000	50800	51200	88	92	75-125	1	20	
Molybdenum, Dissolved	ug/L	66.2	1000	1000	1080	1090	102	103	75-125	1	20	
Potassium, Dissolved	ug/L	5940	10000	10000	15300	15400	94	95	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 775978
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3552331 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	2.3	02/20/24 01:11	
Arsenic	ug/L	ND	1.0	0.075	02/20/24 01:11	
Barium	ug/L	ND	1.0	0.077	02/20/24 01:11	
Cobalt	ug/L	ND	1.0	0.046	02/20/24 01:11	
Manganese	ug/L	ND	1.0	0.17	02/20/24 01:11	
Selenium	ug/L	ND	1.0	0.20	02/20/24 01:11	

LABORATORY CONTROL SAMPLE: 3552332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	402	101	80-120	
Arsenic	ug/L	40	37.1	93	80-120	
Barium	ug/L	40	38.5	96	80-120	
Cobalt	ug/L	40	40.8	102	80-120	
Manganese	ug/L	40	40.2	101	80-120	
Selenium	ug/L	40	40.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3552333 3552334

Parameter	Units	50365849001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	<10.0	400	400	412	417	103	104	75-125	1	20	
Arsenic	ug/L	20.8	40	40	57.8	58.7	92	95	75-125	2	20	
Barium	ug/L	657	40	40	702	698	113	104	75-125	1	20	E
Cobalt	ug/L	<1.0	40	40	38.6	38.1	95	94	75-125	1	20	
Manganese	ug/L	114	40	40	150	147	90	84	75-125	2	20	
Selenium	ug/L	<1.0	40	40	39.8	41.0	99	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 776020
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3552714 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.6	02/20/24 20:04	
Manganese, Dissolved	ug/L	ND	1.0	0.15	02/20/24 20:04	

LABORATORY CONTROL SAMPLE: 3552715

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	389	97	80-120	
Manganese, Dissolved	ug/L	40	41.5	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3552716 3552717

Parameter	Units	50365772001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	396	412	98	103	75-125	4	20	
Manganese, Dissolved	ug/L	ND	40	40	40.4	40.6	100	101	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 776262
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3553537 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	02/19/24 21:30	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	02/19/24 21:30	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	02/19/24 21:30	

LABORATORY CONTROL SAMPLE: 3553538

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	54.6	109	90-110	

SAMPLE DUPLICATE: 3553539

Parameter	Units	50365828008 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	426	431	1	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	426	431	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3553540

Parameter	Units	50366036001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	253000 ug/L	256	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 776290
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3553652 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/20/24 07:19	

LABORATORY CONTROL SAMPLE: 3553653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	260	87	80-120	

SAMPLE DUPLICATE: 3553654

Parameter	Units	50365885004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	757000 ug/L	772	2	10	

SAMPLE DUPLICATE: 3553655

Parameter	Units	50365902001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	313	291	7	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 778027
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

SAMPLE DUPLICATE: 3560959

Parameter	Units	50365888002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	0	2	H3

SAMPLE DUPLICATE: 3560960

Parameter	Units	50365981003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.7	7.7	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 775869
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3551747 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	02/16/24 09:03	

LABORATORY CONTROL SAMPLE: 3551748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.55	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3551749 3551750

Parameter	Units	50365407001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.68	0.68	133	134	90-110	1	20	M3

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3551751 3551752

Parameter	Units	50365772001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.55	0.56	107	110	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 775953
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3552264 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.14	02/16/24 14:43	H3,N2

LABORATORY CONTROL SAMPLE: 3552265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	100	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3552266 3552267

Parameter	Units	50365772001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	ND	1	1	1.1	1.1	98	100	90-110	2	20	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3552268 3552269

Parameter	Units	50365995002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	ND	1	1	1.1	1.1	101	100	90-110	1	20	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 775839
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3551668 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	02/16/24 02:10	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	02/16/24 02:10	

LABORATORY CONTROL SAMPLE: 3551669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	101	90-110	
Nitrogen, Nitrite	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 3551672

Parameter	Units	50365893003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.31	1	1.4	108	90-110	
Nitrogen, Nitrite	mg/L	ND	1	1.1	105	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 777769
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3559791 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	02/28/24 19:02	

LABORATORY CONTROL SAMPLE: 3559792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3559793 3559794

Parameter	Units	50365849006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	<0.15			1.6	1.6				1		

MATRIX SPIKE SAMPLE: 3559795

Parameter	Units	50365894002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	1.6		3.2			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 777635
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3559242 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.25	02/27/24 20:11	

LABORATORY CONTROL SAMPLE: 3559243

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.4	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3559244 3559245

Parameter	Units	50365981003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	2.6	10	10	11.6	11.5	90	88	80-120	1	20	

MATRIX SPIKE SAMPLE: 3559247

Parameter	Units	50365894002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.3	10	11.1	88	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 777429
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3558559 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	02/26/24 19:18	

LABORATORY CONTROL SAMPLE: 3558560

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.5	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3558561 3558562

Parameter	Units	50365772001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.6	10	10	10.8	10.7	92	91	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3558563 3558564

Parameter	Units	50365981003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.6	10	10	12.0	11.7	94	91	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Sample: AP-11B **Lab ID: 50365894001** Collected: 02/14/24 12:15 Received: 02/15/24 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0554 ± 0.360 (0.726) C:NA T:90%**	pCi/L	03/04/24 14:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.434 ± 0.450 (0.933) C:65% T:81%**	pCi/L	03/01/24 14:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.489 ± 0.810 (1.66)**	pCi/L	03/06/24 10:30	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Sample: AP-11I **Lab ID: 50365894002** Collected: 02/14/24 14:20 Received: 02/15/24 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.143 ± 0.337 (0.625) C:NA T:91%**	pCi/L	03/04/24 14:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.405 ± 0.406 (0.832) C:65% T:81%**	pCi/L	03/01/24 14:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.548 ± 0.743 (1.46)**	pCi/L	03/06/24 10:30	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 649416
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3164497 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.123 ± 0.213 (0.380) C:NA T:92%	pCi/L	03/04/24 14:28	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

QC Batch: 649417
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50365894001, 50365894002

METHOD BLANK: 3164498 Matrix: Water
Associated Lab Samples: 50365894001, 50365894002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0406 ± 0.305 (0.717) C:70% T:86%	pCi/L	03/01/24 14:14	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
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.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P4R3 Nov 2023
Pace Project No.: 50365894

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50365894001	**AP-11B**	EPA 9056	775813		
50365894002	**AP-11I**	EPA 9056	775813		
50365894001	**AP-11B**	EPA 3010	776091	EPA 6010	776516
50365894002	**AP-11I**	EPA 3010	776091	EPA 6010	776516
50365894001	**AP-11B**	EPA 3010	776455	EPA 6010	776995
50365894002	**AP-11I**	EPA 3010	776455	EPA 6010	776995
50365894001	**AP-11B**	EPA 200.2	775978	EPA 6020	776088
50365894002	**AP-11I**	EPA 200.2	775978	EPA 6020	776088
50365894001	**AP-11B**	EPA 200.2	776020	EPA 6020	776469
50365894002	**AP-11I**	EPA 200.2	776020	EPA 6020	776469
50365894001	**AP-11B**	EPA 903.1	649416		
50365894002	**AP-11I**	EPA 903.1	649416		
50365894001	**AP-11B**	EPA 904.0	649417		
50365894002	**AP-11I**	EPA 904.0	649417		
50365894001	**AP-11B**	Total Radium Calculation	653067		
50365894002	**AP-11I**	Total Radium Calculation	653067		
50365894001	**AP-11B**	SM 2320B	776262		
50365894002	**AP-11I**	SM 2320B	776262		
50365894001	**AP-11B**	SM 2540C	776290		
50365894002	**AP-11I**	SM 2540C	776290		
50365894001	**AP-11B**	SM 4500-H+B	778027		
50365894002	**AP-11I**	SM 4500-H+B	778027		
50365894001	**AP-11B**	SM 4500-S2-D	775869		
50365894002	**AP-11I**	SM 4500-S2-D	775869		
50365894001	**AP-11B**	HACH 8146	775953		
50365894002	**AP-11I**	HACH 8146	775953		
50365894001	**AP-11B**	EPA 353.2	775839		
50365894002	**AP-11I**	EPA 353.2	775839		
50365894001	**AP-11B**	EPA 365.1	777769	EPA 365.1	777919
50365894002	**AP-11I**	EPA 365.1	777769	EPA 365.1	777919
50365894001	**AP-11B**	SM 5310C	777635		
50365894002	**AP-11I**	SM 5310C	777635		
50365894001	**AP-11B**	SM 5310C	777429		
50365894002	**AP-11I**	SM 5310C	777429		

WO# : 50365894

50365894

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Info:		Section B Report To: Mark Breting		Section C Invoice Information: Attention: Accounts Payable - Paula Sedam	
Company:	Atlas Indianapolis	Copy To:		Company Name:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100 Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4R3 Nov 2023	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/53

Regulatory Agency	
State / Location	IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Br, Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum	Residual Chlorine (Y/N)
																		Requested Analysis Filtered (Y/N)				Y			Y				
1	AP-11B	WT	G			2-14	12:15		11	✓	✓	✓		✓					✓								✓	
2	AP-11I	WT	G			2-14	14:20		11										✓								✓	
3	MW-12A	WT	G			2-14	1700		11										✓								✓	
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 (B, Cd, Fe, Pb, Mo, Ca, Mg, Na, K, Li, sila) (11)	Hayley Torres/ATLAS	2-14-24	17:15	FedEx	2-14-24	1715				
6020 (Al, Mn, Co, As, Se, Ba) (6)	FedEx	2-15-24	9:25		2-15-24	9:25	0.7	y	y	y
** Dissolved FF 6010 (B, Fe, Mo, Mg, K, Li) (6) FF 6020 (Al, Mn) (2)							0.2			
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Hayley Torres					
SIGNATURE of SAMPLER:		DATE Signed: 2/14-24				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 2-15-24 10:52

1. **Courier:** ☑ FED EX ☐ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 0.7/0.7 | 0.2/0.2 | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle:** **HNO3 (<2)** **H2SO4 (<2)** **NaOH (>10)** **NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? **Analysis:** NO_3	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1200			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:

COC PAGE ____ of ____

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/ZnAc >9
1												1	1			2	1	2	1	1	1		1					WT	✓	✓		✓
2												1	1			1	1	1	1	1	1		1					1	1	1		1
3												1	1			1	1	1	1	1	1		1					1	1	1		1
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

May 22, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: AES Petersburg P2R3
Pace Project No.: 50366028

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on February 16, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: AES Petersburg P2R3
Pace Project No.: 50366028

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: AES Petersburg P2R3
Pace Project No.: 50366028

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50366028001	**MW-15B**	Water	02/15/24 12:20	02/16/24 09:30

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: AES Petersburg P2R3
Pace Project No.: 50366028

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50366028001	**MW-15B**	EPA 9056	KBB	3	PASI-I
		EPA 6010	JPK	5	PASI-I
		EPA 6020	CAW	5	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: AES Petersburg P2R3
Pace Project No.: 50366028

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50366028001	**MW-15B**					
EPA 9056	Chloride	38.7	mg/L	2.5	02/26/24 18:20	
EPA 9056	Fluoride	0.13	mg/L	0.10	02/26/24 18:04	
EPA 9056	Sulfate	618	mg/L	25.0	02/26/24 18:39	
EPA 6010	Boron	1360	ug/L	100	02/22/24 00:15	
EPA 6010	Calcium	199000	ug/L	1000	02/22/24 00:15	
EPA 6010	Lithium	726	ug/L	20.0	02/22/24 00:15	
EPA 6010	Molybdenum	16.8	ug/L	10.0	02/22/24 00:15	
EPA 6020	Arsenic	1.3	ug/L	1.0	02/20/24 21:32	
EPA 6020	Barium	46.6	ug/L	1.0	02/20/24 21:32	
EPA 903.1	Radium-226	0.000 ± 0.474 (0.924) C:NA T:94%	pCi/L		03/08/24 14:18	
EPA 904.0	Radium-228	0.859 ± 0.423 (0.702) C:73% T:86%	pCi/L		03/08/24 14:30	
Total Radium Calculation	Total Radium	0.859 ± 0.897 (1.63)	pCi/L		03/12/24 15:20	
SM 2540C	Total Dissolved Solids	1180	mg/L	20.0	02/21/24 08:32	
SM 4500-H+B	pH at 25 Degrees C	7.9	Std. Units	0.10	03/01/24 13:15	H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: AES Petersburg P2R3
Pace Project No.: 50366028

Sample: MW-15B **Lab ID: 50366028001** Collected: 02/15/24 12:20 Received: 02/16/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056								
	Pace Analytical Services - Indianapolis								
Chloride	**38.7**	mg/L	2.5	0.67	10		02/26/24 18:20	16887-00-6	
Fluoride	**0.13**	mg/L	0.10	0.017	1		02/26/24 18:04	16984-48-8	
Sulfate	**618**	mg/L	25.0	19.0	100		02/26/24 18:39	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Pace Analytical Services - Indianapolis								
Boron	**1360**	ug/L	100	6.2	1	02/20/24 21:00	02/22/24 00:15	7440-42-8	
Calcium	**199000**	ug/L	1000	67.7	1	02/20/24 21:00	02/22/24 00:15	7440-70-2	
Lead	ND	ug/L	10.0	2.5	1	02/20/24 21:00	02/22/24 00:15	7439-92-1	
Lithium	**726**	ug/L	20.0	6.8	1	02/20/24 21:00	02/22/24 00:15	7439-93-2	
Molybdenum	**16.8**	ug/L	10.0	0.78	1	02/20/24 21:00	02/22/24 00:15	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2								
	Pace Analytical Services - Indianapolis								
Arsenic	**1.3**	ug/L	1.0	0.10	1	02/20/24 09:45	02/20/24 21:32	7440-38-2	
Barium	**46.6**	ug/L	1.0	0.062	1	02/20/24 09:45	02/20/24 21:32	7440-39-3	
Cobalt	ND	ug/L	1.0	0.060	1	02/20/24 09:45	02/20/24 21:32	7440-48-4	
Selenium	ND	ug/L	1.0	0.36	1	02/20/24 09:45	02/20/24 21:32	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	02/20/24 09:45	02/20/24 21:32	7440-28-0	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1180**	mg/L	20.0	20.0	1		02/21/24 08:32		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
	Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.9**	Std. Units	0.10	0.10	1		03/01/24 13:15		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: AES Petersburg P2R3
Pace Project No.: 50366028

QC Batch: 776504
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366028001

METHOD BLANK: 3554437 Matrix: Water
Associated Lab Samples: 50366028001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	02/26/24 10:38	
Fluoride	mg/L	ND	0.10	0.017	02/26/24 10:38	
Sulfate	mg/L	ND	0.25	0.19	02/26/24 10:38	

LABORATORY CONTROL SAMPLE: 3554438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.5	101	80-120	
Fluoride	mg/L	1	0.96	96	80-120	
Sulfate	mg/L	5	4.7	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3560041 3560042

Parameter	Units	50366105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	93.6	25	25	110	108	65	58	80-120	1	15	M0
Fluoride	mg/L	0.18	1	1	1.1	1.1	92	89	80-120	2	15	
Sulfate	mg/L	122	50	50	165	158	86	73	80-120	4	15	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: AES Petersburg P2R3
Pace Project No.: 50366028

QC Batch: 776094
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366028001

METHOD BLANK: 3553028 Matrix: Water
Associated Lab Samples: 50366028001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	02/21/24 23:24	
Calcium	ug/L	ND	1000	67.7	02/21/24 23:24	
Lead	ug/L	ND	10.0	2.5	02/21/24 23:24	
Lithium	ug/L	ND	20.0	6.8	02/21/24 23:24	
Molybdenum	ug/L	ND	10.0	0.78	02/21/24 23:24	

LABORATORY CONTROL SAMPLE: 3553029

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	959	96	80-120	
Calcium	ug/L	10000	9810	98	80-120	
Lead	ug/L	1000	923	92	80-120	
Lithium	ug/L	1000	1000	100	80-120	
Molybdenum	ug/L	1000	995	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553030 3553031

Parameter	Units	50365995002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	387	1000	1000	1420	1390	104	100	75-125	3	20	
Calcium	ug/L	98100	10000	10000	109000	107000	106	85	75-125	2	20	
Lead	ug/L	ND	1000	1000	925	895	92	90	75-125	3	20	
Lithium	ug/L	ND	1000	1000	1050	1020	103	100	75-125	3	20	
Molybdenum	ug/L	ND	1000	1000	1050	1020	105	101	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: AES Petersburg P2R3
Pace Project No.: 50366028

QC Batch: 776021
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366028001

METHOD BLANK: 3552718 Matrix: Water
Associated Lab Samples: 50366028001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	0.10	02/20/24 15:55	
Barium	ug/L	ND	1.0	0.062	02/20/24 15:55	
Cobalt	ug/L	ND	1.0	0.060	02/20/24 15:55	
Selenium	ug/L	ND	1.0	0.36	02/20/24 15:55	
Thallium	ug/L	ND	1.0	0.079	02/20/24 15:55	

LABORATORY CONTROL SAMPLE: 3552719

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	40.0	100	80-120	
Barium	ug/L	40	39.2	98	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Selenium	ug/L	40	39.0	98	80-120	
Thallium	ug/L	40	40.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3552720 3552721

Parameter	Units	50365995002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	2.3	40	40	42.0	43.0	99	102	75-125	2	20	
Barium	ug/L	441	40	40	480	485	97	112	75-125	1	20	E
Cobalt	ug/L	ND	40	40	39.9	39.8	99	99	75-125	0	20	
Selenium	ug/L	ND	40	40	41.0	41.0	102	102	75-125	0	20	
Thallium	ug/L	ND	40	40	41.2	41.9	103	105	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: AES Petersburg P2R3
Pace Project No.: 50366028

QC Batch: 776534
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366028001

METHOD BLANK: 3554582 Matrix: Water
Associated Lab Samples: 50366028001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/21/24 08:25	

LABORATORY CONTROL SAMPLE: 3554583

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	285	95	80-120	

SAMPLE DUPLICATE: 3554584

Parameter	Units	50365995002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	640	648	1	10	

SAMPLE DUPLICATE: 3554585

Parameter	Units	50366022001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	523	526	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: AES Petersburg P2R3
Pace Project No.: 50366028

QC Batch: 778285
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50366028001

SAMPLE DUPLICATE: 3561978

Parameter	Units	50365995002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.3	1	2	H3

SAMPLE DUPLICATE: 3561979

Parameter	Units	50366179004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AES Petersburg P2R3
Pace Project No.: 50366028

Sample: MW-15B **Lab ID: 50366028001** Collected: 02/15/24 12:20 Received: 02/16/24 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.474 (0.924) C:NA T:94%**	pCi/L	03/08/24 14:18	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.859 ± 0.423 (0.702) C:73% T:86%**	pCi/L	03/08/24 14:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.859 ± 0.897 (1.63)**	pCi/L	03/12/24 15:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: AES Petersburg P2R3
Pace Project No.: 50366028

QC Batch: 650430
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50366028001

METHOD BLANK: 3169491 Matrix: Water
Associated Lab Samples: 50366028001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.166 ± 0.231 (0.386) C:NA T:98%	pCi/L	03/08/24 14:18	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: AES Petersburg P2R3
Pace Project No.: 50366028

QC Batch: 650431
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50366028001

METHOD BLANK: 3169492 Matrix: Water
Associated Lab Samples: 50366028001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.307 ± 0.284 (0.573) C:83% T:91%	pCi/L	03/08/24 11:29	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: AES Petersburg P2R3
Pace Project No.: 50366028

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AES Petersburg P2R3
Pace Project No.: 50366028

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50366028001	**MW-15B**	EPA 9056	776504		
50366028001	**MW-15B**	EPA 3010	776094	EPA 6010	776770
50366028001	**MW-15B**	EPA 200.2	776021	EPA 6020	776449
50366028001	**MW-15B**	EPA 903.1	650430		
50366028001	**MW-15B**	EPA 904.0	650431		
50366028001	**MW-15B**	Total Radium Calculation	654585		
50366028001	**MW-15B**	SM 2540C	776534		
50366028001	**MW-15B**	SM 4500-H+B	778285		

Pace® Location Requested (City/State):
Pace Analytical Indianapolis
7726 Moller Road, Indianapolis, IN 46268

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

WO# : 50366028

50366028

Company Name:	Atlas Indianapolis	Contact/Report To:	Breting, Mark
Street Address:	7988 Centerpoint Drive, Indianapolis, IN 46256	Phone #:	NONE
		E-Mail:	mark.breting@atcgs.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	AES Petersburg P2R3	Invoice To:	
		Invoice E-Mail:	
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET		County / State origin of sample(s):	Indiana

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

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

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	IN Metals, Total	IN Rad226/Rad228	IN TDS 2540C	IN pH/IC (Cl,F,SO4)	Sample Comment
MW-15B	WT	G			2-15-24	12:20	5			X	X	X	X	

Specify Container Size **
Identify Container Preservative Type***
Analysis Requested

** 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: Will Statz
AcctNum / Client ID:
Table #:
Profile / Template: 10498/50
Prelog / Bottle Ord. ID: 1166457

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:

Collected By: (Printed Name) Hayley Tolles
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
2	B	+0.1	See SCUR		

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
ATLAS	2-15-24 / 17:30	Fedex	2-15-24 / 17:30	
FedEx	2/16/24 0930		2/16/24 0930	Delivered by: [ ] In-Person [ ] Courier [ ] FedEX [ ] UPS [ ] Other
				Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: LT 8/16/24 1003

1. **Courier:** ☒ FED EX ☐ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 0.3/0.4 | 0.8/0.9 | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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)		X	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	X		
Short Hold Time Analysis (48 hours or less)? Analysis:		X				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A X
Rush TAT Requested (4 days or less):		X	Residual Chlorine Check (Total/Amenable/Free Cyanide)			X
Custody Signatures Present?	X		Headspace Wisconsin Sulfide?			X
Containers Intact?:	X		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent X
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	X		Trip Blank Present?		X	
Extra labels on Terracore Vials? (soils only)		X	Trip Blank Custody Seals?:			X

COMMENTS:

COC PAGE 1 of 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1									WT	/			
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic
BP3R	250mL Unpres. FF SO4/OH buffer
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

May 22, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on February 17, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50366105001	**MW-1A**	Water	02/16/24 14:30	02/17/24 09:30
50366105002	**Field Blank**	Water	02/16/24 15:00	02/17/24 09:30

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50366105001	**MW-1A**	EPA 9056	KBB	4	PASI-I
		EPA 6010	JPK	12	PASI-I
		EPA 6010	JPK	6	PASI-I
		EPA 6020	DMT	7	PASI-I
		EPA 6020	DMT	2	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	WDB	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	ZM	2	PASI-I
		EPA 365.1	ZM	1	PASI-I
		SM 5310C	YAM	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50366105002	**Field Blank**	EPA 9056	KBB	4	PASI-I
		EPA 6010	JPK	12	PASI-I
		EPA 6020	DMT	7	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	WDB	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	BEP	1	PASI-I
		HACH 8146	STS	1	PASI-I
		EPA 353.2	ZM	2	PASI-I
		EPA 365.1	ZM	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50366105001	**MW-1A**					
EPA 9056	Chloride	93.6	mg/L	2.5	02/26/24 19:18	
EPA 9056	Fluoride	0.18	mg/L	0.10	02/26/24 18:59	
EPA 9056	Sulfate	122	mg/L	2.5	02/26/24 19:18	
EPA 6010	Boron	162	ug/L	100	02/23/24 01:01	
EPA 6010	Calcium	75600	ug/L	1000	02/23/24 01:01	
EPA 6010	Iron	3570	ug/L	100	02/23/24 01:01	
EPA 6010	Magnesium	22600	ug/L	1000	02/23/24 01:01	
EPA 6010	Potassium	1310	ug/L	1000	02/23/24 01:01	
EPA 6010	Silica	27500	ug/L	450	02/23/24 01:01	N2
EPA 6010	Sodium	77600	ug/L	1000	02/23/24 01:01	
EPA 6010	Boron, Dissolved	159	ug/L	100	02/23/24 22:14	
EPA 6010	Iron, Dissolved	3380	ug/L	100	02/23/24 22:14	
EPA 6010	Magnesium, Dissolved	21900	ug/L	1000	02/23/24 22:14	
EPA 6010	Potassium, Dissolved	1270	ug/L	1000	02/23/24 22:14	
EPA 6020	Aluminum	25.5	ug/L	10.0	02/22/24 03:56	
EPA 6020	Barium	80.6	ug/L	1.0	02/22/24 03:56	
EPA 6020	Manganese	157	ug/L	1.0	02/22/24 03:56	
EPA 6020	Manganese, Dissolved	154	ug/L	1.0	02/21/24 03:34	
EPA 903.1	Radium-226	1.70 ± 0.849 (1.05) C:NA T:87%	pCi/L		03/05/24 16:28	
EPA 904.0	Radium-228	1.03 ± 0.492 (0.830) C:73% T:83%	pCi/L		03/07/24 14:30	
Total Radium Calculation	Total Radium	2.73 ± 1.34 (1.88)	pCi/L		03/11/24 14:05	
SM 2320B	Alkalinity, Total as CaCO3	214	mg/L	10.0	02/21/24 15:51	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	214	mg/L	10.0	02/21/24 15:51	
SM 2540C	Total Dissolved Solids	529	mg/L	10.0	02/22/24 11:12	
SM 4500-H+B	pH at 25 Degrees C	8.1	Std. Units	0.10	03/01/24 13:17	H3
EPA 365.1	Phosphate as P04	0.24	mg/L	0.15	02/29/24 17:01	
SM 5310C	Total Organic Carbon	1.1	mg/L	1.0	03/01/24 00:04	
SM 5310C	Dissolved Organic Carbon	11.9	mg/L	1.0	02/28/24 04:42	
50366105002	**Field Blank**					
EPA 903.1	Radium-226	0.568 ± 0.459 (0.256) C:NA T:96%	pCi/L		03/05/24 16:28	
EPA 904.0	Radium-228	0.861 ± 0.514 (0.943) C:74% T:86%	pCi/L		03/07/24 14:30	
Total Radium Calculation	Total Radium	1.43 ± 0.973 (1.20)	pCi/L		03/11/24 14:05	
SM 4500-H+B	pH at 25 Degrees C	9.0	Std. Units	0.10	03/01/24 13:18	H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Sample: MW-1A **Lab ID: 50366105001** Collected: 02/16/24 14:30 Received: 02/17/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		02/26/24 18:59	24959-67-9	
Chloride	**93.6**	mg/L	2.5	0.67	10		02/26/24 19:18	16887-00-6	
Fluoride	**0.18**	mg/L	0.10	0.017	1		02/26/24 18:59	16984-48-8	
Sulfate	**122**	mg/L	2.5	1.9	10		02/26/24 19:18	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**162**	ug/L	100	6.2	1	02/22/24 08:04	02/23/24 01:01	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	02/22/24 08:04	02/23/24 01:01	7440-43-9	
Calcium	**75600**	ug/L	1000	67.7	1	02/22/24 08:04	02/23/24 01:01	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	02/22/24 08:04	02/23/24 01:01	7440-47-3	
Iron	**3570**	ug/L	100	30.0	1	02/22/24 08:04	02/23/24 01:01	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	02/22/24 08:04	02/23/24 01:01	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	02/22/24 08:04	02/23/24 01:01	7439-93-2	
Magnesium	**22600**	ug/L	1000	33.6	1	02/22/24 08:04	02/23/24 01:01	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	02/22/24 08:04	02/23/24 01:01	7439-98-7	
Potassium	**1310**	ug/L	1000	97.8	1	02/22/24 08:04	02/23/24 01:01	7440-09-7	
Silica	**27500**	ug/L	450		1	02/22/24 08:04	02/23/24 01:01	7631-86-9	N2
Sodium	**77600**	ug/L	1000	54.8	1	02/22/24 08:04	02/23/24 01:01	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**159**	ug/L	100	6.2	1	02/22/24 20:36	02/23/24 22:14	7440-42-8	
Iron, Dissolved	**3380**	ug/L	100	30.0	1	02/22/24 20:36	02/23/24 22:14	7439-89-6	
Lithium, Dissolved	ND	ug/L	20.0	6.8	1	02/22/24 20:36	02/23/24 22:14	7439-93-2	
Magnesium, Dissolved	**21900**	ug/L	1000	33.6	1	02/22/24 20:36	02/23/24 22:14	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	0.78	1	02/22/24 20:36	02/23/24 22:14	7439-98-7	
Potassium, Dissolved	**1270**	ug/L	1000	97.8	1	02/22/24 20:36	02/23/24 22:14	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	**25.5**	ug/L	10.0	4.4	1	02/21/24 10:05	02/22/24 03:56	7429-90-5	
Arsenic	ND	ug/L	1.0	0.064	1	02/21/24 10:05	02/22/24 03:56	7440-38-2	
Barium	**80.6**	ug/L	1.0	0.067	1	02/21/24 10:05	02/22/24 03:56	7440-39-3	
Cobalt	ND	ug/L	1.0	0.024	1	02/21/24 10:05	02/22/24 03:56	7440-48-4	
Manganese	**157**	ug/L	1.0	0.043	1	02/21/24 10:05	02/22/24 03:56	7439-96-5	
Selenium	ND	ug/L	1.0	0.23	1	02/21/24 10:05	02/22/24 03:56	7782-49-2	
Thallium	ND	ug/L	1.0	0.042	1	02/21/24 10:05	02/22/24 03:56	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	02/20/24 15:43	02/21/24 03:34	7429-90-5	
Manganese, Dissolved	**154**	ug/L	1.0	0.043	1	02/20/24 15:43	02/21/24 03:34	7439-96-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Sample: MW-1A **Lab ID: 50366105001** Collected: 02/16/24 14:30 Received: 02/17/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	02/26/24 16:05	02/27/24 11:44	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**214**	mg/L	10.0	10.0	1		02/21/24 15:51		
Alkalinity,Bicarbonate (CaCO3)	**214**	mg/L	10.0	10.0	1		02/21/24 15:51		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		02/21/24 15:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**529**	mg/L	10.0	10.0	1		02/22/24 11:12		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**8.1**	Std. Units	0.10	0.10	1		03/01/24 13:17		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		02/21/24 11:39	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.14	1		03/01/24 14:54	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		02/17/24 16:42	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		02/17/24 16:42	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.24**	mg/L	0.15	0.15	1	02/29/24 11:30	02/29/24 17:01		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	**1.1**	mg/L	1.0	0.25	1		03/01/24 00:04	7440-44-0	
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**11.9**	mg/L	1.0	0.25	1		02/28/24 04:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Sample: Field Blank **Lab ID: 50366105002** Collected: 02/16/24 15:00 Received: 02/17/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Bromide	ND	mg/L	0.050	0.0090	1		02/26/24 22:12	24959-67-9	
Chloride	ND	mg/L	0.25	0.067	1		02/26/24 22:12	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		02/26/24 22:12	16984-48-8	
Sulfate	ND	mg/L	0.25	0.19	1		02/26/24 22:12	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	6.2	1	02/22/24 08:04	02/23/24 01:02	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	02/22/24 08:04	02/23/24 01:02	7440-43-9	
Calcium	ND	ug/L	1000	67.7	1	02/22/24 08:04	02/23/24 01:02	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	02/22/24 08:04	02/23/24 01:02	7440-47-3	
Iron	ND	ug/L	100	30.0	1	02/22/24 08:04	02/23/24 01:02	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	02/22/24 08:04	02/23/24 01:02	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	02/22/24 08:04	02/23/24 01:02	7439-93-2	
Magnesium	ND	ug/L	1000	33.6	1	02/22/24 08:04	02/23/24 01:02	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	02/22/24 08:04	02/23/24 01:02	7439-98-7	
Potassium	ND	ug/L	1000	97.8	1	02/22/24 08:04	02/23/24 01:02	7440-09-7	
Silica	ND	ug/L	450		1	02/22/24 08:04	02/23/24 01:02	7631-86-9	N2
Sodium	ND	ug/L	1000	54.8	1	02/22/24 08:04	02/23/24 01:02	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum	ND	ug/L	10.0	4.4	1	02/21/24 10:05	02/22/24 03:59	7429-90-5	
Arsenic	ND	ug/L	1.0	0.064	1	02/21/24 10:05	02/22/24 03:59	7440-38-2	
Barium	ND	ug/L	1.0	0.067	1	02/21/24 10:05	02/22/24 03:59	7440-39-3	
Cobalt	ND	ug/L	1.0	0.024	1	02/21/24 10:05	02/22/24 03:59	7440-48-4	
Manganese	ND	ug/L	1.0	0.043	1	02/21/24 10:05	02/22/24 03:59	7439-96-5	
Selenium	ND	ug/L	1.0	0.23	1	02/21/24 10:05	02/22/24 03:59	7782-49-2	
Thallium	ND	ug/L	1.0	0.042	1	02/21/24 10:05	02/22/24 03:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	02/26/24 16:05	02/27/24 11:47	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	ND	mg/L	10.0	10.0	1		02/21/24 15:51		
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	10.0	10.0	1		02/21/24 15:51		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		02/21/24 15:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/22/24 11:13		PL

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Sample: Field Blank **Lab ID: 50366105002** Collected: 02/16/24 15:00 Received: 02/17/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**9.0**	Std. Units	0.10	0.10	1		03/01/24 13:18		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		02/21/24 11:39	18496-25-8	
Iron, Ferrous	Analytical Method: HACH 8146 Pace Analytical Services - Indianapolis								
Iron, Ferrous	ND	mg/L	0.20	0.14	1		03/01/24 14:57	15438-31-0	H3,N2
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		02/17/24 16:48	14797-55-8	
Nitrogen, Nitrite	ND	mg/L	0.10	0.0040	1		02/17/24 16:48	14797-65-0	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.15	1	02/29/24 11:30	02/29/24 17:02		
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Total Organic Carbon	ND	mg/L	1.0	0.25	1		03/01/24 00:39	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 776504
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3554437 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromide	mg/L	ND	0.050	0.0090	02/26/24 10:38	
Chloride	mg/L	ND	0.25	0.067	02/26/24 10:38	
Fluoride	mg/L	ND	0.10	0.017	02/26/24 10:38	
Sulfate	mg/L	ND	0.25	0.19	02/26/24 10:38	

LABORATORY CONTROL SAMPLE: 3554438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	0.94	94	80-120	
Chloride	mg/L	2.5	2.5	101	80-120	
Fluoride	mg/L	1	0.96	96	80-120	
Sulfate	mg/L	5	4.7	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3560041 3560042

Parameter	Units	50366105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	ND	1	1	0.97	0.94	97	94	80-120	3	15	
Chloride	mg/L	93.6	25	25	110	108	65	58	80-120	1	15	M0
Fluoride	mg/L	0.18	1	1	1.1	1.1	92	89	80-120	2	15	
Sulfate	mg/L	122	50	50	165	158	86	73	80-120	4	15	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 777382
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3558420 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	02/27/24 11:20	

LABORATORY CONTROL SAMPLE: 3558421

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3558422 3558423

Parameter	Units	50366647002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.12	5	5	4.9	4.9	98	99	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 776098
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3553044 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	02/23/24 00:12	
Cadmium	ug/L	ND	2.0	0.60	02/23/24 00:12	
Calcium	ug/L	ND	1000	67.7	02/23/24 00:12	
Chromium	ug/L	ND	10.0	0.42	02/23/24 00:12	
Iron	ug/L	ND	100	30.0	02/23/24 00:12	
Lead	ug/L	ND	10.0	2.5	02/23/24 00:12	
Lithium	ug/L	ND	20.0	6.8	02/23/24 00:12	
Magnesium	ug/L	ND	1000	33.6	02/23/24 00:12	
Molybdenum	ug/L	ND	10.0	0.78	02/23/24 00:12	
Potassium	ug/L	ND	1000	97.8	02/23/24 00:12	
Silica	ug/L	ND	450		02/23/24 00:12	N2
Sodium	ug/L	ND	1000	54.8	02/23/24 00:12	

LABORATORY CONTROL SAMPLE: 3553045

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	966	97	80-120	
Cadmium	ug/L	1000	954	95	80-120	
Calcium	ug/L	10000	9900	99	80-120	
Chromium	ug/L	1000	952	95	80-120	
Iron	ug/L	10000	9770	98	80-120	
Lead	ug/L	1000	918	92	80-120	
Lithium	ug/L	1000	981	98	80-120	
Magnesium	ug/L	10000	9710	97	80-120	
Molybdenum	ug/L	1000	1020	102	80-120	
Potassium	ug/L	10000	9370	94	80-120	
Silica	ug/L	10700	10600	99	80-120	N2
Sodium	ug/L	10000	9320	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553046 3553047

Parameter	Units	50366083002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	1000	1000	990	996	96	96	75-125	1	20	
Cadmium	ug/L	ND	1000	1000	933	932	93	93	75-125	0	20	
Calcium	ug/L	73700	10000	10000	81800	79800	81	61	75-125	2	20	P6
Chromium	ug/L	ND	1000	1000	920	926	92	93	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553046 3553047

Parameter	Units	50366083002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron	ug/L	292	10000	10000	9700	9760	94	95	75-125	1	20	
Lead	ug/L	ND	1000	1000	876	878	87	88	75-125	0	20	
Lithium	ug/L	ND	1000	1000	976	973	97	97	75-125	0	20	
Magnesium	ug/L	18400	10000	10000	27300	26900	89	85	75-125	2	20	
Molybdenum	ug/L	ND	1000	1000	994	996	99	99	75-125	0	20	
Potassium	ug/L	1570	10000	10000	10700	10700	92	91	75-125	1	20	
Silica	ug/L	12400	10700	10700	22800	22600	97	95	75-125	1	20	N2
Sodium	ug/L	3450	10000	10000	12500	12400	91	90	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 776785
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001

METHOD BLANK: 3555705 Matrix: Water
Associated Lab Samples: 50366105001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	02/23/24 21:44	
Iron, Dissolved	ug/L	ND	100	30.0	02/23/24 21:44	
Lithium, Dissolved	ug/L	ND	20.0	6.8	02/23/24 21:44	
Magnesium, Dissolved	ug/L	ND	1000	33.6	02/23/24 21:44	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	02/23/24 21:44	
Potassium, Dissolved	ug/L	ND	1000	97.8	02/23/24 21:44	

LABORATORY CONTROL SAMPLE: 3555706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	929	93	80-120	
Iron, Dissolved	ug/L	10000	9450	95	80-120	
Lithium, Dissolved	ug/L	1000	989	99	80-120	
Magnesium, Dissolved	ug/L	10000	9400	94	80-120	
Molybdenum, Dissolved	ug/L	1000	993	99	80-120	
Potassium, Dissolved	ug/L	10000	9470	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3555707 3555708

Parameter	Units	50365971001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	<100	1000	1000	963	942	95	92	75-125	2	20	
Iron, Dissolved	ug/L	<100	10000	10000	9440	9210	94	92	75-125	2	20	
Lithium, Dissolved	ug/L	<20.0	1000	1000	981	958	98	96	75-125	2	20	
Magnesium, Dissolved	ug/L	13000	10000	10000	22600	22200	96	92	75-125	2	20	
Molybdenum, Dissolved	ug/L	<10.0	1000	1000	996	971	100	97	75-125	3	20	
Potassium, Dissolved	ug/L	0.98 mg/L	10000	10000	10500	10300	96	93	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 776487
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3554352 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	10.0	4.4	02/22/24 03:49	
Arsenic	ug/L	ND	1.0	0.064	02/22/24 03:49	
Barium	ug/L	ND	1.0	0.067	02/22/24 03:49	
Cobalt	ug/L	ND	1.0	0.024	02/22/24 03:49	
Manganese	ug/L	ND	1.0	0.043	02/22/24 03:49	
Selenium	ug/L	ND	1.0	0.23	02/22/24 03:49	
Thallium	ug/L	ND	1.0	0.042	02/22/24 03:49	

LABORATORY CONTROL SAMPLE: 3554353

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	400	401	100	80-120	
Arsenic	ug/L	40	38.2	95	80-120	
Barium	ug/L	40	39.7	99	80-120	
Cobalt	ug/L	40	40.6	102	80-120	
Manganese	ug/L	40	41.5	104	80-120	
Selenium	ug/L	40	39.9	100	80-120	
Thallium	ug/L	40	41.6	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554354 3554355

Parameter	Units	50366204002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	ND	400	400	397	388	98	96	75-125	2	20	
Arsenic	ug/L	ND	40	40	39.1	39.6	97	98	75-125	1	20	
Barium	ug/L	32.3	40	40	71.0	71.4	97	98	75-125	0	20	
Cobalt	ug/L	3.6	40	40	41.5	41.4	95	94	75-125	0	20	
Manganese	ug/L	579	40	40	609	596	75	42	75-125	2	20	E,P6
Selenium	ug/L	ND	40	40	42.3	42.4	104	104	75-125	0	20	
Thallium	ug/L	0.10	40	40	43.8	43.3	109	108	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 776369
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001

METHOD BLANK: 3553927 Matrix: Water
Associated Lab Samples: 50366105001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	4.4	02/21/24 02:09	
Manganese, Dissolved	ug/L	ND	1.0	0.043	02/21/24 02:09	

LABORATORY CONTROL SAMPLE: 3553928

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	400	100	80-120	
Manganese, Dissolved	ug/L	40	41.8	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553929 3553930

Parameter	Units	50365973003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	390	398	97	99	75-125	2	20	
Manganese, Dissolved	ug/L	886	40	40	934	919	120	82	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 776579
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3554741 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	02/21/24 15:51	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	02/21/24 15:51	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	02/21/24 15:51	

LABORATORY CONTROL SAMPLE: 3554742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.2	100	90-110	

SAMPLE DUPLICATE: 3554743

Parameter	Units	50366179001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	158	165	4	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	158	165	4	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3554744

Parameter	Units	50366179003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	186	190	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	186	190	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 776798
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3555735 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/22/24 11:08	

LABORATORY CONTROL SAMPLE: 3555736

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	283	94	80-120	

SAMPLE DUPLICATE: 3555737

Parameter	Units	50366044002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	968000 ug/L	986	2	10	

SAMPLE DUPLICATE: 3555738

Parameter	Units	50366365002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	393	413	5	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 778285
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

SAMPLE DUPLICATE: 3561978

Parameter	Units	50365995002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.3	1	2	H3

SAMPLE DUPLICATE: 3561979

Parameter	Units	50366179004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 776565
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3554691 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	02/21/24 11:39	

LABORATORY CONTROL SAMPLE: 3554692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3554693 3554694

Parameter	Units	50366105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.51	0.50	101	98	90-110	3	20	

MATRIX SPIKE SAMPLE: 3554695

Parameter	Units	50366185019 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.34	68	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 778314
QC Batch Method: HACH 8146
Analysis Method: HACH 8146
Analysis Description: Iron, Ferrous
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3562126 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.20	0.14	03/01/24 14:53	H3,N2

LABORATORY CONTROL SAMPLE: 3562127

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	101	90-110	H3,N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3562128 3562129

Parameter	Units	50366105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Ferrous	mg/L	ND	2.5	2.5	2.7	2.8	102	103	90-110	1	20	H3,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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 776050
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3552830 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	02/17/24 16:39	
Nitrogen, Nitrite	mg/L	ND	0.10	0.0040	02/17/24 16:39	

LABORATORY CONTROL SAMPLE: 3552831

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.1	108	90-110	
Nitrogen, Nitrite	mg/L	1	1.1	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3552832 3552833

Parameter	Units	50366105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	0.91	0.91	91	90	90-110	1	20	
Nitrogen, Nitrite	mg/L	ND	1	1	1.0	1.0	101	101	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 777959
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3560586 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.15	02/29/24 16:57	

LABORATORY CONTROL SAMPLE: 3560587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3560588 3560589

Parameter	Units	50366153001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	12.5			14.3	14.4				0		

MATRIX SPIKE SAMPLE: 3560590

Parameter	Units	50366153002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	10.3		12.0			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 778015
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3560884 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	0.25	02/29/24 23:44	

LABORATORY CONTROL SAMPLE: 3560885

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	10.4	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3560886 3560887

Parameter	Units	50366105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	mg/L	1.1	10	10	8.9	8.9	79	78	80-120	0	20	M3

MATRIX SPIKE SAMPLE: 3560888

Parameter	Units	50366185001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	9.4	40	47.0	94	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 777633
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50366105001

METHOD BLANK: 3559229 Matrix: Water
Associated Lab Samples: 50366105001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	02/28/24 02:03	

LABORATORY CONTROL SAMPLE: 3559230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.7	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3559231 3559232

Parameter	Units	50365995002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	3.6	10	10	13.0	13.2	94	96	80-120	2	20	

MATRIX SPIKE SAMPLE: 3559233

Parameter	Units	50366179004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	9.1	10	19.0	99	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Sample: MW-1A **Lab ID: 50366105001** Collected: 02/16/24 14:30 Received: 02/17/24 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.70 ± 0.849 (1.05) C:NA T:87%**	pCi/L	03/05/24 16:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.03 ± 0.492 (0.830) C:73% T:83%**	pCi/L	03/07/24 14:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.73 ± 1.34 (1.88)**	pCi/L	03/11/24 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Sample: Field Blank **Lab ID: 50366105002** Collected: 02/16/24 15:00 Received: 02/17/24 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.568 ± 0.459 (0.256) C:NA T:96%**	pCi/L	03/05/24 16:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.861 ± 0.514 (0.943) C:74% T:86%**	pCi/L	03/07/24 14:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.43 ± 0.973 (1.20)**	pCi/L	03/11/24 14:05	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 650425
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3169472 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0441 ± 0.259 (0.529) C:NA T:94%	pCi/L	03/05/24 16:16	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

QC Batch: 650426
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50366105001, 50366105002

METHOD BLANK: 3169475 Matrix: Water
Associated Lab Samples: 50366105001, 50366105002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.212 ± 0.341 (0.739) C:77% T:88%	pCi/L	03/07/24 14:27	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
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.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg P4R5 Nov 2023
Pace Project No.: 50366105

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50366105001	**MW-1A**	EPA 9056	776504		
50366105002	**Field Blank**	EPA 9056	776504		
50366105001	**MW-1A**	EPA 3010	776098	EPA 6010	776996
50366105002	**Field Blank**	EPA 3010	776098	EPA 6010	776996
50366105001	**MW-1A**	EPA 3010	776785	EPA 6010	777212
50366105001	**MW-1A**	EPA 200.2	776487	EPA 6020	776732
50366105002	**Field Blank**	EPA 200.2	776487	EPA 6020	776732
50366105001	**MW-1A**	EPA 200.2	776369	EPA 6020	776520
50366105001	**MW-1A**	EPA 7470	777382	EPA 7470	777515
50366105002	**Field Blank**	EPA 7470	777382	EPA 7470	777515
50366105001	**MW-1A**	EPA 903.1	650425		
50366105002	**Field Blank**	EPA 903.1	650425		
50366105001	**MW-1A**	EPA 904.0	650426		
50366105002	**Field Blank**	EPA 904.0	650426		
50366105001	**MW-1A**	Total Radium Calculation	654206		
50366105002	**Field Blank**	Total Radium Calculation	654206		
50366105001	**MW-1A**	SM 2320B	776579		
50366105002	**Field Blank**	SM 2320B	776579		
50366105001	**MW-1A**	SM 2540C	776798		
50366105002	**Field Blank**	SM 2540C	776798		
50366105001	**MW-1A**	SM 4500-H+B	778285		
50366105002	**Field Blank**	SM 4500-H+B	778285		
50366105001	**MW-1A**	SM 4500-S2-D	776565		
50366105002	**Field Blank**	SM 4500-S2-D	776565		
50366105001	**MW-1A**	HACH 8146	778314		
50366105002	**Field Blank**	HACH 8146	778314		
50366105001	**MW-1A**	EPA 353.2	776050		
50366105002	**Field Blank**	EPA 353.2	776050		
50366105001	**MW-1A**	EPA 365.1	777959	EPA 365.1	778144
50366105002	**Field Blank**	EPA 365.1	777959	EPA 365.1	778144
50366105001	**MW-1A**	SM 5310C	778015		
50366105002	**Field Blank**	SM 5310C	778015		
50366105001	**MW-1A**	SM 5310C	777633		

Pace Analytical
WWW.PACELABS.COM

WO# : 50366105

50366105

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A — Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100
	Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone:	(317)579-4082 Fax:
Requested Due Date:	

Section B

Report To:	Mark Breting
Copy To:	
Purchase Order #:	
Project Name:	Petersburg P4R5 Nov 2023
Project #:	

Section C — Invoice Information:

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/54

Regulatory Agency
State / Location
IN

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO2, NO3 Wet	(Br, Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity*, Ferrous Iron, pH	TOC by 5310C	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum	Residual Chlorine (Y/N)	
	Requested Analysis Filtered (Y/N)																						Y			Y				
1	MW 1A					2-16	1430		11	✓	✓	✓		✓					✓									✓		001
2	Field BLANK					2-16	1500		8	✓	✓	✓		✓					✓			X			X			✓		002
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li, sila) (12)	Hayley Tolles / ATLAS	2-16	1630	Fedex	2-16	1630				
6020 (Al, Mn, Co, As, Se, Ba, Tl) (7) + 7470 (Hg)	Fedex	2/17/24	0930	Hannuse	2/17/24	0930	0.7	Y	Y	Y
** Dissolved FF 6010 (B, Fe, Mo, Mg, K, Li) (6) FF 6020 (Al, Mn) (2)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hayley Tolles

SIGNATURE of SAMPLER: [signature]

DATE Signed: 2-16-24

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 2/17/24 1230 IL

1. **Courier:** ☑ FED EX ☐ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** 0.6/0.7 | | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

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
Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: NO2/NO3	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1257			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:

COC PAGE 1 of 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1												1	1			2	1	2	1	1			1					WT	✓	✓		✓
2												↓	1			1	↓	↓	↓				↓					↓	✓	✓		✓
3																																	
4																																	
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

May 2024

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 01, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50371997001	**MW-35D1**	Water	05/01/24 14:15	05/01/24 16:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50371997001	**MW-35D1**	EPA 9056	KBB	3	PASI-I
		EPA 6010	ABH	11	PASI-I
		EPA 6010	ABH	5	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50371997001	**MW-35D1**					
EPA 9056	Chloride	33.8	mg/L	2.5	05/14/24 05:33	
EPA 9056	Fluoride	0.35	mg/L	0.10	05/14/24 05:15	
EPA 9056	Sulfate	692	mg/L	25.0	05/14/24 05:50	
EPA 6010	Calcium	242000	ug/L	2000	05/07/24 21:14	
EPA 6010	Iron	8530	ug/L	100	05/07/24 19:02	
EPA 6010	Lithium	375	ug/L	20.0	05/07/24 19:02	
EPA 6010	Magnesium	66200	ug/L	1000	05/07/24 19:02	
EPA 6010	Molybdenum	38.8	ug/L	10.0	05/07/24 19:02	
EPA 6010	Potassium	8970	ug/L	1000	05/07/24 19:02	
EPA 6010	Sodium	59300	ug/L	1000	05/07/24 19:02	
EPA 6010	Lithium, Dissolved	385	ug/L	20.0	05/08/24 20:07	
EPA 6010	Magnesium, Dissolved	65600	ug/L	1000	05/08/24 20:07	
EPA 6010	Molybdenum, Dissolved	38.1	ug/L	10.0	05/08/24 20:07	
EPA 6010	Potassium, Dissolved	9230	ug/L	1000	05/08/24 20:07	
EPA 6020	Arsenic	1.2	ug/L	1.0	05/04/24 00:32	
EPA 6020	Barium	85.0	ug/L	1.0	05/04/24 00:32	
EPA 6020	Cobalt	2.2	ug/L	1.0	05/04/24 00:32	
EPA 6020	Manganese	848	ug/L	10.0	05/04/24 00:28	
EPA 903.1	Radium-226	1.79 ± 0.917 (1.20) C:NA T:85%	pCi/L		05/23/24 12:53	
EPA 904.0	Radium-228	0.0906 ± 0.356 (0.807) C:81% T:83%	pCi/L		05/16/24 16:01	
Total Radium Calculation	Total Radium	1.88 ± 1.27 (2.01)	pCi/L		05/23/24 15:48	
SM 2320B	Alkalinity, Total as CaCO3	292	mg/L	10.0	05/02/24 22:09	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	292	mg/L	10.0	05/02/24 22:09	
SM 2540C	Total Dissolved Solids	1180	mg/L	20.0	05/06/24 11:44	
SM 4500-H+B	pH at 25 Degrees C	7.2	Std. Units	0.10	05/07/24 15:27	H3
EPA 365.1	Phosphate as P04	3.0	mg/L	0.15	05/15/24 12:43	
SM 5310C	Dissolved Organic Carbon	2.1	mg/L	1.0	05/07/24 22:43	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

Sample: MW-35D1 **Lab ID: 50371997001** Collected: 05/01/24 14:15 Received: 05/01/24 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**33.8**	mg/L	2.5	0.67	10		05/14/24 05:33	16887-00-6	
Fluoride	**0.35**	mg/L	0.10	0.017	1		05/14/24 05:15	16984-48-8	
Sulfate	**692**	mg/L	25.0	19.0	100		05/14/24 05:50	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	11.4	1	05/04/24 08:10	05/07/24 19:02	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/04/24 08:10	05/07/24 19:02	7440-43-9	
Calcium	**242000**	ug/L	2000	113	2	05/04/24 08:10	05/07/24 21:14	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/04/24 08:10	05/07/24 19:02	7440-47-3	
Iron	**8530**	ug/L	100	18.1	1	05/04/24 08:10	05/07/24 19:02	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/04/24 08:10	05/07/24 19:02	7439-92-1	
Lithium	**375**	ug/L	20.0	5.1	1	05/04/24 08:10	05/07/24 19:02	7439-93-2	
Magnesium	**66200**	ug/L	1000	32.8	1	05/04/24 08:10	05/07/24 19:02	7439-95-4	
Molybdenum	**38.8**	ug/L	10.0	1.1	1	05/04/24 08:10	05/07/24 19:02	7439-98-7	
Potassium	**8970**	ug/L	1000	120	1	05/04/24 08:10	05/07/24 19:02	7440-09-7	
Sodium	**59300**	ug/L	1000	48.2	1	05/04/24 08:10	05/07/24 19:02	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	ND	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 20:07	7440-42-8	
Lithium, Dissolved	**385**	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 20:07	7439-93-2	
Magnesium, Dissolved	**65600**	ug/L	1000	32.8	1	05/08/24 07:58	05/08/24 20:07	7439-95-4	
Molybdenum, Dissolved	**38.1**	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 20:07	7439-98-7	
Potassium, Dissolved	**9230**	ug/L	1000	120	1	05/08/24 07:58	05/08/24 20:07	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/03/24 07:45	05/04/24 00:32	7440-36-0	
Arsenic	**1.2**	ug/L	1.0	0.10	1	05/03/24 07:45	05/04/24 00:32	7440-38-2	
Barium	**85.0**	ug/L	1.0	0.062	1	05/03/24 07:45	05/04/24 00:32	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/03/24 07:45	05/04/24 00:32	7440-41-7	
Cobalt	**2.2**	ug/L	1.0	0.060	1	05/03/24 07:45	05/04/24 00:32	7440-48-4	
Manganese	**848**	ug/L	10.0	1.5	10	05/03/24 07:45	05/04/24 00:28	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/03/24 07:45	05/04/24 00:32	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/03/24 07:45	05/04/24 00:32	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/04/24 15:55	05/06/24 22:51	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/08/24 11:45	05/08/24 21:06	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

Sample: MW-35D1 **Lab ID: 50371997001** Collected: 05/01/24 14:15 Received: 05/01/24 16:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**292**	mg/L	10.0	10.0	1		05/02/24 22:09		
Alkalinity,Bicarbonate (CaCO3)	**292**	mg/L	10.0	10.0	1		05/02/24 22:09		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		05/02/24 22:09		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1180**	mg/L	20.0	20.0	1		05/06/24 11:44		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.2**	Std. Units	0.10	0.10	1		05/07/24 15:27		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 14:27	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/02/24 23:21	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**3.0**	mg/L	0.15	0.13	1	05/10/24 11:30	05/15/24 12:43		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.1**	mg/L	1.0	0.25	1		05/07/24 22:43		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 788297
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3606274 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/09/24 10:41	
Fluoride	mg/L	ND	0.10	0.017	05/09/24 10:41	
Sulfate	mg/L	ND	0.25	0.19	05/09/24 10:41	

LABORATORY CONTROL SAMPLE: 3606275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	0.98	98	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606276 3606277

Parameter	Units	50371984004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	68.4	25	25	90.0	91.5	86	92	80-120	2	15	
Fluoride	mg/L	0.72	1	1	1.7	1.7	95	98	80-120	2	15	
Sulfate	mg/L	107	50	50	148	150	83	87	80-120	1	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 788508
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3606931 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/08/24 19:29	

LABORATORY CONTROL SAMPLE: 3606932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606933 3606934

Parameter	Units	50371984004 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	5.7	1.2	114	24	75-125		20	1d,M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 787738
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3603465 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	05/07/24 18:25	
Cadmium	ug/L	ND	2.0	0.74	05/07/24 18:25	
Calcium	ug/L	ND	1000	56.7	05/07/24 18:25	
Chromium	ug/L	ND	10.0	1.4	05/07/24 18:25	
Iron	ug/L	ND	100	18.1	05/07/24 18:25	
Lead	ug/L	ND	10.0	4.0	05/07/24 18:25	
Lithium	ug/L	ND	20.0	5.1	05/07/24 18:25	
Magnesium	ug/L	ND	1000	32.8	05/07/24 18:25	
Molybdenum	ug/L	ND	10.0	1.1	05/07/24 18:25	
Potassium	ug/L	ND	1000	120	05/07/24 18:25	
Sodium	ug/L	ND	1000	48.2	05/07/24 18:25	

LABORATORY CONTROL SAMPLE: 3603466

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	992	99	80-120	
Cadmium	ug/L	1000	965	97	80-120	
Calcium	ug/L	10000	10100	101	80-120	
Chromium	ug/L	1000	994	99	80-120	
Iron	ug/L	10000	9970	100	80-120	
Lead	ug/L	1000	941	94	80-120	
Lithium	ug/L	1000	1030	103	80-120	
Magnesium	ug/L	10000	9990	100	80-120	
Molybdenum	ug/L	1000	1030	103	80-120	
Potassium	ug/L	10000	9750	97	80-120	
Sodium	ug/L	10000	9770	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3603467 3603468

Parameter	Units	50371974005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	<100	1000	1000	1030	1000	102	99	75-125	3	20	
Cadmium	ug/L	<2.0	1000	1000	977	945	98	94	75-125	3	20	
Calcium	ug/L	62300	10000	10000	72000	69800	97	75	75-125	3	20	
Chromium	ug/L	<10.0	1000	1000	1000	970	100	97	75-125	3	20	
Iron	ug/L	502	10000	10000	10500	10100	100	96	75-125	4	20	
Lead	ug/L	<10.0	1000	1000	942	909	94	91	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3603467 3603468

Parameter	Units	50371974005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	<20.0	1000	1000	1060	1010	106	101	75-125	5	20	
Magnesium	ug/L	19100	10000	10000	29000	28100	99	90	75-125	3	20	
Molybdenum	ug/L	<10.0	1000	1000	1050	1020	105	102	75-125	3	20	
Potassium	ug/L	1150	10000	10000	11200	10700	101	96	75-125	5	20	
Sodium	ug/L	3480	10000	10000	13400	12800	99	94	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 788433
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3606766 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/08/24 19:57	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/08/24 19:57	
Magnesium, Dissolved	ug/L	ND	1000	32.8	05/08/24 19:57	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/08/24 19:57	
Potassium, Dissolved	ug/L	ND	1000	120	05/08/24 19:57	

LABORATORY CONTROL SAMPLE: 3606767

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	1000	100	80-120	
Lithium, Dissolved	ug/L	1000	1040	104	80-120	
Magnesium, Dissolved	ug/L	10000	10100	101	80-120	
Molybdenum, Dissolved	ug/L	1000	1030	103	80-120	
Potassium, Dissolved	ug/L	10000	9820	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606768 3606769

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	144	1000	1000	1170	1160	103	101	75-125	1	20	
Lithium, Dissolved	ug/L	ND	1000	1000	1020	1020	102	102	75-125	0	20	
Magnesium, Dissolved	ug/L	26100	10000	10000	35800	35200	97	91	75-125	2	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1050	1040	104	104	75-125	0	20	
Potassium, Dissolved	ug/L	6200	10000	10000	15800	15800	96	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 787899
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3604189 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/03/24 20:05	
Arsenic	ug/L	ND	1.0	0.10	05/03/24 20:05	
Barium	ug/L	ND	1.0	0.062	05/03/24 20:05	
Beryllium	ug/L	ND	0.20	0.020	05/03/24 20:05	
Cobalt	ug/L	ND	1.0	0.060	05/03/24 20:05	
Manganese	ug/L	ND	1.0	0.15	05/03/24 20:05	
Selenium	ug/L	ND	1.0	0.36	05/03/24 20:05	
Thallium	ug/L	ND	1.0	0.079	05/03/24 20:05	

LABORATORY CONTROL SAMPLE: 3604190

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.1	105	80-120	
Arsenic	ug/L	40	41.1	103	80-120	
Barium	ug/L	40	39.5	99	80-120	
Beryllium	ug/L	40	39.7	99	80-120	
Cobalt	ug/L	40	41.3	103	80-120	
Manganese	ug/L	40	41.6	104	80-120	
Selenium	ug/L	40	41.1	103	80-120	
Thallium	ug/L	40	39.3	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604191 3604192

Parameter	Units	50371974005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<1.0	40	40	42.5	41.9	106	105	75-125	1	20	
Arsenic	ug/L	<1.0	40	40	40.8	40.0	100	98	75-125	2	20	
Barium	ug/L	26.8	40	40	66.1	65.4	98	97	75-125	1	20	
Beryllium	ug/L	<0.20	40	40	39.9	39.5	100	99	75-125	1	20	
Cobalt	ug/L	<1.0	40	40	39.0	38.8	97	96	75-125	1	20	
Manganese	ug/L	19.6	40	40	58.7	58.9	98	98	75-125	0	20	
Selenium	ug/L	<1.0	40	40	40.3	39.5	100	98	75-125	2	20	
Thallium	ug/L	<1.0	40	40	40.3	40.0	101	100	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 788119
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3605410 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	05/06/24 22:44	

LABORATORY CONTROL SAMPLE: 3605411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	416	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605412 3605413

Parameter	Units	50372108002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	422	417	105	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 787928
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3604349 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/02/24 22:09	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	05/02/24 22:09	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	05/02/24 22:09	

LABORATORY CONTROL SAMPLE: 3604350

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.0	104	90-110	

SAMPLE DUPLICATE: 3604351

Parameter	Units	50372013013 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	412	419	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	412	419	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3604352

Parameter	Units	50371989001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	290	298	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	290	298	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 788244
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3606156 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/06/24 11:37	

LABORATORY CONTROL SAMPLE: 3606157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3606158

Parameter	Units	50372134001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	20200	20500	2	10	

SAMPLE DUPLICATE: 3606159

Parameter	Units	50372058002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	469	471	0	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 788516
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50371997001

SAMPLE DUPLICATE: 3606949

Parameter	Units	50371984004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.4	8.3	1	2	H3

SAMPLE DUPLICATE: 3606950

Parameter	Units	50372085002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.7	8.7	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 788186
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3605923 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/04/24 14:27	

LABORATORY CONTROL SAMPLE: 3605924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.48	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605925 3605926

Parameter	Units	50371997001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.42	0.42	82	82	90-110	0	20	M3

MATRIX SPIKE SAMPLE: 3605927

Parameter	Units	50372107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.45	88	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 787931
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3604369 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/02/24 23:08	

LABORATORY CONTROL SAMPLE: 3604370

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604371 3604372

Parameter	Units	50371989001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.0	1.0	101	100	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 789179
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3610546 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/15/24 12:34	

LABORATORY CONTROL SAMPLE: 3610547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610548 3610549

Parameter	Units	50372455002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	3.6			5.4	5.2				3		

MATRIX SPIKE SAMPLE: 3610550

Parameter	Units	50372458002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	4.1		5.6			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 788566
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50371997001

METHOD BLANK: 3607236 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/07/24 16:46	

LABORATORY CONTROL SAMPLE: 3607237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607238 3607239

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.7	10	10	10.9	11.1	92	94	80-120	2	20	

MATRIX SPIKE SAMPLE: 3607240

Parameter	Units	50371295002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	1.1	10	10.5	94	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

Sample: MW-35D1 **Lab ID: 50371997001** Collected: 05/01/24 14:15 Received: 05/01/24 16:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.79 ± 0.917 (1.20) C:NA T:85%**	pCi/L	05/23/24 12:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0906 ± 0.356 (0.807) C:81% T:83%**	pCi/L	05/16/24 16:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.88 ± 1.27 (2.01)**	pCi/L	05/23/24 15:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 666742
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50371997001

METHOD BLANK: 3246105 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.361 ± 0.324 (0.648) C:79% T:92%	pCi/L	05/16/24 15:59	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

QC Batch: 666741
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50371997001

METHOD BLANK: 3246104 Matrix: Water
Associated Lab Samples: 50371997001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0883 ± 0.212 (0.410) C:NA T:84%	pCi/L	05/23/24 12:40	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1d	RPD not calculable due to low spike recovery
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P5R1
Pace Project No.: 50371997

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50371997001	**MW-35D1**	EPA 9056	788297		
50371997001	**MW-35D1**	EPA 3010	787738	EPA 6010	788606
50371997001	**MW-35D1**	EPA 3010	788433	EPA 6010	788833
50371997001	**MW-35D1**	EPA 200.2	787899	EPA 6020	788057
50371997001	**MW-35D1**	EPA 200.2	788119	EPA 6020	788221
50371997001	**MW-35D1**	EPA 7470	788508	EPA 7470	788809
50371997001	**MW-35D1**	EPA 903.1	666741		
50371997001	**MW-35D1**	EPA 904.0	666742		
50371997001	**MW-35D1**	Total Radium Calculation	671021		
50371997001	**MW-35D1**	SM 2320B	787928		
50371997001	**MW-35D1**	SM 2540C	788244		
50371997001	**MW-35D1**	SM 4500-H+B	788516		
50371997001	**MW-35D1**	SM 4500-S2-D	788186		
50371997001	**MW-35D1**	EPA 353.2	787931		
50371997001	**MW-35D1**	EPA 365.1	789179	EPA 365.1	790125
50371997001	**MW-35D1**	SM 5310C	788566		

WO# : 50371997

50371997

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Docun

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be co

Page : Of

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg [redacted] May 2024	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:	P5R1	Pace Profile #:	10498/60

Regulatory Agency
State / Location
IN

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N)	Analyses Test	TDS/ NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity,pH	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum				Residual Chlorine (Y/N)	
																		Y/N					Y			Y							
1	MW-35D1	WT	G	5/1/24	1415				8	4	3	3								✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
2																																	
3																																	
4																																	
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li) (11)	Mohammed Bazlamit	5/1/2024	16:00	[signature]	5/1/24	1600	1.3	Y	N	Y
6020 (Be, Mn, Co, As, Se, Sb, Ba, Tl) (8), 7470 (Hg)										
** Dissolved FF 6010 (B, Mo, Mg, K, Li) (5) FF 6020 (Al) (1)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Mohammed Bazlamit					
SIGNATURE of SAMPLER:	[signature]	DATE Signed: 5/1/2024 5/1/2024				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: LR 5/1/24 1745

1. **Courier:** ☐ FED EX ☐ UPS ☒ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H
4. **Cooler Temperature(s):** 1.4/1.3 | | | |
   (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____
6. **Ice Type:** ☒ Wet ☐ Blue ☐ None
7. **Was the PM notified of out of temp cooler?:** ☐ Yes ☒ No
   Cooler temp should be above freezing to 6°C LR 5/1
8. **EZ Bottle Order?** ☐ Yes ☒ No
   If yes but not on COC what is the EZ Bottle Order Number?:

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)		X	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.**	X		
Short Hold Time Analysis (48 hours or less)? **Analysis:** NO_3	X		**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 X
Rush TAT Requested (4 days or less):		X	Residual Chlorine Check (Total/Amenable/Free Cyanide)			X
Custody Signatures Present?	X		Headspace Wisconsin Sulfide?			X
Containers Intact?:	X		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent X
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	X		Trip Blank Present?		X	
Extra labels on Terracore Vials? (soils only)		X	Trip Blank Custody Seals?:			X

COMMENTS:

COC PAGE 1 of 1

Sample Container Count

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

									AMBER GLASS							PLASTIC										OTHER								
			MeOH (only)																											Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			SBS																											Red	Yellow	Green	Black
			DI			VOA																										
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H		VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1														1			2		2	1	1	1		1					WT	✓	✓		✓
2																																	
3																																	
4																																	
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 02, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372034001	**MW-1**	Water	05/01/24 20:10	05/02/24 09:30

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372034001	**MW-1**	EPA 9056	KBB	3	PASI-I
		EPA 6010	JPK	9	PASI-I
		EPA 6020	MTM	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372034001	**MW-1**					
EPA 9056	Chloride	3.9	mg/L	0.25	05/11/24 12:52	
EPA 9056	Fluoride	0.10	mg/L	0.10	05/11/24 12:52	
EPA 9056	Sulfate	127	mg/L	2.5	05/11/24 13:10	
EPA 6010	Boron	109	ug/L	100	05/08/24 00:01	
EPA 6010	Calcium	123000	ug/L	1000	05/08/24 00:01	
EPA 6010	Iron	300	ug/L	100	05/08/24 00:01	
EPA 6010	Manganese	13.4	ug/L	10.0	05/08/24 00:01	
EPA 6020	Barium	41.5	ug/L	1.0	05/04/24 03:10	
EPA 6020	Copper	1.5	ug/L	1.0	05/04/24 03:10	
EPA 903.1	Radium-226	0.228 ± 0.474 (0.855) C:NA T:89%	pCi/L		05/16/24 15:03	
EPA 904.0	Radium-228	0.302 ± 0.305 (0.623) C:83% T:81%	pCi/L		05/13/24 16:00	
Total Radium Calculation	Total Radium	0.530 ± 0.779 (1.48)	pCi/L		05/17/24 09:25	
SM 2540C	Total Dissolved Solids	530	mg/L	10.0	05/06/24 11:44	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

Sample: MW-1 **Lab ID: 50372034001** Collected: 05/01/24 20:10 Received: 05/02/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**3.9**	mg/L	0.25	0.067	1		05/11/24 12:52	16887-00-6	
Fluoride	**0.10**	mg/L	0.10	0.017	1		05/11/24 12:52	16984-48-8	
Sulfate	**127**	mg/L	2.5	1.9	10		05/11/24 13:10	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**109**	ug/L	100	6.2	1	05/05/24 20:38	05/08/24 00:01	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/05/24 20:38	05/08/24 00:01	7440-43-9	
Calcium	**123000**	ug/L	1000	67.7	1	05/05/24 20:38	05/08/24 00:01	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/05/24 20:38	05/08/24 00:01	7440-47-3	
Iron	**300**	ug/L	100	30.0	1	05/05/24 20:38	05/08/24 00:01	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/05/24 20:38	05/08/24 00:01	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/05/24 20:38	05/08/24 00:01	7439-93-2	
Manganese	**13.4**	ug/L	10.0	1.8	1	05/05/24 20:38	05/08/24 00:01	7439-96-5	
Molybdenum	ND	ug/L	10.0	0.78	1	05/05/24 20:38	05/08/24 00:01	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/03/24 15:19	05/04/24 03:10	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/03/24 15:19	05/04/24 03:10	7440-38-2	
Barium	**41.5**	ug/L	1.0	0.062	1	05/03/24 15:19	05/04/24 03:10	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/03/24 15:19	05/04/24 03:10	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/03/24 15:19	05/04/24 03:10	7440-48-4	
Copper	**1.5**	ug/L	1.0	0.66	1	05/03/24 15:19	05/04/24 03:10	7440-50-8	
Selenium	ND	ug/L	1.0	0.36	1	05/03/24 15:19	05/04/24 03:10	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/03/24 15:19	05/04/24 03:10	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	05/03/24 15:19	05/04/24 03:10	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/08/24 11:45	05/08/24 21:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**530**	mg/L	10.0	10.0	1		05/06/24 11:44		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

QC Batch: 788297
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372034001

METHOD BLANK: 3606274 Matrix: Water
Associated Lab Samples: 50372034001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/09/24 10:41	
Fluoride	mg/L	ND	0.10	0.017	05/09/24 10:41	
Sulfate	mg/L	ND	0.25	0.19	05/09/24 10:41	

LABORATORY CONTROL SAMPLE: 3606275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	0.98	98	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606276 3606277

Parameter	Units	50371984004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	68.4	25	25	90.0	91.5	86	92	80-120	2	15	
Fluoride	mg/L	0.72	1	1	1.7	1.7	95	98	80-120	2	15	
Sulfate	mg/L	107	50	50	148	150	83	87	80-120	1	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

QC Batch: 788508
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372034001

METHOD BLANK: 3606931 Matrix: Water
Associated Lab Samples: 50372034001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/08/24 19:29	

LABORATORY CONTROL SAMPLE: 3606932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606933 3606934

Parameter	Units	50371984004 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	5.7	1.2	114	24	75-125		20	1d,M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

QC Batch: 787944
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372034001

METHOD BLANK: 3604648 Matrix: Water
Associated Lab Samples: 50372034001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/07/24 23:56	
Cadmium	ug/L	ND	2.0	0.60	05/07/24 23:56	
Calcium	ug/L	ND	1000	67.7	05/07/24 23:56	
Chromium	ug/L	ND	10.0	0.42	05/07/24 23:56	
Iron	ug/L	ND	100	30.0	05/07/24 23:56	
Lead	ug/L	ND	10.0	2.5	05/07/24 23:56	
Lithium	ug/L	ND	20.0	6.8	05/07/24 23:56	
Manganese	ug/L	ND	10.0	1.8	05/07/24 23:56	
Molybdenum	ug/L	ND	10.0	0.78	05/07/24 23:56	

LABORATORY CONTROL SAMPLE: 3604649

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	904	90	80-120	
Cadmium	ug/L	1000	897	90	80-120	
Calcium	ug/L	10000	9330	93	80-120	
Chromium	ug/L	1000	916	92	80-120	
Iron	ug/L	10000	9270	93	80-120	
Lead	ug/L	1000	879	88	80-120	
Lithium	ug/L	1000	966	97	80-120	
Manganese	ug/L	1000	917	92	80-120	
Molybdenum	ug/L	1000	952	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604650 3604651

Parameter	Units	50372079004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	45.1J	1000	1000	945	964	90	92	75-125	2	20	
Cadmium	ug/L	<0.60	1000	1000	879	885	88	89	75-125	1	20	
Calcium	ug/L	31800	10000	10000	40400	39200	86	74	75-125	3	20	M0
Chromium	ug/L	3.8J	1000	1000	892	900	89	90	75-125	1	20	
Iron	ug/L	3980	10000	10000	13100	13000	91	91	75-125	1	20	
Lead	ug/L	5.0J	1000	1000	844	848	84	84	75-125	1	20	
Lithium	ug/L	<6.8	1000	1000	934	929	93	92	75-125	1	20	
Manganese	ug/L	5430	1000	1000	6200	5990	77	56	75-125	3	20	P6
Molybdenum	ug/L	3.5J	1000	1000	939	945	94	94	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

QC Batch: 787975
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372034001

METHOD BLANK: 3604730 Matrix: Water
Associated Lab Samples: 50372034001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/04/24 02:15	
Arsenic	ug/L	ND	1.0	0.10	05/04/24 02:15	
Barium	ug/L	ND	1.0	0.062	05/04/24 02:15	
Beryllium	ug/L	ND	0.20	0.020	05/04/24 02:15	
Cobalt	ug/L	ND	1.0	0.060	05/04/24 02:15	
Copper	ug/L	ND	1.0	0.66	05/04/24 02:15	
Selenium	ug/L	ND	1.0	0.36	05/04/24 02:15	
Thallium	ug/L	ND	1.0	0.079	05/04/24 02:15	
Zinc	ug/L	ND	3.0	1.3	05/04/24 02:15	

LABORATORY CONTROL SAMPLE: 3604731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.5	106	80-120	
Arsenic	ug/L	40	39.8	100	80-120	
Barium	ug/L	40	38.7	97	80-120	
Beryllium	ug/L	40	37.6	94	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Copper	ug/L	40	38.3	96	80-120	
Selenium	ug/L	40	41.9	105	80-120	
Thallium	ug/L	40	39.1	98	80-120	
Zinc	ug/L	40	38.8	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604732 3604733

Parameter	Units	50371899003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.26	40	40	42.4	42.6	106	106	75-125	0	20	
Arsenic	ug/L	0.26J	40	40	39.0	40.1	97	100	75-125	3	20	
Barium	ug/L	9.3	40	40	47.8	47.9	96	97	75-125	0	20	
Beryllium	ug/L	<0.020	40	40	38.4	38.4	96	96	75-125	0	20	
Cobalt	ug/L	0.17J	40	40	38.5	38.9	96	97	75-125	1	20	
Copper	ug/L	1.1	40	40	36.9	37.5	90	91	75-125	2	20	
Selenium	ug/L	0.44J	40	40	38.3	39.4	95	97	75-125	3	20	
Thallium	ug/L	0.13J	40	40	39.5	39.7	98	99	75-125	1	20	
Zinc	ug/L	1160	40	40	1190	1210	69	127	75-125	2	20	E,P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

QC Batch: 788244
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372034001

METHOD BLANK: 3606156 Matrix: Water
Associated Lab Samples: 50372034001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/06/24 11:37	

LABORATORY CONTROL SAMPLE: 3606157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3606158

Parameter	Units	50372134001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	20200	20500	2	10	

SAMPLE DUPLICATE: 3606159

Parameter	Units	50372058002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	469	471	0	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

Sample: MW-1 **Lab ID: 50372034001** Collected: 05/01/24 20:10 Received: 05/02/24 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.228 ± 0.474 (0.855) C:NA T:89%**	pCi/L	05/16/24 15:03	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.302 ± 0.305 (0.623) C:83% T:81%**	pCi/L	05/13/24 16:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.530 ± 0.779 (1.48)**	pCi/L	05/17/24 09:25	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

QC Batch: 666618
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372034001

METHOD BLANK: 3245584 Matrix: Water
Associated Lab Samples: 50372034001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.138 ± 0.271 (0.495) C:NA T:88%	pCi/L	05/16/24 14:32	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

QC Batch: 666619
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372034001

METHOD BLANK: 3245585 Matrix: Water
Associated Lab Samples: 50372034001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.237 ± 0.279 (0.586) C:83% T:88%	pCi/L	05/13/24 12:06	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1d	RPD not calculable due to low spike recovery
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372034

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372034001	**MW-1**	EPA 9056	788297		
50372034001	**MW-1**	EPA 3010	787944	EPA 6010	788636
50372034001	**MW-1**	EPA 200.2	787975	EPA 6020	788145
50372034001	**MW-1**	EPA 7470	788508	EPA 7470	788809
50372034001	**MW-1**	EPA 903.1	666618		
50372034001	**MW-1**	EPA 904.0	666619		
50372034001	**MW-1**	Total Radium Calculation	669444		
50372034001	**MW-1**	SM 2540C	788244		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTO

The Chain-of-Custody is a LE ely.

WO# : 50372034

50372034

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Info	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P1R2	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/58

Regulatory Agency
State / Location
IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals by 6010/6020/7470	Cl, F, SO4 by 9056	TDS by 2540C	Rad-226/228 + Sum	Residual Chlorine (Y/N)
1	MW-1			5/1/24	1215	5/1/24	2010		5	X		X							X	X	X	X	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)		5-2-24	700		5/2	7:00				
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg	Joy Williams	5-2	930	PACE	5/2/24	930	2.7	Y	N	Y
Rad to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Chris Burks					
SIGNATURE of SAMPLER:	Chris Burks	DATE Signed: 05-01-24				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 5/2/24 1000

1. Courier: ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. Cooler Temperature(s): (Initial/Corrected) 2.9/2.7 | | |

RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No

Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? ☐ Yes ☑ No

If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: Subout		✓				
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:

COC PAGE 1 of 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1											✓			
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 02, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372035001	**MW-1**	Water	05/01/24 20:10	05/02/24 09:30

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372035001	**MW-1**	EPA 9056	KBB	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	ABH	3	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372035001	**MW-1**					
EPA 9056	Chloride	3.8	mg/L	0.25	05/11/24 13:27	
EPA 9056	Fluoride	0.11	mg/L	0.10	05/11/24 13:27	
EPA 9056	Sulfate	130	mg/L	2.5	05/11/24 13:45	
EPA 6010	Boron	109	ug/L	100	05/08/24 00:03	
EPA 6010	Calcium	122000	ug/L	1000	05/08/24 00:03	
EPA 6010	Magnesium	36200	ug/L	1000	05/08/24 00:03	
EPA 6010	Potassium	1140	ug/L	1000	05/08/24 00:03	
EPA 6010	Sodium	4200	ug/L	1000	05/08/24 00:03	
EPA 6010	Boron, Dissolved	122	ug/L	100	05/08/24 20:09	
EPA 6020	Barium	39.6	ug/L	1.0	05/04/24 03:14	
EPA 6020	Manganese	2.0	ug/L	1.0	05/04/24 03:14	
EPA 903.1	Radium-226	-0.123 ± 0.482 (1.02) C:NA T:78%	pCi/L		05/23/24 13:06	
EPA 904.0	Radium-228	0.780 ± 0.410 (0.716) C:79% T:85%	pCi/L		05/16/24 16:01	
Total Radium Calculation	Total Radium	0.780 ± 0.892 (1.74)	pCi/L		05/23/24 15:48	
SM 2320B	Alkalinity, Total as CaCO3	342	mg/L	10.0	05/02/24 21:24	
SM 2540C	Total Dissolved Solids	525	mg/L	10.0	05/06/24 11:44	
SM 4500-H+B	pH at 25 Degrees C	7.8	Std. Units	0.10	05/07/24 15:30	H3
EPA 353.2	Nitrogen, Nitrate	1.7	mg/L	0.10	05/02/24 23:30	
EPA 365.1	Phosphate as P04	0.16	mg/L	0.15	05/15/24 12:43	
SM 5310C	Dissolved Organic Carbon	1.4	mg/L	1.0	05/07/24 23:09	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

Sample: MW-1 **Lab ID: 50372035001** Collected: 05/01/24 20:10 Received: 05/02/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**3.8**	mg/L	0.25	0.067	1		05/11/24 13:27	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	0.017	1		05/11/24 13:27	16984-48-8	
Sulfate	**130**	mg/L	2.5	1.9	10		05/11/24 13:45	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**109**	ug/L	100	6.2	1	05/05/24 20:38	05/08/24 00:03	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/05/24 20:38	05/08/24 00:03	7440-43-9	
Calcium	**122000**	ug/L	1000	67.7	1	05/05/24 20:38	05/08/24 00:03	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/05/24 20:38	05/08/24 00:03	7440-47-3	
Iron	ND	ug/L	100	30.0	1	05/05/24 20:38	05/08/24 00:03	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/05/24 20:38	05/08/24 00:03	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/05/24 20:38	05/08/24 00:03	7439-93-2	
Magnesium	**36200**	ug/L	1000	33.6	1	05/05/24 20:38	05/08/24 00:03	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	05/05/24 20:38	05/08/24 00:03	7439-98-7	
Potassium	**1140**	ug/L	1000	97.8	1	05/05/24 20:38	05/08/24 00:03	7440-09-7	
Sodium	**4200**	ug/L	1000	54.8	1	05/05/24 20:38	05/08/24 00:03	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**122**	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 20:09	7440-42-8	
Lithium, Dissolved	ND	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 20:09	7439-93-2	
Molybdenum, Dissolved	ND	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 20:09	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/03/24 15:19	05/04/24 03:14	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/03/24 15:19	05/04/24 03:14	7440-38-2	
Barium	**39.6**	ug/L	1.0	0.062	1	05/03/24 15:19	05/04/24 03:14	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/03/24 15:19	05/04/24 03:14	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/03/24 15:19	05/04/24 03:14	7440-48-4	
Manganese	**2.0**	ug/L	1.0	0.15	1	05/03/24 15:19	05/04/24 03:14	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/03/24 15:19	05/04/24 03:14	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/03/24 15:19	05/04/24 03:14	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/04/24 15:55	05/06/24 22:54	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/08/24 11:45	05/08/24 21:11	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

Sample: MW-1 **Lab ID: 50372035001** Collected: 05/01/24 20:10 Received: 05/02/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**342**	mg/L	10.0	10.0	1		05/02/24 21:24		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**525**	mg/L	10.0	10.0	1		05/06/24 11:44		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.8**	Std. Units	0.10	0.10	1		05/07/24 15:30		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 14:27	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**1.7**	mg/L	0.10	0.013	1		05/02/24 23:30	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.16**	mg/L	0.15	0.13	1	05/10/24 11:30	05/15/24 12:43		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.4**	mg/L	1.0	0.25	1		05/07/24 23:09		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 788297
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372035001

METHOD BLANK: 3606274 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/09/24 10:41	
Fluoride	mg/L	ND	0.10	0.017	05/09/24 10:41	
Sulfate	mg/L	ND	0.25	0.19	05/09/24 10:41	

LABORATORY CONTROL SAMPLE: 3606275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	0.98	98	80-120	
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606276 3606277

Parameter	Units	50371984004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	68.4	25	25	90.0	91.5	86	92	80-120	2	15	
Fluoride	mg/L	0.72	1	1	1.7	1.7	95	98	80-120	2	15	
Sulfate	mg/L	107	50	50	148	150	83	87	80-120	1	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 788508
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372035001

METHOD BLANK: 3606931 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/08/24 19:29	

LABORATORY CONTROL SAMPLE: 3606932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606933 3606934

Parameter	Units	50371984004 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	5.7	1.2	114	24	75-125		20	1d,M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 787944
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372035001

METHOD BLANK: 3604648 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/07/24 23:56	
Cadmium	ug/L	ND	2.0	0.60	05/07/24 23:56	
Calcium	ug/L	ND	1000	67.7	05/07/24 23:56	
Chromium	ug/L	ND	10.0	0.42	05/07/24 23:56	
Iron	ug/L	ND	100	30.0	05/07/24 23:56	
Lead	ug/L	ND	10.0	2.5	05/07/24 23:56	
Lithium	ug/L	ND	20.0	6.8	05/07/24 23:56	
Magnesium	ug/L	ND	1000	33.6	05/07/24 23:56	
Molybdenum	ug/L	ND	10.0	0.78	05/07/24 23:56	
Potassium	ug/L	ND	1000	97.8	05/07/24 23:56	
Sodium	ug/L	ND	1000	54.8	05/07/24 23:56	

LABORATORY CONTROL SAMPLE: 3604649

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	904	90	80-120	
Cadmium	ug/L	1000	897	90	80-120	
Calcium	ug/L	10000	9330	93	80-120	
Chromium	ug/L	1000	916	92	80-120	
Iron	ug/L	10000	9270	93	80-120	
Lead	ug/L	1000	879	88	80-120	
Lithium	ug/L	1000	966	97	80-120	
Magnesium	ug/L	10000	9270	93	80-120	
Molybdenum	ug/L	1000	952	95	80-120	
Potassium	ug/L	10000	9280	93	80-120	
Sodium	ug/L	10000	9200	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604650 3604651

Parameter	Units	50372079004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	45.1J	1000	1000	945	964	90	92	75-125	2	20	
Cadmium	ug/L	<0.60	1000	1000	879	885	88	89	75-125	1	20	
Calcium	ug/L	31800	10000	10000	40400	39200	86	74	75-125	3	20	M0
Chromium	ug/L	3.8J	1000	1000	892	900	89	90	75-125	1	20	
Iron	ug/L	3980	10000	10000	13100	13000	91	91	75-125	1	20	
Lead	ug/L	5.0J	1000	1000	844	848	84	84	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604650 3604651

Parameter	Units	50372079004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	<6.8	1000	1000	934	929	93	92	75-125	1	20	
Magnesium	ug/L	12900	10000	10000	21600	21300	87	83	75-125	2	20	
Molybdenum	ug/L	3.5J	1000	1000	939	945	94	94	75-125	1	20	
Potassium	ug/L	1620	10000	10000	10600	10500	90	88	75-125	2	20	
Sodium	ug/L	71600	10000	10000	80000	75700	84	41	75-125	5	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 788433
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372035001

METHOD BLANK: 3606766 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/08/24 19:57	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/08/24 19:57	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/08/24 19:57	

LABORATORY CONTROL SAMPLE: 3606767

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	1000	100	80-120	
Lithium, Dissolved	ug/L	1000	1040	104	80-120	
Molybdenum, Dissolved	ug/L	1000	1030	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606768 3606769

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	144	1000	1000	1170	1160	103	101	75-125	1	20	
Lithium, Dissolved	ug/L	ND	1000	1000	1020	1020	102	102	75-125	0	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1050	1040	104	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 787975
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372035001

METHOD BLANK: 3604730 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/04/24 02:15	
Arsenic	ug/L	ND	1.0	0.10	05/04/24 02:15	
Barium	ug/L	ND	1.0	0.062	05/04/24 02:15	
Beryllium	ug/L	ND	0.20	0.020	05/04/24 02:15	
Cobalt	ug/L	ND	1.0	0.060	05/04/24 02:15	
Manganese	ug/L	ND	1.0	0.15	05/04/24 02:15	
Selenium	ug/L	ND	1.0	0.36	05/04/24 02:15	
Thallium	ug/L	ND	1.0	0.079	05/04/24 02:15	

LABORATORY CONTROL SAMPLE: 3604731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.5	106	80-120	
Arsenic	ug/L	40	39.8	100	80-120	
Barium	ug/L	40	38.7	97	80-120	
Beryllium	ug/L	40	37.6	94	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Manganese	ug/L	40	41.3	103	80-120	
Selenium	ug/L	40	41.9	105	80-120	
Thallium	ug/L	40	39.1	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604732 3604733

Parameter	Units	50371899003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.26	40	40	42.4	42.6	106	106	75-125	0	20	
Arsenic	ug/L	0.26J	40	40	39.0	40.1	97	100	75-125	3	20	
Barium	ug/L	9.3	40	40	47.8	47.9	96	97	75-125	0	20	
Beryllium	ug/L	<0.020	40	40	38.4	38.4	96	96	75-125	0	20	
Cobalt	ug/L	0.17J	40	40	38.5	38.9	96	97	75-125	1	20	
Manganese	ug/L	8.1	40	40	48.2	48.8	100	102	75-125	1	20	
Selenium	ug/L	0.44J	40	40	38.3	39.4	95	97	75-125	3	20	
Thallium	ug/L	0.13J	40	40	39.5	39.7	98	99	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 788119
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372035001

METHOD BLANK: 3605410 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	05/06/24 22:44	

LABORATORY CONTROL SAMPLE: 3605411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	416	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605412 3605413

Parameter	Units	50372108002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	422	417	105	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 787926
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372035001

METHOD BLANK: 3604344 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/02/24 21:24	

LABORATORY CONTROL SAMPLE: 3604345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.7	101	90-110	

SAMPLE DUPLICATE: 3604346

Parameter	Units	50372041001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	251	254	1	20	

SAMPLE DUPLICATE: 3604347

Parameter	Units	50372013001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	364	367	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 788244
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372035001

METHOD BLANK: 3606156 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/06/24 11:37	

LABORATORY CONTROL SAMPLE: 3606157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3606158

Parameter	Units	50372134001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	20200	20500	2	10	

SAMPLE DUPLICATE: 3606159

Parameter	Units	50372058002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	469	471	0	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 788516
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372035001

SAMPLE DUPLICATE: 3606949

Parameter	Units	50371984004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.4	8.3	1	2	H3

SAMPLE DUPLICATE: 3606950

Parameter	Units	50372085002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.7	8.7	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 788186
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372035001

METHOD BLANK: 3605923 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/04/24 14:27	

LABORATORY CONTROL SAMPLE: 3605924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.48	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605925 3605926

Parameter	Units	50371997001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.42	0.42	82	82	90-110	0	20	M3

MATRIX SPIKE SAMPLE: 3605927

Parameter	Units	50372107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.45	88	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 787931
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372035001

METHOD BLANK: 3604369 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/02/24 23:08	

LABORATORY CONTROL SAMPLE: 3604370

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604371 3604372

Parameter	Units	50371989001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.0	1.0	101	100	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 789179
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372035001

METHOD BLANK: 3610546 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/15/24 12:34	

LABORATORY CONTROL SAMPLE: 3610547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610548 3610549

Parameter	Units	50372455002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	3.6			5.4	5.2				3		

MATRIX SPIKE SAMPLE: 3610550

Parameter	Units	50372458002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	4.1		5.6			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 788566
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372035001

METHOD BLANK: 3607236 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/07/24 16:46	

LABORATORY CONTROL SAMPLE: 3607237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607238 3607239

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.7	10	10	10.9	11.1	92	94	80-120	2	20	

MATRIX SPIKE SAMPLE: 3607240

Parameter	Units	50371295002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	1.1	10	10.5	94	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

Sample: MW-1 **Lab ID: 50372035001** Collected: 05/01/24 20:10 Received: 05/02/24 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.123 ± 0.482 (1.02) C:NA T:78%**	pCi/L	05/23/24 13:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.780 ± 0.410 (0.716) C:79% T:85%**	pCi/L	05/16/24 16:01	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.780 ± 0.892 (1.74)**	pCi/L	05/23/24 15:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 666742
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372035001

METHOD BLANK: 3246105 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.361 ± 0.324 (0.648) C:79% T:92%	pCi/L	05/16/24 15:59	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

QC Batch: 666741
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372035001

METHOD BLANK: 3246104 Matrix: Water
Associated Lab Samples: 50372035001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0883 ± 0.212 (0.410) C:NA T:84%	pCi/L	05/23/24 12:40	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1d	RPD not calculable due to low spike recovery
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372035

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372035001	**MW-1**	EPA 9056	788297		
50372035001	**MW-1**	EPA 3010	787944	EPA 6010	788636
50372035001	**MW-1**	EPA 3010	788433	EPA 6010	788833
50372035001	**MW-1**	EPA 200.2	787975	EPA 6020	788145
50372035001	**MW-1**	EPA 200.2	788119	EPA 6020	788221
50372035001	**MW-1**	EPA 7470	788508	EPA 7470	788809
50372035001	**MW-1**	EPA 903.1	666741		
50372035001	**MW-1**	EPA 904.0	666742		
50372035001	**MW-1**	Total Radium Calculation	671021		
50372035001	**MW-1**	SM 2320B	787926		
50372035001	**MW-1**	SM 2540C	788244		
50372035001	**MW-1**	SM 4500-H+B	788516		
50372035001	**MW-1**	SM 4500-S2-D	788186		
50372035001	**MW-1**	EPA 353.2	787931		
50372035001	**MW-1**	EPA 365.1	789179	EPA 365.1	790125
50372035001	**MW-1**	SM 5310C	788566		

Pace Analytical
WWW.PACELABS.COM

WO# : 50372035

50372035

CHAIN-OF-CUS

The Chain-of-Custody is a [illegible] rately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P2R2	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/59

Regulatory Agency
State / Location
IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: Total Metals 6010/6020/7470	Diss. Metals 6010/6020	DOC by 5310	Alkalinity/pH	Cl, F, SO4 by 9056	TDS by 2540C	Nitrate by 353.2	Phosphate by 365.1	Sulfide by 4500	Rad 226/228 + Sum to PA	Residual Chlorine (Y/N)
1	MW-1			5/1/24	1215	5/1/24	2010		10	X	X	X		X					X	X	X	X	X	X	X	X	X	
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li (11)	[signature]	5-2-24	200	[signature]	5/2	2.00				
6020: Be, Mn, Co, As, Se, Sb, Ba, Tl (8). 7470: Hg (1)	[signature]	5-2	9:30	[signature]	5/2/24	0930	2.7	Y	N	Y
Diss 6010: B, Mo, Li (3). Diss 6020: Al, Mn (2)										
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chris Burks

SIGNATURE of SAMPLER: [signature] DATE Signed: 05-01-24

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 5/2/24 1000

1. Courier: ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H
4. Cooler Temperature(s): 2.9/2.7 (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____
6. Ice Type: ☑ Wet ☐ Blue ☐ None
7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C
8. EZ Bottle Order? ☐ Yes ☑ No
If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: Nitrate + Subout	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1045			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:

COC PAGE 1 of 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix
1													1			2	1	2	1	1	1		1					WT
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
Red	Yellow	Green	Black
HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
✓	✓		✓

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 02, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372107001	**MW-1A**	Water	05/02/24 11:30	05/02/24 15:10

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372107001	**MW-1A**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	JTR	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372107001	**MW-1A**					
EPA 9056	Chloride	94.6	mg/L	2.5	05/11/24 10:58	
EPA 9056	Sulfate	129	mg/L	2.5	05/11/24 10:58	
EPA 6010	Boron	156	ug/L	100	05/09/24 02:05	
EPA 6010	Calcium	70800	ug/L	1000	05/09/24 02:05	
EPA 6010	Iron	3110	ug/L	100	05/09/24 02:05	
EPA 6010	Magnesium	21100	ug/L	1000	05/09/24 02:05	
EPA 6010	Potassium	1390	ug/L	1000	05/09/24 02:05	
EPA 6010	Sodium	76300	ug/L	1000	05/09/24 02:05	
EPA 6020	Barium	84.5	ug/L	1.0	05/07/24 03:11	
EPA 6020	Manganese	159	ug/L	1.0	05/07/24 03:11	
EPA 903.1	Radium-226	1.88 ± 0.839 (1.00) C:NA T:90%	pCi/L		05/24/24 14:48	
EPA 904.0	Radium-228	1.24 ± 0.514 (0.813) C:79% T:84%	pCi/L		05/21/24 16:10	
Total Radium Calculation	Total Radium	3.12 ± 1.35 (1.81)	pCi/L		05/28/24 14:51	
SM 2320B	Alkalinity, Total as CaCO3	214	mg/L	10.0	05/04/24 14:47	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	214	mg/L	10.0	05/04/24 14:47	
SM 2540C	Total Dissolved Solids	513	mg/L	10.0	05/07/24 11:06	
SM 4500-H+B	pH at 25 Degrees C	7.2	Std. Units	0.10	05/08/24 12:50	H3
EPA 365.1	Phosphate as P04	0.22	mg/L	0.15	05/15/24 13:53	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

Sample: MW-1A **Lab ID: 50372107001** Collected: 05/02/24 11:30 Received: 05/02/24 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**94.6**	mg/L	2.5	0.67	10		05/11/24 10:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/08/24 06:15	16984-48-8	
Sulfate	**129**	mg/L	2.5	1.9	10		05/11/24 10:58	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**156**	ug/L	100	6.2	1	05/07/24 08:18	05/09/24 02:05	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/07/24 08:18	05/09/24 02:05	7440-43-9	
Calcium	**70800**	ug/L	1000	67.7	1	05/07/24 08:18	05/09/24 02:05	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/07/24 08:18	05/09/24 02:05	7440-47-3	
Iron	**3110**	ug/L	100	30.0	1	05/07/24 08:18	05/09/24 02:05	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/07/24 08:18	05/09/24 02:05	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/07/24 08:18	05/09/24 02:05	7439-93-2	
Magnesium	**21100**	ug/L	1000	33.6	1	05/07/24 08:18	05/09/24 02:05	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	05/07/24 08:18	05/09/24 02:05	7439-98-7	
Potassium	**1390**	ug/L	1000	97.8	1	05/07/24 08:18	05/09/24 02:05	7440-09-7	
Sodium	**76300**	ug/L	1000	54.8	1	05/07/24 08:18	05/09/24 02:05	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/04/24 15:55	05/07/24 03:11	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	05/04/24 15:55	05/07/24 03:11	7440-38-2	
Barium	**84.5**	ug/L	1.0	0.077	1	05/04/24 15:55	05/07/24 03:11	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/04/24 15:55	05/07/24 22:09	7440-41-7	
Cobalt	ND	ug/L	1.0	0.046	1	05/04/24 15:55	05/07/24 03:11	7440-48-4	
Manganese	**159**	ug/L	1.0	0.17	1	05/04/24 15:55	05/07/24 03:11	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	05/04/24 15:55	05/07/24 03:11	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/04/24 15:55	05/07/24 03:11	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:24	05/12/24 15:13	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**214**	mg/L	10.0	10.0	1		05/04/24 14:47		
Alkalinity,Bicarbonate (CaCO3)	**214**	mg/L	10.0	10.0	1		05/04/24 14:47		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		05/04/24 14:47		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**513**	mg/L	10.0	10.0	1		05/07/24 11:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

Sample: MW-1A **Lab ID: 50372107001** Collected: 05/02/24 11:30 Received: 05/02/24 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.2**	Std. Units	0.10	0.10	1		05/08/24 12:50		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 14:27	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/04/24 02:37	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.22**	mg/L	0.15	0.13	1	05/14/24 09:30	05/15/24 13:53		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	ND	mg/L	1.0	0.25	1		05/08/24 02:36		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788302
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372107001

METHOD BLANK: 3606297 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/07/24 10:30	
Fluoride	mg/L	ND	0.10	0.017	05/07/24 10:30	
Sulfate	mg/L	ND	0.25	0.19	05/07/24 10:30	

LABORATORY CONTROL SAMPLE: 3606298

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.5	99	80-120	
Fluoride	mg/L	1	1.0	105	80-120	
Sulfate	mg/L	5	5.1	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606299 3606300

Parameter	Units	50372091003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	14.9	2.5	2.5	17.7	17.7	114	116	80-120	0	15	
Fluoride	mg/L	2.1	1	1	3.2	3.2	109	109	80-120	0	15	
Sulfate	mg/L	<2.0	5	5	5.4	5.4	97	97	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788696
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372107001

METHOD BLANK: 3607931 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/12/24 14:26	

LABORATORY CONTROL SAMPLE: 3607932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.4	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607933 3607934

Parameter	Units	50372104001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.091	5	5	5.6	5.5	113	109	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788211
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372107001

METHOD BLANK: 3606067 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/09/24 02:01	
Cadmium	ug/L	ND	2.0	0.60	05/09/24 02:01	
Calcium	ug/L	ND	1000	67.7	05/09/24 02:01	
Chromium	ug/L	ND	10.0	0.42	05/09/24 02:01	
Iron	ug/L	ND	100	30.0	05/09/24 02:01	
Lead	ug/L	ND	10.0	2.5	05/09/24 02:01	
Lithium	ug/L	ND	20.0	6.8	05/09/24 02:01	
Magnesium	ug/L	ND	1000	33.6	05/09/24 02:01	
Molybdenum	ug/L	ND	10.0	0.78	05/09/24 02:01	
Potassium	ug/L	ND	1000	97.8	05/09/24 02:01	
Sodium	ug/L	ND	1000	54.8	05/09/24 02:01	

LABORATORY CONTROL SAMPLE: 3606068

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	921	92	80-120	
Cadmium	ug/L	1000	927	93	80-120	
Calcium	ug/L	10000	9540	95	80-120	
Chromium	ug/L	1000	935	94	80-120	
Iron	ug/L	10000	9460	95	80-120	
Lead	ug/L	1000	902	90	80-120	
Lithium	ug/L	1000	995	100	80-120	
Magnesium	ug/L	10000	9380	94	80-120	
Molybdenum	ug/L	1000	991	99	80-120	
Potassium	ug/L	10000	9440	94	80-120	
Sodium	ug/L	10000	9370	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606069 3606070

Parameter	Units	50372182002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	1000	1000	995	1010	92	94	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	903	922	90	92	75-125	2	20	
Calcium	ug/L	123000	10000	10000	127000	129000	40	54	75-125	1	20	P6
Chromium	ug/L	ND	1000	1000	893	910	89	91	75-125	2	20	
Iron	ug/L	22300	10000	10000	30500	30800	82	85	75-125	1	20	
Lead	ug/L	ND	1000	1000	845	866	84	87	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606069 3606070

Parameter	Units	50372182002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	ND	1000	1000	954	975	95	97	75-125	2	20	
Magnesium	ug/L	22500	10000	10000	30500	30800	80	83	75-125	1	20	
Molybdenum	ug/L	15.8	1000	1000	978	996	96	98	75-125	2	20	
Potassium	ug/L	1270	10000	10000	10200	10500	90	92	75-125	3	20	
Sodium	ug/L	88000	10000	10000	92900	94300	49	63	75-125	1	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788120
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372107001

METHOD BLANK: 3605418 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.49	05/07/24 01:50	
Arsenic	ug/L	ND	1.0	0.075	05/07/24 01:50	
Barium	ug/L	ND	1.0	0.077	05/07/24 01:50	
Beryllium	ug/L	ND	0.20	0.035	05/07/24 20:42	
Cobalt	ug/L	ND	1.0	0.046	05/07/24 01:50	
Manganese	ug/L	ND	1.0	0.17	05/07/24 01:50	
Selenium	ug/L	ND	1.0	0.20	05/07/24 01:50	
Thallium	ug/L	ND	1.0	0.040	05/07/24 01:50	

LABORATORY CONTROL SAMPLE: 3605419

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.7	104	80-120	
Arsenic	ug/L	40	38.8	97	80-120	
Barium	ug/L	40	39.9	100	80-120	
Beryllium	ug/L	40	39.4	99	80-120	
Cobalt	ug/L	40	41.4	104	80-120	
Manganese	ug/L	40	41.3	103	80-120	
Selenium	ug/L	40	40.0	100	80-120	
Thallium	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605420 3605421

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	41.9	42.0	105	105	75-125	0	20	
Arsenic	ug/L	2.9	40	40	41.3	41.9	96	98	75-125	2	20	
Barium	ug/L	151	40	40	189	189	96	95	75-125	0	20	
Beryllium	ug/L	ND	40	40	39.7	40.4	99	101	75-125	2	20	
Cobalt	ug/L	ND	40	40	38.4	39.1	96	97	75-125	2	20	
Manganese	ug/L	310	40	40	341	345	78	86	75-125	1	20	E
Selenium	ug/L	ND	40	40	39.3	40.0	98	100	75-125	2	20	
Thallium	ug/L	ND	40	40	41.8	41.9	104	105	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788174
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372107001

METHOD BLANK: 3605846 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/04/24 14:47	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	05/04/24 14:47	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	05/04/24 14:47	

LABORATORY CONTROL SAMPLE: 3605847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.0	100	90-110	

SAMPLE DUPLICATE: 3605848

Parameter	Units	50372106010 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	403	404	0	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	403	404	0	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3605849

Parameter	Units	50372108002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	298	301	1	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	298	301	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788248
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372107001

METHOD BLANK: 3606168 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/07/24 10:54	

LABORATORY CONTROL SAMPLE: 3606169

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	279	93	80-120	

SAMPLE DUPLICATE: 3606170

Parameter	Units	50372125003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	207	196	5	10	

SAMPLE DUPLICATE: 3606957

Parameter	Units	50372105001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	574	584	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788717
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372107001

SAMPLE DUPLICATE: 3608068

Parameter	Units	50372105001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.5	2	2	H3

SAMPLE DUPLICATE: 3608069

Parameter	Units	50372141003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.5	7.4	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788186
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372107001

METHOD BLANK: 3605923 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/04/24 14:27	

LABORATORY CONTROL SAMPLE: 3605924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.48	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605925 3605926

Parameter	Units	50371997001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.42	0.42	82	82	90-110	0	20	M3

MATRIX SPIKE SAMPLE: 3605927

Parameter	Units	50372107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.45	88	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788150
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372107001

METHOD BLANK: 3605762 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/04/24 02:14	

LABORATORY CONTROL SAMPLE: 3605763

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605764 3605765

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.1	1.1	101	103	90-110	2	20	

MATRIX SPIKE SAMPLE: 3605766

Parameter	Units	50372136005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.2	1	2.2	101	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 789735
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372107001

METHOD BLANK: 3613492 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/15/24 13:48	

LABORATORY CONTROL SAMPLE: 3613493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3613494 3613495

Parameter	Units	50372107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	0.22			1.7	1.9				12		

MATRIX SPIKE SAMPLE: 3613496

Parameter	Units	50372108001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	0.42		1.9			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 788566
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372107001

METHOD BLANK: 3607236 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/07/24 16:46	

LABORATORY CONTROL SAMPLE: 3607237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607238 3607239

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.7	10	10	10.9	11.1	92	94	80-120	2	20	

MATRIX SPIKE SAMPLE: 3607240

Parameter	Units	50371295002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	1.1	10	10.5	94	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

Sample: MW-1A **Lab ID: 50372107001** Collected: 05/02/24 11:30 Received: 05/02/24 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.88 ± 0.839 (1.00) C:NA T:90%**	pCi/L	05/24/24 14:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.24 ± 0.514 (0.813) C:79% T:84%**	pCi/L	05/21/24 16:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**3.12 ± 1.35 (1.81)**	pCi/L	05/28/24 14:51	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 667538
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372107001

METHOD BLANK: 3250408 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.436 ± 0.380 (0.765) C:80% T:83%	pCi/L	05/21/24 16:09	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

QC Batch: 667537
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372107001

METHOD BLANK: 3250407 Matrix: Water
Associated Lab Samples: 50372107001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.198 ± 0.239 (0.364) C:NA T:79%	pCi/L	05/24/24 14:28	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372107001	**MW-1A**	EPA 9056	788302		
50372107001	**MW-1A**	EPA 3010	788211	EPA 6010	788893
50372107001	**MW-1A**	EPA 200.2	788120	EPA 6020	788223
50372107001	**MW-1A**	EPA 7470	788696	EPA 7470	789457
50372107001	**MW-1A**	EPA 903.1	667537		
50372107001	**MW-1A**	EPA 904.0	667538		
50372107001	**MW-1A**	Total Radium Calculation	671725		
50372107001	**MW-1A**	SM 2320B	788174		
50372107001	**MW-1A**	SM 2540C	788248		
50372107001	**MW-1A**	SM 4500-H+B	788717		
50372107001	**MW-1A**	SM 4500-S2-D	788186		
50372107001	**MW-1A**	EPA 353.2	788150		
50372107001	**MW-1A**	EPA 365.1	789735	EPA 365.1	790174
50372107001	**MW-1A**	SM 5310C	788566		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Do

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must

WO# : 50372107

50372107

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4 May 2024	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:	P4 R5	Pace Profile #:	10498/60

Regulatory Agency	
State / Location	IN

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity,pH	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum	Residual Chlorine (Y/N)
	Requested Analysis Filtered (Y/N)																					Y			Y				
1	MW-1A	WT	G	5/2/24	1130				10	3	2	4		1				X	X	X	X	X	X	X	X	X	X	
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li) (11)	Mohammed Bazlamit	5/2/24	1510	T.H	5/2/24	15:10	2.9	Y	N	Y
020 (Be, Mn, Co, As, Se, Sb, Ba, Tl) (8), 7470 (Hg)										
* Dissolved FF 6010 (B, Mo, Mg, K, Li) (5) FF 6020 (Al) (1)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Mohammed Bazlamit					
SIGNATURE of SAMPLER:		DATE Signed: 5/2/24				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 5/2/24 19:11 TH

1. Courier: ☐FED EX | UPS ☑CLIENT ☐PACE ☐NOW/JETT | 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 7 8 A B C D E F G H

4. Cooler Temperature(s): 2.9/2.9 | | | |

(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: | |Bubble Wrap ☑ Bubble Bags | | None | | Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: | | Yes ☐ No

Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? | Yes ☑ No

If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: NO3 Wet	✓					
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:

COC PAGE 1 **of** 1

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER						Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			MeOH (only)																										Red	Yellow	Green	Black
			SBS																													
			DI																													
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2D	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1																2		1	2	1		1					3		✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 02, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372109001	**MW-35SS**	Water	05/02/24 10:15	05/02/24 15:10
50372109002	**MW-35D2**	Water	05/02/24 13:45	05/02/24 15:10
50372109003	**DUP-13**	Water	05/02/24 08:00	05/02/24 15:10

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372109001	**MW-35SS**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	ABH	5	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	JTR	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372109002	**MW-35D2**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	ABH	5	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	JTR	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372109003	**DUP-13**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	ABH	5	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 6020	CAW	1	PASI-I

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	JTR	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372109001	**MW-35SS**					
EPA 9056	Chloride	23.5	mg/L	2.5	05/08/24 03:12	
EPA 9056	Fluoride	0.46	mg/L	0.10	05/08/24 02:55	
EPA 9056	Sulfate	81.8	mg/L	2.5	05/08/24 03:12	
EPA 6010	Boron	580	ug/L	100	05/07/24 22:39	
EPA 6010	Calcium	46200	ug/L	1000	05/07/24 22:39	
EPA 6010	Iron	212	ug/L	100	05/07/24 22:39	
EPA 6010	Lithium	53.0	ug/L	20.0	05/07/24 22:39	
EPA 6010	Magnesium	12900	ug/L	1000	05/07/24 22:39	
EPA 6010	Molybdenum	20.0	ug/L	10.0	05/07/24 22:39	
EPA 6010	Potassium	3990	ug/L	1000	05/07/24 22:39	
EPA 6010	Sodium	121000	ug/L	1000	05/07/24 22:39	
EPA 6010	Boron, Dissolved	604	ug/L	100	05/08/24 20:40	
EPA 6010	Lithium, Dissolved	47.1	ug/L	20.0	05/08/24 20:40	
EPA 6010	Magnesium, Dissolved	12600	ug/L	1000	05/08/24 20:40	
EPA 6010	Molybdenum, Dissolved	20.7	ug/L	10.0	05/08/24 20:40	
EPA 6010	Potassium, Dissolved	3820	ug/L	1000	05/08/24 20:40	
EPA 6020	Barium	197	ug/L	1.0	05/07/24 03:31	
EPA 6020	Manganese	90.3	ug/L	1.0	05/07/24 03:31	
EPA 903.1	Radium-226	0.448 ± 0.714 (1.23) C:NA T:85%	pCi/L		05/24/24 15:33	
EPA 904.0	Radium-228	0.272 ± 0.399 (0.859) C:76% T:85%	pCi/L		05/22/24 15:41	
Total Radium Calculation	Total Radium	0.720 ± 1.11 (2.09)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	354	mg/L	10.0	05/04/24 14:47	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	354	mg/L	10.0	05/04/24 14:47	
SM 2540C	Total Dissolved Solids	466	mg/L	10.0	05/07/24 11:11	
SM 4500-H+B	pH at 25 Degrees C	7.6	Std. Units	0.10	05/08/24 12:53	H3
EPA 353.2	Nitrogen, Nitrate	0.19	mg/L	0.10	05/04/24 02:25	
SM 5310C	Dissolved Organic Carbon	1.3	mg/L	1.0	05/08/24 19:06	
50372109002	**MW-35D2**					
EPA 9056	Chloride	14.8	mg/L	0.25	05/08/24 03:46	
EPA 9056	Fluoride	2.2	mg/L	0.10	05/08/24 03:46	
EPA 9056	Sulfate	87.8	mg/L	2.5	05/08/24 04:03	
EPA 6010	Boron	1160	ug/L	100	05/07/24 22:41	
EPA 6010	Calcium	17600	ug/L	1000	05/07/24 22:41	
EPA 6010	Iron	178	ug/L	100	05/07/24 22:41	
EPA 6010	Lithium	21.4	ug/L	20.0	05/07/24 22:41	
EPA 6010	Magnesium	5300	ug/L	1000	05/07/24 22:41	
EPA 6010	Molybdenum	16.6	ug/L	10.0	05/07/24 22:41	
EPA 6010	Potassium	1720	ug/L	1000	05/07/24 22:41	
EPA 6010	Sodium	173000	ug/L	1000	05/07/24 22:41	
EPA 6010	Boron, Dissolved	1180	ug/L	100	05/08/24 20:42	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372109002	**MW-35D2**					
EPA 6010	Lithium, Dissolved	21.4	ug/L	20.0	05/08/24 20:42	
EPA 6010	Magnesium, Dissolved	5160	ug/L	1000	05/08/24 20:42	
EPA 6010	Molybdenum, Dissolved	17.4	ug/L	10.0	05/08/24 20:42	
EPA 6010	Potassium, Dissolved	1690	ug/L	1000	05/08/24 20:42	
EPA 6020	Barium	108	ug/L	1.0	05/07/24 03:35	
EPA 6020	Manganese	41.4	ug/L	1.0	05/07/24 03:35	
EPA 903.1	Radium-226	0.419 ± 0.388 (0.564) C:NA T:87%	pCi/L		05/24/24 15:45	
EPA 904.0	Radium-228	0.474 ± 0.428 (0.877) C:89% T:81%	pCi/L		05/22/24 15:41	
Total Radium Calculation	Total Radium	0.893 ± 0.816 (1.44)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	369	mg/L	10.0	05/04/24 14:47	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	341	mg/L	10.0	05/04/24 14:47	
SM 2320B	Alkalinity,Carbonate (CaCO3)	27.2	mg/L	10.0	05/04/24 14:47	
SM 2540C	Total Dissolved Solids	468	mg/L	10.0	05/07/24 11:11	
SM 4500-H+B	pH at 25 Degrees C	8.2	Std. Units	0.10	05/08/24 12:54	H3
SM 5310C	Dissolved Organic Carbon	1.2	mg/L	1.0	05/08/24 19:25	
50372109003	**DUP-13**					
EPA 9056	Chloride	24.9	mg/L	2.5	05/08/24 02:04	
EPA 9056	Fluoride	0.48	mg/L	0.10	05/08/24 01:47	
EPA 9056	Sulfate	91.8	mg/L	2.5	05/08/24 02:04	
EPA 6010	Boron	591	ug/L	100	05/07/24 22:43	
EPA 6010	Calcium	48500	ug/L	1000	05/07/24 22:43	
EPA 6010	Iron	365	ug/L	100	05/07/24 22:43	
EPA 6010	Lithium	56.6	ug/L	20.0	05/07/24 22:43	
EPA 6010	Magnesium	13500	ug/L	1000	05/07/24 22:43	
EPA 6010	Molybdenum	21.5	ug/L	10.0	05/07/24 22:43	
EPA 6010	Potassium	3970	ug/L	1000	05/07/24 22:43	
EPA 6010	Sodium	126000	ug/L	1000	05/07/24 22:43	
EPA 6010	Boron, Dissolved	612	ug/L	100	05/08/24 20:44	
EPA 6010	Lithium, Dissolved	46.7	ug/L	20.0	05/08/24 20:44	
EPA 6010	Magnesium, Dissolved	12500	ug/L	1000	05/08/24 20:44	
EPA 6010	Molybdenum, Dissolved	20.7	ug/L	10.0	05/08/24 20:44	
EPA 6010	Potassium, Dissolved	3790	ug/L	1000	05/08/24 20:44	
EPA 6020	Arsenic	1.0	ug/L	1.0	05/07/24 03:38	
EPA 6020	Barium	207	ug/L	2.0	05/07/24 23:01	
EPA 6020	Cobalt	1.4	ug/L	1.0	05/07/24 03:38	
EPA 6020	Manganese	110	ug/L	1.0	05/07/24 03:38	
EPA 903.1	Radium-226	0.303 ± 0.683 (1.22) C:NA T:81%	pCi/L		05/24/24 15:45	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372109003	**DUP-13**					
EPA 904.0	Radium-228	0.736 ± 0.465 (0.893) C:88% T:80%	pCi/L		05/22/24 15:41	
Total Radium Calculation	Total Radium	1.04 ± 1.15 (2.11)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	355	mg/L	10.0	05/04/24 14:47	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	355	mg/L	10.0	05/04/24 14:47	
SM 2540C	Total Dissolved Solids	470	mg/L	10.0	05/07/24 11:12	
SM 4500-H+B	pH at 25 Degrees C	7.9	Std. Units	0.10	05/08/24 12:55	H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Sample: MW-35SS **Lab ID: 50372109001** Collected: 05/02/24 10:15 Received: 05/02/24 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**23.5**	mg/L	2.5	0.67	10		05/08/24 03:12	16887-00-6	
Fluoride	**0.46**	mg/L	0.10	0.017	1		05/08/24 02:55	16984-48-8	
Sulfate	**81.8**	mg/L	2.5	1.9	10		05/08/24 03:12	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**580**	ug/L	100	6.2	1	05/06/24 08:17	05/07/24 22:39	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/06/24 08:17	05/07/24 22:39	7440-43-9	
Calcium	**46200**	ug/L	1000	67.7	1	05/06/24 08:17	05/07/24 22:39	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/06/24 08:17	05/07/24 22:39	7440-47-3	
Iron	**212**	ug/L	100	30.0	1	05/06/24 08:17	05/07/24 22:39	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/06/24 08:17	05/07/24 22:39	7439-92-1	
Lithium	**53.0**	ug/L	20.0	6.8	1	05/06/24 08:17	05/07/24 22:39	7439-93-2	
Magnesium	**12900**	ug/L	1000	33.6	1	05/06/24 08:17	05/07/24 22:39	7439-95-4	
Molybdenum	**20.0**	ug/L	10.0	0.78	1	05/06/24 08:17	05/07/24 22:39	7439-98-7	
Potassium	**3990**	ug/L	1000	97.8	1	05/06/24 08:17	05/07/24 22:39	7440-09-7	
Sodium	**121000**	ug/L	1000	54.8	1	05/06/24 08:17	05/07/24 22:39	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**604**	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 20:40	7440-42-8	
Lithium, Dissolved	**47.1**	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 20:40	7439-93-2	
Magnesium, Dissolved	**12600**	ug/L	1000	32.8	1	05/08/24 07:58	05/08/24 20:40	7439-95-4	
Molybdenum, Dissolved	**20.7**	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 20:40	7439-98-7	
Potassium, Dissolved	**3820**	ug/L	1000	120	1	05/08/24 07:58	05/08/24 20:40	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/04/24 15:55	05/07/24 03:31	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	05/04/24 15:55	05/07/24 03:31	7440-38-2	
Barium	**197**	ug/L	1.0	0.077	1	05/04/24 15:55	05/07/24 03:31	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/04/24 15:55	05/07/24 22:53	7440-41-7	
Cobalt	ND	ug/L	1.0	0.046	1	05/04/24 15:55	05/07/24 03:31	7440-48-4	
Manganese	**90.3**	ug/L	1.0	0.17	1	05/04/24 15:55	05/07/24 03:31	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	05/04/24 15:55	05/07/24 03:31	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/04/24 15:55	05/07/24 03:31	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/04/24 15:55	05/07/24 00:09	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:24	05/12/24 15:30	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Sample: MW-35SS **Lab ID: 50372109001** Collected: 05/02/24 10:15 Received: 05/02/24 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**354**	mg/L	10.0	10.0	1		05/04/24 14:47		
Alkalinity,Bicarbonate (CaCO3)	**354**	mg/L	10.0	10.0	1		05/04/24 14:47		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		05/04/24 14:47		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**466**	mg/L	10.0	10.0	1		05/07/24 11:11		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.6**	Std. Units	0.10	0.10	1		05/08/24 12:53		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 14:27	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**0.19**	mg/L	0.10	0.013	1		05/04/24 02:25	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/14/24 09:30	05/15/24 13:58		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.3**	mg/L	1.0	0.25	1		05/08/24 19:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Sample: MW-35D2 **Lab ID: 50372109002** Collected: 05/02/24 13:45 Received: 05/02/24 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**14.8**	mg/L	0.25	0.067	1		05/08/24 03:46	16887-00-6	
Fluoride	**2.2**	mg/L	0.10	0.017	1		05/08/24 03:46	16984-48-8	
Sulfate	**87.8**	mg/L	2.5	1.9	10		05/08/24 04:03	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1160**	ug/L	100	6.2	1	05/06/24 08:17	05/07/24 22:41	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/06/24 08:17	05/07/24 22:41	7440-43-9	
Calcium	**17600**	ug/L	1000	67.7	1	05/06/24 08:17	05/07/24 22:41	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/06/24 08:17	05/07/24 22:41	7440-47-3	
Iron	**178**	ug/L	100	30.0	1	05/06/24 08:17	05/07/24 22:41	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/06/24 08:17	05/07/24 22:41	7439-92-1	
Lithium	**21.4**	ug/L	20.0	6.8	1	05/06/24 08:17	05/07/24 22:41	7439-93-2	
Magnesium	**5300**	ug/L	1000	33.6	1	05/06/24 08:17	05/07/24 22:41	7439-95-4	
Molybdenum	**16.6**	ug/L	10.0	0.78	1	05/06/24 08:17	05/07/24 22:41	7439-98-7	
Potassium	**1720**	ug/L	1000	97.8	1	05/06/24 08:17	05/07/24 22:41	7440-09-7	
Sodium	**173000**	ug/L	1000	54.8	1	05/06/24 08:17	05/07/24 22:41	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1180**	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 20:42	7440-42-8	
Lithium, Dissolved	**21.4**	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 20:42	7439-93-2	
Magnesium, Dissolved	**5160**	ug/L	1000	32.8	1	05/08/24 07:58	05/08/24 20:42	7439-95-4	
Molybdenum, Dissolved	**17.4**	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 20:42	7439-98-7	
Potassium, Dissolved	**1690**	ug/L	1000	120	1	05/08/24 07:58	05/08/24 20:42	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/04/24 15:55	05/07/24 03:35	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	05/04/24 15:55	05/07/24 03:35	7440-38-2	
Barium	**108**	ug/L	1.0	0.077	1	05/04/24 15:55	05/07/24 03:35	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/04/24 15:55	05/07/24 22:57	7440-41-7	
Cobalt	ND	ug/L	1.0	0.046	1	05/04/24 15:55	05/07/24 03:35	7440-48-4	
Manganese	**41.4**	ug/L	1.0	0.17	1	05/04/24 15:55	05/07/24 03:35	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	05/04/24 15:55	05/07/24 03:35	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/04/24 15:55	05/07/24 03:35	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/04/24 15:55	05/07/24 00:12	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:24	05/12/24 15:32	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Sample: MW-35D2 **Lab ID: 50372109002** Collected: 05/02/24 13:45 Received: 05/02/24 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**369**	mg/L	10.0	10.0	1		05/04/24 14:47		
Alkalinity,Bicarbonate (CaCO3)	**341**	mg/L	10.0	10.0	1		05/04/24 14:47		
Alkalinity,Carbonate (CaCO3)	**27.2**	mg/L	10.0	10.0	1		05/04/24 14:47		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**468**	mg/L	10.0	10.0	1		05/07/24 11:11		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**8.2**	Std. Units	0.10	0.10	1		05/08/24 12:54		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 14:27	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/04/24 03:21	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/14/24 09:30	05/15/24 13:58		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.2**	mg/L	1.0	0.25	1		05/08/24 19:25		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Sample: DUP-13 **Lab ID: 50372109003** Collected: 05/02/24 08:00 Received: 05/02/24 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**24.9**	mg/L	2.5	0.67	10		05/08/24 02:04	16887-00-6	
Fluoride	**0.48**	mg/L	0.10	0.017	1		05/08/24 01:47	16984-48-8	
Sulfate	**91.8**	mg/L	2.5	1.9	10		05/08/24 02:04	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**591**	ug/L	100	6.2	1	05/06/24 08:17	05/07/24 22:43	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/06/24 08:17	05/07/24 22:43	7440-43-9	
Calcium	**48500**	ug/L	1000	67.7	1	05/06/24 08:17	05/07/24 22:43	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/06/24 08:17	05/07/24 22:43	7440-47-3	
Iron	**365**	ug/L	100	30.0	1	05/06/24 08:17	05/07/24 22:43	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/06/24 08:17	05/07/24 22:43	7439-92-1	
Lithium	**56.6**	ug/L	20.0	6.8	1	05/06/24 08:17	05/07/24 22:43	7439-93-2	
Magnesium	**13500**	ug/L	1000	33.6	1	05/06/24 08:17	05/07/24 22:43	7439-95-4	
Molybdenum	**21.5**	ug/L	10.0	0.78	1	05/06/24 08:17	05/07/24 22:43	7439-98-7	
Potassium	**3970**	ug/L	1000	97.8	1	05/06/24 08:17	05/07/24 22:43	7440-09-7	
Sodium	**126000**	ug/L	1000	54.8	1	05/06/24 08:17	05/07/24 22:43	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**612**	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 20:44	7440-42-8	
Lithium, Dissolved	**46.7**	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 20:44	7439-93-2	
Magnesium, Dissolved	**12500**	ug/L	1000	32.8	1	05/08/24 07:58	05/08/24 20:44	7439-95-4	
Molybdenum, Dissolved	**20.7**	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 20:44	7439-98-7	
Potassium, Dissolved	**3790**	ug/L	1000	120	1	05/08/24 07:58	05/08/24 20:44	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/04/24 15:55	05/07/24 03:38	7440-36-0	
Arsenic	**1.0**	ug/L	1.0	0.075	1	05/04/24 15:55	05/07/24 03:38	7440-38-2	
Barium	**207**	ug/L	2.0	0.15	2	05/04/24 15:55	05/07/24 23:01	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/04/24 15:55	05/07/24 23:04	7440-41-7	
Cobalt	**1.4**	ug/L	1.0	0.046	1	05/04/24 15:55	05/07/24 03:38	7440-48-4	
Manganese	**110**	ug/L	1.0	0.17	1	05/04/24 15:55	05/07/24 03:38	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	05/04/24 15:55	05/07/24 03:38	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/04/24 15:55	05/07/24 03:38	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/04/24 15:55	05/07/24 00:16	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:24	05/12/24 15:35	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Sample: DUP-13 **Lab ID: 50372109003** Collected: 05/02/24 08:00 Received: 05/02/24 15:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**355**	mg/L	10.0	10.0	1		05/04/24 14:47		
Alkalinity,Bicarbonate (CaCO3)	**355**	mg/L	10.0	10.0	1		05/04/24 14:47		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		05/04/24 14:47		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**470**	mg/L	10.0	10.0	1		05/07/24 11:12		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.9**	Std. Units	0.10	0.10	1		05/08/24 12:55		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 14:27	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/04/24 02:18	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/14/24 09:30	05/15/24 14:00		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	ND	mg/L	1.0	0.25	1		05/08/24 19:51		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788306
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3606316 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/07/24 13:22	
Fluoride	mg/L	ND	0.10	0.017	05/07/24 13:22	
Sulfate	mg/L	ND	0.25	0.19	05/07/24 13:22	

LABORATORY CONTROL SAMPLE: 3606317

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.5	99	80-120	
Fluoride	mg/L	1	1.1	107	80-120	
Sulfate	mg/L	5	5.1	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606318 3606319

Parameter	Units	50372108003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.9	2.5	2.5	12.6	12.6	108	108	80-120	0	15	
Fluoride	mg/L	ND	1	1	1.2	1.2	113	111	80-120	1	15	
Sulfate	mg/L	52.5	50	50	104	103	102	102	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788696
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3607931 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/12/24 14:26	

LABORATORY CONTROL SAMPLE: 3607932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.4	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607933 3607934

Parameter	Units	50372104001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.091	5	5	5.6	5.5	113	109	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 787946
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3604659 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/07/24 21:52	
Cadmium	ug/L	ND	2.0	0.60	05/07/24 21:52	
Calcium	ug/L	ND	1000	67.7	05/07/24 21:52	
Chromium	ug/L	ND	10.0	0.42	05/07/24 21:52	
Iron	ug/L	ND	100	30.0	05/07/24 21:52	
Lead	ug/L	ND	10.0	2.5	05/07/24 21:52	
Lithium	ug/L	ND	20.0	6.8	05/07/24 21:52	
Magnesium	ug/L	ND	1000	33.6	05/07/24 21:52	
Molybdenum	ug/L	ND	10.0	0.78	05/07/24 21:52	
Potassium	ug/L	ND	1000	97.8	05/07/24 21:52	
Sodium	ug/L	ND	1000	54.8	05/07/24 21:52	

LABORATORY CONTROL SAMPLE: 3604660

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	952	95	80-120	
Cadmium	ug/L	1000	935	94	80-120	
Calcium	ug/L	10000	9810	98	80-120	
Chromium	ug/L	1000	961	96	80-120	
Iron	ug/L	10000	9750	97	80-120	
Lead	ug/L	1000	918	92	80-120	
Lithium	ug/L	1000	1010	101	80-120	
Magnesium	ug/L	10000	9720	97	80-120	
Molybdenum	ug/L	1000	1000	100	80-120	
Potassium	ug/L	10000	9810	98	80-120	
Sodium	ug/L	10000	9650	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604661 3604662

Parameter	Units	50372103005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	3430	1000	1000	4430	4480	100	106	75-125	1	20	
Cadmium	ug/L	<2.0	1000	1000	949	960	95	96	75-125	1	20	
Calcium	ug/L	160000	10000	10000	167000	170000	63	96	75-125	2	20	P6
Chromium	ug/L	<10.0	1000	1000	939	955	94	95	75-125	2	20	
Iron	ug/L	28900	10000	10000	37700	38500	88	96	75-125	2	20	
Lead	ug/L	<10.0	1000	1000	871	881	87	88	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604661 3604662

Parameter	Units	50372103005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	51.1	1000	1000	1020	1050	97	100	75-125	3	20	
Magnesium	ug/L	129000	10000	10000	137000	139000	72	99	75-125	2	20	P6
Molybdenum	ug/L	<10.0	1000	1000	1010	1020	101	102	75-125	1	20	
Potassium	ug/L	70900	10000	10000	78500	81100	76	102	75-125	3	20	
Sodium	ug/L	271000	10000	10000	287000	292000	157	203	75-125	2	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788433
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3606766 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/08/24 19:57	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/08/24 19:57	
Magnesium, Dissolved	ug/L	ND	1000	32.8	05/08/24 19:57	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/08/24 19:57	
Potassium, Dissolved	ug/L	ND	1000	120	05/08/24 19:57	

LABORATORY CONTROL SAMPLE: 3606767

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	1000	100	80-120	
Lithium, Dissolved	ug/L	1000	1040	104	80-120	
Magnesium, Dissolved	ug/L	10000	10100	101	80-120	
Molybdenum, Dissolved	ug/L	1000	1030	103	80-120	
Potassium, Dissolved	ug/L	10000	9820	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606768 3606769

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	144	1000	1000	1170	1160	103	101	75-125	1	20	
Lithium, Dissolved	ug/L	ND	1000	1000	1020	1020	102	102	75-125	0	20	
Magnesium, Dissolved	ug/L	26100	10000	10000	35800	35200	97	91	75-125	2	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1050	1040	104	104	75-125	0	20	
Potassium, Dissolved	ug/L	6200	10000	10000	15800	15800	96	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788120
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3605418 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.49	05/07/24 01:50	
Arsenic	ug/L	ND	1.0	0.075	05/07/24 01:50	
Barium	ug/L	ND	1.0	0.077	05/07/24 01:50	
Beryllium	ug/L	ND	0.20	0.035	05/07/24 20:42	
Cobalt	ug/L	ND	1.0	0.046	05/07/24 01:50	
Manganese	ug/L	ND	1.0	0.17	05/07/24 01:50	
Selenium	ug/L	ND	1.0	0.20	05/07/24 01:50	
Thallium	ug/L	ND	1.0	0.040	05/07/24 01:50	

LABORATORY CONTROL SAMPLE: 3605419

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.7	104	80-120	
Arsenic	ug/L	40	38.8	97	80-120	
Barium	ug/L	40	39.9	100	80-120	
Beryllium	ug/L	40	39.4	99	80-120	
Cobalt	ug/L	40	41.4	104	80-120	
Manganese	ug/L	40	41.3	103	80-120	
Selenium	ug/L	40	40.0	100	80-120	
Thallium	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605420 3605421

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	41.9	42.0	105	105	75-125	0	20	
Arsenic	ug/L	2.9	40	40	41.3	41.9	96	98	75-125	2	20	
Barium	ug/L	151	40	40	189	189	96	95	75-125	0	20	
Beryllium	ug/L	ND	40	40	39.7	40.4	99	101	75-125	2	20	
Cobalt	ug/L	ND	40	40	38.4	39.1	96	97	75-125	2	20	
Manganese	ug/L	310	40	40	341	345	78	86	75-125	1	20	E
Selenium	ug/L	ND	40	40	39.3	40.0	98	100	75-125	2	20	
Thallium	ug/L	ND	40	40	41.8	41.9	104	105	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788119
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3605410 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	05/06/24 22:44	

LABORATORY CONTROL SAMPLE: 3605411

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	416	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605412 3605413

Parameter	Units	50372108002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	422	417	105	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788174
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3605846 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/04/24 14:47	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	05/04/24 14:47	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	05/04/24 14:47	

LABORATORY CONTROL SAMPLE: 3605847

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.0	100	90-110	

SAMPLE DUPLICATE: 3605848

Parameter	Units	50372106010 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	403	404	0	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	403	404	0	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3605849

Parameter	Units	50372108002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	298	301	1	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	298	301	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788459 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3606824 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/07/24 11:09	

LABORATORY CONTROL SAMPLE: 3606825

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3606826

Parameter	Units	50372108002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	374	379	1	10	

SAMPLE DUPLICATE: 3606827

Parameter	Units	50372175001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	592	611	3	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788717
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

SAMPLE DUPLICATE: 3608068

Parameter	Units	50372105001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.5	2	2	H3

SAMPLE DUPLICATE: 3608069

Parameter	Units	50372141003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.5	7.4	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788186
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3605923 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/04/24 14:27	

LABORATORY CONTROL SAMPLE: 3605924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.48	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605925 3605926

Parameter	Units	50371997001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.42	0.42	82	82	90-110	0	20	M3

MATRIX SPIKE SAMPLE: 3605927

Parameter	Units	50372107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.45	88	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788150
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109003

METHOD BLANK: 3605762 Matrix: Water
Associated Lab Samples: 50372109001, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/04/24 02:14	

LABORATORY CONTROL SAMPLE: 3605763

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605764 3605765

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.1	1.1	101	103	90-110	2	20	

MATRIX SPIKE SAMPLE: 3605766

Parameter	Units	50372136005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.2	1	2.2	101	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788151
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109002

METHOD BLANK: 3605767 Matrix: Water
Associated Lab Samples: 50372109002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/04/24 03:08	

LABORATORY CONTROL SAMPLE: 3605768

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	102	90-110	

MATRIX SPIKE SAMPLE: 3605769

Parameter	Units	50372136003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.4	1	2.5	103	90-110	

MATRIX SPIKE SAMPLE: 3605770

Parameter	Units	50372182002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	5	5.0	101	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 789735
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3613492 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/15/24 13:48	

LABORATORY CONTROL SAMPLE: 3613493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3613494 3613495

Parameter	Units	50372107001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	0.22			1.7	1.9				12		

MATRIX SPIKE SAMPLE: 3613496

Parameter	Units	50372108001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	0.42		1.9			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 788764
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3608259 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/08/24 17:10	

LABORATORY CONTROL SAMPLE: 3608260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608261 3608262

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.0	10	10	10.3	10.5	93	95	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608263 3608264

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	3.7	10	10	12.9	13.3	93	96	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Sample: MW-35SS **Lab ID: 50372109001** Collected: 05/02/24 10:15 Received: 05/02/24 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.448 ± 0.714 (1.23) C:NA T:85%**	pCi/L	05/24/24 15:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.272 ± 0.399 (0.859) C:76% T:85%**	pCi/L	05/22/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.720 ± 1.11 (2.09)**	pCi/L	05/28/24 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Sample: MW-35D2 **Lab ID: 50372109002** Collected: 05/02/24 13:45 Received: 05/02/24 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.419 ± 0.388 (0.564) C:NA T:87%**	pCi/L	05/24/24 15:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.474 ± 0.428 (0.877) C:89% T:81%**	pCi/L	05/22/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.893 ± 0.816 (1.44)**	pCi/L	05/28/24 15:01	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Sample: DUP-13 **Lab ID: 50372109003** Collected: 05/02/24 08:00 Received: 05/02/24 15:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.303 ± 0.683 (1.22) C:NA T:81%**	pCi/L	05/24/24 15:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.736 ± 0.465 (0.893) C:88% T:80%**	pCi/L	05/22/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.04 ± 1.15 (2.11)**	pCi/L	05/28/24 15:01	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 667225
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3248761 Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.244 ± 0.253 (0.377) C:NA T:95%	pCi/L	05/24/24 15:19	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

QC Batch: 667228
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372109001, 50372109002, 50372109003

METHOD BLANK: 3248767
Matrix: Water
Associated Lab Samples: 50372109001, 50372109002, 50372109003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.534 ± 0.349 (0.645) C:78% T:84%	pCi/L	05/22/24 15:40	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372109001	**MW-35SS**	EPA 9056	788306		
50372109002	**MW-35D2**	EPA 9056	788306		
50372109003	**DUP-13**	EPA 9056	788306		
50372109001	**MW-35SS**	EPA 3010	787946	EPA 6010	788625
50372109002	**MW-35D2**	EPA 3010	787946	EPA 6010	788625
50372109003	**DUP-13**	EPA 3010	787946	EPA 6010	788625
50372109001	**MW-35SS**	EPA 3010	788433	EPA 6010	788833
50372109002	**MW-35D2**	EPA 3010	788433	EPA 6010	788833
50372109003	**DUP-13**	EPA 3010	788433	EPA 6010	788833
50372109001	**MW-35SS**	EPA 200.2	788120	EPA 6020	788223
50372109002	**MW-35D2**	EPA 200.2	788120	EPA 6020	788223
50372109003	**DUP-13**	EPA 200.2	788120	EPA 6020	788223
50372109001	**MW-35SS**	EPA 200.2	788119	EPA 6020	788221
50372109002	**MW-35D2**	EPA 200.2	788119	EPA 6020	788221
50372109003	**DUP-13**	EPA 200.2	788119	EPA 6020	788221
50372109001	**MW-35SS**	EPA 7470	788696	EPA 7470	789457
50372109002	**MW-35D2**	EPA 7470	788696	EPA 7470	789457
50372109003	**DUP-13**	EPA 7470	788696	EPA 7470	789457
50372109001	**MW-35SS**	EPA 903.1	667225		
50372109002	**MW-35D2**	EPA 903.1	667225		
50372109003	**DUP-13**	EPA 903.1	667225		
50372109001	**MW-35SS**	EPA 904.0	667228		
50372109002	**MW-35D2**	EPA 904.0	667228		
50372109003	**DUP-13**	EPA 904.0	667228		
50372109001	**MW-35SS**	Total Radium Calculation	671739		
50372109002	**MW-35D2**	Total Radium Calculation	671739		
50372109003	**DUP-13**	Total Radium Calculation	671739		
50372109001	**MW-35SS**	SM 2320B	788174		
50372109002	**MW-35D2**	SM 2320B	788174		
50372109003	**DUP-13**	SM 2320B	788174		
50372109001	**MW-35SS**	SM 2540C	788459		
50372109002	**MW-35D2**	SM 2540C	788459		
50372109003	**DUP-13**	SM 2540C	788459		
50372109001	**MW-35SS**	SM 4500-H+B	788717		
50372109002	**MW-35D2**	SM 4500-H+B	788717		
50372109003	**DUP-13**	SM 4500-H+B	788717		
50372109001	**MW-35SS**	SM 4500-S2-D	788186		
50372109002	**MW-35D2**	SM 4500-S2-D	788186		
50372109003	**DUP-13**	SM 4500-S2-D	788186		
50372109001	**MW-35SS**	EPA 353.2	788150		
50372109002	**MW-35D2**	EPA 353.2	788151		

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372109

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372109003	**DUP-13**	EPA 353.2	788150		
50372109001	**MW-35SS**	EPA 365.1	789735	EPA 365.1	790174
50372109002	**MW-35D2**	EPA 365.1	789735	EPA 365.1	790174
50372109003	**DUP-13**	EPA 365.1	789735	EPA 365.1	790174
50372109001	**MW-35SS**	SM 5310C	788764		
50372109002	**MW-35D2**	SM 5310C	788764		
50372109003	**DUP-13**	SM 5310C	788764		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

WO# : 50372109

50372109

Section A – Required Client Information:		Section B – Required Project Information:		Section C – Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Se
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4 May 2024	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:	PSB1	Pace Profile #:	10498/60

Regulatory Agency	
State / Location	
	IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity,pH	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum			Residual Chlorine (Y/N)	
																							Y			Y					
1	MW-35 S5			5/2/24	1015				10	3	2	4		1					↓	↓	↓	↓	↓	↓	↓	↓	↓				
2	MW-35 D2			↓	1345				↓	↓	↓	↓		↓																	
3	DUP-13			↓	—				↓	↓	↓	↓		↓																	
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li) (11)	Mohammed Berdawit	5/2/24	1510	Chelsea B	5/2/24	1510	2.9	Y	Y	Y
6020 (Be, Mn, Co, As, Se, Sb, Ba, Tl) (8), 7470 (Hg)							5.0			
** Dissolved FF 6010 (B, Mo, Mg, K, Li) (5) FF 6020 (Al) (1)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Mykah Bertram		
SIGNATURE of SAMPLER:		DATE Signed:	5/2/2024

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: CB 5/2/24 18:21

1. Courier: ☐FED EX | UPS ☑CLIENT ☐PACE ☐NOW/JETT | 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 7 8 A B C D E F G H
4. Cooler Temperature(s): 2.9/2.9 | 5.0/5.0 | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags | ☐ None | ☐ Other _____
6. Ice Type: ☑ Wet ☐ Blue ☐ None
7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C
8. EZ Bottle Order? ☐ Yes ☑ No

If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.**	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: NO3	✓	~~✓~~	**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:

COC PAGE ____ of ____

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER					Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			MeOH (only)																											Red	Yellow	Green	Black
			SBS																													
			DI																													
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1													1			2	1	2	1	1	1		1						✓	✓		✓
2													1			2	1	2	1	1	1		1						✓			
3													1			2	1	2	1	1	1		1						✓			
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 03, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372174001	**MW-2R**	Water	05/02/24 16:50	05/03/24 09:45

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372174001	**MW-2R**	EPA 9056	ADM	3	PASI-I
		EPA 6010	ABH	11	PASI-I
		EPA 6010	NWB	3	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	JTR	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372174001	**MW-2R**					
EPA 9056	Chloride	76.2	mg/L	2.5	05/10/24 11:51	
EPA 9056	Sulfate	1650	mg/L	25.0	05/10/24 12:07	
EPA 6010	Boron	1860	ug/L	100	05/08/24 18:12	
EPA 6010	Calcium	514000	ug/L	5000	05/08/24 21:00	
EPA 6010	Iron	15500	ug/L	100	05/08/24 18:12	
EPA 6010	Lithium	778	ug/L	20.0	05/08/24 18:12	
EPA 6010	Magnesium	60300	ug/L	1000	05/08/24 18:12	
EPA 6010	Molybdenum	10.4	ug/L	10.0	05/08/24 18:12	
EPA 6010	Potassium	103000	ug/L	5000	05/08/24 21:00	
EPA 6010	Sodium	112000	ug/L	1000	05/08/24 18:12	
EPA 6010	Boron, Dissolved	1770	ug/L	100	05/10/24 09:32	
EPA 6010	Lithium, Dissolved	709	ug/L	20.0	05/10/24 09:32	
EPA 6010	Molybdenum, Dissolved	10.0	ug/L	10.0	05/10/24 09:32	
EPA 6020	Arsenic	10.8	ug/L	1.0	05/08/24 08:58	
EPA 6020	Barium	53.6	ug/L	1.0	05/08/24 08:58	
EPA 6020	Cobalt	3.3	ug/L	1.0	05/08/24 08:58	
EPA 6020	Manganese	6870	ug/L	50.0	05/08/24 06:55	
EPA 903.1	Radium-226	0.432 ± 0.426 (0.648) C:NA T:90%	pCi/L		05/24/24 15:33	
EPA 904.0	Radium-228	1.26 ± 0.486 (0.749) C:84% T:85%	pCi/L		05/22/24 15:42	
Total Radium Calculation	Total Radium	1.69 ± 0.912 (1.40)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	139	mg/L	10.0	05/07/24 15:19	
SM 2540C	Total Dissolved Solids	2620	mg/L	40.0	05/07/24 11:19	
SM 4500-H+B	pH at 25 Degrees C	7.3	Std. Units	0.10	05/09/24 13:59	H3
SM 5310C	Dissolved Organic Carbon	3.3	mg/L	1.0	05/08/24 20:11	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

Sample: MW-2R **Lab ID: 50372174001** Collected: 05/02/24 16:50 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**76.2**	mg/L	2.5	0.67	10		05/10/24 11:51	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/10/24 11:34	16984-48-8	
Sulfate	**1650**	mg/L	25.0	19.0	100		05/10/24 12:07	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1860**	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 18:12	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/08/24 07:58	05/08/24 18:12	7440-43-9	
Calcium	**514000**	ug/L	5000	284	5	05/08/24 07:58	05/08/24 21:00	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/08/24 07:58	05/08/24 18:12	7440-47-3	
Iron	**15500**	ug/L	100	18.1	1	05/08/24 07:58	05/08/24 18:12	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/08/24 07:58	05/08/24 18:12	7439-92-1	
Lithium	**778**	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 18:12	7439-93-2	
Magnesium	**60300**	ug/L	1000	32.8	1	05/08/24 07:58	05/08/24 18:12	7439-95-4	
Molybdenum	**10.4**	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 18:12	7439-98-7	
Potassium	**103000**	ug/L	5000	600	5	05/08/24 07:58	05/08/24 21:00	7440-09-7	
Sodium	**112000**	ug/L	1000	48.2	1	05/08/24 07:58	05/08/24 18:12	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1770**	ug/L	100	11.4	1	05/08/24 20:22	05/10/24 09:32	7440-42-8	
Lithium, Dissolved	**709**	ug/L	20.0	5.1	1	05/08/24 20:22	05/10/24 09:32	7439-93-2	
Molybdenum, Dissolved	**10.0**	ug/L	10.0	1.1	1	05/08/24 20:22	05/10/24 09:32	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 08:58	7440-36-0	
Arsenic	**10.8**	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 08:58	7440-38-2	
Barium	**53.6**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 08:58	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 08:58	7440-41-7	
Cobalt	**3.3**	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 08:58	7440-48-4	
Manganese	**6870**	ug/L	50.0	7.4	50	05/07/24 15:30	05/08/24 06:55	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 08:58	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 08:58	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/08/24 07:45	05/08/24 16:12	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:37	05/12/24 16:11	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

Sample: MW-2R **Lab ID: 50372174001** Collected: 05/02/24 16:50 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**139**	mg/L	10.0	10.0	1		05/07/24 15:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2620**	mg/L	40.0	40.0	1		05/07/24 11:19		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.3**	Std. Units	0.10	0.10	1		05/09/24 13:59		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 16:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/04/24 03:38	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	1.5	1.3	10	05/14/24 09:30	05/17/24 15:20		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**3.3**	mg/L	1.0	0.25	1		05/08/24 20:11		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788743
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3608176 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/10/24 11:01	
Fluoride	mg/L	ND	0.10	0.017	05/10/24 11:01	
Sulfate	mg/L	ND	0.25	0.19	05/10/24 11:01	

LABORATORY CONTROL SAMPLE: 3608177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.9	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608178 3608179

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	66.2	25	25	89.5	89.1	93	92	80-120	0	15	
Fluoride	mg/L	2.9	1	1	3.9	3.9	102	101	80-120	0	15	
Sulfate	mg/L	64.4	50	50	111	111	93	93	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608180 3608181

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	24.8	2.5	2.5	27.4	27.5	104	108	80-120	0	15	E
Fluoride	mg/L	ND	1	1	1.1	1.1	100	101	80-120	1	15	
Sulfate	mg/L	290	50	50	336	334	92	89	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788875
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3608998 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/12/24 15:37	

LABORATORY CONTROL SAMPLE: 3608999

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.5	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609000 3609001

Parameter	Units	50372141005 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	5.4	5.3	109	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788213
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372174001

METHOD BLANK: 3606075 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	05/08/24 17:25	
Cadmium	ug/L	ND	2.0	0.74	05/08/24 17:25	
Calcium	ug/L	ND	1000	56.7	05/08/24 17:25	
Chromium	ug/L	ND	10.0	1.4	05/08/24 17:25	
Iron	ug/L	ND	100	18.1	05/08/24 17:25	
Lead	ug/L	ND	10.0	4.0	05/08/24 17:25	
Lithium	ug/L	ND	20.0	5.1	05/08/24 17:25	
Magnesium	ug/L	ND	1000	32.8	05/08/24 17:25	
Molybdenum	ug/L	ND	10.0	1.1	05/08/24 17:25	
Potassium	ug/L	ND	1000	120	05/08/24 17:25	
Sodium	ug/L	ND	1000	48.2	05/08/24 17:25	

LABORATORY CONTROL SAMPLE: 3606076

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	992	99	80-120	
Cadmium	ug/L	1000	954	95	80-120	
Calcium	ug/L	10000	10100	101	80-120	
Chromium	ug/L	1000	985	99	80-120	
Iron	ug/L	10000	10800	108	80-120	
Lead	ug/L	1000	939	94	80-120	
Lithium	ug/L	1000	1030	103	80-120	
Magnesium	ug/L	10000	9980	100	80-120	
Molybdenum	ug/L	1000	1030	103	80-120	
Potassium	ug/L	10000	9790	98	80-120	
Sodium	ug/L	10000	9730	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606077 3606078

Parameter	Units	50372152001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	9940	1000	1000	10800	10900	90	99	75-125	1	20	
Cadmium	ug/L	ND	1000	1000	1020	1040	102	104	75-125	2	20	
Calcium	ug/L	833000	10000	10000	824000	844000	-84	115	75-125	2	20	P6
Chromium	ug/L	ND	1000	1000	926	950	92	95	75-125	3	20	
Iron	ug/L	ND	10000	10000	10000	10300	100	102	75-125	3	20	
Lead	ug/L	ND	1000	1000	809	824	81	82	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606077 3606078

Parameter	Units	50372152001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	4270	1000	1000	5210	5350	94	109	75-125	3	20	
Magnesium	ug/L	1500000	10000	10000	1480000	1510000	-237	75	75-125	2	20	P6
Molybdenum	ug/L	ND	1000	1000	1020	1040	102	104	75-125	2	20	
Potassium	ug/L	76600	10000	10000	85300	87900	87	113	75-125	3	20	
Sodium	ug/L	6050000	10000	10000	5890000	6040000	-1610	-173	75-125	2	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788557
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3607179 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/10/24 09:07	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/10/24 09:07	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/10/24 09:07	

LABORATORY CONTROL SAMPLE: 3607180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	981	98	80-120	
Lithium, Dissolved	ug/L	1000	1020	102	80-120	
Molybdenum, Dissolved	ug/L	1000	1010	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607181 3607182

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	1100	1000	1000	2020	2110	92	101	75-125	4	20	
Lithium, Dissolved	ug/L	39.1	1000	1000	988	1020	95	98	75-125	3	20	
Molybdenum, Dissolved	ug/L	22.0	1000	1000	980	1020	96	100	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788390
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372174001

METHOD BLANK: 3606566 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/08/24 06:31	
Arsenic	ug/L	ND	1.0	0.10	05/08/24 06:31	
Barium	ug/L	ND	1.0	0.062	05/08/24 06:31	
Beryllium	ug/L	ND	0.20	0.020	05/08/24 06:31	
Cobalt	ug/L	ND	1.0	0.060	05/08/24 06:31	
Manganese	ug/L	ND	1.0	0.15	05/08/24 06:31	
Selenium	ug/L	ND	1.0	0.36	05/08/24 06:31	
Thallium	ug/L	ND	1.0	0.079	05/08/24 06:31	

LABORATORY CONTROL SAMPLE: 3606567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.4	106	80-120	
Arsenic	ug/L	40	40.1	100	80-120	
Barium	ug/L	40	39.3	98	80-120	
Beryllium	ug/L	40	38.7	97	80-120	
Cobalt	ug/L	40	41.1	103	80-120	
Manganese	ug/L	40	41.5	104	80-120	
Selenium	ug/L	40	40.4	101	80-120	
Thallium	ug/L	40	39.4	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606568 3606569

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	43.4	43.1	108	107	75-125	1	20	
Arsenic	ug/L	1.2	40	40	41.9	41.4	102	100	75-125	1	20	
Barium	ug/L	226	40	40	253	258	69	80	75-125	2	20	P6
Beryllium	ug/L	ND	40	40	40.4	40.8	101	102	75-125	1	20	
Cobalt	ug/L	ND	40	40	38.3	38.5	96	96	75-125	0	20	
Manganese	ug/L	25.4	40	40	63.5	63.8	95	96	75-125	1	20	
Selenium	ug/L	ND	40	40	39.6	39.7	99	99	75-125	0	20	
Thallium	ug/L	ND	40	40	39.3	39.1	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788588
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3607528 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	05/08/24 16:04	

LABORATORY CONTROL SAMPLE: 3607529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	395	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607530 3607531

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	410	419	101	103	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788503
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3606920 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/07/24 15:19	

LABORATORY CONTROL SAMPLE: 3606921

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.1	98	90-110	

SAMPLE DUPLICATE: 3606922

Parameter	Units	50372182002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	330	278	17	20	

SAMPLE DUPLICATE: 3606923

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	461	465	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788459
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3606824 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/07/24 11:09	

LABORATORY CONTROL SAMPLE: 3606825

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3606826

Parameter	Units	50372108002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	374	379	1	10	

SAMPLE DUPLICATE: 3606827

Parameter	Units	50372175001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	592	611	3	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788721
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372174001

SAMPLE DUPLICATE: 3608082

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.2	8.2	0	2	H3

SAMPLE DUPLICATE: 3608083

Parameter	Units	50372252004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.2	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788191
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3606016 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/04/24 16:32	

LABORATORY CONTROL SAMPLE: 3606017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606018 3606019

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	0.15	0.5	0.5	0.64	0.61	97	92	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788151
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3605767 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/04/24 03:08	

LABORATORY CONTROL SAMPLE: 3605768

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	102	90-110	

MATRIX SPIKE SAMPLE: 3605769

Parameter	Units	50372136003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.4	1	2.5	103	90-110	

MATRIX SPIKE SAMPLE: 3605770

Parameter	Units	50372182002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	5	5.0	101	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 789736
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3613497 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/17/24 15:14	

LABORATORY CONTROL SAMPLE: 3613498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.4			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3613499 3613500

Parameter	Units	50372136003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.6	1.5				2		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 788764
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372174001

METHOD BLANK: 3608259 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/08/24 17:10	

LABORATORY CONTROL SAMPLE: 3608260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608261 3608262

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.0	10	10	10.3	10.5	93	95	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608263 3608264

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	3.7	10	10	12.9	13.3	93	96	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

Sample: MW-2R **Lab ID: 50372174001** Collected: 05/02/24 16:50 Received: 05/03/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.432 ± 0.426 (0.648) C:NA T:90%**	pCi/L	05/24/24 15:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.26 ± 0.486 (0.749) C:84% T:85%**	pCi/L	05/22/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.69 ± 0.912 (1.40)**	pCi/L	05/28/24 15:01	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 667225
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372174001

METHOD BLANK: 3248761 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.244 ± 0.253 (0.377) C:NA T:95%	pCi/L	05/24/24 15:19	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

QC Batch: 667228
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372174001

METHOD BLANK: 3248767 Matrix: Water
Associated Lab Samples: 50372174001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.534 ± 0.349 (0.645) C:78% T:84%	pCi/L	05/22/24 15:40	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372174

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372174001	**MW-2R**	EPA 9056	788743		
50372174001	**MW-2R**	EPA 3010	788213	EPA 6010	788830
50372174001	**MW-2R**	EPA 3010	788557	EPA 6010	789183
50372174001	**MW-2R**	EPA 200.2	788390	EPA 6020	788630
50372174001	**MW-2R**	EPA 200.2	788588	EPA 6020	788786
50372174001	**MW-2R**	EPA 7470	788875	EPA 7470	789458
50372174001	**MW-2R**	EPA 903.1	667225		
50372174001	**MW-2R**	EPA 904.0	667228		
50372174001	**MW-2R**	Total Radium Calculation	671739		
50372174001	**MW-2R**	SM 2320B	788503		
50372174001	**MW-2R**	SM 2540C	788459		
50372174001	**MW-2R**	SM 4500-H+B	788721		
50372174001	**MW-2R**	SM 4500-S2-D	788191		
50372174001	**MW-2R**	EPA 353.2	788151		
50372174001	**MW-2R**	EPA 365.1	789736	EPA 365.1	790664
50372174001	**MW-2R**	SM 5310C	788764		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / A

The Chain-of-Custody is a LEGAL DOC

WO# : 50372174

50372174

Page 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P2R1	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/59

Regulatory Agency	
State / Location	IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Total Metals 6010/6020/7470	Diss. Metals 6010/6020	DOC by 5310	Alkalinity/pH	Cl, F, SO4 by 9056	TDS by 2540C	Nitrate by 353.2	Phosphate by 365.1	Sulfide by 4500	Rad 226/228 + Sum to PA	Residual Chlorine (Y/N)
1	MW-2R					5-2-24	1650		10	X	X	X		X					X	X	X	X	X	X	X	X	X
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
s* 6010: B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li (11)	Josh O'Brien	5-3-24	7:30	Jay Wallace	5/3	7:10				
Be, Mn, Co, As, Se, Sb, Ba, Tl (8). 7470: Hg (1)	Jay Williams	5-3	9:45		5-3-24	9:45	1.3	Y	N	Y
6010: B, Mo, Li (3). Diss 6020: Al, Mn (2)							0.6			
							0.7			

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brien					
SIGNATURE of SAMPLER:	Josh O'Brien	DATE Signed: 5-2-24				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 5-3-24 13:07

1. Courier: ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. Cooler Temperature(s): (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

1.2/1.3	0.5/0.6	0.6/0.7	

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? ☐ Yes ☑ No

If yes but not on COC what is the EZ Bottle Order Number?:

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

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis: NO3	✓	
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1415	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
Headspace in VOA Vials (>6mm): See Containter Count form for details			No VOA Vials Sent ✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE ____ of ____

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1													1			2	1	2	1	1	1		1					WT	✓	✓	.	✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 03, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372175001	**MW-11**	Water	05/02/24 09:50	05/03/24 09:45
50372175002	**MW-12**	Water	05/02/24 12:55	05/03/24 09:45
50372175003	**MW-13**	Water	05/02/24 14:15	05/03/24 09:45

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372175001	**MW-11**	EPA 9056	KBB	3	PASI-I
		EPA 6010	ABH	11	PASI-I
		EPA 6010	ABH	3	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	JTR	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372175002	**MW-12**	EPA 9056	KBB	3	PASI-I
		EPA 6010	ABH	11	PASI-I
		EPA 6010	ABH	3	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	JTR	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372175003	**MW-13**	EPA 9056	KBB	3	PASI-I
		EPA 6010	ABH	11	PASI-I
		EPA 6010	ABH	3	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	CAW	1	PASI-I

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	JTR	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372175001	**MW-11**					
EPA 9056	Chloride	2.0	mg/L	0.25	05/09/24 20:14	
EPA 9056	Fluoride	0.15	mg/L	0.10	05/09/24 20:14	
EPA 9056	Sulfate	318	mg/L	2.5	05/09/24 20:32	
EPA 6010	Boron	807	ug/L	100	05/08/24 18:14	
EPA 6010	Calcium	136000	ug/L	1000	05/08/24 18:14	
EPA 6010	Iron	164	ug/L	100	05/08/24 18:14	
EPA 6010	Magnesium	39300	ug/L	1000	05/08/24 18:14	
EPA 6010	Sodium	5050	ug/L	1000	05/08/24 18:14	
EPA 6010	Boron, Dissolved	830	ug/L	100	05/08/24 20:46	
EPA 6020	Barium	29.6	ug/L	1.0	05/08/24 07:11	
EPA 6020	Selenium	3.0	ug/L	1.0	05/08/24 07:11	
EPA 903.1	Radium-226	0.196 ± 0.841 (1.54) C:NA T:87%	pCi/L		05/24/24 15:45	
EPA 904.0	Radium-228	0.806 ± 0.477 (0.902) C:84% T:83%	pCi/L		05/22/24 15:41	
Total Radium Calculation	Total Radium	1.00 ± 1.32 (2.44)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	156	mg/L	10.0	05/07/24 15:19	
SM 2540C	Total Dissolved Solids	592	mg/L	10.0	05/07/24 11:19	
SM 4500-H+B	pH at 25 Degrees C	7.6	Std. Units	0.10	05/09/24 14:00	H3
EPA 353.2	Nitrogen, Nitrate	2.4	mg/L	0.10	05/04/24 02:22	
EPA 365.1	Phosphate as P04	1.9	mg/L	0.15	05/17/24 15:20	
50372175002	**MW-12**					
EPA 9056	Chloride	8.5	mg/L	0.25	05/09/24 21:06	
EPA 9056	Fluoride	0.12	mg/L	0.10	05/09/24 21:06	
EPA 9056	Sulfate	13.3	mg/L	0.25	05/09/24 21:06	
EPA 6010	Calcium	46200	ug/L	1000	05/08/24 18:16	
EPA 6010	Iron	2950	ug/L	100	05/08/24 18:16	
EPA 6010	Magnesium	20300	ug/L	1000	05/08/24 18:16	
EPA 6010	Potassium	1420	ug/L	1000	05/08/24 18:16	
EPA 6010	Sodium	4000	ug/L	1000	05/08/24 18:16	
EPA 6020	Arsenic	2.4	ug/L	1.0	05/08/24 07:15	
EPA 6020	Barium	30.4	ug/L	1.0	05/08/24 07:15	
EPA 6020	Manganese	35.2	ug/L	1.0	05/08/24 07:15	
EPA 6020	Selenium	1.2	ug/L	1.0	05/08/24 07:15	
EPA 6020	Aluminum, Dissolved	34.3	ug/L	10.0	05/09/24 20:20	
EPA 903.1	Radium-226	-0.603 ± 0.769 (1.59) C:NA T:85%	pCi/L		05/24/24 15:45	
EPA 904.0	Radium-228	0.343 ± 0.375 (0.785) C:86% T:90%	pCi/L		05/22/24 15:41	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372175002	**MW-12**					
Total Radium Calculation	Total Radium	0.343 ± 1.14 (2.38)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	156	mg/L	10.0	05/07/24 15:19	
SM 2540C	Total Dissolved Solids	182	mg/L	10.0	05/08/24 12:03	
SM 4500-H+B	pH at 25 Degrees C	7.5	Std. Units	0.10	05/09/24 14:00	H3
EPA 353.2	Nitrogen, Nitrate	8.0	mg/L	0.50	05/04/24 04:41	
SM 5310C	Dissolved Organic Carbon	1.7	mg/L	1.0	05/08/24 21:35	
50372175003	**MW-13**					
EPA 9056	Chloride	26.0	mg/L	2.5	05/09/24 22:51	
EPA 9056	Fluoride	0.74	mg/L	0.10	05/09/24 22:33	
EPA 9056	Sulfate	1390	mg/L	25.0	05/09/24 23:08	
EPA 6010	Boron	1730	ug/L	100	05/08/24 18:17	
EPA 6010	Calcium	571000	ug/L	5000	05/08/24 21:02	
EPA 6010	Lithium	594	ug/L	20.0	05/08/24 18:17	
EPA 6010	Magnesium	34000	ug/L	1000	05/08/24 18:17	
EPA 6010	Molybdenum	45.5	ug/L	10.0	05/08/24 18:17	
EPA 6010	Potassium	63600	ug/L	1000	05/08/24 18:17	
EPA 6010	Sodium	49500	ug/L	1000	05/08/24 18:17	
EPA 6010	Boron, Dissolved	1760	ug/L	100	05/08/24 20:49	
EPA 6010	Lithium, Dissolved	621	ug/L	20.0	05/08/24 20:49	
EPA 6010	Molybdenum, Dissolved	44.6	ug/L	10.0	05/08/24 20:49	
EPA 6020	Barium	31.8	ug/L	1.0	05/08/24 07:19	
EPA 6020	Manganese	11.3	ug/L	1.0	05/08/24 07:19	
EPA 6020	Selenium	21.0	ug/L	1.0	05/08/24 07:19	
EPA 903.1	Radium-226	0.940 ± 0.488 (0.170) C:NA T:86%	pCi/L		05/24/24 15:45	
EPA 904.0	Radium-228	0.683 ± 0.460 (0.884) C:80% T:83%	pCi/L		05/22/24 15:41	
Total Radium Calculation	Total Radium	1.62 ± 0.948 (1.05)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	221	mg/L	10.0	05/07/24 15:19	
SM 2540C	Total Dissolved Solids	2330	mg/L	20.0	05/08/24 12:04	
SM 4500-H+B	pH at 25 Degrees C	7.1	Std. Units	0.10	05/09/24 14:01	H3
EPA 353.2	Nitrogen, Nitrate	0.88	mg/L	0.10	05/04/24 03:32	
SM 5310C	Dissolved Organic Carbon	1.2	mg/L	1.0	05/08/24 22:01	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Sample: MW-11 **Lab ID: 50372175001** Collected: 05/02/24 09:50 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**2.0**	mg/L	0.25	0.067	1		05/09/24 20:14	16887-00-6	
Fluoride	**0.15**	mg/L	0.10	0.017	1		05/09/24 20:14	16984-48-8	
Sulfate	**318**	mg/L	2.5	1.9	10		05/09/24 20:32	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**807**	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 18:14	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/08/24 07:58	05/08/24 18:14	7440-43-9	
Calcium	**136000**	ug/L	1000	56.7	1	05/08/24 07:58	05/08/24 18:14	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/08/24 07:58	05/08/24 18:14	7440-47-3	
Iron	**164**	ug/L	100	18.1	1	05/08/24 07:58	05/08/24 18:14	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/08/24 07:58	05/08/24 18:14	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 18:14	7439-93-2	
Magnesium	**39300**	ug/L	1000	32.8	1	05/08/24 07:58	05/08/24 18:14	7439-95-4	
Molybdenum	ND	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 18:14	7439-98-7	
Potassium	ND	ug/L	1000	120	1	05/08/24 07:58	05/08/24 18:14	7440-09-7	
Sodium	**5050**	ug/L	1000	48.2	1	05/08/24 07:58	05/08/24 18:14	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**830**	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 20:46	7440-42-8	
Lithium, Dissolved	ND	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 20:46	7439-93-2	
Molybdenum, Dissolved	ND	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 20:46	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 07:11	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 07:11	7440-38-2	
Barium	**29.6**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 07:11	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 07:11	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 07:11	7440-48-4	
Manganese	ND	ug/L	1.0	0.15	1	05/07/24 15:30	05/08/24 07:11	7439-96-5	
Selenium	**3.0**	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 07:11	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 07:11	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/08/24 07:45	05/08/24 16:15	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:37	05/12/24 16:14	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Sample: MW-11 **Lab ID: 50372175001** Collected: 05/02/24 09:50 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**156**	mg/L	10.0	10.0	1		05/07/24 15:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**592**	mg/L	10.0	10.0	1		05/07/24 11:19		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.6**	Std. Units	0.10	0.10	1		05/09/24 14:00		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 16:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**2.4**	mg/L	0.10	0.013	1		05/04/24 02:22	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**1.9**	mg/L	0.15	0.13	1	05/14/24 09:30	05/17/24 15:20		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	ND	mg/L	1.0	0.25	1		05/08/24 20:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Sample: MW-12 **Lab ID: 50372175002** Collected: 05/02/24 12:55 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**8.5**	mg/L	0.25	0.067	1		05/09/24 21:06	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.017	1		05/09/24 21:06	16984-48-8	
Sulfate	**13.3**	mg/L	0.25	0.19	1		05/09/24 21:06	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 18:16	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/08/24 07:58	05/08/24 18:16	7440-43-9	
Calcium	**46200**	ug/L	1000	56.7	1	05/08/24 07:58	05/08/24 18:16	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/08/24 07:58	05/08/24 18:16	7440-47-3	
Iron	**2950**	ug/L	100	18.1	1	05/08/24 07:58	05/08/24 18:16	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/08/24 07:58	05/08/24 18:16	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 18:16	7439-93-2	
Magnesium	**20300**	ug/L	1000	32.8	1	05/08/24 07:58	05/08/24 18:16	7439-95-4	
Molybdenum	ND	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 18:16	7439-98-7	
Potassium	**1420**	ug/L	1000	120	1	05/08/24 07:58	05/08/24 18:16	7440-09-7	
Sodium	**4000**	ug/L	1000	48.2	1	05/08/24 07:58	05/08/24 18:16	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	ND	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 20:48	7440-42-8	
Lithium, Dissolved	ND	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 20:48	7439-93-2	
Molybdenum, Dissolved	ND	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 20:48	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 07:15	7440-36-0	
Arsenic	**2.4**	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 07:15	7440-38-2	
Barium	**30.4**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 07:15	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 07:15	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 07:15	7440-48-4	
Manganese	**35.2**	ug/L	1.0	0.15	1	05/07/24 15:30	05/08/24 07:15	7439-96-5	
Selenium	**1.2**	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 07:15	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/11/24 00:24	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	**34.3**	ug/L	10.0	2.3	1	05/08/24 07:45	05/09/24 20:20	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:37	05/12/24 16:16	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Sample: MW-12 **Lab ID: 50372175002** Collected: 05/02/24 12:55 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**156**	mg/L	10.0	10.0	1		05/07/24 15:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**182**	mg/L	10.0	10.0	1		05/08/24 12:03		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.5**	Std. Units	0.10	0.10	1		05/09/24 14:00		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 16:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**8.0**	mg/L	0.50	0.065	5		05/04/24 04:41	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/14/24 09:30	05/17/24 15:21		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.7**	mg/L	1.0	0.25	1		05/08/24 21:35		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Sample: MW-13 **Lab ID: 50372175003** Collected: 05/02/24 14:15 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**26.0**	mg/L	2.5	0.67	10		05/09/24 22:51	16887-00-6	
Fluoride	**0.74**	mg/L	0.10	0.017	1		05/09/24 22:33	16984-48-8	
Sulfate	**1390**	mg/L	25.0	19.0	100		05/09/24 23:08	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1730**	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 18:17	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/08/24 07:58	05/08/24 18:17	7440-43-9	
Calcium	**571000**	ug/L	5000	284	5	05/08/24 07:58	05/08/24 21:02	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/08/24 07:58	05/08/24 18:17	7440-47-3	
Iron	ND	ug/L	100	18.1	1	05/08/24 07:58	05/08/24 18:17	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/08/24 07:58	05/08/24 18:17	7439-92-1	
Lithium	**594**	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 18:17	7439-93-2	
Magnesium	**34000**	ug/L	1000	32.8	1	05/08/24 07:58	05/08/24 18:17	7439-95-4	
Molybdenum	**45.5**	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 18:17	7439-98-7	
Potassium	**63600**	ug/L	1000	120	1	05/08/24 07:58	05/08/24 18:17	7440-09-7	
Sodium	**49500**	ug/L	1000	48.2	1	05/08/24 07:58	05/08/24 18:17	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1760**	ug/L	100	11.4	1	05/08/24 07:58	05/08/24 20:49	7440-42-8	
Lithium, Dissolved	**621**	ug/L	20.0	5.1	1	05/08/24 07:58	05/08/24 20:49	7439-93-2	
Molybdenum, Dissolved	**44.6**	ug/L	10.0	1.1	1	05/08/24 07:58	05/08/24 20:49	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 07:19	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 07:19	7440-38-2	
Barium	**31.8**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 07:19	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 07:19	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 07:19	7440-48-4	
Manganese	**11.3**	ug/L	1.0	0.15	1	05/07/24 15:30	05/08/24 07:19	7439-96-5	
Selenium	**21.0**	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 07:19	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 07:19	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/08/24 07:45	05/08/24 16:30	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:37	05/12/24 16:19	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Sample: MW-13 **Lab ID: 50372175003** Collected: 05/02/24 14:15 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**221**	mg/L	10.0	10.0	1		05/07/24 15:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2330**	mg/L	20.0	20.0	1		05/08/24 12:04		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.1**	Std. Units	0.10	0.10	1		05/09/24 14:01		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 16:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**0.88**	mg/L	0.10	0.013	1		05/04/24 03:32	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/14/24 09:30	05/17/24 15:21		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.2**	mg/L	1.0	0.25	1		05/08/24 22:01		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788311
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3606320 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/09/24 13:51	
Fluoride	mg/L	ND	0.10	0.017	05/09/24 13:51	
Sulfate	mg/L	ND	0.25	0.19	05/09/24 13:51	

LABORATORY CONTROL SAMPLE: 3606321

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	92	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.6	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606322 3606323

Parameter	Units	50372183002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	229	25	25	254	249	101	80	80-120	2	15	E
Fluoride	mg/L	0.78	1	1	1.8	1.8	98	99	80-120	0	15	
Sulfate	mg/L	523	500	500	953	938	86	83	80-120	2	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788875
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3608998 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/12/24 15:37	

LABORATORY CONTROL SAMPLE: 3608999

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.5	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609000 3609001

Parameter	Units	50372141005 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	5.4	5.3	109	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788213
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3606075 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	05/08/24 17:25	
Cadmium	ug/L	ND	2.0	0.74	05/08/24 17:25	
Calcium	ug/L	ND	1000	56.7	05/08/24 17:25	
Chromium	ug/L	ND	10.0	1.4	05/08/24 17:25	
Iron	ug/L	ND	100	18.1	05/08/24 17:25	
Lead	ug/L	ND	10.0	4.0	05/08/24 17:25	
Lithium	ug/L	ND	20.0	5.1	05/08/24 17:25	
Magnesium	ug/L	ND	1000	32.8	05/08/24 17:25	
Molybdenum	ug/L	ND	10.0	1.1	05/08/24 17:25	
Potassium	ug/L	ND	1000	120	05/08/24 17:25	
Sodium	ug/L	ND	1000	48.2	05/08/24 17:25	

LABORATORY CONTROL SAMPLE: 3606076

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	992	99	80-120	
Cadmium	ug/L	1000	954	95	80-120	
Calcium	ug/L	10000	10100	101	80-120	
Chromium	ug/L	1000	985	99	80-120	
Iron	ug/L	10000	10800	108	80-120	
Lead	ug/L	1000	939	94	80-120	
Lithium	ug/L	1000	1030	103	80-120	
Magnesium	ug/L	10000	9980	100	80-120	
Molybdenum	ug/L	1000	1030	103	80-120	
Potassium	ug/L	10000	9790	98	80-120	
Sodium	ug/L	10000	9730	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606077 3606078

Parameter	Units	50372152001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	9940	1000	1000	10800	10900	90	99	75-125	1	20	
Cadmium	ug/L	ND	1000	1000	1020	1040	102	104	75-125	2	20	
Calcium	ug/L	833000	10000	10000	824000	844000	-84	115	75-125	2	20	P6
Chromium	ug/L	ND	1000	1000	926	950	92	95	75-125	3	20	
Iron	ug/L	ND	10000	10000	10000	10300	100	102	75-125	3	20	
Lead	ug/L	ND	1000	1000	809	824	81	82	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606077 3606078

Parameter	Units	50372152001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	4270	1000	1000	5210	5350	94	109	75-125	3	20	
Magnesium	ug/L	1500000	10000	10000	1480000	1510000	-237	75	75-125	2	20	P6
Molybdenum	ug/L	ND	1000	1000	1020	1040	102	104	75-125	2	20	
Potassium	ug/L	76600	10000	10000	85300	87900	87	113	75-125	3	20	
Sodium	ug/L	6050000	10000	10000	5890000	6040000	-1610	-173	75-125	2	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788433
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3606766 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/08/24 19:57	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/08/24 19:57	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/08/24 19:57	

LABORATORY CONTROL SAMPLE: 3606767

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	1000	100	80-120	
Lithium, Dissolved	ug/L	1000	1040	104	80-120	
Molybdenum, Dissolved	ug/L	1000	1030	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606768 3606769

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	144	1000	1000	1170	1160	103	101	75-125	1	20	
Lithium, Dissolved	ug/L	ND	1000	1000	1020	1020	102	102	75-125	0	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1050	1040	104	104	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788390
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3606566 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/08/24 06:31	
Arsenic	ug/L	ND	1.0	0.10	05/08/24 06:31	
Barium	ug/L	ND	1.0	0.062	05/08/24 06:31	
Beryllium	ug/L	ND	0.20	0.020	05/08/24 06:31	
Cobalt	ug/L	ND	1.0	0.060	05/08/24 06:31	
Manganese	ug/L	ND	1.0	0.15	05/08/24 06:31	
Selenium	ug/L	ND	1.0	0.36	05/08/24 06:31	
Thallium	ug/L	ND	1.0	0.079	05/08/24 06:31	

LABORATORY CONTROL SAMPLE: 3606567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.4	106	80-120	
Arsenic	ug/L	40	40.1	100	80-120	
Barium	ug/L	40	39.3	98	80-120	
Beryllium	ug/L	40	38.7	97	80-120	
Cobalt	ug/L	40	41.1	103	80-120	
Manganese	ug/L	40	41.5	104	80-120	
Selenium	ug/L	40	40.4	101	80-120	
Thallium	ug/L	40	39.4	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606568 3606569

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	43.4	43.1	108	107	75-125	1	20	
Arsenic	ug/L	1.2	40	40	41.9	41.4	102	100	75-125	1	20	
Barium	ug/L	226	40	40	253	258	69	80	75-125	2	20	P6
Beryllium	ug/L	ND	40	40	40.4	40.8	101	102	75-125	1	20	
Cobalt	ug/L	ND	40	40	38.3	38.5	96	96	75-125	0	20	
Manganese	ug/L	25.4	40	40	63.5	63.8	95	96	75-125	1	20	
Selenium	ug/L	ND	40	40	39.6	39.7	99	99	75-125	0	20	
Thallium	ug/L	ND	40	40	39.3	39.1	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788588
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3607528 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	05/08/24 16:04	

LABORATORY CONTROL SAMPLE: 3607529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	395	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607530 3607531

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	410	419	101	103	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788503 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3606920 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/07/24 15:19	

LABORATORY CONTROL SAMPLE: 3606921

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.1	98	90-110	

SAMPLE DUPLICATE: 3606922

Parameter	Units	50372182002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	330	278	17	20	

SAMPLE DUPLICATE: 3606923

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	461	465	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788459
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001

METHOD BLANK: 3606824 Matrix: Water
Associated Lab Samples: 50372175001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/07/24 11:09	

LABORATORY CONTROL SAMPLE: 3606825

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3606826

Parameter	Units	50372108002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	374	379	1	10	

SAMPLE DUPLICATE: 3606827

Parameter	Units	50372175001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	592	611	3	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788651
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175002, 50372175003

METHOD BLANK: 3607813 Matrix: Water
Associated Lab Samples: 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/08/24 12:03	

LABORATORY CONTROL SAMPLE: 3607814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3607815

Parameter	Units	50372175002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	182	199	9	10	

SAMPLE DUPLICATE: 3607816

Parameter	Units	50372183003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1600	1570	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788721
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

SAMPLE DUPLICATE: 3608082

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.2	8.2	0	2	H3

SAMPLE DUPLICATE: 3608083

Parameter	Units	50372252004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.2	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788191
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3606016 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/04/24 16:32	

LABORATORY CONTROL SAMPLE: 3606017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606018 3606019

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	0.15	0.5	0.5	0.64	0.61	97	92	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788150
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002

METHOD BLANK: 3605762 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/04/24 02:14	

LABORATORY CONTROL SAMPLE: 3605763

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605764 3605765

Parameter	Units	50372105001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.1	1.1	101	103	90-110	2	20	

MATRIX SPIKE SAMPLE: 3605766

Parameter	Units	50372136005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.2	1	2.2	101	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788151
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175003

METHOD BLANK: 3605767 Matrix: Water
Associated Lab Samples: 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/04/24 03:08	

LABORATORY CONTROL SAMPLE: 3605768

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	102	90-110	

MATRIX SPIKE SAMPLE: 3605769

Parameter	Units	50372136003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.4	1	2.5	103	90-110	

MATRIX SPIKE SAMPLE: 3605770

Parameter	Units	50372182002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	5	5.0	101	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 789736
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3613497 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/17/24 15:14	

LABORATORY CONTROL SAMPLE: 3613498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.4			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3613499 3613500

Parameter	Units	50372136003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.6	1.5				2		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 788764
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3608259 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/08/24 17:10	

LABORATORY CONTROL SAMPLE: 3608260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608261 3608262

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.0	10	10	10.3	10.5	93	95	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608263 3608264

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	3.7	10	10	12.9	13.3	93	96	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Sample: MW-11 **Lab ID: 50372175001** Collected: 05/02/24 09:50 Received: 05/03/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.196 ± 0.841 (1.54) C:NA T:87%**	pCi/L	05/24/24 15:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.806 ± 0.477 (0.902) C:84% T:83%**	pCi/L	05/22/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.00 ± 1.32 (2.44)**	pCi/L	05/28/24 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Sample: MW-12 **Lab ID: 50372175002** Collected: 05/02/24 12:55 Received: 05/03/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.603 ± 0.769 (1.59) C:NA T:85%**	pCi/L	05/24/24 15:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.343 ± 0.375 (0.785) C:86% T:90%**	pCi/L	05/22/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.343 ± 1.14 (2.38)**	pCi/L	05/28/24 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Sample: MW-13 **Lab ID: 50372175003** Collected: 05/02/24 14:15 Received: 05/03/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.940 ± 0.488 (0.170) C:NA T:86%**	pCi/L	05/24/24 15:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.683 ± 0.460 (0.884) C:80% T:83%**	pCi/L	05/22/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.62 ± 0.948 (1.05)**	pCi/L	05/28/24 15:01	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 667225
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3248761 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.244 ± 0.253 (0.377) C:NA T:95%	pCi/L	05/24/24 15:19	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

QC Batch: 667228
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372175001, 50372175002, 50372175003

METHOD BLANK: 3248767 Matrix: Water
Associated Lab Samples: 50372175001, 50372175002, 50372175003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.534 ± 0.349 (0.645) C:78% T:84%	pCi/L	05/22/24 15:40	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372175001	**MW-11**	EPA 9056	788311		
50372175002	**MW-12**	EPA 9056	788311		
50372175003	**MW-13**	EPA 9056	788311		
50372175001	**MW-11**	EPA 3010	788213	EPA 6010	788830
50372175002	**MW-12**	EPA 3010	788213	EPA 6010	788830
50372175003	**MW-13**	EPA 3010	788213	EPA 6010	788830
50372175001	**MW-11**	EPA 3010	788433	EPA 6010	788833
50372175002	**MW-12**	EPA 3010	788433	EPA 6010	788833
50372175003	**MW-13**	EPA 3010	788433	EPA 6010	788833
50372175001	**MW-11**	EPA 200.2	788390	EPA 6020	788630
50372175002	**MW-12**	EPA 200.2	788390	EPA 6020	788630
50372175003	**MW-13**	EPA 200.2	788390	EPA 6020	788630
50372175001	**MW-11**	EPA 200.2	788588	EPA 6020	788786
50372175002	**MW-12**	EPA 200.2	788588	EPA 6020	788786
50372175003	**MW-13**	EPA 200.2	788588	EPA 6020	788786
50372175001	**MW-11**	EPA 7470	788875	EPA 7470	789458
50372175002	**MW-12**	EPA 7470	788875	EPA 7470	789458
50372175003	**MW-13**	EPA 7470	788875	EPA 7470	789458
50372175001	**MW-11**	EPA 903.1	667225		
50372175002	**MW-12**	EPA 903.1	667225		
50372175003	**MW-13**	EPA 903.1	667225		
50372175001	**MW-11**	EPA 904.0	667228		
50372175002	**MW-12**	EPA 904.0	667228		
50372175003	**MW-13**	EPA 904.0	667228		
50372175001	**MW-11**	Total Radium Calculation	671739		
50372175002	**MW-12**	Total Radium Calculation	671739		
50372175003	**MW-13**	Total Radium Calculation	671739		
50372175001	**MW-11**	SM 2320B	788503		
50372175002	**MW-12**	SM 2320B	788503		
50372175003	**MW-13**	SM 2320B	788503		
50372175001	**MW-11**	SM 2540C	788459		
50372175002	**MW-12**	SM 2540C	788651		
50372175003	**MW-13**	SM 2540C	788651		
50372175001	**MW-11**	SM 4500-H+B	788721		
50372175002	**MW-12**	SM 4500-H+B	788721		
50372175003	**MW-13**	SM 4500-H+B	788721		
50372175001	**MW-11**	SM 4500-S2-D	788191		
50372175002	**MW-12**	SM 4500-S2-D	788191		
50372175003	**MW-13**	SM 4500-S2-D	788191		
50372175001	**MW-11**	EPA 353.2	788150		
50372175002	**MW-12**	EPA 353.2	788150		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372175

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372175003	**MW-13**	EPA 353.2	788151		
50372175001	**MW-11**	EPA 365.1	789736	EPA 365.1	790664
50372175002	**MW-12**	EPA 365.1	789736	EPA 365.1	790664
50372175003	**MW-13**	EPA 365.1	789736	EPA 365.1	790664
50372175001	**MW-11**	SM 5310C	788764		
50372175002	**MW-12**	SM 5310C	788764		
50372175003	**MW-13**	SM 5310C	788764		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTO

The Chain-of-Custody is a LE

WO# : 50372175

50372175

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Infor	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P2R2	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/59

Regulatory Agency
State / Location
IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Total Metals 6010/6020/7470	Diss. Metals 6010/6020	DOC by 5310	Alkalinity/pH	Cl, F, SO4 by 9056	TDS by 2540C	Nitrate by 353.2	Phosphate by 365.1	Sulfide by 4500	Rad 226/228 + Sum to PA			Residual Chlorine (Y/N)	
1	MW11					5-2-24	0950		10	X	X	X		X					X	X	X	X	X	X	X	X	X			001
2	MW12					5-2-24	1235		10	X	X	X		X					X	X	X	X	X	X	X	X	X			002
3	MW13					5-2-24			10	X	X	X		X					X	X	X	X	X	X	X	X	X			003
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
etals* 6010: B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li (11)		5-3-24	7.10		5/3	7.16				
020: Be, Mn, Co, As, Se, Sb, Ba, Tl (8). 7470: Hg (1)	Josh O'Brian / Jay Williams	5/3	945		5-3-24	9:45	1.3	y	N	y
iss 6010: B, Mo, Li (3). Diss 6020: Al, Mn (2)							0.6			
							0.7			

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brian					
SIGNATURE of SAMPLER:		DATE Signed: 5-2-24				

F-IN-Q-290-rev.26, 30Apr2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 5-3-24 13:07

1. Courier: ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B (C) D E F G H

4. Cooler Temperature(s): (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

1.2/1.7	0.5/0.6	0.6/0.7	

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? ☐ Yes ☑ No

If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl. Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: NO3	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1426		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: MW-13 time not recorded on COC but container reads 14:15 RC 5-3-24

COC PAGE ____ of ____

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit	Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1													1			2	1	2	1	1	1		1				WT	✓	✓		✓
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 03, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372194001	**MW-11**	Water	05/02/24 09:50	05/03/24 09:45
50372194002	**MW-12**	Water	05/02/24 12:55	05/03/24 09:45
50372194003	**MW-13**	Water	05/02/24 14:15	05/03/24 09:45

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372194001	**MW-11**	EPA 9056	KBB	3	PASI-I
		EPA 6010	JPK	9	PASI-I
		EPA 6020	MTM	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I
50372194002	**MW-12**	EPA 9056	KBB	3	PASI-I
		EPA 6010	JPK	9	PASI-I
		EPA 6020	MTM	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I
50372194003	**MW-13**	EPA 9056	KBB	3	PASI-I
		EPA 6010	JPK	9	PASI-I
		EPA 6020	MTM	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372194001	**MW-11**					
EPA 9056	Chloride	2.1	mg/L	0.25	05/09/24 23:26	
EPA 9056	Fluoride	0.16	mg/L	0.10	05/09/24 23:26	
EPA 9056	Sulfate	325	mg/L	2.5	05/09/24 23:43	
EPA 6010	Boron	716	ug/L	100	05/08/24 02:28	
EPA 6010	Calcium	128000	ug/L	1000	05/08/24 02:28	
EPA 6010	Iron	238	ug/L	100	05/08/24 02:28	
EPA 6020	Barium	29.8	ug/L	1.0	05/08/24 07:23	
EPA 6020	Copper	1.1	ug/L	1.0	05/08/24 07:23	
EPA 6020	Selenium	2.7	ug/L	1.0	05/08/24 07:23	
EPA 903.1	Radium-226	-0.0994 ± 0.365 (0.788) C:NA T:93%	pCi/L		05/27/24 15:06	
EPA 904.0	Radium-228	0.795 ± 0.380 (0.653) C:85% T:87%	pCi/L		05/22/24 12:31	
Total Radium Calculation	Total Radium	0.795 ± 0.745 (1.44)	pCi/L		05/28/24 14:44	
SM 2540C	Total Dissolved Solids	597	mg/L	10.0	05/08/24 12:04	
50372194002	**MW-12**					
EPA 9056	Chloride	7.9	mg/L	0.25	05/10/24 00:18	
EPA 9056	Fluoride	0.12	mg/L	0.10	05/10/24 00:18	
EPA 9056	Sulfate	13.5	mg/L	0.25	05/10/24 00:18	
EPA 6010	Calcium	44500	ug/L	1000	05/08/24 02:30	
EPA 6010	Iron	566	ug/L	100	05/08/24 02:30	
EPA 6020	Barium	22.4	ug/L	1.0	05/08/24 07:35	
EPA 903.1	Radium-226	0.496 ± 0.313 (0.135) C:NA T:94%	pCi/L		05/27/24 15:06	
EPA 904.0	Radium-228	0.431 ± 0.320 (0.624) C:84% T:87%	pCi/L		05/22/24 12:31	
Total Radium Calculation	Total Radium	0.927 ± 0.633 (0.759)	pCi/L		05/28/24 14:44	
SM 2540C	Total Dissolved Solids	187	mg/L	10.0	05/08/24 12:04	
50372194003	**MW-13**					
EPA 9056	Chloride	25.8	mg/L	2.5	05/10/24 02:02	
EPA 9056	Fluoride	0.70	mg/L	0.10	05/13/24 23:44	
EPA 9056	Sulfate	1470	mg/L	25.0	05/10/24 02:20	
EPA 6010	Boron	1660	ug/L	100	05/08/24 02:32	
EPA 6010	Calcium	572000	ug/L	5000	05/08/24 03:03	
EPA 6010	Lithium	652	ug/L	20.0	05/08/24 02:32	
EPA 6010	Molybdenum	41.9	ug/L	10.0	05/08/24 02:32	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372194003	**MW-13**					
EPA 6020	Barium	32.9	ug/L	1.0	05/08/24 07:39	
EPA 6020	Copper	2.4	ug/L	1.0	05/08/24 07:39	
EPA 6020	Selenium	21.0	ug/L	1.0	05/08/24 07:39	
EPA 903.1	Radium-226	0.0538 ± 0.527 (1.01) C:NA T:86%	pCi/L		05/27/24 15:06	
EPA 904.0	Radium-228	0.367 ± 0.299 (0.590) C:81% T:89%	pCi/L		05/22/24 12:32	
Total Radium Calculation	Total Radium	0.421 ± 0.826 (1.60)	pCi/L		05/28/24 14:44	
SM 2540C	Total Dissolved Solids	2230	mg/L	40.0	05/08/24 12:05	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Sample: MW-11 **Lab ID: 50372194001** Collected: 05/02/24 09:50 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**2.1**	mg/L	0.25	0.067	1		05/09/24 23:26	16887-00-6	
Fluoride	**0.16**	mg/L	0.10	0.017	1		05/09/24 23:26	16984-48-8	
Sulfate	**325**	mg/L	2.5	1.9	10		05/09/24 23:43	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**716**	ug/L	100	6.2	1	05/07/24 08:20	05/08/24 02:28	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/07/24 08:20	05/08/24 02:28	7440-43-9	
Calcium	**128000**	ug/L	1000	67.7	1	05/07/24 08:20	05/08/24 02:28	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/07/24 08:20	05/08/24 02:28	7440-47-3	
Iron	**238**	ug/L	100	30.0	1	05/07/24 08:20	05/08/24 02:28	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/07/24 08:20	05/08/24 02:28	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/07/24 08:20	05/08/24 02:28	7439-93-2	
Manganese	ND	ug/L	10.0	1.8	1	05/07/24 08:20	05/08/24 02:28	7439-96-5	
Molybdenum	ND	ug/L	10.0	0.78	1	05/07/24 08:20	05/08/24 02:28	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 07:23	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 07:23	7440-38-2	
Barium	**29.8**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 07:23	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 07:23	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 07:23	7440-48-4	
Copper	**1.1**	ug/L	1.0	0.66	1	05/07/24 15:30	05/08/24 07:23	7440-50-8	
Selenium	**2.7**	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 07:23	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 07:23	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	05/07/24 15:30	05/08/24 07:23	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:42	05/12/24 17:05	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**597**	mg/L	10.0	10.0	1		05/08/24 12:04		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Sample: MW-12 **Lab ID: 50372194002** Collected: 05/02/24 12:55 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**7.9**	mg/L	0.25	0.067	1		05/10/24 00:18	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.017	1		05/10/24 00:18	16984-48-8	
Sulfate	**13.5**	mg/L	0.25	0.19	1		05/10/24 00:18	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	6.2	1	05/07/24 08:20	05/08/24 02:30	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/07/24 08:20	05/08/24 02:30	7440-43-9	
Calcium	**44500**	ug/L	1000	67.7	1	05/07/24 08:20	05/08/24 02:30	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/07/24 08:20	05/08/24 02:30	7440-47-3	
Iron	**566**	ug/L	100	30.0	1	05/07/24 08:20	05/08/24 02:30	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/07/24 08:20	05/08/24 02:30	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/07/24 08:20	05/08/24 02:30	7439-93-2	
Manganese	ND	ug/L	10.0	1.8	1	05/07/24 08:20	05/08/24 02:30	7439-96-5	
Molybdenum	ND	ug/L	10.0	0.78	1	05/07/24 08:20	05/08/24 02:30	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 07:35	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 07:35	7440-38-2	
Barium	**22.4**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 07:35	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 07:35	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 07:35	7440-48-4	
Copper	ND	ug/L	1.0	0.66	1	05/07/24 15:30	05/08/24 07:35	7440-50-8	
Selenium	ND	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 07:35	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 07:35	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	05/07/24 15:30	05/08/24 07:35	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:42	05/12/24 17:08	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**187**	mg/L	10.0	10.0	1		05/08/24 12:04		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Sample: MW-13 **Lab ID: 50372194003** Collected: 05/02/24 14:15 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**25.8**	mg/L	2.5	0.67	10		05/10/24 02:02	16887-00-6	
Fluoride	**0.70**	mg/L	0.10	0.017	1		05/13/24 23:44	16984-48-8	
Sulfate	**1470**	mg/L	25.0	19.0	100		05/10/24 02:20	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1660**	ug/L	100	6.2	1	05/07/24 08:20	05/08/24 02:32	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/07/24 08:20	05/08/24 02:32	7440-43-9	
Calcium	**572000**	ug/L	5000	338	5	05/07/24 08:20	05/08/24 03:03	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/07/24 08:20	05/08/24 02:32	7440-47-3	
Iron	ND	ug/L	100	30.0	1	05/07/24 08:20	05/08/24 02:32	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/07/24 08:20	05/08/24 02:32	7439-92-1	
Lithium	**652**	ug/L	20.0	6.8	1	05/07/24 08:20	05/08/24 02:32	7439-93-2	
Manganese	ND	ug/L	10.0	1.8	1	05/07/24 08:20	05/08/24 02:32	7439-96-5	
Molybdenum	**41.9**	ug/L	10.0	0.78	1	05/07/24 08:20	05/08/24 02:32	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 07:39	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 07:39	7440-38-2	
Barium	**32.9**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 07:39	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 07:39	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 07:39	7440-48-4	
Copper	**2.4**	ug/L	1.0	0.66	1	05/07/24 15:30	05/08/24 07:39	7440-50-8	
Selenium	**21.0**	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 07:39	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 07:39	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	05/07/24 15:30	05/08/24 07:39	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:42	05/12/24 17:10	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2230**	mg/L	40.0	40.0	1		05/08/24 12:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

QC Batch: 788311
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372194001, 50372194002, 50372194003

METHOD BLANK: 3606320 Matrix: Water
Associated Lab Samples: 50372194001, 50372194002, 50372194003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/09/24 13:51	
Fluoride	mg/L	ND	0.10	0.017	05/09/24 13:51	
Sulfate	mg/L	ND	0.25	0.19	05/09/24 13:51	

LABORATORY CONTROL SAMPLE: 3606321

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	92	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.6	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606322 3606323

Parameter	Units	50372183002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	229	25	25	254	249	101	80	80-120	2	15	E
Fluoride	mg/L	0.78	1	1	1.8	1.8	98	99	80-120	0	15	
Sulfate	mg/L	523	500	500	953	938	86	83	80-120	2	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

QC Batch: 789004
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372194001, 50372194002, 50372194003

METHOD BLANK: 3609483 Matrix: Water
Associated Lab Samples: 50372194001, 50372194002, 50372194003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/12/24 16:41	

LABORATORY CONTROL SAMPLE: 3609484

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609485 3609486

Parameter	Units	50372217001 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	104	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

QC Batch: 788212
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372194001, 50372194002, 50372194003

METHOD BLANK: 3606071 Matrix: Water
Associated Lab Samples: 50372194001, 50372194002, 50372194003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/08/24 02:21	
Cadmium	ug/L	ND	2.0	0.60	05/08/24 02:21	
Calcium	ug/L	ND	1000	67.7	05/08/24 02:21	
Chromium	ug/L	ND	10.0	0.42	05/08/24 02:21	
Iron	ug/L	ND	100	30.0	05/08/24 02:21	
Lead	ug/L	ND	10.0	2.5	05/08/24 02:21	
Lithium	ug/L	ND	20.0	6.8	05/08/24 02:21	
Manganese	ug/L	ND	10.0	1.8	05/08/24 02:21	
Molybdenum	ug/L	ND	10.0	0.78	05/08/24 02:21	

LABORATORY CONTROL SAMPLE: 3606072

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	973	97	80-120	
Cadmium	ug/L	1000	958	96	80-120	
Calcium	ug/L	10000	9990	100	80-120	
Chromium	ug/L	1000	976	98	80-120	
Iron	ug/L	10000	9940	99	80-120	
Lead	ug/L	1000	930	93	80-120	
Lithium	ug/L	1000	1000	100	80-120	
Manganese	ug/L	1000	975	97	80-120	
Molybdenum	ug/L	1000	1010	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606073 3606074

Parameter	Units	50372134001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	1000	1000	1200J	1120J	103	94	75-125		20	1d,M2
Cadmium	ug/L	ND	1000	1000	966	964	96	95	75-125	0	20	
Calcium	ug/L	488000	10000	10000	495000	490000	61	20	75-125	1	20	P6
Chromium	ug/L	ND	1000	1000	905J	884J	90	88	75-125		20	1d,M2
Iron	ug/L	ND	10000	10000	14900	14600	99	96	75-125	2	20	
Lead	ug/L	ND	1000	1000	754J	772J	75	77	75-125		20	1d,M2
Lithium	ug/L	ND	1000	1000	1090J	951J	99	85	75-125		20	1d,M2
Manganese	ug/L	ND	1000	1000	1020	1000	93	91	75-125	2	20	
Molybdenum	ug/L	ND	1000	1000	974J	989J	97	99	75-125		20	1d,M2

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

QC Batch: 788390
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372194001, 50372194002, 50372194003

METHOD BLANK: 3606566 Matrix: Water
Associated Lab Samples: 50372194001, 50372194002, 50372194003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/08/24 06:31	
Arsenic	ug/L	ND	1.0	0.10	05/08/24 06:31	
Barium	ug/L	ND	1.0	0.062	05/08/24 06:31	
Beryllium	ug/L	ND	0.20	0.020	05/08/24 06:31	
Cobalt	ug/L	ND	1.0	0.060	05/08/24 06:31	
Copper	ug/L	ND	1.0	0.66	05/08/24 06:31	
Selenium	ug/L	ND	1.0	0.36	05/08/24 06:31	
Thallium	ug/L	ND	1.0	0.079	05/08/24 06:31	
Zinc	ug/L	ND	3.0	1.3	05/08/24 06:31	

LABORATORY CONTROL SAMPLE: 3606567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.4	106	80-120	
Arsenic	ug/L	40	40.1	100	80-120	
Barium	ug/L	40	39.3	98	80-120	
Beryllium	ug/L	40	38.7	97	80-120	
Cobalt	ug/L	40	41.1	103	80-120	
Copper	ug/L	40	38.6	96	80-120	
Selenium	ug/L	40	40.4	101	80-120	
Thallium	ug/L	40	39.4	98	80-120	
Zinc	ug/L	40	39.9	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606568 3606569

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	43.4	43.1	108	107	75-125	1	20	
Arsenic	ug/L	1.2	40	40	41.9	41.4	102	100	75-125	1	20	
Barium	ug/L	226	40	40	253	258	69	80	75-125	2	20	P6
Beryllium	ug/L	ND	40	40	40.4	40.8	101	102	75-125	1	20	
Cobalt	ug/L	ND	40	40	38.3	38.5	96	96	75-125	0	20	
Copper	ug/L	ND	40	40	35.7	36.0	88	89	75-125	1	20	
Selenium	ug/L	ND	40	40	39.6	39.7	99	99	75-125	0	20	
Thallium	ug/L	ND	40	40	39.3	39.1	98	98	75-125	1	20	
Zinc	ug/L	ND	40	40	38.9	39.6	94	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

QC Batch: 788651
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372194001, 50372194002, 50372194003

METHOD BLANK: 3607813 Matrix: Water
Associated Lab Samples: 50372194001, 50372194002, 50372194003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/08/24 12:03	

LABORATORY CONTROL SAMPLE: 3607814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3607815

Parameter	Units	50372175002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	182	199	9	10	

SAMPLE DUPLICATE: 3607816

Parameter	Units	50372183003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1600	1570	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Sample: MW-11 **Lab ID: 50372194001** Collected: 05/02/24 09:50 Received: 05/03/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0994 ± 0.365 (0.788) C:NA T:93%**	pCi/L	05/27/24 15:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.795 ± 0.380 (0.653) C:85% T:87%**	pCi/L	05/22/24 12:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.795 ± 0.745 (1.44)**	pCi/L	05/28/24 14:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Sample: MW-12 **Lab ID: 50372194002** Collected: 05/02/24 12:55 Received: 05/03/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.496 ± 0.313 (0.135) C:NA T:94%**	pCi/L	05/27/24 15:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.431 ± 0.320 (0.624) C:84% T:87%**	pCi/L	05/22/24 12:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.927 ± 0.633 (0.759)**	pCi/L	05/28/24 14:44	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Sample: MW-13 **Lab ID: 50372194003** Collected: 05/02/24 14:15 Received: 05/03/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0538 ± 0.527 (1.01) C:NA T:86%**	pCi/L	05/27/24 15:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.367 ± 0.299 (0.590) C:81% T:89%**	pCi/L	05/22/24 12:32	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.421 ± 0.826 (1.60)**	pCi/L	05/28/24 14:44	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

QC Batch: 667237
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372194001, 50372194002, 50372194003

METHOD BLANK: 3248796 Matrix: Water
Associated Lab Samples: 50372194001, 50372194002, 50372194003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.651 ± 0.403 (0.755) C:76% T:87%	pCi/L	05/22/24 12:30	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

QC Batch: 667232
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372194001, 50372194002, 50372194003

METHOD BLANK: 3248787 Matrix: Water
Associated Lab Samples: 50372194001, 50372194002, 50372194003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.300 ± 0.404 (0.680) C:NA T:87%	pCi/L	05/27/24 14:53	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1d	RPD not evaluated against control limits due to sample dilution. JPK 5-8-24
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M2	Matrix spike recovery was below QC limits due to sample dilution. Data acceptance based on laboratory control sample (LCS) recovery.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372194

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372194001	**MW-11**	EPA 9056	788311		
50372194002	**MW-12**	EPA 9056	788311		
50372194003	**MW-13**	EPA 9056	788311		
50372194001	**MW-11**	EPA 3010	788212	EPA 6010	788639
50372194002	**MW-12**	EPA 3010	788212	EPA 6010	788639
50372194003	**MW-13**	EPA 3010	788212	EPA 6010	788639
50372194001	**MW-11**	EPA 200.2	788390	EPA 6020	788630
50372194002	**MW-12**	EPA 200.2	788390	EPA 6020	788630
50372194003	**MW-13**	EPA 200.2	788390	EPA 6020	788630
50372194001	**MW-11**	EPA 7470	789004	EPA 7470	789459
50372194002	**MW-12**	EPA 7470	789004	EPA 7470	789459
50372194003	**MW-13**	EPA 7470	789004	EPA 7470	789459
50372194001	**MW-11**	EPA 903.1	667232		
50372194002	**MW-12**	EPA 903.1	667232		
50372194003	**MW-13**	EPA 903.1	667232		
50372194001	**MW-11**	EPA 904.0	667237		
50372194002	**MW-12**	EPA 904.0	667237		
50372194003	**MW-13**	EPA 904.0	667237		
50372194001	**MW-11**	Total Radium Calculation	671718		
50372194002	**MW-12**	Total Radium Calculation	671718		
50372194003	**MW-13**	Total Radium Calculation	671718		
50372194001	**MW-11**	SM 2540C	788651		
50372194002	**MW-12**	SM 2540C	788651		
50372194003	**MW-13**	SM 2540C	788651		

WO# : 50372194

50372194

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields r

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P1R2	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/58

Regulatory Agency	
State / Location	IN

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals by 6010/6020/7470	Cl, F, SO4 by 9056	TDS by 2540C	Rad-226/228 + Sum	Residual Chlorine (Y/N)	
1	MW-11					5-2-24	0950		5	X		X							X	XX	X	X		001
2	MW-12					5-2-24	1255		5	X		X							X	X	X	X		002
3	MW-13					5-2-24			5	X		X							X	X	X	X		003
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)		5-3-24	7.10		5/3	7.10				
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg		5-3	9.45		5-3-24	9:45	1.3	y	n	y
Rad to Pace PA							0.6			
							0.7			

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Josh O'Brien	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
SIGNATURE of SAMPLER:	DATE Signed:				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 5-3-24 13:07

1. Courier: ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. Cooler Temperature(s): (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

1.2/1.3	0.5/0.6	0.6/0.7	

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? ☐ Yes ☑ No

If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
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)			
			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: MW-13 time not recorded on COC but container read 14:15 RC 5-3-24

COC PAGE ____ of ____

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit	Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1									WT	✓			
2																1		1	1									1	1			
3																1		1	1									1	1			
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 03, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372196001	**MW-2R**	Water	05/02/24 16:50	05/03/24 09:45

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372196001	**MW-2R**	EPA 9056	KBB	3	PASI-I
		EPA 6010	JPK	9	PASI-I
		EPA 6020	MTM	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372196001	**MW-2R**					
EPA 9056	Chloride	80.0	mg/L	2.5	05/10/24 02:55	
EPA 9056	Sulfate	1620	mg/L	25.0	05/10/24 03:12	
EPA 6010	Boron	1730	ug/L	100	05/08/24 23:56	
EPA 6010	Calcium	505000	ug/L	5000	05/09/24 00:00	
EPA 6010	Iron	21400	ug/L	100	05/08/24 23:56	
EPA 6010	Lithium	804	ug/L	20.0	05/08/24 23:56	
EPA 6010	Manganese	6250	ug/L	10.0	05/08/24 23:56	
EPA 6010	Molybdenum	10.1	ug/L	10.0	05/08/24 23:56	
EPA 6020	Arsenic	20.7	ug/L	1.0	05/08/24 07:43	
EPA 6020	Barium	77.9	ug/L	1.0	05/08/24 07:43	
EPA 6020	Beryllium	0.21	ug/L	0.20	05/08/24 07:43	
EPA 6020	Cobalt	3.7	ug/L	1.0	05/08/24 07:43	
EPA 6020	Copper	5.9	ug/L	1.0	05/08/24 07:43	
EPA 6020	Selenium	1.5	ug/L	1.0	05/08/24 07:43	
EPA 6020	Zinc	15.2	ug/L	3.0	05/08/24 07:43	
EPA 903.1	Radium-226	0.527 ± 0.640 (1.06) C:NA T:88%	pCi/L		05/24/24 15:33	
EPA 904.0	Radium-228	1.13 ± 0.479 (0.785) C:83% T:85%	pCi/L		05/22/24 15:42	
Total Radium Calculation	Total Radium	1.66 ± 1.12 (1.85)	pCi/L		05/28/24 15:01	
SM 2540C	Total Dissolved Solids	2310	mg/L	40.0	05/08/24 12:05	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

Sample: MW-2R **Lab ID: 50372196001** Collected: 05/02/24 16:50 Received: 05/03/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**80.0**	mg/L	2.5	0.67	10		05/10/24 02:55	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/10/24 02:37	16984-48-8	
Sulfate	**1620**	mg/L	25.0	19.0	100		05/10/24 03:12	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1730**	ug/L	100	6.2	1	05/08/24 08:15	05/08/24 23:56	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/08/24 08:15	05/08/24 23:56	7440-43-9	
Calcium	**505000**	ug/L	5000	338	5	05/08/24 08:15	05/09/24 00:00	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/08/24 08:15	05/08/24 23:56	7440-47-3	
Iron	**21400**	ug/L	100	30.0	1	05/08/24 08:15	05/08/24 23:56	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/08/24 08:15	05/08/24 23:56	7439-92-1	
Lithium	**804**	ug/L	20.0	6.8	1	05/08/24 08:15	05/08/24 23:56	7439-93-2	
Manganese	**6250**	ug/L	10.0	1.8	1	05/08/24 08:15	05/08/24 23:56	7439-96-5	
Molybdenum	**10.1**	ug/L	10.0	0.78	1	05/08/24 08:15	05/08/24 23:56	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 07:43	7440-36-0	
Arsenic	**20.7**	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 07:43	7440-38-2	
Barium	**77.9**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 07:43	7440-39-3	
Beryllium	**0.21**	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 07:43	7440-41-7	
Cobalt	**3.7**	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 07:43	7440-48-4	
Copper	**5.9**	ug/L	1.0	0.66	1	05/07/24 15:30	05/08/24 07:43	7440-50-8	
Selenium	**1.5**	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 07:43	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 07:43	7440-28-0	
Zinc	**15.2**	ug/L	3.0	1.3	1	05/07/24 15:30	05/08/24 07:43	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:42	05/12/24 17:12	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2310**	mg/L	40.0	40.0	1		05/08/24 12:05		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

QC Batch: 788311
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372196001

METHOD BLANK: 3606320 Matrix: Water
Associated Lab Samples: 50372196001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/09/24 13:51	
Fluoride	mg/L	ND	0.10	0.017	05/09/24 13:51	
Sulfate	mg/L	ND	0.25	0.19	05/09/24 13:51	

LABORATORY CONTROL SAMPLE: 3606321

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	92	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.6	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606322 3606323

Parameter	Units	50372183002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	229	25	25	254	249	101	80	80-120	2	15	E
Fluoride	mg/L	0.78	1	1	1.8	1.8	98	99	80-120	0	15	
Sulfate	mg/L	523	500	500	953	938	86	83	80-120	2	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

QC Batch: 789004
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372196001

METHOD BLANK: 3609483 Matrix: Water
Associated Lab Samples: 50372196001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/12/24 16:41	

LABORATORY CONTROL SAMPLE: 3609484

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609485 3609486

Parameter	Units	50372217001 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	104	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

QC Batch: 788431
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372196001

METHOD BLANK: 3606756 Matrix: Water
Associated Lab Samples: 50372196001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/08/24 23:20	
Cadmium	ug/L	ND	2.0	0.60	05/08/24 23:20	
Calcium	ug/L	ND	1000	67.7	05/08/24 23:20	
Chromium	ug/L	ND	10.0	0.42	05/08/24 23:20	
Iron	ug/L	ND	100	30.0	05/08/24 23:20	
Lead	ug/L	ND	10.0	2.5	05/08/24 23:20	
Lithium	ug/L	ND	20.0	6.8	05/08/24 23:20	
Manganese	ug/L	ND	10.0	1.8	05/08/24 23:20	
Molybdenum	ug/L	ND	10.0	0.78	05/08/24 23:20	

LABORATORY CONTROL SAMPLE: 3606757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	941	94	80-120	
Cadmium	ug/L	1000	932	93	80-120	
Calcium	ug/L	10000	9750	98	80-120	
Chromium	ug/L	1000	942	94	80-120	
Iron	ug/L	10000	9630	96	80-120	
Lead	ug/L	1000	919	92	80-120	
Lithium	ug/L	1000	985	99	80-120	
Manganese	ug/L	1000	952	95	80-120	
Molybdenum	ug/L	1000	994	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606758 3606759

Parameter	Units	50372224024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	5000	5000	4790	4880	94	96	75-125	2	20	
Cadmium	ug/L	11.1	5000	5000	4640	4700	93	94	75-125	1	20	
Calcium	ug/L	272000	50000	50000	314000	319000	85	94	75-125	1	20	
Chromium	ug/L	ND	5000	5000	4640	4710	92	93	75-125	1	20	
Iron	ug/L	183000	50000	50000	225000	228000	84	91	75-125	2	20	
Lead	ug/L	91.3	5000	5000	4530	4590	89	90	75-125	1	20	
Lithium	ug/L	ND	5000	5000	4890	4910	97	97	75-125	0	20	
Manganese	ug/L	1540	5000	5000	6120	6210	92	93	75-125	1	20	
Molybdenum	ug/L	297	5000	5000	5230	5310	99	100	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

QC Batch: 788390
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372196001

METHOD BLANK: 3606566 Matrix: Water
Associated Lab Samples: 50372196001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/08/24 06:31	
Arsenic	ug/L	ND	1.0	0.10	05/08/24 06:31	
Barium	ug/L	ND	1.0	0.062	05/08/24 06:31	
Beryllium	ug/L	ND	0.20	0.020	05/08/24 06:31	
Cobalt	ug/L	ND	1.0	0.060	05/08/24 06:31	
Copper	ug/L	ND	1.0	0.66	05/08/24 06:31	
Selenium	ug/L	ND	1.0	0.36	05/08/24 06:31	
Thallium	ug/L	ND	1.0	0.079	05/08/24 06:31	
Zinc	ug/L	ND	3.0	1.3	05/08/24 06:31	

LABORATORY CONTROL SAMPLE: 3606567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.4	106	80-120	
Arsenic	ug/L	40	40.1	100	80-120	
Barium	ug/L	40	39.3	98	80-120	
Beryllium	ug/L	40	38.7	97	80-120	
Cobalt	ug/L	40	41.1	103	80-120	
Copper	ug/L	40	38.6	96	80-120	
Selenium	ug/L	40	40.4	101	80-120	
Thallium	ug/L	40	39.4	98	80-120	
Zinc	ug/L	40	39.9	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606568 3606569

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	43.4	43.1	108	107	75-125	1	20	
Arsenic	ug/L	1.2	40	40	41.9	41.4	102	100	75-125	1	20	
Barium	ug/L	226	40	40	253	258	69	80	75-125	2	20	P6
Beryllium	ug/L	ND	40	40	40.4	40.8	101	102	75-125	1	20	
Cobalt	ug/L	ND	40	40	38.3	38.5	96	96	75-125	0	20	
Copper	ug/L	ND	40	40	35.7	36.0	88	89	75-125	1	20	
Selenium	ug/L	ND	40	40	39.6	39.7	99	99	75-125	0	20	
Thallium	ug/L	ND	40	40	39.3	39.1	98	98	75-125	1	20	
Zinc	ug/L	ND	40	40	38.9	39.6	94	96	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

QC Batch: 788651
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372196001

METHOD BLANK: 3607813 Matrix: Water
Associated Lab Samples: 50372196001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/08/24 12:03	

LABORATORY CONTROL SAMPLE: 3607814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3607815

Parameter	Units	50372175002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	182	199	9	10	

SAMPLE DUPLICATE: 3607816

Parameter	Units	50372183003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1600	1570	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

Sample: MW-2R **Lab ID: 50372196001** Collected: 05/02/24 16:50 Received: 05/03/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.527 ± 0.640 (1.06) C:NA T:88%**	pCi/L	05/24/24 15:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.13 ± 0.479 (0.785) C:83% T:85%**	pCi/L	05/22/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.66 ± 1.12 (1.85)**	pCi/L	05/28/24 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

QC Batch: 667225
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372196001

METHOD BLANK: 3248761 Matrix: Water
Associated Lab Samples: 50372196001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.244 ± 0.253 (0.377) C:NA T:95%	pCi/L	05/24/24 15:19	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

QC Batch: 667228
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372196001

METHOD BLANK: 3248767 Matrix: Water
Associated Lab Samples: 50372196001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.534 ± 0.349 (0.645) C:78% T:84%	pCi/L	05/22/24 15:40	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372196

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372196001	**MW-2R**	EPA 9056	788311		
50372196001	**MW-2R**	EPA 3010	788431	EPA 6010	788877
50372196001	**MW-2R**	EPA 200.2	788390	EPA 6020	788630
50372196001	**MW-2R**	EPA 7470	789004	EPA 7470	789459
50372196001	**MW-2R**	EPA 903.1	667225		
50372196001	**MW-2R**	EPA 904.0	667228		
50372196001	**MW-2R**	Total Radium Calculation	671739		
50372196001	**MW-2R**	SM 2540C	788651		

WO# : 50372196

50372196

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Do

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P1R1	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/58

Regulatory Agency

State / Location: IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals by 6010/6020/7470	Cl, F, SO4 by 9056	TDS by 2540C	Rad-226/228 + Sum	Residual Chlorine (Y/N)
1	MW-2R					5-2-24	1650		5	X		X							X	X	X	X	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)	Josh O'Brien	5-3-24	7:10	Jay Wilkes	5/3	7:10	
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg	Jay Wilkes	5-3	9:45		5-3-24	9:45	1.7
Rad to Pace PA							0.6
							0.7

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brien					
SIGNATURE of SAMPLER:	Josh O'Brien	DATE Signed: 5-2-24				

F-IN-Q-290-rev.26, 30Apr2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 5-3-24 13:07

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B (C) D E F G H
4. **Cooler Temperature(s):** (Initial/Corrected) **RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)**

1.2/1.3	0.5/0.6	0.6/0.7	

5. **Packing Material:** ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____
6. **Ice Type:** ☑ Wet ☐ Blue ☐ None
7. **Was the PM notified of out of temp cooler?:** ☐ Yes ☐ No
   Cooler temp should be above freezing to 6°C
8. **EZ Bottle Order?** ☐ Yes ☑ No
   If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, 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 ✓
			Trip Blank Present?		✓	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE ____ of ____

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER								
			MeOH (only)																											Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			SBS																											Red	Yellow	Green	Black
			DI																													
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1																2		2	1								SL	✓			
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial
DG9P	40mL TSP amber vial
DG9S	40mL H2SO4 amber vial
DG9T	40mL Na Thio amber vial
DG9U	40mL unpreserved amber vial
VG9H	40mL HCl clear vial
VG9T	40mL Na Thio. clear vial
VG9U	40mL unpreserved clear vial
I	40mL w/hexane wipe vial
WGKU	8oz unpreserved clear jar
WGFU	4oz clear soil jar
JGFU	4oz unpreserved amber wide
CG3H	250mL clear glass HCl
CG3F	250mL clear glass HCl, Field Filter
BG1H	1L HCl clear glass
BG1S	1L H2SO4 clear glass
BG1T	glass
BG1U	1L unpreserved glass
CG3U	250mL Unpres Clear Glass
AG0U	100mL unpres amber glass
AG1H	1L HCl amber glass
AG1S	1L H2SO4 amber glass
AG1T	1L Na Thiosulfate amber glass
AG1U	1liter unpres amber glass
AG2N	500mL HNO3 amber glass
AG2S	500mL H2SO4 amber glass
AG2U	500mL unpres amber glass
AG3S	250mL H2SO4 amber glass
AG3SF	250mL H2SO4 amb glass -field filtered
AG3U	250mL unpres amber glass
AG3B	250mL NaOH amber glass

Plastic

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic
BP3R	250mL Unpres. FF SO4/OH buffer
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 03, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372217001	**MW-33D2**	Water	05/03/24 11:00	05/03/24 15:00
50372217002	**MW-33D2 MS**	Water	05/03/24 11:00	05/03/24 15:00
50372217003	**MW-33D2 MSD**	Water	05/03/24 11:00	05/03/24 15:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372217001	**MW-33D2**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	NWB	5	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	JTR	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	OAS	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372217002	**MW-33D2 MS**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
50372217003	**MW-33D2 MSD**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372217001	**MW-33D2**					
EPA 9056	Chloride	66.2	mg/L	2.5	05/10/24 12:40	
EPA 9056	Fluoride	2.9	mg/L	0.10	05/10/24 12:24	
EPA 9056	Sulfate	64.4	mg/L	2.5	05/10/24 12:40	
EPA 6010	Boron	1100	ug/L	100	05/10/24 23:25	
EPA 6010	Calcium	15800	ug/L	1000	05/10/24 23:25	
EPA 6010	Iron	280	ug/L	100	05/10/24 23:25	
EPA 6010	Lithium	57.0	ug/L	20.0	05/10/24 23:25	
EPA 6010	Magnesium	4490	ug/L	1000	05/10/24 23:25	
EPA 6010	Molybdenum	33.7	ug/L	10.0	05/10/24 23:25	
EPA 6010	Potassium	3710	ug/L	1000	05/10/24 23:25	
EPA 6010	Sodium	252000	ug/L	2000	05/11/24 00:14	
EPA 6010	Boron, Dissolved	1100	ug/L	100	05/10/24 09:41	
EPA 6010	Lithium, Dissolved	39.1	ug/L	20.0	05/10/24 09:41	
EPA 6010	Magnesium, Dissolved	3030	ug/L	1000	05/10/24 09:41	
EPA 6010	Molybdenum, Dissolved	22.0	ug/L	10.0	05/10/24 09:41	
EPA 6010	Potassium, Dissolved	2650	ug/L	1000	05/10/24 09:41	
EPA 6020	Arsenic	1.2	ug/L	1.0	05/08/24 08:22	
EPA 6020	Barium	226	ug/L	2.0	05/11/24 00:48	
EPA 6020	Manganese	25.4	ug/L	1.0	05/08/24 08:22	
EPA 903.1	Radium-226	0.201 ± 0.379 (0.671) C:NA T:89%	pCi/L		05/27/24 14:53	
EPA 904.0	Radium-228	0.432 ± 0.378 (0.765) C:79% T:85%	pCi/L		05/22/24 12:30	
Total Radium Calculation	Total Radium	0.633 ± 0.757 (1.44)	pCi/L		05/28/24 14:44	
SM 2320B	Alkalinity, Total as CaCO3	461	mg/L	10.0	05/07/24 15:19	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	432	mg/L	10.0	05/07/24 15:19	
SM 2320B	Alkalinity,Carbonate (CaCO3)	28.4	mg/L	10.0	05/07/24 15:19	
SM 2540C	Total Dissolved Solids	641	mg/L	10.0	05/08/24 12:14	
SM 4500-H+B	pH at 25 Degrees C	8.2	Std. Units	0.10	05/09/24 13:52	H3
SM 4500-S2-D	Sulfide	0.15	mg/L	0.10	05/04/24 16:32	
SM 5310C	Dissolved Organic Carbon	1.0	mg/L	1.0	05/09/24 00:02	
50372217002	**MW-33D2 MS**					
EPA 903.1	Radium-226	114.70 %REC ± NA (NA) C:NA T:NA	pCi/L		05/27/24 14:53	
EPA 904.0	Radium-228	89.26 %REC ± NA (NA) C:NA T:NA	pCi/L		05/22/24 12:30	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372217003	**MW-33D2 MSD**					
EPA 903.1	Radium-226	88.41 %REC 25.88RPD ± NA (NA) C:NA T:NA	pCi/L		05/27/24 14:53	
EPA 904.0	Radium-228	94.10 %REC 5.28RPD ± NA (NA) C:NA T:NA	pCi/L		05/22/24 12:30	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Sample: MW-33D2 **Lab ID: 50372217001** Collected: 05/03/24 11:00 Received: 05/03/24 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**66.2**	mg/L	2.5	0.67	10		05/10/24 12:40	16887-00-6	
Fluoride	**2.9**	mg/L	0.10	0.017	1		05/10/24 12:24	16984-48-8	
Sulfate	**64.4**	mg/L	2.5	1.9	10		05/10/24 12:40	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1100**	ug/L	100	6.2	1	05/09/24 08:07	05/10/24 23:25	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/09/24 08:07	05/10/24 23:25	7440-43-9	
Calcium	**15800**	ug/L	1000	67.7	1	05/09/24 08:07	05/10/24 23:25	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/09/24 08:07	05/10/24 23:25	7440-47-3	
Iron	**280**	ug/L	100	30.0	1	05/09/24 08:07	05/10/24 23:25	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/09/24 08:07	05/10/24 23:25	7439-92-1	
Lithium	**57.0**	ug/L	20.0	6.8	1	05/09/24 08:07	05/10/24 23:25	7439-93-2	
Magnesium	**4490**	ug/L	1000	33.6	1	05/09/24 08:07	05/10/24 23:25	7439-95-4	
Molybdenum	**33.7**	ug/L	10.0	0.78	1	05/09/24 08:07	05/10/24 23:25	7439-98-7	
Potassium	**3710**	ug/L	1000	97.8	1	05/09/24 08:07	05/10/24 23:25	7440-09-7	
Sodium	**252000**	ug/L	2000	110	2	05/09/24 08:07	05/11/24 00:14	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1100**	ug/L	100	11.4	1	05/08/24 20:22	05/10/24 09:41	7440-42-8	
Lithium, Dissolved	**39.1**	ug/L	20.0	5.1	1	05/08/24 20:22	05/10/24 09:41	7439-93-2	
Magnesium, Dissolved	**3030**	ug/L	1000	32.8	1	05/08/24 20:22	05/10/24 09:41	7439-95-4	
Molybdenum, Dissolved	**22.0**	ug/L	10.0	1.1	1	05/08/24 20:22	05/10/24 09:41	7439-98-7	
Potassium, Dissolved	**2650**	ug/L	1000	120	1	05/08/24 20:22	05/10/24 09:41	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 08:22	7440-36-0	
Arsenic	**1.2**	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 08:22	7440-38-2	
Barium	**226**	ug/L	2.0	0.12	2	05/07/24 15:30	05/11/24 00:48	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 08:22	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 08:22	7440-48-4	
Manganese	**25.4**	ug/L	1.0	0.15	1	05/07/24 15:30	05/08/24 08:22	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 08:22	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 08:22	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/08/24 07:45	05/09/24 20:35	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:42	05/12/24 17:57	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Sample: MW-33D2 **Lab ID: 50372217001** Collected: 05/03/24 11:00 Received: 05/03/24 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**461**	mg/L	10.0	10.0	1		05/07/24 15:19		
Alkalinity,Bicarbonate (CaCO3)	**432**	mg/L	10.0	10.0	1		05/07/24 15:19		
Alkalinity,Carbonate (CaCO3)	**28.4**	mg/L	10.0	10.0	1		05/07/24 15:19		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**641**	mg/L	10.0	10.0	1		05/08/24 12:14		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**8.2**	Std. Units	0.10	0.10	1		05/09/24 13:52		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	**0.15**	mg/L	0.10	0.025	1		05/04/24 16:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/04/24 09:34	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/14/24 11:00	05/17/24 15:26		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.0**	mg/L	1.0	0.25	1		05/09/24 00:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788743
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372217001

METHOD BLANK: 3608176 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/10/24 11:01	
Fluoride	mg/L	ND	0.10	0.017	05/10/24 11:01	
Sulfate	mg/L	ND	0.25	0.19	05/10/24 11:01	

LABORATORY CONTROL SAMPLE: 3608177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.9	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608178 3608179

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	66.2	25	25	89.5	89.1	93	92	80-120	0	15	
Fluoride	mg/L	2.9	1	1	3.9	3.9	102	101	80-120	0	15	
Sulfate	mg/L	64.4	50	50	111	111	93	93	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608180 3608181

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	24.8	2.5	2.5	27.4	27.5	104	108	80-120	0	15	E
Fluoride	mg/L	ND	1	1	1.1	1.1	100	101	80-120	1	15	
Sulfate	mg/L	290	50	50	336	334	92	89	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 789004
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3609483 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/12/24 16:41	

LABORATORY CONTROL SAMPLE: 3609484

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609485 3609486

Parameter	Units	50372217001 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	104	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788584
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3607506 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/10/24 23:13	
Cadmium	ug/L	ND	2.0	0.60	05/10/24 23:13	
Calcium	ug/L	ND	1000	67.7	05/10/24 23:13	
Chromium	ug/L	ND	10.0	0.42	05/10/24 23:13	
Iron	ug/L	ND	100	30.0	05/10/24 23:13	
Lead	ug/L	ND	10.0	2.5	05/10/24 23:13	
Lithium	ug/L	ND	20.0	6.8	05/10/24 23:13	
Magnesium	ug/L	ND	1000	33.6	05/10/24 23:13	
Molybdenum	ug/L	ND	10.0	0.78	05/10/24 23:13	
Potassium	ug/L	ND	1000	97.8	05/10/24 23:13	
Sodium	ug/L	ND	1000	54.8	05/10/24 23:13	

LABORATORY CONTROL SAMPLE: 3607507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	973	97	80-120	
Cadmium	ug/L	1000	926	93	80-120	
Calcium	ug/L	10000	10300	103	80-120	
Chromium	ug/L	1000	1010	101	80-120	
Iron	ug/L	10000	9910	99	80-120	
Lead	ug/L	1000	913	91	80-120	
Lithium	ug/L	1000	1010	101	80-120	
Magnesium	ug/L	10000	9870	99	80-120	
Molybdenum	ug/L	1000	980	98	80-120	
Potassium	ug/L	10000	9910	99	80-120	
Sodium	ug/L	10000	9860	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607508 3607509

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	1100	1000	1000	2080	2040	99	94	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	949	927	95	93	75-125	2	20	
Calcium	ug/L	15800	10000	10000	26000	25200	102	93	75-125	3	20	
Chromium	ug/L	ND	1000	1000	1020	993	102	99	75-125	2	20	
Iron	ug/L	280	10000	10000	10400	10100	101	98	75-125	2	20	
Lead	ug/L	ND	1000	1000	905	888	90	89	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607508 3607509

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	57.0	1000	1000	1070	1040	101	99	75-125	2	20	
Magnesium	ug/L	4490	10000	10000	14300	13900	98	94	75-125	3	20	
Molybdenum	ug/L	33.7	1000	1000	1040	1010	100	98	75-125	2	20	
Potassium	ug/L	3710	10000	10000	13900	13500	102	97	75-125	3	20	
Sodium	ug/L	252000	10000	10000	261000	248000	88	-43	75-125	5	20	P6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607510 3607511

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	600	1000	1000	1570	1600	97	100	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	948	956	95	96	75-125	1	20	
Calcium	ug/L	249000	10000	10000	257000	244000	75	-55	75-125	5	20	P6
Chromium	ug/L	ND	1000	1000	999	1010	100	101	75-125	1	20	
Iron	ug/L	7160	10000	10000	16600	16700	94	96	75-125	1	20	
Lead	ug/L	ND	1000	1000	885	898	88	90	75-125	2	20	
Lithium	ug/L	ND	1000	1000	1030	1020	102	101	75-125	1	20	
Magnesium	ug/L	38400	10000	10000	46500	46800	81	84	75-125	1	20	
Molybdenum	ug/L	ND	1000	1000	994	1010	99	101	75-125	1	20	
Potassium	ug/L	2310	10000	10000	12600	12300	103	100	75-125	2	20	
Sodium	ug/L	21000	10000	10000	30600	30300	96	93	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788557
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3607179 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/10/24 09:07	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/10/24 09:07	
Magnesium, Dissolved	ug/L	ND	1000	32.8	05/10/24 09:07	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/10/24 09:07	
Potassium, Dissolved	ug/L	ND	1000	120	05/10/24 09:07	

LABORATORY CONTROL SAMPLE: 3607180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	981	98	80-120	
Lithium, Dissolved	ug/L	1000	1020	102	80-120	
Magnesium, Dissolved	ug/L	10000	9910	99	80-120	
Molybdenum, Dissolved	ug/L	1000	1010	101	80-120	
Potassium, Dissolved	ug/L	10000	9720	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607181 3607182

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	1100	1000	1000	2020	2110	92	101	75-125	4	20	
Lithium, Dissolved	ug/L	39.1	1000	1000	988	1020	95	98	75-125	3	20	
Magnesium, Dissolved	ug/L	3030	10000	10000	12100	12700	91	96	75-125	5	20	
Molybdenum, Dissolved	ug/L	22.0	1000	1000	980	1020	96	100	75-125	4	20	
Potassium, Dissolved	ug/L	2650	10000	10000	12000	12300	93	97	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788390
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3606566 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/08/24 06:31	
Arsenic	ug/L	ND	1.0	0.10	05/08/24 06:31	
Barium	ug/L	ND	1.0	0.062	05/08/24 06:31	
Beryllium	ug/L	ND	0.20	0.020	05/08/24 06:31	
Cobalt	ug/L	ND	1.0	0.060	05/08/24 06:31	
Manganese	ug/L	ND	1.0	0.15	05/08/24 06:31	
Selenium	ug/L	ND	1.0	0.36	05/08/24 06:31	
Thallium	ug/L	ND	1.0	0.079	05/08/24 06:31	

LABORATORY CONTROL SAMPLE: 3606567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.4	106	80-120	
Arsenic	ug/L	40	40.1	100	80-120	
Barium	ug/L	40	39.3	98	80-120	
Beryllium	ug/L	40	38.7	97	80-120	
Cobalt	ug/L	40	41.1	103	80-120	
Manganese	ug/L	40	41.5	104	80-120	
Selenium	ug/L	40	40.4	101	80-120	
Thallium	ug/L	40	39.4	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606568 3606569

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	43.4	43.1	108	107	75-125	1	20	
Arsenic	ug/L	1.2	40	40	41.9	41.4	102	100	75-125	1	20	
Barium	ug/L	226	40	40	253	258	69	80	75-125	2	20	P6
Beryllium	ug/L	ND	40	40	40.4	40.8	101	102	75-125	1	20	
Cobalt	ug/L	ND	40	40	38.3	38.5	96	96	75-125	0	20	
Manganese	ug/L	25.4	40	40	63.5	63.8	95	96	75-125	1	20	
Selenium	ug/L	ND	40	40	39.6	39.7	99	99	75-125	0	20	
Thallium	ug/L	ND	40	40	39.3	39.1	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788588
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3607528 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	05/08/24 16:04	

LABORATORY CONTROL SAMPLE: 3607529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	395	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607530 3607531

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	410	419	101	103	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788503
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3606920 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/07/24 15:19	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	05/07/24 15:19	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	05/07/24 15:19	

LABORATORY CONTROL SAMPLE: 3606921

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.1	98	90-110	

SAMPLE DUPLICATE: 3606922

Parameter	Units	50372182002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	330	278	17	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	330	278	17	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3606923

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	461	465	1	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	432	435	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	28.4	29.2	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788654
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3607822 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/08/24 12:12	

LABORATORY CONTROL SAMPLE: 3607823

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	303	101	80-120	

SAMPLE DUPLICATE: 3607824

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	641	653	2	10	

SAMPLE DUPLICATE: 3607825

Parameter	Units	50372252004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	297	294	1	10	

SAMPLE DUPLICATE: 3607826

Parameter	Units	50372278001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	864	852	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788721
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372217001

SAMPLE DUPLICATE: 3608082

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.2	8.2	0	2	H3

SAMPLE DUPLICATE: 3608083

Parameter	Units	50372252004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.2	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788191
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3606016 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/04/24 16:32	

LABORATORY CONTROL SAMPLE: 3606017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606018 3606019

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	0.15	0.5	0.5	0.64	0.61	97	92	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788165
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3605782 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/04/24 09:30	

LABORATORY CONTROL SAMPLE: 3605783

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605784 3605785

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.0	1.0	102	102	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 789737
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3613501 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/17/24 15:23	

LABORATORY CONTROL SAMPLE: 3613502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3613503 3613504

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.6	1.6				0		

MATRIX SPIKE SAMPLE: 3613505

Parameter	Units	50372250001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	0.71		2.1			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 788764
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372217001

METHOD BLANK: 3608259 Matrix: Water
Associated Lab Samples: 50372217001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/08/24 17:10	

LABORATORY CONTROL SAMPLE: 3608260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608261 3608262

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.0	10	10	10.3	10.5	93	95	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608263 3608264

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	3.7	10	10	12.9	13.3	93	96	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Sample: MW-33D2 **Lab ID: 50372217001** Collected: 05/03/24 11:00 Received: 05/03/24 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.201 ± 0.379 (0.671) C:NA T:89%**	pCi/L	05/27/24 14:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.432 ± 0.378 (0.765) C:79% T:85%**	pCi/L	05/22/24 12:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.633 ± 0.757 (1.44)**	pCi/L	05/28/24 14:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Sample: MW-33D2 MS **Lab ID: 50372217002** Collected: 05/03/24 11:00 Received: 05/03/24 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**114.70 %REC ± NA (NA) C:NA T:NA**	pCi/L	05/27/24 14:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**89.26 %REC ± NA (NA) C:NA T:NA**	pCi/L	05/22/24 12:30	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Sample: MW-33D2 MSD **Lab ID: 50372217003** Collected: 05/03/24 11:00 Received: 05/03/24 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**88.41 %REC 25.88RPD ± NA (NA) C:NA T:NA**	pCi/L	05/27/24 14:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**94.10 %REC 5.28RPD ± NA (NA) C:NA T:NA**	pCi/L	05/22/24 12:30	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 667237
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372217001, 50372217002, 50372217003

METHOD BLANK: 3248796 Matrix: Water
Associated Lab Samples: 50372217001, 50372217002, 50372217003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.651 ± 0.403 (0.755) C:76% T:87%	pCi/L	05/22/24 12:30	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

QC Batch: 667232
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372217001, 50372217002, 50372217003

METHOD BLANK: 3248787 Matrix: Water
Associated Lab Samples: 50372217001, 50372217002, 50372217003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.300 ± 0.404 (0.680) C:NA T:87%	pCi/L	05/27/24 14:53	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P5R1
Pace Project No.: 50372217

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372217001	**MW-33D2**	EPA 9056	788743		
50372217001	**MW-33D2**	EPA 3010	788584	EPA 6010	789385
50372217001	**MW-33D2**	EPA 3010	788557	EPA 6010	789183
50372217001	**MW-33D2**	EPA 200.2	788390	EPA 6020	788630
50372217001	**MW-33D2**	EPA 200.2	788588	EPA 6020	788786
50372217001	**MW-33D2**	EPA 7470	789004	EPA 7470	789459
50372217001	**MW-33D2**	EPA 903.1	667232		
50372217002	**MW-33D2 MS**	EPA 903.1	667232		
50372217003	**MW-33D2 MSD**	EPA 903.1	667232		
50372217001	**MW-33D2**	EPA 904.0	667237		
50372217002	**MW-33D2 MS**	EPA 904.0	667237		
50372217003	**MW-33D2 MSD**	EPA 904.0	667237		
50372217001	**MW-33D2**	Total Radium Calculation	671718		
50372217001	**MW-33D2**	SM 2320B	788503		
50372217001	**MW-33D2**	SM 2540C	788654		
50372217001	**MW-33D2**	SM 4500-H+B	788721		
50372217001	**MW-33D2**	SM 4500-S2-D	788191		
50372217001	**MW-33D2**	EPA 353.2	788165		
50372217001	**MW-33D2**	EPA 365.1	789737	EPA 365.1	790666
50372217001	**MW-33D2**	SM 5310C	788764		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields

WO# : 50372217

50372217

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sed
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4 May 2024	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:	P5 R1	Pace Profile #:	10498/60

Regulatory Agency

State / Location: IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity,pH	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum					Residual Chlorine (Y/N)
	MATRIX: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS																	Y/N				Y			Y						
1	MW-33D2	WT	G	5/3/24	1100				10	3	2	4		1																
2	MS 8	↓	↓	↓	↓				↓	↓	↓	↓		↓					↓	↓	↓	↓	↓	↓	↓	↓	↓				
3	MSD 8	↓	↓	↓	↓				↓	↓	↓	↓		↓					↓	↓	↓	↓	↓	↓	↓	↓	↓				
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li) (11)	Mohammed Bazavit	5/3/2024	1500		5/3/24	15:00	0.8	Y	N	Y
020 (Be, Mn, Co, As, Se, Sb, Ba, Tl) (8), 7470 (Hg)										
Dissolved FF 6010 (B, Mo, Mg, K, Li) (5) FF 6020 (Al) (1)										
ad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Mohammed Bazavit		
SIGNATURE of SAMPLER:		DATE Signed:	5/2/2024

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 5/3/24 17:59 JG

1. Courier: ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E (F) G H

4. Cooler Temperature(s): 1.0/0.8 (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? ☐ Yes ☑ No

If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.**			
Short Hold Time Analysis (48 hours or less)? Analysis: NO3 Wet	—		**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:

COC PAGE ____ of ____

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1													3			6	3	6	3	3	3		3					WT	✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic
BP3R	250mL Unpres. FF SO4/OH buffer
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 03, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372218001	**MW-12A**	Water	05/03/24 12:30	05/03/24 15:00
50372218002	**DUP-12**	Water	05/03/24 12:30	05/03/24 15:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372218001	**MW-12A**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	NWB	5	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	OAS	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372218002	**DUP-12**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	NWB	5	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	OAS	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372218001	**MW-12A**					
EPA 9056	Chloride	7.2	mg/L	0.25	05/10/24 15:25	
EPA 9056	Sulfate	63.4	mg/L	2.5	05/10/24 15:41	
EPA 6010	Calcium	49500	ug/L	1000	05/10/24 23:39	
EPA 6010	Iron	2560	ug/L	100	05/10/24 23:39	
EPA 6010	Magnesium	18000	ug/L	1000	05/10/24 23:39	
EPA 6010	Potassium	1930	ug/L	1000	05/10/24 23:39	
EPA 6010	Sodium	4160	ug/L	1000	05/10/24 23:39	
EPA 6010	Magnesium, Dissolved	17900	ug/L	1000	05/10/24 09:54	
EPA 6010	Potassium, Dissolved	1890	ug/L	1000	05/10/24 09:54	
EPA 6020	Barium	76.4	ug/L	1.0	05/08/24 08:50	
EPA 6020	Manganese	499	ug/L	5.0	05/08/24 06:47	
EPA 903.1	Radium-226	0.648 ± 0.509 (0.708) C:NA T:85%	pCi/L		05/24/24 15:33	
EPA 904.0	Radium-228	0.955 ± 0.456 (0.774) C:80% T:84%	pCi/L		05/22/24 15:42	
Total Radium Calculation	Total Radium	1.60 ± 0.965 (1.48)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	134	mg/L	10.0	05/07/24 20:37	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	134	mg/L	10.0	05/07/24 20:37	
SM 2540C	Total Dissolved Solids	210	mg/L	10.0	05/08/24 12:14	
SM 4500-H+B	pH at 25 Degrees C	7.3	Std. Units	0.10	05/09/24 14:07	H3
50372218002	**DUP-12**					
EPA 9056	Chloride	7.2	mg/L	0.25	05/10/24 12:57	
EPA 9056	Sulfate	63.7	mg/L	2.5	05/10/24 13:13	
EPA 6010	Calcium	48900	ug/L	1000	05/10/24 23:41	
EPA 6010	Iron	2540	ug/L	100	05/10/24 23:41	
EPA 6010	Magnesium	17800	ug/L	1000	05/10/24 23:41	
EPA 6010	Potassium	1840	ug/L	1000	05/10/24 23:41	
EPA 6010	Sodium	4040	ug/L	1000	05/10/24 23:41	
EPA 6010	Magnesium, Dissolved	17900	ug/L	1000	05/10/24 09:56	
EPA 6010	Potassium, Dissolved	1790	ug/L	1000	05/10/24 09:56	
EPA 6020	Barium	76.7	ug/L	1.0	05/08/24 08:54	
EPA 6020	Manganese	501	ug/L	5.0	05/08/24 06:51	
EPA 903.1	Radium-226	0.266 ± 0.601 (1.07) C:NA T:87%	pCi/L		05/24/24 15:33	
EPA 904.0	Radium-228	0.423 ± 0.353 (0.708) C:86% T:89%	pCi/L		05/22/24 15:42	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372218002	**DUP-12**					
Total Radium Calculation	Total Radium	0.689 ± 0.954 (1.78)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	134	mg/L	10.0	05/07/24 20:37	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	134	mg/L	10.0	05/07/24 20:37	
SM 2540C	Total Dissolved Solids	224	mg/L	10.0	05/08/24 12:15	
SM 4500-H+B	pH at 25 Degrees C	7.3	Std. Units	0.10	05/09/24 14:08	H3
EPA 365.1	Phosphate as P04	0.16	mg/L	0.15	05/17/24 15:28	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Sample: MW-12A **Lab ID: 50372218001** Collected: 05/03/24 12:30 Received: 05/03/24 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**7.2**	mg/L	0.25	0.067	1		05/10/24 15:25	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/10/24 15:25	16984-48-8	
Sulfate	**63.4**	mg/L	2.5	1.9	10		05/10/24 15:41	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	6.2	1	05/09/24 08:07	05/10/24 23:39	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/09/24 08:07	05/10/24 23:39	7440-43-9	
Calcium	**49500**	ug/L	1000	67.7	1	05/09/24 08:07	05/10/24 23:39	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/09/24 08:07	05/10/24 23:39	7440-47-3	
Iron	**2560**	ug/L	100	30.0	1	05/09/24 08:07	05/10/24 23:39	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/09/24 08:07	05/10/24 23:39	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/09/24 08:07	05/10/24 23:39	7439-93-2	
Magnesium	**18000**	ug/L	1000	33.6	1	05/09/24 08:07	05/10/24 23:39	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	05/09/24 08:07	05/10/24 23:39	7439-98-7	
Potassium	**1930**	ug/L	1000	97.8	1	05/09/24 08:07	05/10/24 23:39	7440-09-7	
Sodium	**4160**	ug/L	1000	54.8	1	05/09/24 08:07	05/10/24 23:39	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	ND	ug/L	100	11.4	1	05/08/24 20:22	05/10/24 09:54	7440-42-8	
Lithium, Dissolved	ND	ug/L	20.0	5.1	1	05/08/24 20:22	05/10/24 09:54	7439-93-2	
Magnesium, Dissolved	**17900**	ug/L	1000	32.8	1	05/08/24 20:22	05/10/24 09:54	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	1.1	1	05/08/24 20:22	05/10/24 09:54	7439-98-7	
Potassium, Dissolved	**1890**	ug/L	1000	120	1	05/08/24 20:22	05/10/24 09:54	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 08:50	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 08:50	7440-38-2	
Barium	**76.4**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 08:50	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 08:50	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 08:50	7440-48-4	
Manganese	**499**	ug/L	5.0	0.74	5	05/07/24 15:30	05/08/24 06:47	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 08:50	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 08:50	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/08/24 07:45	05/08/24 16:34	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:42	05/12/24 18:04	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Sample: MW-12A **Lab ID: 50372218001** Collected: 05/03/24 12:30 Received: 05/03/24 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**134**	mg/L	10.0	10.0	1		05/07/24 20:37		
Alkalinity,Bicarbonate (CaCO3)	**134**	mg/L	10.0	10.0	1		05/07/24 20:37		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		05/07/24 20:37		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**210**	mg/L	10.0	10.0	1		05/08/24 12:14		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.3**	Std. Units	0.10	0.10	1		05/09/24 14:07		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 16:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/04/24 09:40	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/14/24 11:00	05/17/24 15:28		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	ND	mg/L	1.0	0.25	1		05/09/24 01:01		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Sample: DUP-12 **Lab ID: 50372218002** Collected: 05/03/24 12:30 Received: 05/03/24 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**7.2**	mg/L	0.25	0.067	1		05/10/24 12:57	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/10/24 12:57	16984-48-8	
Sulfate	**63.7**	mg/L	2.5	1.9	10		05/10/24 13:13	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	6.2	1	05/09/24 08:07	05/10/24 23:41	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/09/24 08:07	05/10/24 23:41	7440-43-9	
Calcium	**48900**	ug/L	1000	67.7	1	05/09/24 08:07	05/10/24 23:41	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/09/24 08:07	05/10/24 23:41	7440-47-3	
Iron	**2540**	ug/L	100	30.0	1	05/09/24 08:07	05/10/24 23:41	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/09/24 08:07	05/10/24 23:41	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/09/24 08:07	05/10/24 23:41	7439-93-2	
Magnesium	**17800**	ug/L	1000	33.6	1	05/09/24 08:07	05/10/24 23:41	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	05/09/24 08:07	05/10/24 23:41	7439-98-7	
Potassium	**1840**	ug/L	1000	97.8	1	05/09/24 08:07	05/10/24 23:41	7440-09-7	
Sodium	**4040**	ug/L	1000	54.8	1	05/09/24 08:07	05/10/24 23:41	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	ND	ug/L	100	11.4	1	05/08/24 20:22	05/10/24 09:56	7440-42-8	
Lithium, Dissolved	ND	ug/L	20.0	5.1	1	05/08/24 20:22	05/10/24 09:56	7439-93-2	
Magnesium, Dissolved	**17900**	ug/L	1000	32.8	1	05/08/24 20:22	05/10/24 09:56	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	1.1	1	05/08/24 20:22	05/10/24 09:56	7439-98-7	
Potassium, Dissolved	**1790**	ug/L	1000	120	1	05/08/24 20:22	05/10/24 09:56	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/07/24 15:30	05/08/24 08:54	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/07/24 15:30	05/08/24 08:54	7440-38-2	
Barium	**76.7**	ug/L	1.0	0.062	1	05/07/24 15:30	05/08/24 08:54	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/07/24 15:30	05/08/24 08:54	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/07/24 15:30	05/08/24 08:54	7440-48-4	
Manganese	**501**	ug/L	5.0	0.74	5	05/07/24 15:30	05/08/24 06:51	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/07/24 15:30	05/08/24 08:54	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/07/24 15:30	05/08/24 08:54	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/08/24 07:45	05/08/24 17:10	7429-90-5	CU
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/10/24 10:42	05/12/24 18:07	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Sample: DUP-12 **Lab ID: 50372218002** Collected: 05/03/24 12:30 Received: 05/03/24 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**134**	mg/L	10.0	10.0	1		05/07/24 20:37		
Alkalinity,Bicarbonate (CaCO3)	**134**	mg/L	10.0	10.0	1		05/07/24 20:37		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		05/07/24 20:37		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**224**	mg/L	10.0	10.0	1		05/08/24 12:15		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.3**	Std. Units	0.10	0.10	1		05/09/24 14:08		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/04/24 16:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/04/24 09:42	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.16**	mg/L	0.15	0.13	1	05/14/24 11:00	05/17/24 15:28		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	ND	mg/L	1.0	0.25	1		05/09/24 02:18		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788743
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3608176 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/10/24 11:01	
Fluoride	mg/L	ND	0.10	0.017	05/10/24 11:01	
Sulfate	mg/L	ND	0.25	0.19	05/10/24 11:01	

LABORATORY CONTROL SAMPLE: 3608177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.9	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608178 3608179

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	66.2	25	25	89.5	89.1	93	92	80-120	0	15	
Fluoride	mg/L	2.9	1	1	3.9	3.9	102	101	80-120	0	15	
Sulfate	mg/L	64.4	50	50	111	111	93	93	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608180 3608181

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	24.8	2.5	2.5	27.4	27.5	104	108	80-120	0	15	E
Fluoride	mg/L	ND	1	1	1.1	1.1	100	101	80-120	1	15	
Sulfate	mg/L	290	50	50	336	334	92	89	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 789004
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3609483 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/12/24 16:41	

LABORATORY CONTROL SAMPLE: 3609484

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609485 3609486

Parameter	Units	50372217001 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	104	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788584
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3607506 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/10/24 23:13	
Cadmium	ug/L	ND	2.0	0.60	05/10/24 23:13	
Calcium	ug/L	ND	1000	67.7	05/10/24 23:13	
Chromium	ug/L	ND	10.0	0.42	05/10/24 23:13	
Iron	ug/L	ND	100	30.0	05/10/24 23:13	
Lead	ug/L	ND	10.0	2.5	05/10/24 23:13	
Lithium	ug/L	ND	20.0	6.8	05/10/24 23:13	
Magnesium	ug/L	ND	1000	33.6	05/10/24 23:13	
Molybdenum	ug/L	ND	10.0	0.78	05/10/24 23:13	
Potassium	ug/L	ND	1000	97.8	05/10/24 23:13	
Sodium	ug/L	ND	1000	54.8	05/10/24 23:13	

LABORATORY CONTROL SAMPLE: 3607507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	973	97	80-120	
Cadmium	ug/L	1000	926	93	80-120	
Calcium	ug/L	10000	10300	103	80-120	
Chromium	ug/L	1000	1010	101	80-120	
Iron	ug/L	10000	9910	99	80-120	
Lead	ug/L	1000	913	91	80-120	
Lithium	ug/L	1000	1010	101	80-120	
Magnesium	ug/L	10000	9870	99	80-120	
Molybdenum	ug/L	1000	980	98	80-120	
Potassium	ug/L	10000	9910	99	80-120	
Sodium	ug/L	10000	9860	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607508 3607509

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	1100	1000	1000	2080	2040	99	94	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	949	927	95	93	75-125	2	20	
Calcium	ug/L	15800	10000	10000	26000	25200	102	93	75-125	3	20	
Chromium	ug/L	ND	1000	1000	1020	993	102	99	75-125	2	20	
Iron	ug/L	280	10000	10000	10400	10100	101	98	75-125	2	20	
Lead	ug/L	ND	1000	1000	905	888	90	89	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607508 3607509

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	57.0	1000	1000	1070	1040	101	99	75-125	2	20	
Magnesium	ug/L	4490	10000	10000	14300	13900	98	94	75-125	3	20	
Molybdenum	ug/L	33.7	1000	1000	1040	1010	100	98	75-125	2	20	
Potassium	ug/L	3710	10000	10000	13900	13500	102	97	75-125	3	20	
Sodium	ug/L	252000	10000	10000	261000	248000	88	-43	75-125	5	20	P6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607510 3607511

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	600	1000	1000	1570	1600	97	100	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	948	956	95	96	75-125	1	20	
Calcium	ug/L	249000	10000	10000	257000	244000	75	-55	75-125	5	20	P6
Chromium	ug/L	ND	1000	1000	999	1010	100	101	75-125	1	20	
Iron	ug/L	7160	10000	10000	16600	16700	94	96	75-125	1	20	
Lead	ug/L	ND	1000	1000	885	898	88	90	75-125	2	20	
Lithium	ug/L	ND	1000	1000	1030	1020	102	101	75-125	1	20	
Magnesium	ug/L	38400	10000	10000	46500	46800	81	84	75-125	1	20	
Molybdenum	ug/L	ND	1000	1000	994	1010	99	101	75-125	1	20	
Potassium	ug/L	2310	10000	10000	12600	12300	103	100	75-125	2	20	
Sodium	ug/L	21000	10000	10000	30600	30300	96	93	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788557
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3607179 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/10/24 09:07	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/10/24 09:07	
Magnesium, Dissolved	ug/L	ND	1000	32.8	05/10/24 09:07	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/10/24 09:07	
Potassium, Dissolved	ug/L	ND	1000	120	05/10/24 09:07	

LABORATORY CONTROL SAMPLE: 3607180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	981	98	80-120	
Lithium, Dissolved	ug/L	1000	1020	102	80-120	
Magnesium, Dissolved	ug/L	10000	9910	99	80-120	
Molybdenum, Dissolved	ug/L	1000	1010	101	80-120	
Potassium, Dissolved	ug/L	10000	9720	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607181 3607182

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	1100	1000	1000	2020	2110	92	101	75-125	4	20	
Lithium, Dissolved	ug/L	39.1	1000	1000	988	1020	95	98	75-125	3	20	
Magnesium, Dissolved	ug/L	3030	10000	10000	12100	12700	91	96	75-125	5	20	
Molybdenum, Dissolved	ug/L	22.0	1000	1000	980	1020	96	100	75-125	4	20	
Potassium, Dissolved	ug/L	2650	10000	10000	12000	12300	93	97	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788390
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3606566 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/08/24 06:31	
Arsenic	ug/L	ND	1.0	0.10	05/08/24 06:31	
Barium	ug/L	ND	1.0	0.062	05/08/24 06:31	
Beryllium	ug/L	ND	0.20	0.020	05/08/24 06:31	
Cobalt	ug/L	ND	1.0	0.060	05/08/24 06:31	
Manganese	ug/L	ND	1.0	0.15	05/08/24 06:31	
Selenium	ug/L	ND	1.0	0.36	05/08/24 06:31	
Thallium	ug/L	ND	1.0	0.079	05/08/24 06:31	

LABORATORY CONTROL SAMPLE: 3606567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.4	106	80-120	
Arsenic	ug/L	40	40.1	100	80-120	
Barium	ug/L	40	39.3	98	80-120	
Beryllium	ug/L	40	38.7	97	80-120	
Cobalt	ug/L	40	41.1	103	80-120	
Manganese	ug/L	40	41.5	104	80-120	
Selenium	ug/L	40	40.4	101	80-120	
Thallium	ug/L	40	39.4	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606568 3606569

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	43.4	43.1	108	107	75-125	1	20	
Arsenic	ug/L	1.2	40	40	41.9	41.4	102	100	75-125	1	20	
Barium	ug/L	226	40	40	253	258	69	80	75-125	2	20	P6
Beryllium	ug/L	ND	40	40	40.4	40.8	101	102	75-125	1	20	
Cobalt	ug/L	ND	40	40	38.3	38.5	96	96	75-125	0	20	
Manganese	ug/L	25.4	40	40	63.5	63.8	95	96	75-125	1	20	
Selenium	ug/L	ND	40	40	39.6	39.7	99	99	75-125	0	20	
Thallium	ug/L	ND	40	40	39.3	39.1	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788588
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3607528 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	05/08/24 16:04	

LABORATORY CONTROL SAMPLE: 3607529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	395	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607530 3607531

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	410	419	101	103	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788610
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3607644 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/07/24 20:37	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	05/07/24 20:37	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	05/07/24 20:37	

LABORATORY CONTROL SAMPLE: 3607645

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.2	100	90-110	

SAMPLE DUPLICATE: 3607646

Parameter	Units	50372250004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	184	187	1	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	184	187	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3607647

Parameter	Units	50372278001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	497	505	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	497	505	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788654
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3607822 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/08/24 12:12	

LABORATORY CONTROL SAMPLE: 3607823

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	303	101	80-120	

SAMPLE DUPLICATE: 3607824

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	641	653	2	10	

SAMPLE DUPLICATE: 3607825

Parameter	Units	50372252004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	297	294	1	10	

SAMPLE DUPLICATE: 3607826

Parameter	Units	50372278001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	864	852	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788721
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

SAMPLE DUPLICATE: 3608082

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.2	8.2	0	2	H3

SAMPLE DUPLICATE: 3608083

Parameter	Units	50372252004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.2	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788191
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3606016 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/04/24 16:32	

LABORATORY CONTROL SAMPLE: 3606017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606018 3606019

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	0.15	0.5	0.5	0.64	0.61	97	92	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788165
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3605782 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/04/24 09:30	

LABORATORY CONTROL SAMPLE: 3605783

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605784 3605785

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.0	1.0	102	102	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 789737
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3613501 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/17/24 15:23	

LABORATORY CONTROL SAMPLE: 3613502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.6			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3613503 3613504

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.6	1.6				0		

MATRIX SPIKE SAMPLE: 3613505

Parameter	Units	50372250001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	0.71		2.1			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 788764
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3608259 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/08/24 17:10	

LABORATORY CONTROL SAMPLE: 3608260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608261 3608262

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.0	10	10	10.3	10.5	93	95	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608263 3608264

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	3.7	10	10	12.9	13.3	93	96	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Sample: MW-12A **Lab ID: 50372218001** Collected: 05/03/24 12:30 Received: 05/03/24 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.648 ± 0.509 (0.708) C:NA T:85%**	pCi/L	05/24/24 15:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.955 ± 0.456 (0.774) C:80% T:84%**	pCi/L	05/22/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.60 ± 0.965 (1.48)**	pCi/L	05/28/24 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Sample: DUP-12 **Lab ID: 50372218002** Collected: 05/03/24 12:30 Received: 05/03/24 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.266 ± 0.601 (1.07) C:NA T:87%**	pCi/L	05/24/24 15:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.423 ± 0.353 (0.708) C:86% T:89%**	pCi/L	05/22/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.689 ± 0.954 (1.78)**	pCi/L	05/28/24 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 667225
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3248761 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.244 ± 0.253 (0.377) C:NA T:95%	pCi/L	05/24/24 15:19	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

QC Batch: 667228
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372218001, 50372218002

METHOD BLANK: 3248767 Matrix: Water
Associated Lab Samples: 50372218001, 50372218002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.534 ± 0.349 (0.645) C:78% T:84%	pCi/L	05/22/24 15:40	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

CU	The continuing calibration for this analyte is above laboratory acceptance limits. Analyte was not detected above the reporting limit in any of the associated samples.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P4R5
Pace Project No.: 50372218

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372218001	**MW-12A**	EPA 9056	788743		
50372218002	**DUP-12**	EPA 9056	788743		
50372218001	**MW-12A**	EPA 3010	788584	EPA 6010	789385
50372218002	**DUP-12**	EPA 3010	788584	EPA 6010	789385
50372218001	**MW-12A**	EPA 3010	788557	EPA 6010	789183
50372218002	**DUP-12**	EPA 3010	788557	EPA 6010	789183
50372218001	**MW-12A**	EPA 200.2	788390	EPA 6020	788630
50372218002	**DUP-12**	EPA 200.2	788390	EPA 6020	788630
50372218001	**MW-12A**	EPA 200.2	788588	EPA 6020	788786
50372218002	**DUP-12**	EPA 200.2	788588	EPA 6020	788786
50372218001	**MW-12A**	EPA 7470	789004	EPA 7470	789459
50372218002	**DUP-12**	EPA 7470	789004	EPA 7470	789459
50372218001	**MW-12A**	EPA 903.1	667225		
50372218002	**DUP-12**	EPA 903.1	667225		
50372218001	**MW-12A**	EPA 904.0	667228		
50372218002	**DUP-12**	EPA 904.0	667228		
50372218001	**MW-12A**	Total Radium Calculation	671739		
50372218002	**DUP-12**	Total Radium Calculation	671739		
50372218001	**MW-12A**	SM 2320B	788610		
50372218002	**DUP-12**	SM 2320B	788610		
50372218001	**MW-12A**	SM 2540C	788654		
50372218002	**DUP-12**	SM 2540C	788654		
50372218001	**MW-12A**	SM 4500-H+B	788721		
50372218002	**DUP-12**	SM 4500-H+B	788721		
50372218001	**MW-12A**	SM 4500-S2-D	788191		
50372218002	**DUP-12**	SM 4500-S2-D	788191		
50372218001	**MW-12A**	EPA 353.2	788165		
50372218002	**DUP-12**	EPA 353.2	788165		
50372218001	**MW-12A**	EPA 365.1	789737	EPA 365.1	790666
50372218002	**DUP-12**	EPA 365.1	789737	EPA 365.1	790666
50372218001	**MW-12A**	SM 5310C	788764		
50372218002	**DUP-12**	SM 5310C	788764		

REPORT OF LABORATORY ANALYSIS

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request D

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields mu

WO# : 50372218

50372218

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:			
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam		
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis		
	Indianapolis, IN 46256			Address:		Regulatory Agency	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:			
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4 May 2024	Pace Project Manager:	Will Statz	State / Location	
Requested Due Date:		Project #:	P4R5	Pace Profile #:	10498/60	IN	

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity,pH	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum				Residual Chlorine (Y/N)
																		Requested Analysis Filtered (Y/N)				Y			Y						
1	MW-12A	WT	G	5/3/24	1230				10	3	2	4		1					↓	↓	↓	↓	↓	↓	↓	↓	↓				
2	DUP-12	↓	↓	↓	↓				↓	↓	↓	↓		↓					↓	↓	↓	↓	↓	↓	↓	↓	↓				
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li) (11)	Mohammed Bazlamit	5/3/24	1500		5/3/24	15:00	2.0	Y	N	Y
020 (Be, Mn, Co, As, Se, Sb, Ba, Tl) (8), 7470 (Hg)										
Dissolved FF 6010 (B, Mo, Mg, K, Li) (5) FF 6020 (Al) (1)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Mohammed Bazlamit					
SIGNATURE of SAMPLER:		DATE Signed: 5/3/24				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 5/3/24 17:59 JG

1. Courier: ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E F G H

4. Cooler Temperature(s): 2.2/2.0 | | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? ☐ Yes ☑ No
If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl. Circle: ~~HNO3 (<2)~~ H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	—		
Short Hold Time Analysis (48 hours or less)? Analysis: NO3 Wet	—					
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:

COC PAGE ____ of ____

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/ZnAc >9
1													1			2	1	2	1	1	1		1					WT	✓	✓		✓
2													↓			↓	↓	↓	↓	↓	↓		↓					↓	↓	↓		↓
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 06, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372278001	**MW-14**	Water	05/05/24 09:05	05/06/24 10:00
50372278002	**Field Blank 2**	Water	05/05/24 12:15	05/06/24 10:00
50372278003	**MW-15**	Water	05/05/24 12:15	05/06/24 10:00
50372278004	**Dup 2**	Water	05/05/24 00:00	05/06/24 10:00
50372278005	**MW-14 MS**	Water	05/05/24 09:05	05/06/24 10:00
50372278006	**MW-14 MSD**	Water	05/05/24 09:05	05/06/24 10:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372278001	**MW-14**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	NWB	3	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372278002	**Field Blank 2**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
50372278003	**MW-15**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	NWB	3	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372278004	**Dup 2**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	NWB	3	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372278005	**MW-14 MS**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
50372278006	**MW-14 MSD**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372278001	**MW-14**					
EPA 9056	Chloride	24.8	mg/L	0.25	05/10/24 17:54	
EPA 9056	Sulfate	290	mg/L	2.5	05/10/24 18:11	
EPA 6010	Boron	600	ug/L	100	05/10/24 23:51	
EPA 6010	Calcium	249000	ug/L	2000	05/11/24 00:28	
EPA 6010	Iron	7160	ug/L	100	05/10/24 23:51	
EPA 6010	Magnesium	38400	ug/L	1000	05/10/24 23:51	
EPA 6010	Potassium	2310	ug/L	1000	05/10/24 23:51	
EPA 6010	Sodium	21000	ug/L	1000	05/10/24 23:51	
EPA 6010	Boron, Dissolved	594	ug/L	100	05/10/24 11:02	
EPA 6020	Manganese	3760	ug/L	30.0	05/09/24 19:22	
EPA 6020	Cobalt	1.9	ug/L	1.0	05/08/24 19:26	
EPA 6020	Arsenic	2.7	ug/L	1.0	05/08/24 19:26	
EPA 6020	Barium	95.7	ug/L	1.0	05/08/24 19:26	
EPA 903.1	Radium-226	0.262 ± 0.343 (0.571) C:NA T:87%	pCi/L		05/24/24 15:19	
EPA 904.0	Radium-228	1.63 ± 0.610 (0.908) C:69% T:83%	pCi/L		05/22/24 15:41	
Total Radium Calculation	Total Radium	1.89 ± 0.953 (1.48)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	497	mg/L	10.0	05/07/24 20:37	
SM 2540C	Total Dissolved Solids	864	mg/L	20.0	05/08/24 12:20	
SM 4500-H+B	pH at 25 Degrees C	7.1	Std. Units	0.10	05/09/24 12:03	H3
EPA 365.1	Phosphate as P04	0.72	mg/L	0.15	05/17/24 17:37	
SM 5310C	Dissolved Organic Carbon	3.7	mg/L	1.0	05/09/24 03:24	
50372278002	**Field Blank 2**					
EPA 903.1	Radium-226	-0.152 ± 0.411 (0.884) C:NA T:91%	pCi/L		05/24/24 15:19	
EPA 904.0	Radium-228	0.0742 ± 0.335 (0.762) C:83% T:89%	pCi/L		05/22/24 15:42	
Total Radium Calculation	Total Radium	0.0742 ± 0.746 (1.65)	pCi/L		05/28/24 15:01	
SM 4500-H+B	pH at 25 Degrees C	8.0	Std. Units	0.10	05/09/24 12:04	H3
50372278003	**MW-15**					
EPA 9056	Chloride	70.4	mg/L	2.5	05/10/24 21:16	
EPA 9056	Sulfate	690	mg/L	25.0	05/10/24 21:33	
EPA 6010	Boron	1210	ug/L	100	05/11/24 00:04	
EPA 6010	Calcium	279000	ug/L	2000	05/11/24 00:33	
EPA 6010	Iron	2390	ug/L	100	05/11/24 00:04	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372278003	**MW-15**					
EPA 6010	Lithium	797	ug/L	20.0	05/11/24 00:04	
EPA 6010	Magnesium	40100	ug/L	1000	05/11/24 00:04	
EPA 6010	Molybdenum	119	ug/L	10.0	05/11/24 00:04	
EPA 6010	Potassium	60900	ug/L	1000	05/11/24 00:04	
EPA 6010	Sodium	64900	ug/L	1000	05/11/24 00:04	
EPA 6010	Boron, Dissolved	1200	ug/L	100	05/10/24 11:11	
EPA 6010	Lithium, Dissolved	772	ug/L	20.0	05/10/24 11:11	
EPA 6010	Molybdenum, Dissolved	117	ug/L	10.0	05/10/24 11:11	
EPA 6020	Barium	112	ug/L	1.0	05/08/24 19:56	
EPA 6020	Manganese	453	ug/L	4.0	05/09/24 19:15	
EPA 903.1	Radium-226	0.497 ± 0.606 (1.00) C:NA T:85%	pCi/L		05/24/24 15:19	
EPA 904.0	Radium-228	0.542 ± 0.410 (0.807) C:84% T:79%	pCi/L		05/22/24 15:42	
Total Radium Calculation	Total Radium	1.04 ± 1.02 (1.81)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	223	mg/L	10.0	05/07/24 20:37	
SM 2540C	Total Dissolved Solids	1280	mg/L	20.0	05/08/24 12:21	
SM 4500-H+B	pH at 25 Degrees C	6.4	Std. Units	0.10	05/09/24 12:06	H3
EPA 365.1	Phosphate as P04	0.29	mg/L	0.15	05/17/24 17:30	
SM 5310C	Dissolved Organic Carbon	2.0	mg/L	1.0	05/13/24 14:58	
50372278004	**Dup 2**					
EPA 9056	Chloride	70.4	mg/L	2.5	05/10/24 22:07	
EPA 9056	Sulfate	699	mg/L	25.0	05/10/24 22:24	
EPA 6010	Boron	1140	ug/L	100	05/11/24 00:05	
EPA 6010	Calcium	273000	ug/L	2000	05/11/24 00:35	
EPA 6010	Iron	2230	ug/L	100	05/11/24 00:05	
EPA 6010	Lithium	757	ug/L	20.0	05/11/24 00:05	
EPA 6010	Magnesium	37800	ug/L	1000	05/11/24 00:05	
EPA 6010	Molybdenum	113	ug/L	10.0	05/11/24 00:05	
EPA 6010	Potassium	58300	ug/L	1000	05/11/24 00:05	
EPA 6010	Sodium	61900	ug/L	1000	05/11/24 00:05	
EPA 6010	Boron, Dissolved	1180	ug/L	100	05/10/24 11:16	
EPA 6010	Lithium, Dissolved	772	ug/L	20.0	05/10/24 11:16	
EPA 6010	Molybdenum, Dissolved	116	ug/L	10.0	05/10/24 11:16	
EPA 6020	Barium	109	ug/L	1.0	05/08/24 19:59	
EPA 6020	Manganese	451	ug/L	4.0	05/09/24 19:19	
EPA 903.1	Radium-226	1.65 ± 0.958 (1.32) C:NA T:87%	pCi/L		05/24/24 15:19	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372278004	**Dup 2**					
EPA 904.0	Radium-228	0.742 ± 0.444 (0.838) C:86% T:83%	pCi/L		05/22/24 15:42	
Total Radium Calculation	Total Radium	2.39 ± 1.40 (2.16)	pCi/L		05/28/24 15:01	
SM 2320B	Alkalinity, Total as CaCO3	221	mg/L	10.0	05/07/24 20:37	
SM 2540C	Total Dissolved Solids	1310	mg/L	20.0	05/08/24 12:21	
SM 4500-H+B	pH at 25 Degrees C	6.7	Std. Units	0.10	05/09/24 12:07	H3
EPA 365.1	Phosphate as P04	0.34	mg/L	0.15	05/17/24 17:30	
SM 5310C	Dissolved Organic Carbon	2.5	mg/L	1.0	05/13/24 15:30	
50372278005	**MW-14 MS**					
EPA 903.1	Radium-226	84.75 %REC ± NA (NA) C:NA T:NA	pCi/L		05/24/24 15:19	
EPA 904.0	Radium-228	64.21 %REC ± NA (NA) C:NA T:NA	pCi/L		05/22/24 15:42	
50372278006	**MW-14 MSD**					
EPA 903.1	Radium-226	106.10 %REC 22.37RPD ± NA (NA) C:NA T:NA	pCi/L		05/24/24 15:33	
EPA 904.0	Radium-228	74.07 %REC 14.26RPD ± NA (NA) C:NA T:NA	pCi/L		05/22/24 15:42	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: MW-14 **Lab ID: 50372278001** Collected: 05/05/24 09:05 Received: 05/06/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**24.8**	mg/L	0.25	0.067	1		05/10/24 17:54	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/10/24 17:54	16984-48-8	
Sulfate	**290**	mg/L	2.5	1.9	10		05/10/24 18:11	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**600**	ug/L	100	6.2	1	05/09/24 08:07	05/10/24 23:51	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/09/24 08:07	05/10/24 23:51	7440-43-9	
Calcium	**249000**	ug/L	2000	135	2	05/09/24 08:07	05/11/24 00:28	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/09/24 08:07	05/10/24 23:51	7440-47-3	
Iron	**7160**	ug/L	100	30.0	1	05/09/24 08:07	05/10/24 23:51	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/09/24 08:07	05/10/24 23:51	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/09/24 08:07	05/10/24 23:51	7439-93-2	
Magnesium	**38400**	ug/L	1000	33.6	1	05/09/24 08:07	05/10/24 23:51	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	05/09/24 08:07	05/10/24 23:51	7439-98-7	
Potassium	**2310**	ug/L	1000	97.8	1	05/09/24 08:07	05/10/24 23:51	7440-09-7	
Sodium	**21000**	ug/L	1000	54.8	1	05/09/24 08:07	05/10/24 23:51	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**594**	ug/L	100	11.4	1	05/09/24 22:04	05/10/24 11:02	7440-42-8	
Lithium, Dissolved	ND	ug/L	20.0	5.1	1	05/09/24 22:04	05/10/24 11:02	7439-93-2	
Molybdenum, Dissolved	ND	ug/L	10.0	1.1	1	05/09/24 22:04	05/10/24 11:02	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Beryllium	ND	ug/L	0.20	0.035	1	05/08/24 07:45	05/08/24 19:26	7440-41-7	
Manganese	**3760**	ug/L	30.0	5.0	30	05/08/24 07:45	05/09/24 19:22	7439-96-5	
Cobalt	**1.9**	ug/L	1.0	0.046	1	05/08/24 07:45	05/08/24 19:26	7440-48-4	
Arsenic	**2.7**	ug/L	1.0	0.075	1	05/08/24 07:45	05/08/24 19:26	7440-38-2	
Selenium	ND	ug/L	1.0	0.20	1	05/08/24 07:45	05/08/24 19:26	7782-49-2	
Antimony	ND	ug/L	1.0	0.49	1	05/08/24 07:45	05/08/24 19:26	7440-36-0	
Barium	**95.7**	ug/L	1.0	0.077	1	05/08/24 07:45	05/08/24 19:26	7440-39-3	
Thallium	ND	ug/L	1.0	0.040	1	05/08/24 07:45	05/08/24 19:26	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	05/08/24 15:26	05/10/24 14:20	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/13/24 18:48	05/14/24 17:39	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: MW-14 **Lab ID: 50372278001** Collected: 05/05/24 09:05 Received: 05/06/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**497**	mg/L	10.0	10.0	1		05/07/24 20:37		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**864**	mg/L	20.0	20.0	1		05/08/24 12:20		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.1**	Std. Units	0.10	0.10	1		05/09/24 12:03		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/07/24 10:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/06/24 22:40	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.72**	mg/L	0.15	0.13	1	05/15/24 09:45	05/17/24 17:37		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**3.7**	mg/L	1.0	0.25	1		05/09/24 03:24		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: Field Blank 2 **Lab ID: 50372278002** Collected: 05/05/24 12:15 Received: 05/06/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	ND	mg/L	0.25	0.067	1		05/10/24 20:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/10/24 20:42	16984-48-8	
Sulfate	ND	mg/L	0.25	0.19	1		05/10/24 20:42	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	6.2	1	05/09/24 08:07	05/11/24 00:02	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/09/24 08:07	05/11/24 00:02	7440-43-9	
Calcium	ND	ug/L	1000	67.7	1	05/09/24 08:07	05/11/24 00:02	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/09/24 08:07	05/11/24 00:02	7440-47-3	
Iron	ND	ug/L	100	30.0	1	05/09/24 08:07	05/11/24 00:02	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/09/24 08:07	05/11/24 00:02	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/09/24 08:07	05/11/24 00:02	7439-93-2	
Magnesium	ND	ug/L	1000	33.6	1	05/09/24 08:07	05/11/24 00:02	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	05/09/24 08:07	05/11/24 00:02	7439-98-7	
Potassium	ND	ug/L	1000	97.8	1	05/09/24 08:07	05/11/24 00:02	7440-09-7	
Sodium	ND	ug/L	1000	54.8	1	05/09/24 08:07	05/11/24 00:02	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/08/24 07:45	05/08/24 19:52	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	05/08/24 07:45	05/08/24 19:52	7440-38-2	
Barium	ND	ug/L	1.0	0.077	1	05/08/24 07:45	05/08/24 19:52	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/08/24 07:45	05/08/24 19:52	7440-41-7	
Cobalt	ND	ug/L	1.0	0.046	1	05/08/24 07:45	05/08/24 19:52	7440-48-4	
Manganese	ND	ug/L	1.0	0.17	1	05/08/24 07:45	05/08/24 19:52	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	05/08/24 07:45	05/08/24 19:52	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/08/24 07:45	05/08/24 19:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/13/24 18:48	05/14/24 17:52	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	ND	mg/L	10.0	10.0	1		05/07/24 20:37		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		05/08/24 12:20		PL
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**8.0**	Std. Units	0.10	0.10	1		05/09/24 12:04		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: Field Blank 2 **Lab ID: 50372278002** Collected: 05/05/24 12:15 Received: 05/06/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/07/24 10:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/06/24 22:45	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/14/24 11:00	05/17/24 17:29		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: MW-15 **Lab ID: 50372278003** Collected: 05/05/24 12:15 Received: 05/06/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**70.4**	mg/L	2.5	0.67	10		05/10/24 21:16	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/10/24 20:59	16984-48-8	
Sulfate	**690**	mg/L	25.0	19.0	100		05/10/24 21:33	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1210**	ug/L	100	6.2	1	05/09/24 08:07	05/11/24 00:04	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/09/24 08:07	05/11/24 00:04	7440-43-9	
Calcium	**279000**	ug/L	2000	135	2	05/09/24 08:07	05/11/24 00:33	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/09/24 08:07	05/11/24 00:04	7440-47-3	
Iron	**2390**	ug/L	100	30.0	1	05/09/24 08:07	05/11/24 00:04	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/09/24 08:07	05/11/24 00:04	7439-92-1	
Lithium	**797**	ug/L	20.0	6.8	1	05/09/24 08:07	05/11/24 00:04	7439-93-2	
Magnesium	**40100**	ug/L	1000	33.6	1	05/09/24 08:07	05/11/24 00:04	7439-95-4	
Molybdenum	**119**	ug/L	10.0	0.78	1	05/09/24 08:07	05/11/24 00:04	7439-98-7	
Potassium	**60900**	ug/L	1000	97.8	1	05/09/24 08:07	05/11/24 00:04	7440-09-7	
Sodium	**64900**	ug/L	1000	54.8	1	05/09/24 08:07	05/11/24 00:04	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1200**	ug/L	100	11.4	1	05/09/24 22:04	05/10/24 11:11	7440-42-8	
Lithium, Dissolved	**772**	ug/L	20.0	5.1	1	05/09/24 22:04	05/10/24 11:11	7439-93-2	
Molybdenum, Dissolved	**117**	ug/L	10.0	1.1	1	05/09/24 22:04	05/10/24 11:11	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/08/24 07:45	05/08/24 19:56	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	05/08/24 07:45	05/08/24 19:56	7440-38-2	
Barium	**112**	ug/L	1.0	0.077	1	05/08/24 07:45	05/08/24 19:56	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/08/24 07:45	05/08/24 19:56	7440-41-7	
Cobalt	ND	ug/L	1.0	0.046	1	05/08/24 07:45	05/08/24 19:56	7440-48-4	
Manganese	**453**	ug/L	4.0	0.67	4	05/08/24 07:45	05/09/24 19:15	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	05/08/24 07:45	05/08/24 19:56	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/08/24 07:45	05/08/24 19:56	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	05/08/24 15:26	05/10/24 14:53	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/13/24 18:48	05/14/24 17:54	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: MW-15 **Lab ID: 50372278003** Collected: 05/05/24 12:15 Received: 05/06/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**223**	mg/L	10.0	10.0	1		05/07/24 20:37		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1280**	mg/L	20.0	20.0	1		05/08/24 12:21		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.4**	Std. Units	0.10	0.10	1		05/09/24 12:06		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/07/24 10:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/06/24 22:47	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.29**	mg/L	0.15	0.13	1	05/14/24 11:00	05/17/24 17:30		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.0**	mg/L	1.0	0.25	1		05/13/24 14:58		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: Dup 2 **Lab ID: 50372278004** Collected: 05/05/24 00:00 Received: 05/06/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**70.4**	mg/L	2.5	0.67	10		05/10/24 22:07	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/10/24 21:50	16984-48-8	
Sulfate	**699**	mg/L	25.0	19.0	100		05/10/24 22:24	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1140**	ug/L	100	6.2	1	05/09/24 08:07	05/11/24 00:05	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/09/24 08:07	05/11/24 00:05	7440-43-9	
Calcium	**273000**	ug/L	2000	135	2	05/09/24 08:07	05/11/24 00:35	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/09/24 08:07	05/11/24 00:05	7440-47-3	
Iron	**2230**	ug/L	100	30.0	1	05/09/24 08:07	05/11/24 00:05	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/09/24 08:07	05/11/24 00:05	7439-92-1	
Lithium	**757**	ug/L	20.0	6.8	1	05/09/24 08:07	05/11/24 00:05	7439-93-2	
Magnesium	**37800**	ug/L	1000	33.6	1	05/09/24 08:07	05/11/24 00:05	7439-95-4	
Molybdenum	**113**	ug/L	10.0	0.78	1	05/09/24 08:07	05/11/24 00:05	7439-98-7	
Potassium	**58300**	ug/L	1000	97.8	1	05/09/24 08:07	05/11/24 00:05	7440-09-7	
Sodium	**61900**	ug/L	1000	54.8	1	05/09/24 08:07	05/11/24 00:05	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1180**	ug/L	100	11.4	1	05/09/24 22:04	05/10/24 11:16	7440-42-8	
Lithium, Dissolved	**772**	ug/L	20.0	5.1	1	05/09/24 22:04	05/10/24 11:16	7439-93-2	
Molybdenum, Dissolved	**116**	ug/L	10.0	1.1	1	05/09/24 22:04	05/10/24 11:16	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/08/24 07:45	05/08/24 19:59	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	05/08/24 07:45	05/08/24 19:59	7440-38-2	
Barium	**109**	ug/L	1.0	0.077	1	05/08/24 07:45	05/08/24 19:59	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/08/24 07:45	05/08/24 19:59	7440-41-7	
Cobalt	ND	ug/L	1.0	0.046	1	05/08/24 07:45	05/08/24 19:59	7440-48-4	
Manganese	**451**	ug/L	4.0	0.67	4	05/08/24 07:45	05/09/24 19:19	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	05/08/24 07:45	05/08/24 19:59	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/08/24 07:45	05/08/24 19:59	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	05/08/24 15:26	05/10/24 14:56	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/13/24 18:48	05/14/24 17:56	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: Dup 2 **Lab ID: 50372278004** Collected: 05/05/24 00:00 Received: 05/06/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**221**	mg/L	10.0	10.0	1		05/07/24 20:37		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1310**	mg/L	20.0	20.0	1		05/08/24 12:21		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.7**	Std. Units	0.10	0.10	1		05/09/24 12:07		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/07/24 10:32	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/06/24 22:34	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.34**	mg/L	0.15	0.13	1	05/14/24 11:00	05/17/24 17:30		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.5**	mg/L	1.0	0.25	1		05/13/24 15:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788743
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

METHOD BLANK: 3608176 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/10/24 11:01	
Fluoride	mg/L	ND	0.10	0.017	05/10/24 11:01	
Sulfate	mg/L	ND	0.25	0.19	05/10/24 11:01	

LABORATORY CONTROL SAMPLE: 3608177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.9	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608178 3608179

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	66.2	25	25	89.5	89.1	93	92	80-120	0	15	
Fluoride	mg/L	2.9	1	1	3.9	3.9	102	101	80-120	0	15	
Sulfate	mg/L	64.4	50	50	111	111	93	93	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608180 3608181

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	24.8	2.5	2.5	27.4	27.5	104	108	80-120	0	15	E
Fluoride	mg/L	ND	1	1	1.1	1.1	100	101	80-120	1	15	
Sulfate	mg/L	290	50	50	336	334	92	89	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 789230
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

METHOD BLANK: 3610804 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/14/24 17:27	

LABORATORY CONTROL SAMPLE: 3610805

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610806 3610807

Parameter	Units	50372278001 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	4.6	4.8	91	96	75-125	6	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788584
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

METHOD BLANK: 3607506 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/10/24 23:13	
Cadmium	ug/L	ND	2.0	0.60	05/10/24 23:13	
Calcium	ug/L	ND	1000	67.7	05/10/24 23:13	
Chromium	ug/L	ND	10.0	0.42	05/10/24 23:13	
Iron	ug/L	ND	100	30.0	05/10/24 23:13	
Lead	ug/L	ND	10.0	2.5	05/10/24 23:13	
Lithium	ug/L	ND	20.0	6.8	05/10/24 23:13	
Magnesium	ug/L	ND	1000	33.6	05/10/24 23:13	
Molybdenum	ug/L	ND	10.0	0.78	05/10/24 23:13	
Potassium	ug/L	ND	1000	97.8	05/10/24 23:13	
Sodium	ug/L	ND	1000	54.8	05/10/24 23:13	

LABORATORY CONTROL SAMPLE: 3607507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	973	97	80-120	
Cadmium	ug/L	1000	926	93	80-120	
Calcium	ug/L	10000	10300	103	80-120	
Chromium	ug/L	1000	1010	101	80-120	
Iron	ug/L	10000	9910	99	80-120	
Lead	ug/L	1000	913	91	80-120	
Lithium	ug/L	1000	1010	101	80-120	
Magnesium	ug/L	10000	9870	99	80-120	
Molybdenum	ug/L	1000	980	98	80-120	
Potassium	ug/L	10000	9910	99	80-120	
Sodium	ug/L	10000	9860	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607508 3607509

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	1100	1000	1000	2080	2040	99	94	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	949	927	95	93	75-125	2	20	
Calcium	ug/L	15800	10000	10000	26000	25200	102	93	75-125	3	20	
Chromium	ug/L	ND	1000	1000	1020	993	102	99	75-125	2	20	
Iron	ug/L	280	10000	10000	10400	10100	101	98	75-125	2	20	
Lead	ug/L	ND	1000	1000	905	888	90	89	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607508 3607509

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	57.0	1000	1000	1070	1040	101	99	75-125	2	20	
Magnesium	ug/L	4490	10000	10000	14300	13900	98	94	75-125	3	20	
Molybdenum	ug/L	33.7	1000	1000	1040	1010	100	98	75-125	2	20	
Potassium	ug/L	3710	10000	10000	13900	13500	102	97	75-125	3	20	
Sodium	ug/L	252000	10000	10000	261000	248000	88	-43	75-125	5	20	P6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607510 3607511

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	600	1000	1000	1570	1600	97	100	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	948	956	95	96	75-125	1	20	
Calcium	ug/L	249000	10000	10000	257000	244000	75	-55	75-125	5	20	P6
Chromium	ug/L	ND	1000	1000	999	1010	100	101	75-125	1	20	
Iron	ug/L	7160	10000	10000	16600	16700	94	96	75-125	1	20	
Lead	ug/L	ND	1000	1000	885	898	88	90	75-125	2	20	
Lithium	ug/L	ND	1000	1000	1030	1020	102	101	75-125	1	20	
Magnesium	ug/L	38400	10000	10000	46500	46800	81	84	75-125	1	20	
Molybdenum	ug/L	ND	1000	1000	994	1010	99	101	75-125	1	20	
Potassium	ug/L	2310	10000	10000	12600	12300	103	100	75-125	2	20	
Sodium	ug/L	21000	10000	10000	30600	30300	96	93	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788890
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278003, 50372278004

METHOD BLANK: 3609083 Matrix: Water
Associated Lab Samples: 50372278001, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/10/24 10:58	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/10/24 10:58	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/10/24 10:58	

LABORATORY CONTROL SAMPLE: 3609084

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	990	99	80-120	
Lithium, Dissolved	ug/L	1000	1010	101	80-120	
Molybdenum, Dissolved	ug/L	1000	994	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609085 3609086

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	594	1000	1000	1610	1610	102	102	75-125	0	20	
Lithium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	75-125	0	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	992	985	99	98	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609087 3609088

Parameter	Units	50372310003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	<100	1000	1000	1020	1010	100	99	75-125	1	20	
Lithium, Dissolved	ug/L	<20.0	1000	1000	980	990	98	99	75-125	1	20	
Molybdenum, Dissolved	ug/L	<10.0	1000	1000	985	981	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788586
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

METHOD BLANK: 3607520 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.49	05/08/24 19:19	
Arsenic	ug/L	ND	1.0	0.075	05/08/24 19:19	
Barium	ug/L	ND	1.0	0.077	05/08/24 19:19	
Beryllium	ug/L	ND	0.20	0.035	05/08/24 19:19	
Cobalt	ug/L	ND	1.0	0.046	05/08/24 19:19	
Manganese	ug/L	ND	1.0	0.17	05/08/24 19:19	
Selenium	ug/L	ND	1.0	0.20	05/08/24 19:19	
Thallium	ug/L	ND	1.0	0.040	05/08/24 19:19	

LABORATORY CONTROL SAMPLE: 3607521

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.2	103	80-120	
Arsenic	ug/L	40	39.0	98	80-120	
Barium	ug/L	40	40.3	101	80-120	
Beryllium	ug/L	40	39.8	100	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Manganese	ug/L	40	40.6	102	80-120	
Selenium	ug/L	40	39.9	100	80-120	
Thallium	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607522 3607523

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	42.0	41.6	105	104	75-125	1	20	
Arsenic	ug/L	2.7	40	40	41.3	41.4	96	97	75-125	0	20	
Barium	ug/L	95.7	40	40	136	134	100	96	75-125	1	20	
Beryllium	ug/L	ND	40	40	39.5	39.1	99	98	75-125	1	20	
Cobalt	ug/L	1.9	40	40	40.5	40.4	97	96	75-125	0	20	
Manganese	ug/L	3760	40	40	3720	3810	-109	137	75-125	3	20	P6
Selenium	ug/L	ND	40	40	38.6	39.8	96	99	75-125	3	20	
Thallium	ug/L	ND	40	40	42.9	42.3	107	106	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788703
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278003, 50372278004

METHOD BLANK: 3607970 Matrix: Water
Associated Lab Samples: 50372278001, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	4.4	05/10/24 14:13	

LABORATORY CONTROL SAMPLE: 3607971

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	379	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607972 3607973

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	376	382	94	95	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788610 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

METHOD BLANK: 3607644 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/07/24 20:37	

LABORATORY CONTROL SAMPLE: 3607645

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.2	100	90-110	

SAMPLE DUPLICATE: 3607646

Parameter	Units	50372250004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	184	187	1	20	

SAMPLE DUPLICATE: 3607647

Parameter	Units	50372278001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	497	505	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788654
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

METHOD BLANK: 3607822 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/08/24 12:12	

LABORATORY CONTROL SAMPLE: 3607823

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	303	101	80-120	

SAMPLE DUPLICATE: 3607824

Parameter	Units	50372217001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	641	653	2	10	

SAMPLE DUPLICATE: 3607825

Parameter	Units	50372252004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	297	294	1	10	

SAMPLE DUPLICATE: 3607826

Parameter	Units	50372278001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	864	852	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788959
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

SAMPLE DUPLICATE: 3609292

Parameter	Units	50372278001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.0	0	2	H3

SAMPLE DUPLICATE: 3609293

Parameter	Units	50372299001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.8	7.9	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788465
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

METHOD BLANK: 3606835 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/07/24 10:32	

LABORATORY CONTROL SAMPLE: 3606836

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.54	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606837 3606838

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.53	0.53	106	105	90-110	1	20	

MATRIX SPIKE SAMPLE: 3606839

Parameter	Units	50372298002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.46	91	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788408
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

METHOD BLANK: 3606686 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/06/24 22:17	

LABORATORY CONTROL SAMPLE: 3606687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606688 3606689

Parameter	Units	50372250004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	3.0	1	1	3.8	3.8	84	85	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606690 3606691

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	0.81	0.81	81	81	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 789738
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278002, 50372278003, 50372278004

METHOD BLANK: 3613506 Matrix: Water
Associated Lab Samples: 50372278002, 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/17/24 17:26	

LABORATORY CONTROL SAMPLE: 3613507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3613508 3613509

Parameter	Units	50372250004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.7	1.5				9		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 790017
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001

METHOD BLANK: 3614694 Matrix: Water
Associated Lab Samples: 50372278001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/17/24 17:36	

LABORATORY CONTROL SAMPLE: 3614695

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614696 3614697

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	0.72			2.3	2.2				5		

MATRIX SPIKE SAMPLE: 3614698

Parameter	Units	50372291001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	11.3		13.0			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 788764
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278001

METHOD BLANK: 3608259 Matrix: Water
Associated Lab Samples: 50372278001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/08/24 17:10	

LABORATORY CONTROL SAMPLE: 3608260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	10.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608261 3608262

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.0	10	10	10.3	10.5	93	95	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608263 3608264

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	3.7	10	10	12.9	13.3	93	96	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 789530
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372278003, 50372278004

METHOD BLANK: 3612686 Matrix: Water
Associated Lab Samples: 50372278003, 50372278004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/13/24 14:36	

LABORATORY CONTROL SAMPLE: 3612687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3612688 3612689

Parameter	Units	50372278003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.0	10	10	11.9	11.6	99	96	80-120	3	20	

MATRIX SPIKE SAMPLE: 3612690

Parameter	Units	50372298002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	4.8	10	13.3	85	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: MW-14 **Lab ID: 50372278001** Collected: 05/05/24 09:05 Received: 05/06/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.262 ± 0.343 (0.571) C:NA T:87%**	pCi/L	05/24/24 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.63 ± 0.610 (0.908) C:69% T:83%**	pCi/L	05/22/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.89 ± 0.953 (1.48)**	pCi/L	05/28/24 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: Field Blank 2 **Lab ID: 50372278002** Collected: 05/05/24 12:15 Received: 05/06/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.152 ± 0.411 (0.884) C:NA T:91%**	pCi/L	05/24/24 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0742 ± 0.335 (0.762) C:83% T:89%**	pCi/L	05/22/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0742 ± 0.746 (1.65)**	pCi/L	05/28/24 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: MW-15 **Lab ID: 50372278003** Collected: 05/05/24 12:15 Received: 05/06/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.497 ± 0.606 (1.00) C:NA T:85%**	pCi/L	05/24/24 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.542 ± 0.410 (0.807) C:84% T:79%**	pCi/L	05/22/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.04 ± 1.02 (1.81)**	pCi/L	05/28/24 15:01	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: Dup 2 **Lab ID: 50372278004** Collected: 05/05/24 00:00 Received: 05/06/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.65 ± 0.958 (1.32) C:NA T:87%**	pCi/L	05/24/24 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.742 ± 0.444 (0.838) C:86% T:83%**	pCi/L	05/22/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.39 ± 1.40 (2.16)**	pCi/L	05/28/24 15:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: MW-14 MS **Lab ID: 50372278005** Collected: 05/05/24 09:05 Received: 05/06/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**84.75 %REC ± NA (NA) C:NA T:NA**	pCi/L	05/24/24 15:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**64.21 %REC ± NA (NA) C:NA T:NA**	pCi/L	05/22/24 15:42	15262-20-1	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Sample: MW-14 MSD **Lab ID: 50372278006** Collected: 05/05/24 09:05 Received: 05/06/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**106.10 %REC 22.37RPD ± NA (NA) C:NA T:NA**	pCi/L	05/24/24 15:33	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**74.07 %REC 14.26RPD ± NA (NA) C:NA T:NA**	pCi/L	05/22/24 15:42	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 667225
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004, 50372278005, 50372278006

METHOD BLANK: 3248761 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004, 50372278005, 50372278006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.244 ± 0.253 (0.377) C:NA T:95%	pCi/L	05/24/24 15:19	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

QC Batch: 667228
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004, 50372278005, 50372278006

METHOD BLANK: 3248767 Matrix: Water
Associated Lab Samples: 50372278001, 50372278002, 50372278003, 50372278004, 50372278005, 50372278006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.534 ± 0.349 (0.645) C:78% T:84%	pCi/L	05/22/24 15:40	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372278001	**MW-14**	EPA 9056	788743		
50372278002	**Field Blank 2**	EPA 9056	788743		
50372278003	**MW-15**	EPA 9056	788743		
50372278004	**Dup 2**	EPA 9056	788743		
50372278001	**MW-14**	EPA 3010	788584	EPA 6010	789385
50372278002	**Field Blank 2**	EPA 3010	788584	EPA 6010	789385
50372278003	**MW-15**	EPA 3010	788584	EPA 6010	789385
50372278004	**Dup 2**	EPA 3010	788584	EPA 6010	789385
50372278001	**MW-14**	EPA 3010	788890	EPA 6010	789185
50372278003	**MW-15**	EPA 3010	788890	EPA 6010	789185
50372278004	**Dup 2**	EPA 3010	788890	EPA 6010	789185
50372278001	**MW-14**	EPA 200.2	788586	EPA 6020	788785
50372278002	**Field Blank 2**	EPA 200.2	788586	EPA 6020	788785
50372278003	**MW-15**	EPA 200.2	788586	EPA 6020	788785
50372278004	**Dup 2**	EPA 200.2	788586	EPA 6020	788785
50372278001	**MW-14**	EPA 200.2	788703	EPA 6020	788870
50372278003	**MW-15**	EPA 200.2	788703	EPA 6020	788870
50372278004	**Dup 2**	EPA 200.2	788703	EPA 6020	788870
50372278001	**MW-14**	EPA 7470	789230	EPA 7470	789894
50372278002	**Field Blank 2**	EPA 7470	789230	EPA 7470	789894
50372278003	**MW-15**	EPA 7470	789230	EPA 7470	789894
50372278004	**Dup 2**	EPA 7470	789230	EPA 7470	789894
50372278001	**MW-14**	EPA 903.1	667225		
50372278002	**Field Blank 2**	EPA 903.1	667225		
50372278003	**MW-15**	EPA 903.1	667225		
50372278004	**Dup 2**	EPA 903.1	667225		
50372278005	**MW-14 MS**	EPA 903.1	667225		
50372278006	**MW-14 MSD**	EPA 903.1	667225		
50372278001	**MW-14**	EPA 904.0	667228		
50372278002	**Field Blank 2**	EPA 904.0	667228		
50372278003	**MW-15**	EPA 904.0	667228		
50372278004	**Dup 2**	EPA 904.0	667228		
50372278005	**MW-14 MS**	EPA 904.0	667228		
50372278006	**MW-14 MSD**	EPA 904.0	667228		
50372278001	**MW-14**	Total Radium Calculation	671739		
50372278002	**Field Blank 2**	Total Radium Calculation	671739		
50372278003	**MW-15**	Total Radium Calculation	671739		
50372278004	**Dup 2**	Total Radium Calculation	671739		
50372278001	**MW-14**	SM 2320B	788610		
50372278002	**Field Blank 2**	SM 2320B	788610		
50372278003	**MW-15**	SM 2320B	788610		
50372278004	**Dup 2**	SM 2320B	788610		
50372278001	**MW-14**	SM 2540C	788654		
50372278002	**Field Blank 2**	SM 2540C	788654		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372278

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372278003	**MW-15**	SM 2540C	788654		
50372278004	**Dup 2**	SM 2540C	788654		
50372278001	**MW-14**	SM 4500-H+B	788959		
50372278002	**Field Blank 2**	SM 4500-H+B	788959		
50372278003	**MW-15**	SM 4500-H+B	788959		
50372278004	**Dup 2**	SM 4500-H+B	788959		
50372278001	**MW-14**	SM 4500-S2-D	788465		
50372278002	**Field Blank 2**	SM 4500-S2-D	788465		
50372278003	**MW-15**	SM 4500-S2-D	788465		
50372278004	**Dup 2**	SM 4500-S2-D	788465		
50372278001	**MW-14**	EPA 353.2	788408		
50372278002	**Field Blank 2**	EPA 353.2	788408		
50372278003	**MW-15**	EPA 353.2	788408		
50372278004	**Dup 2**	EPA 353.2	788408		
50372278001	**MW-14**	EPA 365.1	790017	EPA 365.1	790689
50372278002	**Field Blank 2**	EPA 365.1	789738	EPA 365.1	790688
50372278003	**MW-15**	EPA 365.1	789738	EPA 365.1	790688
50372278004	**Dup 2**	EPA 365.1	789738	EPA 365.1	790688
50372278001	**MW-14**	SM 5310C	788764		
50372278003	**MW-15**	SM 5310C	789530		
50372278004	**Dup 2**	SM 5310C	789530		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Reques

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant field

WO# : 50372278

50372278

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P2R3	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/59

Regulatory Agency

State / Location: IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Total Metals 6010/6020/7470	Diss. Metals 6010/6020	DOC by 5310	Alkalinity/pH	Cl, F, SO4 by 9056	TDS by 2540C	Nitrate by 353.2	Phosphate by 365.1	Sulfide by 4500	Rad 226/228 + Sum to PA	Residual Chlorine (Y/N)	
1	MW-14					5/5/24	0905		10	X	X	X		X					X	X	X	X	X	X	X	X		001
2	MS					5/5/24			10	X	X	X		X					X	X	X	X	X	X	X	X		
3	MSD-2					5/5/24			10	X	X	X		X					X	X	X	X	X	X	X	X		
4	Field Blank 2					5/5/24			8	X	X	X		X					X	X	X	X	X	X	X	X		002
5	MW-15					5/5/24	1215		10	X	X	X		X					X	X	X	X	X	X	X	X		003
6	DUP 2					5/5/24			10	X	X	X		X					X	X	X	X	X	X	X	X		004
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li (11)	Josh O'Brian	5-6-24	7:20am	Jay Williams	5/6	7:20	2.0			
6020: Be, Mn, Co, As, Se, Sb, Ba, Tl (8). 7470: Hg (1)	Jay Williams	5-6-24	10:00am	[illegible]	5-6-24	10:00	1.2	y	N	
Diss 6010: B, Mo, Li (3). Diss 6020: Al, Mn (2)							0.9			y
							0.7			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh O'Brian

SIGNATURE of SAMPLER: [signature] DATE Signed: 5-5-24

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: RC 5-6-24 11:32

1. Courier: ☐FED EX | UPS ☑CLIENT ☐PACE ☐NOW/JETT | 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 7 8 Ⓐ B C D E F G H

4. Cooler Temperature(s): (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

2012.0	12/1.2	0.9/0.9	0.7/0.7

5. Packing Material: | ✓ Bubble Wrap | ✓ Bubble Bags | | None | | Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: | | Yes ☐ No
Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? | Yes ✓ | No

If yes but not on COC what is the EZ Bottle Order Number?:

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

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? **Analysis:** NO3	✓	
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
Headspace in VOA Vials (>6mm): See Containter Count form for details			No VOA Vials Sent ✓
Trip Blank Present?		✓	
Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE ____ of ____

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER								
			MeOH (only)																											Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			SBS																											Red	Yellow	Green	Black
			DI			VOA VIAL HS >6mm																											
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H			VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1														3			6	3	6	3	3	3		3					WT	✓	✓		✓
2																																	
3																																	
4																	2	1	2	1		1		1					WT	✓	✓		✓
5														1			1	1	1	1	1	1		1					1	1	1		1
6														1			1	1	1	1	1	1		1					1	1	1		1
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372339001	**MW-10**	Water	05/06/24 15:45	05/07/24 10:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372339001	**MW-10**	EPA 9056	ADM	3	PASI-I
		EPA 6010	NWB	11	PASI-I
		EPA 6010	NWB	3	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372339001	**MW-10**					
EPA 9056	Chloride	65.9	mg/L	2.5	05/13/24 18:08	
EPA 9056	Sulfate	920	mg/L	25.0	05/13/24 18:25	
EPA 6010	Boron	34400	ug/L	100	05/10/24 10:15	
EPA 6010	Calcium	591000	ug/L	5000	05/10/24 12:07	
EPA 6010	Iron	34900	ug/L	100	05/10/24 10:15	
EPA 6010	Lithium	24.9	ug/L	20.0	05/10/24 10:15	
EPA 6010	Magnesium	110000	ug/L	1000	05/10/24 10:15	
EPA 6010	Molybdenum	12.9	ug/L	10.0	05/10/24 10:15	
EPA 6010	Potassium	32500	ug/L	1000	05/10/24 10:15	
EPA 6010	Sodium	76700	ug/L	1000	05/10/24 10:15	
EPA 6010	Boron, Dissolved	37400	ug/L	100	05/16/24 13:32	
EPA 6010	Lithium, Dissolved	25.8	ug/L	20.0	05/16/24 10:38	
EPA 6010	Molybdenum, Dissolved	13.1	ug/L	10.0	05/16/24 10:38	
EPA 6020	Arsenic	62.6	ug/L	1.0	05/10/24 00:30	
EPA 6020	Barium	79.1	ug/L	1.0	05/08/24 21:17	
EPA 6020	Cobalt	2.2	ug/L	1.0	05/10/24 00:30	
EPA 6020	Manganese	2630	ug/L	20.0	05/09/24 20:09	
EPA 903.1	Radium-226	0.677 ± 0.489 (0.681) C:NA T:95%	pCi/L		05/28/24 15:30	
EPA 904.0	Radium-228	0.674 ± 0.385 (0.697) C:80% T:86%	pCi/L		05/22/24 14:16	
Total Radium Calculation	Total Radium	1.35 ± 0.874 (1.38)	pCi/L		05/30/24 10:25	
SM 2320B	Alkalinity, Total as CaCO3	175	mg/L	10.0	05/07/24 20:55	
SM 2540C	Total Dissolved Solids	1550	mg/L	20.0	05/09/24 11:54	
SM 4500-H+B	pH at 25 Degrees C	6.4	Std. Units	0.10	05/09/24 15:46	H3
SM 5310C	Dissolved Organic Carbon	1.8	mg/L	1.0	05/13/24 19:52	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

Sample: MW-10 **Lab ID: 50372339001** Collected: 05/06/24 15:45 Received: 05/07/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**65.9**	mg/L	2.5	0.67	10		05/13/24 18:08	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/13/24 17:51	16984-48-8	
Sulfate	**920**	mg/L	25.0	19.0	100		05/13/24 18:25	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**34400**	ug/L	100	11.4	1	05/09/24 15:46	05/10/24 10:15	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/09/24 15:46	05/10/24 10:15	7440-43-9	
Calcium	**591000**	ug/L	5000	284	5	05/09/24 15:46	05/10/24 12:07	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/09/24 15:46	05/10/24 10:15	7440-47-3	
Iron	**34900**	ug/L	100	18.1	1	05/09/24 15:46	05/10/24 10:15	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/09/24 15:46	05/10/24 10:15	7439-92-1	
Lithium	**24.9**	ug/L	20.0	5.1	1	05/09/24 15:46	05/10/24 10:15	7439-93-2	
Magnesium	**110000**	ug/L	1000	32.8	1	05/09/24 15:46	05/10/24 10:15	7439-95-4	
Molybdenum	**12.9**	ug/L	10.0	1.1	1	05/09/24 15:46	05/10/24 10:15	7439-98-7	
Potassium	**32500**	ug/L	1000	120	1	05/09/24 15:46	05/10/24 10:15	7440-09-7	
Sodium	**76700**	ug/L	1000	48.2	1	05/09/24 15:46	05/10/24 10:15	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**37400**	ug/L	100	11.4	1	05/15/24 20:27	05/16/24 13:32	7440-42-8	
Lithium, Dissolved	**25.8**	ug/L	20.0	5.1	1	05/15/24 20:27	05/16/24 10:38	7439-93-2	
Molybdenum, Dissolved	**13.1**	ug/L	10.0	1.1	1	05/15/24 20:27	05/16/24 10:38	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/08/24 07:45	05/08/24 21:17	7440-36-0	
Arsenic	**62.6**	ug/L	1.0	0.075	1	05/08/24 07:45	05/10/24 00:30	7440-38-2	
Barium	**79.1**	ug/L	1.0	0.077	1	05/08/24 07:45	05/08/24 21:17	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/08/24 07:45	05/08/24 21:17	7440-41-7	
Cobalt	**2.2**	ug/L	1.0	0.046	1	05/08/24 07:45	05/10/24 00:30	7440-48-4	
Manganese	**2630**	ug/L	20.0	3.4	20	05/08/24 07:45	05/09/24 20:09	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	05/08/24 07:45	05/10/24 00:30	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/08/24 07:45	05/08/24 21:17	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/08/24 07:45	05/08/24 18:06	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/17/24 09:53	05/19/24 16:56	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

Sample: MW-10 **Lab ID: 50372339001** Collected: 05/06/24 15:45 Received: 05/07/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**175**	mg/L	10.0	10.0	1		05/07/24 20:55		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1550**	mg/L	20.0	20.0	1		05/09/24 11:54		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.4**	Std. Units	0.10	0.10	1		05/09/24 15:46		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/07/24 14:41	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/07/24 22:18	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/15/24 11:15	05/17/24 18:14		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.8**	mg/L	1.0	0.25	1		05/13/24 19:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 788750
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3608191 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/13/24 10:33	
Fluoride	mg/L	ND	0.10	0.017	05/13/24 10:33	
Sulfate	mg/L	ND	0.25	0.19	05/13/24 10:33	

LABORATORY CONTROL SAMPLE: 3608192

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	98	80-120	
Fluoride	mg/L	1	1.1	105	80-120	
Sulfate	mg/L	5	5.1	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608193 3608194

Parameter	Units	50372252004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.6	2.5	2.5	5.1	5.1	99	99	80-120	0	15	
Fluoride	mg/L	0.29	1	1	1.4	1.3	107	106	80-120	1	15	
Sulfate	mg/L	37.8	5	5	42.8	42.9	101	102	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608195 3608196

Parameter	Units	50372420003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	170	25	25	190	191	83	86	80-120	0	15	
Fluoride	mg/L	0.21	1	1	1.3	1.3	110	110	80-120	0	15	
Sulfate	mg/L	86.3	50	50	134	134	96	96	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 789231
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3610814 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/19/24 16:19	

LABORATORY CONTROL SAMPLE: 3610815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.4	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610816 3610817

Parameter	Units	50372534001 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	5.1	5.0	101	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 788882
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372339001

METHOD BLANK: 3609050 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	05/10/24 10:01	
Cadmium	ug/L	ND	2.0	0.74	05/10/24 10:01	
Calcium	ug/L	ND	1000	56.7	05/10/24 10:01	
Chromium	ug/L	ND	10.0	1.4	05/10/24 10:01	
Iron	ug/L	ND	100	18.1	05/10/24 10:01	
Lead	ug/L	ND	10.0	4.0	05/10/24 10:01	
Lithium	ug/L	ND	20.0	5.1	05/10/24 10:01	
Magnesium	ug/L	ND	1000	32.8	05/10/24 10:01	
Molybdenum	ug/L	ND	10.0	1.1	05/10/24 10:01	
Potassium	ug/L	ND	1000	120	05/10/24 10:01	
Sodium	ug/L	ND	1000	48.2	05/10/24 10:01	

LABORATORY CONTROL SAMPLE: 3609051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	966	97	80-120	
Cadmium	ug/L	1000	921	92	80-120	
Calcium	ug/L	10000	9880	99	80-120	
Chromium	ug/L	1000	974	97	80-120	
Iron	ug/L	10000	9400	94	80-120	
Lead	ug/L	1000	897	90	80-120	
Lithium	ug/L	1000	992	99	80-120	
Magnesium	ug/L	10000	9780	98	80-120	
Molybdenum	ug/L	1000	987	99	80-120	
Potassium	ug/L	10000	9490	95	80-120	
Sodium	ug/L	10000	9490	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609052 3609053

Parameter	Units	50372389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	<100	1000	1000	1050	1010	97	93	75-125	4	20	
Cadmium	ug/L	<2.0	1000	1000	933	911	93	91	75-125	2	20	
Calcium	ug/L	54.5 mg/L	10000	10000	63300	61300	88	68	75-125	3	20	P6
Chromium	ug/L	<10.0	1000	1000	982	952	98	95	75-125	3	20	
Iron	ug/L	<100	10000	10000	9520	9220	95	92	75-125	3	20	
Lead	ug/L	<10.0	1000	1000	896	876	89	87	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609052 3609053

Parameter	Units	50372389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	<8.0	1000	1000	1020	980	102	98	75-125	4	20	
Magnesium	ug/L	7.5 mg/L	10000	10000	17100	16600	96	91	75-125	3	20	
Molybdenum	ug/L	<10.0	1000	1000	996	969	100	97	75-125	3	20	
Potassium	ug/L	1.7 mg/L	10000	10000	11600	11100	99	94	75-125	5	20	
Sodium	ug/L	11.7 mg/L	10000	10000	21100	20400	94	86	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 789952
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372339001

METHOD BLANK: 3614467 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/16/24 13:22	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/16/24 13:22	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/16/24 13:22	

LABORATORY CONTROL SAMPLE: 3614468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	1050	105	80-120	
Lithium, Dissolved	ug/L	1000	1070	107	80-120	
Molybdenum, Dissolved	ug/L	1000	1100	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614469 3614470

Parameter	Units	50372420003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	407	1000	1000	1510	1430	111	103	75-125	5	20	CH
Lithium, Dissolved	ug/L	ND	1000	1000	1070	1030	106	102	75-125	4	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1140	1090	114	108	75-125	5	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 788586
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3607520 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.49	05/08/24 19:19	
Arsenic	ug/L	ND	1.0	0.075	05/08/24 19:19	
Barium	ug/L	ND	1.0	0.077	05/08/24 19:19	
Beryllium	ug/L	ND	0.20	0.035	05/08/24 19:19	
Cobalt	ug/L	ND	1.0	0.046	05/08/24 19:19	
Manganese	ug/L	ND	1.0	0.17	05/08/24 19:19	
Selenium	ug/L	ND	1.0	0.20	05/08/24 19:19	
Thallium	ug/L	ND	1.0	0.040	05/08/24 19:19	

LABORATORY CONTROL SAMPLE: 3607521

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.2	103	80-120	
Arsenic	ug/L	40	39.0	98	80-120	
Barium	ug/L	40	40.3	101	80-120	
Beryllium	ug/L	40	39.8	100	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Manganese	ug/L	40	40.6	102	80-120	
Selenium	ug/L	40	39.9	100	80-120	
Thallium	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607522 3607523

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	42.0	41.6	105	104	75-125	1	20	
Arsenic	ug/L	2.7	40	40	41.3	41.4	96	97	75-125	0	20	
Barium	ug/L	95.7	40	40	136	134	100	96	75-125	1	20	
Beryllium	ug/L	ND	40	40	39.5	39.1	99	98	75-125	1	20	
Cobalt	ug/L	1.9	40	40	40.5	40.4	97	96	75-125	0	20	
Manganese	ug/L	3760	40	40	3720	3810	-109	137	75-125	3	20	P6
Selenium	ug/L	ND	40	40	38.6	39.8	96	99	75-125	3	20	
Thallium	ug/L	ND	40	40	42.9	42.3	107	106	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 788588
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3607528 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	05/08/24 16:04	

LABORATORY CONTROL SAMPLE: 3607529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	395	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607530 3607531

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	410	419	101	103	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 788614
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3607656 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/07/24 20:55	

LABORATORY CONTROL SAMPLE: 3607657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	47.8	96	90-110	

SAMPLE DUPLICATE: 3607658

Parameter	Units	50372298001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	474	479	1	20	

SAMPLE DUPLICATE: 3607659

Parameter	Units	50372337001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	60.0	60.8	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 788899
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3609136 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/09/24 11:46	

LABORATORY CONTROL SAMPLE: 3609137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3609138

Parameter	Units	50372297001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	216	213	1	10	

SAMPLE DUPLICATE: 3609139

Parameter	Units	50372340001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2630	2590	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 788964
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372339001

SAMPLE DUPLICATE: 3609321

Parameter	Units	50372299002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.8	7.6	1	2	H3

SAMPLE DUPLICATE: 3609322

Parameter	Units	50372419005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.0	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 788573
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3607250 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/07/24 14:41	

LABORATORY CONTROL SAMPLE: 3607251

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607252 3607253

Parameter	Units	50372339001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.55	0.55	109	109	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 788620
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3607729 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/07/24 21:54	

LABORATORY CONTROL SAMPLE: 3607730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607731 3607732

Parameter	Units	50372420003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	0.98	0.98	97	97	90-110	0	20	

MATRIX SPIKE SAMPLE: 3607733

Parameter	Units	50372420004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.93	92	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 790021
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3614703 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/17/24 18:04	

LABORATORY CONTROL SAMPLE: 3614704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614705 3614706

Parameter	Units	50372335001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	1.1			2.6	2.6				1		

MATRIX SPIKE SAMPLE: 3614707

Parameter	Units	50372337001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	0.15		1.8			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 789530
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372339001

METHOD BLANK: 3612686 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/13/24 14:36	

LABORATORY CONTROL SAMPLE: 3612687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3612688 3612689

Parameter	Units	50372278003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.0	10	10	11.9	11.6	99	96	80-120	3	20	

MATRIX SPIKE SAMPLE: 3612690

Parameter	Units	50372298002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	4.8	10	13.3	85	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

Sample: MW-10 **Lab ID: 50372339001** Collected: 05/06/24 15:45 Received: 05/07/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.677 ± 0.489 (0.681) C:NA T:95%**	pCi/L	05/28/24 15:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.674 ± 0.385 (0.697) C:80% T:86%**	pCi/L	05/22/24 14:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.35 ± 0.874 (1.38)**	pCi/L	05/30/24 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 667540
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372339001

METHOD BLANK: 3250413 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.118 ± 0.179 (0.106) C:NA T:90%	pCi/L	05/28/24 15:17	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

QC Batch: 667541
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372339001

METHOD BLANK: 3250414 Matrix: Water
Associated Lab Samples: 50372339001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.227 ± 0.339 (0.730) C:79% T:84%	pCi/L	05/22/24 14:15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R2
Pace Project No.: 50372339

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372339001	**MW-10**	EPA 9056	788750		
50372339001	**MW-10**	EPA 3010	788882	EPA 6010	789184
50372339001	**MW-10**	EPA 3010	789952	EPA 6010	790303
50372339001	**MW-10**	EPA 200.2	788586	EPA 6020	788785
50372339001	**MW-10**	EPA 200.2	788588	EPA 6020	788786
50372339001	**MW-10**	EPA 7470	789231	EPA 7470	790794
50372339001	**MW-10**	EPA 903.1	667540		
50372339001	**MW-10**	EPA 904.0	667541		
50372339001	**MW-10**	Total Radium Calculation	672036		
50372339001	**MW-10**	SM 2320B	788614		
50372339001	**MW-10**	SM 2540C	788899		
50372339001	**MW-10**	SM 4500-H+B	788964		
50372339001	**MW-10**	SM 4500-S2-D	788573		
50372339001	**MW-10**	EPA 353.2	788620		
50372339001	**MW-10**	EPA 365.1	790021	EPA 365.1	790691
50372339001	**MW-10**	SM 5310C	789530		

Pace Analytical
WWW.PACELABS.COM

WO# : 50372339

50372339

CHAIN- ...ument

The Chain- ...mpleted accurately.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P2R2	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/59

Regulatory Agency	
State / Location	
	IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Total Metals 6010/6020/7470	Diss. Metals 6010/6020	DOC by 5310	Alkalinity/pH	Cl, F, SO4 by 9056	TDS by 2540C	Nitrate by 353.2	Phosphate by 365.1	Sulfide by 4500	Rad 226/228 + Sum to PA			Residual Chlorine (Y/N)	
1	MW-10		G			5/6/24	1545		10	X	X	X		X					X	X	X	X	X	X	X	X	X	X			001
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li (11)		5/6/24	730 PM		5/7/24	730				
6020: Be, Mn, Co, As, Se, Sb, Ba, Tl (8). 7470: Hg (1)		5/7/24	1000 AM		5/7/24	1000	2.3	Y	Y	Y
Diss 6010: B, Mo, Li (3). Diss 6020: Al, Mn (2)										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brian					
SIGNATURE of SAMPLER:		DATE Signed: 5-6-24				

F-IN-Q-290-rev.26, 30Apr2024

MW-10

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: DMP 05/07/24 10:28

1. Courier: ☐FED EX | UPS ☑CLIENT ☐PACE ☐NOW/JETT | 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 7 8 A B C D E F G H
4. Cooler Temperature(s): 2.3/2.3 (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: | Bubble Wrap ☑ Bubble Bags | None | Other _____
6. Ice Type: ☑ Wet ☐ Blue ☐ None
7. Was the PM notified of out of temp cooler?: | Yes ☐No N/A
Cooler temp should be above freezing to 6°C
8. EZ Bottle Order? | Yes ☑No
If yes but not on COC what is the EZ Bottle Order Number?: N/A

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: Nitrate by 353.2	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 12:05		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)		N/A	Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE 1 of 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1													1			2	1	2	1	1	1		1					WT	✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372340001	**MW-24**	Water	05/06/24 15:30	05/07/24 10:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372340001	**MW-24**	EPA 9056	KBB	3	PASI-I
		EPA 6010	NWB	11	PASI-I
		EPA 6010	NWB	5	PASI-I
		EPA 6020	CAW	8	PASI-I
		EPA 6020	CAW	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372340001	**MW-24**					
EPA 9056	Chloride	89.2	mg/L	2.5	05/13/24 19:55	
EPA 9056	Fluoride	0.37	mg/L	0.10	05/13/24 19:37	
EPA 9056	Sulfate	1290	mg/L	25.0	05/13/24 20:12	
EPA 6010	Boron	1080	ug/L	100	05/10/24 10:17	
EPA 6010	Calcium	273000	ug/L	2000	05/10/24 12:09	
EPA 6010	Iron	100	ug/L	100	05/10/24 10:17	
EPA 6010	Lithium	1240	ug/L	20.0	05/10/24 10:17	
EPA 6010	Magnesium	32400	ug/L	1000	05/10/24 10:17	
EPA 6010	Molybdenum	354	ug/L	10.0	05/10/24 10:17	
EPA 6010	Potassium	142000	ug/L	2000	05/10/24 12:09	
EPA 6010	Sodium	73800	ug/L	1000	05/10/24 10:17	
EPA 6010	Boron, Dissolved	1220	ug/L	100	05/16/24 13:34	
EPA 6010	Lithium, Dissolved	1280	ug/L	20.0	05/16/24 10:40	
EPA 6010	Magnesium, Dissolved	33800	ug/L	1000	05/16/24 10:40	
EPA 6010	Molybdenum, Dissolved	387	ug/L	10.0	05/16/24 10:40	
EPA 6010	Potassium, Dissolved	154000	ug/L	2000	05/16/24 13:41	
EPA 6020	Barium	37.3	ug/L	1.0	05/08/24 21:06	
EPA 6020	Cobalt	2.0	ug/L	1.0	05/10/24 00:04	
EPA 6020	Manganese	987	ug/L	10.0	05/09/24 20:06	
EPA 903.1	Radium-226	0.0506 ± 0.553 (1.05) C:NA T:90%	pCi/L		05/27/24 13:56	
EPA 904.0	Radium-228	0.445 ± 0.381 (0.763) C:75% T:84%	pCi/L		05/21/24 14:27	
Total Radium Calculation	Total Radium	0.496 ± 0.934 (1.81)	pCi/L		05/28/24 14:05	
SM 2320B	Alkalinity, Total as CaCO3	641	mg/L	10.0	05/08/24 20:26	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	641	mg/L	10.0	05/08/24 20:26	
SM 2540C	Total Dissolved Solids	2630	mg/L	40.0	05/09/24 11:54	
SM 4500-H+B	pH at 25 Degrees C	6.7	Std. Units	0.10	05/09/24 15:46	H3
EPA 365.1	Phosphate as P04	1.3	mg/L	0.15	05/17/24 18:16	
SM 5310C	Dissolved Organic Carbon	14.1	mg/L	1.0	05/13/24 20:03	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

Sample: MW-24 **Lab ID: 50372340001** Collected: 05/06/24 15:30 Received: 05/07/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**89.2**	mg/L	2.5	0.67	10		05/13/24 19:55	16887-00-6	
Fluoride	**0.37**	mg/L	0.10	0.017	1		05/13/24 19:37	16984-48-8	
Sulfate	**1290**	mg/L	25.0	19.0	100		05/13/24 20:12	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1080**	ug/L	100	11.4	1	05/09/24 15:46	05/10/24 10:17	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/09/24 15:46	05/10/24 10:17	7440-43-9	
Calcium	**273000**	ug/L	2000	113	2	05/09/24 15:46	05/10/24 12:09	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/09/24 15:46	05/10/24 10:17	7440-47-3	
Iron	**100**	ug/L	100	18.1	1	05/09/24 15:46	05/10/24 10:17	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/09/24 15:46	05/10/24 10:17	7439-92-1	
Lithium	**1240**	ug/L	20.0	5.1	1	05/09/24 15:46	05/10/24 10:17	7439-93-2	
Magnesium	**32400**	ug/L	1000	32.8	1	05/09/24 15:46	05/10/24 10:17	7439-95-4	
Molybdenum	**354**	ug/L	10.0	1.1	1	05/09/24 15:46	05/10/24 10:17	7439-98-7	
Potassium	**142000**	ug/L	2000	240	2	05/09/24 15:46	05/10/24 12:09	7440-09-7	
Sodium	**73800**	ug/L	1000	48.2	1	05/09/24 15:46	05/10/24 10:17	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1220**	ug/L	100	11.4	1	05/15/24 20:27	05/16/24 13:34	7440-42-8	
Lithium, Dissolved	**1280**	ug/L	20.0	5.1	1	05/15/24 20:27	05/16/24 10:40	7439-93-2	
Magnesium, Dissolved	**33800**	ug/L	1000	32.8	1	05/15/24 20:27	05/16/24 10:40	7439-95-4	
Molybdenum, Dissolved	**387**	ug/L	10.0	1.1	1	05/15/24 20:27	05/16/24 10:40	7439-98-7	
Potassium, Dissolved	**154000**	ug/L	2000	240	2	05/15/24 20:27	05/16/24 13:41	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/08/24 07:45	05/08/24 21:06	7440-36-0	
Arsenic	ND	ug/L	1.0	0.075	1	05/08/24 07:45	05/08/24 21:06	7440-38-2	
Barium	**37.3**	ug/L	1.0	0.077	1	05/08/24 07:45	05/08/24 21:06	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/08/24 07:45	05/08/24 21:06	7440-41-7	
Cobalt	**2.0**	ug/L	1.0	0.046	1	05/08/24 07:45	05/10/24 00:04	7440-48-4	
Manganese	**987**	ug/L	10.0	1.7	10	05/08/24 07:45	05/09/24 20:06	7439-96-5	
Selenium	ND	ug/L	1.0	0.20	1	05/08/24 07:45	05/08/24 21:06	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/08/24 07:45	05/08/24 21:06	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.3	1	05/08/24 07:45	05/08/24 18:02	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/17/24 09:53	05/19/24 16:58	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

Sample: MW-24 **Lab ID: 50372340001** Collected: 05/06/24 15:30 Received: 05/07/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**641**	mg/L	10.0	10.0	1		05/08/24 20:26		
Alkalinity,Bicarbonate (CaCO3)	**641**	mg/L	10.0	10.0	1		05/08/24 20:26		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		05/08/24 20:26		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2630**	mg/L	40.0	40.0	1		05/09/24 11:54		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.7**	Std. Units	0.10	0.10	1		05/09/24 15:46		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/07/24 14:41	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/07/24 22:16	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**1.3**	mg/L	0.15	0.13	1	05/15/24 11:15	05/17/24 18:16		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**14.1**	mg/L	1.0	0.25	1		05/13/24 20:03		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 788752
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3608197 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/13/24 18:28	
Fluoride	mg/L	ND	0.10	0.017	05/13/24 18:28	
Sulfate	mg/L	ND	0.25	0.19	05/13/24 18:28	

LABORATORY CONTROL SAMPLE: 3608198

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	1.0	100	80-120	
Sulfate	mg/L	5	4.7	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608199 3608200

Parameter	Units	50372340001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	89.2	25	25	112	111	91	88	80-120	1	15	
Fluoride	mg/L	0.37	1	1	1.4	1.4	103	101	80-120	2	15	
Sulfate	mg/L	1290	500	500	1720	1720	86	86	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 789231
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3610814 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/19/24 16:19	

LABORATORY CONTROL SAMPLE: 3610815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.4	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610816 3610817

Parameter	Units	50372534001 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	5.1	5.0	101	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 788882
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372340001

METHOD BLANK: 3609050 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	05/10/24 10:01	
Cadmium	ug/L	ND	2.0	0.74	05/10/24 10:01	
Calcium	ug/L	ND	1000	56.7	05/10/24 10:01	
Chromium	ug/L	ND	10.0	1.4	05/10/24 10:01	
Iron	ug/L	ND	100	18.1	05/10/24 10:01	
Lead	ug/L	ND	10.0	4.0	05/10/24 10:01	
Lithium	ug/L	ND	20.0	5.1	05/10/24 10:01	
Magnesium	ug/L	ND	1000	32.8	05/10/24 10:01	
Molybdenum	ug/L	ND	10.0	1.1	05/10/24 10:01	
Potassium	ug/L	ND	1000	120	05/10/24 10:01	
Sodium	ug/L	ND	1000	48.2	05/10/24 10:01	

LABORATORY CONTROL SAMPLE: 3609051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	966	97	80-120	
Cadmium	ug/L	1000	921	92	80-120	
Calcium	ug/L	10000	9880	99	80-120	
Chromium	ug/L	1000	974	97	80-120	
Iron	ug/L	10000	9400	94	80-120	
Lead	ug/L	1000	897	90	80-120	
Lithium	ug/L	1000	992	99	80-120	
Magnesium	ug/L	10000	9780	98	80-120	
Molybdenum	ug/L	1000	987	99	80-120	
Potassium	ug/L	10000	9490	95	80-120	
Sodium	ug/L	10000	9490	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609052 3609053

Parameter	Units	50372389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	<100	1000	1000	1050	1010	97	93	75-125	4	20	
Cadmium	ug/L	<2.0	1000	1000	933	911	93	91	75-125	2	20	
Calcium	ug/L	54.5 mg/L	10000	10000	63300	61300	88	68	75-125	3	20	P6
Chromium	ug/L	<10.0	1000	1000	982	952	98	95	75-125	3	20	
Iron	ug/L	<100	10000	10000	9520	9220	95	92	75-125	3	20	
Lead	ug/L	<10.0	1000	1000	896	876	89	87	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609052 3609053

Parameter	Units	50372389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	<8.0	1000	1000	1020	980	102	98	75-125	4	20	
Magnesium	ug/L	7.5 mg/L	10000	10000	17100	16600	96	91	75-125	3	20	
Molybdenum	ug/L	<10.0	1000	1000	996	969	100	97	75-125	3	20	
Potassium	ug/L	1.7 mg/L	10000	10000	11600	11100	99	94	75-125	5	20	
Sodium	ug/L	11.7 mg/L	10000	10000	21100	20400	94	86	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 789952
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3614467 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	05/16/24 13:22	
Lithium, Dissolved	ug/L	ND	20.0	5.1	05/16/24 13:22	
Magnesium, Dissolved	ug/L	ND	1000	32.8	05/16/24 13:22	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	05/16/24 13:22	
Potassium, Dissolved	ug/L	ND	1000	120	05/16/24 13:22	

LABORATORY CONTROL SAMPLE: 3614468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	1050	105	80-120	
Lithium, Dissolved	ug/L	1000	1070	107	80-120	
Magnesium, Dissolved	ug/L	10000	10600	106	80-120	
Molybdenum, Dissolved	ug/L	1000	1100	110	80-120	
Potassium, Dissolved	ug/L	10000	10700	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614469 3614470

Parameter	Units	50372420003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	407	1000	1000	1510	1430	111	103	75-125	5	20	CH
Lithium, Dissolved	ug/L	ND	1000	1000	1070	1030	106	102	75-125	4	20	
Magnesium, Dissolved	ug/L	26800	10000	10000	37500	36500	108	97	75-125	3	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1140	1090	114	108	75-125	5	20	
Potassium, Dissolved	ug/L	3560	10000	10000	14200	13800	106	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 788586
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3607520 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.49	05/08/24 19:19	
Arsenic	ug/L	ND	1.0	0.075	05/08/24 19:19	
Barium	ug/L	ND	1.0	0.077	05/08/24 19:19	
Beryllium	ug/L	ND	0.20	0.035	05/08/24 19:19	
Cobalt	ug/L	ND	1.0	0.046	05/08/24 19:19	
Manganese	ug/L	ND	1.0	0.17	05/08/24 19:19	
Selenium	ug/L	ND	1.0	0.20	05/08/24 19:19	
Thallium	ug/L	ND	1.0	0.040	05/08/24 19:19	

LABORATORY CONTROL SAMPLE: 3607521

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.2	103	80-120	
Arsenic	ug/L	40	39.0	98	80-120	
Barium	ug/L	40	40.3	101	80-120	
Beryllium	ug/L	40	39.8	100	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Manganese	ug/L	40	40.6	102	80-120	
Selenium	ug/L	40	39.9	100	80-120	
Thallium	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607522 3607523

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	42.0	41.6	105	104	75-125	1	20	
Arsenic	ug/L	2.7	40	40	41.3	41.4	96	97	75-125	0	20	
Barium	ug/L	95.7	40	40	136	134	100	96	75-125	1	20	
Beryllium	ug/L	ND	40	40	39.5	39.1	99	98	75-125	1	20	
Cobalt	ug/L	1.9	40	40	40.5	40.4	97	96	75-125	0	20	
Manganese	ug/L	3760	40	40	3720	3810	-109	137	75-125	3	20	P6
Selenium	ug/L	ND	40	40	38.6	39.8	96	99	75-125	3	20	
Thallium	ug/L	ND	40	40	42.9	42.3	107	106	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 788588
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3607528 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.3	05/08/24 16:04	

LABORATORY CONTROL SAMPLE: 3607529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	395	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607530 3607531

Parameter	Units	50372217001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	410	419	101	103	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 788835
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3608723 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/08/24 20:26	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	05/08/24 20:26	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	05/08/24 20:26	

LABORATORY CONTROL SAMPLE: 3608724

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.6	103	90-110	

SAMPLE DUPLICATE: 3608725

Parameter	Units	50372291001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	208	210	1	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	192	194	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	16.4	16.8	2	20	

SAMPLE DUPLICATE: 3608726

Parameter	Units	50372291002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	219	221	1	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	219	221	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 788899
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3609136 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/09/24 11:46	

LABORATORY CONTROL SAMPLE: 3609137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3609138

Parameter	Units	50372297001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	216	213	1	10	

SAMPLE DUPLICATE: 3609139

Parameter	Units	50372340001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2630	2590	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 788964
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372340001

SAMPLE DUPLICATE: 3609321

Parameter	Units	50372299002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.8	7.6	1	2	H3

SAMPLE DUPLICATE: 3609322

Parameter	Units	50372419005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.0	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 788573
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3607250 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/07/24 14:41	

LABORATORY CONTROL SAMPLE: 3607251

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607252 3607253

Parameter	Units	50372339001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.55	0.55	109	109	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 788620
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3607729 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/07/24 21:54	

LABORATORY CONTROL SAMPLE: 3607730

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607731 3607732

Parameter	Units	50372420003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	0.98	0.98	97	97	90-110	0	20	

MATRIX SPIKE SAMPLE: 3607733

Parameter	Units	50372420004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	0.93	92	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 790021
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3614703 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/17/24 18:04	

LABORATORY CONTROL SAMPLE: 3614704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614705 3614706

Parameter	Units	50372335001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	1.1			2.6	2.6				1		

MATRIX SPIKE SAMPLE: 3614707

Parameter	Units	50372337001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	0.15		1.8			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 789530
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372340001

METHOD BLANK: 3612686 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/13/24 14:36	

LABORATORY CONTROL SAMPLE: 3612687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3612688 3612689

Parameter	Units	50372278003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.0	10	10	11.9	11.6	99	96	80-120	3	20	

MATRIX SPIKE SAMPLE: 3612690

Parameter	Units	50372298002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	4.8	10	13.3	85	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

Sample: MW-24 **Lab ID: 50372340001** Collected: 05/06/24 15:30 Received: 05/07/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0506 ± 0.553 (1.05) C:NA T:90%**	pCi/L	05/27/24 13:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.445 ± 0.381 (0.763) C:75% T:84%**	pCi/L	05/21/24 14:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.496 ± 0.934 (1.81)**	pCi/L	05/28/24 14:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 667548
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372340001

METHOD BLANK: 3250435 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.237 (0.501) C:NA T:94%	pCi/L	05/27/24 13:56	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

QC Batch: 667549
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372340001

METHOD BLANK: 3250436 Matrix: Water
Associated Lab Samples: 50372340001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0842 ± 0.330 (0.751) C:75% T:85%	pCi/L	05/21/24 14:27	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P4R2
Pace Project No.: 50372340

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372340001	**MW-24**	EPA 9056	788752		
50372340001	**MW-24**	EPA 3010	788882	EPA 6010	789184
50372340001	**MW-24**	EPA 3010	789952	EPA 6010	790303
50372340001	**MW-24**	EPA 200.2	788586	EPA 6020	788785
50372340001	**MW-24**	EPA 200.2	788588	EPA 6020	788786
50372340001	**MW-24**	EPA 7470	789231	EPA 7470	790794
50372340001	**MW-24**	EPA 903.1	667548		
50372340001	**MW-24**	EPA 904.0	667549		
50372340001	**MW-24**	Total Radium Calculation	671703		
50372340001	**MW-24**	SM 2320B	788835		
50372340001	**MW-24**	SM 2540C	788899		
50372340001	**MW-24**	SM 4500-H+B	788964		
50372340001	**MW-24**	SM 4500-S2-D	788573		
50372340001	**MW-24**	EPA 353.2	788620		
50372340001	**MW-24**	EPA 365.1	790021	EPA 365.1	790691
50372340001	**MW-24**	SM 5310C	789530		

WO#: 50372340

50372340

Pace Analytical WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : Of

Section A — Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100, Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone:	(317)579-4082 Fax:
Requested Due Date:	

Section B — Required Project Information:

Report To:	Mark Breting
Copy To:	
Purchase Order #:	
Project Name:	Petersburg P4 May 2024
Project #:	P4 RZ

Section C — Invoice Information:

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/60

Regulatory Agency	
State / Location	IN

MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

Requested Analysis Filtered (Y/N): Metals Diss. Field Filtered** = Y; Sulfide = Y

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity,pH	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum				Residual Chlorine (Y/N)	
1	MW-24	WT	G	5/6/24	1530				10	3	2	4		1					✓	✓	✓	✓	✓	✓	✓	✓	✓					001
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li) (11)	Jacob Rager	5/6/24	4:33	Joy Williams	[illegible]	7:30				
20 (Be, Mn, Co, As, Se, Sb, Ba, Tl) (8), 7470 (Hg)	Joy Williams	5/7/24	10:00AM	[illegible]/Pace	5/7/24	1000	1.6	Y	Y	Y
Dissolved FF 6010 (B, Mo, Mg, K, Li) (5) FF 6020 (Al) (1)										
ad 226/2228 to Pace PA										
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jacob Rager

SIGNATURE of SAMPLER: [signature] DATE Signed: 5/6/24

F-IN-Q-290-rev.26, 30Apr2024

MW-24

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: DMP 05/07/24 10:13

1. Courier: ☐FED EX | UPS ☑CLIENT ☐PACE ☐NOW/JETT | 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 7 8 A B C D E F G H

4. Cooler Temperature(s): 1.6/1.6 (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: | Bubble Wrap ☑ Bubble Bags ☐ None | Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: | Yes ☐No N/A
Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? | Yes ☑No

If yes but not on COC what is the EZ Bottle Order Number?: N/A

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: NO3 Wet	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 12:07		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)		N/A	Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE 1 of 1

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER						Preservation			
			MeOH (only)																											Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			SBS																											Red	Yellow	Green	Black
COC Line Item	WGFU	WGKU BG1U	DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1													1			2	1	2	1	1	1		1					WT	✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372351001	**MW-10**	Water	05/06/24 15:45	05/07/24 10:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372351001	**MW-10**	EPA 9056	ADM	3	PASI-I
		EPA 6010	NWB	9	PASI-I
		EPA 6020	CAW, DMT	9	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372351001	**MW-10**					
EPA 9056	Chloride	88.8	mg/L	2.5	05/13/24 18:59	
EPA 9056	Fluoride	0.39	mg/L	0.10	05/13/24 18:42	
EPA 9056	Sulfate	1390	mg/L	25.0	05/13/24 19:15	
EPA 6010	Boron	34600	ug/L	100	05/10/24 10:19	
EPA 6010	Calcium	589000	ug/L	5000	05/10/24 12:11	
EPA 6010	Iron	35500	ug/L	100	05/10/24 10:19	
EPA 6010	Lithium	24.0	ug/L	20.0	05/10/24 10:19	
EPA 6010	Manganese	2440	ug/L	10.0	05/10/24 10:19	
EPA 6010	Molybdenum	13.1	ug/L	10.0	05/10/24 10:19	
EPA 6020	Arsenic	63.6	ug/L	1.0	05/10/24 00:41	
EPA 6020	Barium	78.5	ug/L	1.0	05/08/24 21:20	
EPA 6020	Cobalt	2.2	ug/L	1.0	05/10/24 00:41	
EPA 6020	Copper	2.0	ug/L	1.0	05/10/24 00:41	
EPA 6020	Zinc	4.0	ug/L	3.0	05/13/24 10:10	
EPA 903.1	Radium-226	0.653 ± 0.536 (0.797) C:NA T:89%	pCi/L		05/28/24 15:30	
EPA 904.0	Radium-228	0.419 ± 0.334 (0.660) C:82% T:88%	pCi/L		05/22/24 14:16	
Total Radium Calculation	Total Radium	1.07 ± 0.870 (1.46)	pCi/L		05/30/24 10:25	
SM 2540C	Total Dissolved Solids	2530	mg/L	40.0	05/09/24 11:27	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

Sample: MW-10 **Lab ID: 50372351001** Collected: 05/06/24 15:45 Received: 05/07/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**88.8**	mg/L	2.5	0.67	10		05/13/24 18:59	16887-00-6	
Fluoride	**0.39**	mg/L	0.10	0.017	1		05/13/24 18:42	16984-48-8	
Sulfate	**1390**	mg/L	25.0	19.0	100		05/13/24 19:15	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**34600**	ug/L	100	11.4	1	05/09/24 15:46	05/10/24 10:19	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/09/24 15:46	05/10/24 10:19	7440-43-9	
Calcium	**589000**	ug/L	5000	284	5	05/09/24 15:46	05/10/24 12:11	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/09/24 15:46	05/10/24 10:19	7440-47-3	
Iron	**35500**	ug/L	100	18.1	1	05/09/24 15:46	05/10/24 10:19	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/09/24 15:46	05/10/24 10:19	7439-92-1	
Lithium	**24.0**	ug/L	20.0	5.1	1	05/09/24 15:46	05/10/24 10:19	7439-93-2	
Manganese	**2440**	ug/L	10.0	1.1	1	05/09/24 15:46	05/10/24 10:19	7439-96-5	
Molybdenum	**13.1**	ug/L	10.0	1.1	1	05/09/24 15:46	05/10/24 10:19	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.49	1	05/08/24 07:45	05/08/24 21:20	7440-36-0	
Arsenic	**63.6**	ug/L	1.0	0.075	1	05/08/24 07:45	05/10/24 00:41	7440-38-2	
Barium	**78.5**	ug/L	1.0	0.077	1	05/08/24 07:45	05/08/24 21:20	7440-39-3	
Beryllium	ND	ug/L	0.20	0.035	1	05/08/24 07:45	05/08/24 21:20	7440-41-7	
Cobalt	**2.2**	ug/L	1.0	0.046	1	05/08/24 07:45	05/10/24 00:41	7440-48-4	
Copper	**2.0**	ug/L	1.0	0.23	1	05/08/24 07:45	05/10/24 00:41	7440-50-8	
Selenium	ND	ug/L	1.0	0.20	1	05/08/24 07:45	05/10/24 00:41	7782-49-2	
Thallium	ND	ug/L	1.0	0.040	1	05/08/24 07:45	05/08/24 21:20	7440-28-0	
Zinc	**4.0**	ug/L	3.0	1.2	1	05/11/24 15:18	05/13/24 10:10	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/17/24 09:53	05/19/24 17:01	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2530**	mg/L	40.0	40.0	1		05/09/24 11:27		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

QC Batch: 788750
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372351001

METHOD BLANK: 3608191 Matrix: Water
Associated Lab Samples: 50372351001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/13/24 10:33	
Fluoride	mg/L	ND	0.10	0.017	05/13/24 10:33	
Sulfate	mg/L	ND	0.25	0.19	05/13/24 10:33	

LABORATORY CONTROL SAMPLE: 3608192

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	98	80-120	
Fluoride	mg/L	1	1.1	105	80-120	
Sulfate	mg/L	5	5.1	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608193 3608194

Parameter	Units	50372252004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	2.6	2.5	2.5	5.1	5.1	99	99	80-120	0	15	
Fluoride	mg/L	0.29	1	1	1.4	1.3	107	106	80-120	1	15	
Sulfate	mg/L	37.8	5	5	42.8	42.9	101	102	80-120	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608195 3608196

Parameter	Units	50372420003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	170	25	25	190	191	83	86	80-120	0	15	
Fluoride	mg/L	0.21	1	1	1.3	1.3	110	110	80-120	0	15	
Sulfate	mg/L	86.3	50	50	134	134	96	96	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

QC Batch: 789231
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372351001

METHOD BLANK: 3610814 Matrix: Water
Associated Lab Samples: 50372351001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/19/24 16:19	

LABORATORY CONTROL SAMPLE: 3610815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.4	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610816 3610817

Parameter	Units	50372534001 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	5.1	5.0	101	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

QC Batch: 788882
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372351001

METHOD BLANK: 3609050 Matrix: Water
Associated Lab Samples: 50372351001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	05/10/24 10:01	
Cadmium	ug/L	ND	2.0	0.74	05/10/24 10:01	
Calcium	ug/L	ND	1000	56.7	05/10/24 10:01	
Chromium	ug/L	ND	10.0	1.4	05/10/24 10:01	
Iron	ug/L	ND	100	18.1	05/10/24 10:01	
Lead	ug/L	ND	10.0	4.0	05/10/24 10:01	
Lithium	ug/L	ND	20.0	5.1	05/10/24 10:01	
Manganese	ug/L	ND	10.0	1.1	05/10/24 10:01	
Molybdenum	ug/L	ND	10.0	1.1	05/10/24 10:01	

LABORATORY CONTROL SAMPLE: 3609051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	966	97	80-120	
Cadmium	ug/L	1000	921	92	80-120	
Calcium	ug/L	10000	9880	99	80-120	
Chromium	ug/L	1000	974	97	80-120	
Iron	ug/L	10000	9400	94	80-120	
Lead	ug/L	1000	897	90	80-120	
Lithium	ug/L	1000	992	99	80-120	
Manganese	ug/L	1000	948	95	80-120	
Molybdenum	ug/L	1000	987	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609052 3609053

Parameter	Units	50372389001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	<100	1000	1000	1050	1010	97	93	75-125	4	20	
Cadmium	ug/L	<2.0	1000	1000	933	911	93	91	75-125	2	20	
Calcium	ug/L	54.5 mg/L	10000	10000	63300	61300	88	68	75-125	3	20	P6
Chromium	ug/L	<10.0	1000	1000	982	952	98	95	75-125	3	20	
Iron	ug/L	<100	10000	10000	9520	9220	95	92	75-125	3	20	
Lead	ug/L	<10.0	1000	1000	896	876	89	87	75-125	2	20	
Lithium	ug/L	<8.0	1000	1000	1020	980	102	98	75-125	4	20	
Manganese	ug/L	<20.0	1000	1000	958	933	96	93	75-125	3	20	
Molybdenum	ug/L	<10.0	1000	1000	996	969	100	97	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

QC Batch: 788586
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372351001

METHOD BLANK: 3607520 Matrix: Water
Associated Lab Samples: 50372351001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.49	05/08/24 19:19	
Arsenic	ug/L	ND	1.0	0.075	05/08/24 19:19	
Barium	ug/L	ND	1.0	0.077	05/08/24 19:19	
Beryllium	ug/L	ND	0.20	0.035	05/08/24 19:19	
Cobalt	ug/L	ND	1.0	0.046	05/08/24 19:19	
Copper	ug/L	ND	1.0	0.23	05/08/24 19:19	
Selenium	ug/L	ND	1.0	0.20	05/08/24 19:19	
Thallium	ug/L	ND	1.0	0.040	05/08/24 19:19	

LABORATORY CONTROL SAMPLE: 3607521

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.2	103	80-120	
Arsenic	ug/L	40	39.0	98	80-120	
Barium	ug/L	40	40.3	101	80-120	
Beryllium	ug/L	40	39.8	100	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Copper	ug/L	40	40.0	100	80-120	
Selenium	ug/L	40	39.9	100	80-120	
Thallium	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607522 3607523

Parameter	Units	50372278001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	42.0	41.6	105	104	75-125	1	20	
Arsenic	ug/L	2.7	40	40	41.3	41.4	96	97	75-125	0	20	
Barium	ug/L	95.7	40	40	136	134	100	96	75-125	1	20	
Beryllium	ug/L	ND	40	40	39.5	39.1	99	98	75-125	1	20	
Cobalt	ug/L	1.9	40	40	40.5	40.4	97	96	75-125	0	20	
Copper	ug/L	ND	40	40	37.5	37.4	92	92	75-125	0	20	
Selenium	ug/L	ND	40	40	38.6	39.8	96	99	75-125	3	20	
Thallium	ug/L	ND	40	40	42.9	42.3	107	106	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

QC Batch: 789332
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372351001

METHOD BLANK: 3611439 Matrix: Water
Associated Lab Samples: 50372351001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Zinc	ug/L	ND	3.0	1.2	05/13/24 09:13	

LABORATORY CONTROL SAMPLE: 3611440

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Zinc	ug/L	40	41.1	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3611441 3611442

Parameter	Units	50372481002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Zinc	ug/L	3.5J	40	40	50.6	42.1	118	97	75-125	18	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

QC Batch: 788900
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372351001

METHOD BLANK: 3609140 Matrix: Water
Associated Lab Samples: 50372351001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/09/24 11:27	

LABORATORY CONTROL SAMPLE: 3609141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3609142

Parameter	Units	50372351001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2530	2600	3	10	

SAMPLE DUPLICATE: 3609143

Parameter	Units	50372420003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	582	603	4	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

Sample: MW-10 **Lab ID: 50372351001** Collected: 05/06/24 15:45 Received: 05/07/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.653 ± 0.536 (0.797) C:NA T:89%**	pCi/L	05/28/24 15:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.419 ± 0.334 (0.660) C:82% T:88%**	pCi/L	05/22/24 14:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.07 ± 0.870 (1.46)**	pCi/L	05/30/24 10:25	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

QC Batch: 667540
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372351001

METHOD BLANK: 3250413 Matrix: Water
Associated Lab Samples: 50372351001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.118 ± 0.179 (0.106) C:NA T:90%	pCi/L	05/28/24 15:17	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

QC Batch: 667541
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372351001

METHOD BLANK: 3250414 Matrix: Water
Associated Lab Samples: 50372351001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.227 ± 0.339 (0.730) C:79% T:84%	pCi/L	05/22/24 14:15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P1R2
Pace Project No.: 50372351

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372351001	**MW-10**	EPA 9056	788750		
50372351001	**MW-10**	EPA 3010	788882	EPA 6010	789184
50372351001	**MW-10**	EPA 200.2	788586	EPA 6020	788785
50372351001	**MW-10**	EPA 200.2	789332	EPA 6020	789472
50372351001	**MW-10**	EPA 7470	789231	EPA 7470	790794
50372351001	**MW-10**	EPA 903.1	667540		
50372351001	**MW-10**	EPA 904.0	667541		
50372351001	**MW-10**	Total Radium Calculation	672036		
50372351001	**MW-10**	SM 2540C	788900		

WO#:50372351

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Doc

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must b

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P1R2	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/58

Regulatory Agency
State / Location
IN

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: Metals by 6010/6020/7470	Cl, F, SO4 by 9056	TDS by 2540C	Rad-226/228 + Sum	Residual Chlorine (Y/N)
1	MW-10		G			5/6/24	1545		5	X		X							X	X	X	X	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)	Josh O'Brian	5-7-24	7:30AM	Jay Williams	5/7/24	730				
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg	Jay Williams	5/7/24	10:00AM	David Hanson/Pace	5/7/24	1000	2.3	Y	Y	Y
Rad to Pace PA										

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	Josh O'Brian
SIGNATURE of SAMPLER:	Josh O'B
DATE Signed:	5-6-24

COC PAGE 1 of 1

Sample Container Count

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

									AMBER GLASS							PLASTIC									OTHER								
			MeOH (only)																													
			SBS																													
			DI																													
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1									WT	✓			
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

F-IN-Q-290-rev.26, 30Apr2024

MW-10

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: DMP 05/07/24 10:28

1. Courier: ☐FED EX | UPS ☑CLIENT ☐PACE ☐NOW/JETT | 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 7 8 A B C D E F G H

4. Cooler Temperature(s): 2.3/2.3 | | | |

(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: | Bubble Wrap | ☑ Bubble Bags | | None | | Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: | Yes ☐No N/A

Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? | Yes | ☑No

If yes but not on COC what is the EZ Bottle Order Number?: N/A

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, 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)		NA	Trip Blank Custody Seals?:			✓

COMMENTS:

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372468001	**MW-16**	Water	05/07/24 13:00	05/08/24 10:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372468001	**MW-16**	EPA 9056	ADM	3	PASI-I
		EPA 6010	ABH	11	PASI-I
		EPA 6010	ELK	3	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	STS	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372468001	**MW-16**					
EPA 9056	Chloride	49.7	mg/L	2.5	05/13/24 17:55	
EPA 9056	Sulfate	1380	mg/L	25.0	05/13/24 18:11	
EPA 6010	Boron	4070	ug/L	100	05/12/24 21:58	
EPA 6010	Calcium	542000	ug/L	5000	05/13/24 00:14	
EPA 6010	Iron	8190	ug/L	100	05/12/24 21:58	
EPA 6010	Lithium	823	ug/L	20.0	05/12/24 21:58	
EPA 6010	Magnesium	44200	ug/L	1000	05/12/24 21:58	
EPA 6010	Molybdenum	318	ug/L	10.0	05/12/24 21:58	
EPA 6010	Potassium	153000	ug/L	5000	05/13/24 00:14	
EPA 6010	Sodium	63400	ug/L	1000	05/12/24 21:58	
EPA 6010	Boron, Dissolved	3860	ug/L	100	05/16/24 13:25	
EPA 6010	Lithium, Dissolved	834	ug/L	20.0	05/16/24 13:25	
EPA 6010	Molybdenum, Dissolved	315	ug/L	10.0	05/16/24 13:25	
EPA 6020	Arsenic	4.3	ug/L	1.0	05/11/24 11:55	
EPA 6020	Barium	56.0	ug/L	1.0	05/11/24 11:55	
EPA 6020	Manganese	6050	ug/L	50.0	05/11/24 11:51	
EPA 903.1	Radium-226	0.116 ± 0.680 (1.27) C:NA T:87%	pCi/L		05/28/24 14:35	
EPA 904.0	Radium-228	0.766 ± 0.398 (0.702) C:88% T:86%	pCi/L		05/23/24 15:49	
Total Radium Calculation	Total Radium	0.882 ± 1.08 (1.97)	pCi/L		05/31/24 11:17	
SM 2320B	Alkalinity, Total as CaCO3	425	mg/L	10.0	05/08/24 20:24	
SM 2540C	Total Dissolved Solids	2350	mg/L	40.0	05/09/24 11:44	
SM 4500-H+B	pH at 25 Degrees C	6.8	Std. Units	0.10	05/14/24 15:16	H3
EPA 365.1	Phosphate as P04	1.6	mg/L	0.15	05/20/24 19:36	
SM 5310C	Dissolved Organic Carbon	5.4	mg/L	1.0	05/14/24 01:53	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

Sample: MW-16 **Lab ID: 50372468001** Collected: 05/07/24 13:00 Received: 05/08/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**49.7**	mg/L	2.5	0.67	10		05/13/24 17:55	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/13/24 17:38	16984-48-8	
Sulfate	**1380**	mg/L	25.0	19.0	100		05/13/24 18:11	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**4070**	ug/L	100	11.4	1	05/09/24 21:49	05/12/24 21:58	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/09/24 21:49	05/12/24 21:58	7440-43-9	
Calcium	**542000**	ug/L	5000	284	5	05/09/24 21:49	05/13/24 00:14	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/09/24 21:49	05/12/24 21:58	7440-47-3	
Iron	**8190**	ug/L	100	18.1	1	05/09/24 21:49	05/12/24 21:58	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/09/24 21:49	05/12/24 21:58	7439-92-1	
Lithium	**823**	ug/L	20.0	5.1	1	05/09/24 21:49	05/12/24 21:58	7439-93-2	
Magnesium	**44200**	ug/L	1000	32.8	1	05/09/24 21:49	05/12/24 21:58	7439-95-4	
Molybdenum	**318**	ug/L	10.0	1.1	1	05/09/24 21:49	05/12/24 21:58	7439-98-7	
Potassium	**153000**	ug/L	5000	600	5	05/09/24 21:49	05/13/24 00:14	7440-09-7	
Sodium	**63400**	ug/L	1000	48.2	1	05/09/24 21:49	05/12/24 21:58	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**3860**	ug/L	100	6.2	1	05/15/24 20:38	05/16/24 13:25	7440-42-8	
Lithium, Dissolved	**834**	ug/L	20.0	6.8	1	05/15/24 20:38	05/16/24 13:25	7439-93-2	
Molybdenum, Dissolved	**315**	ug/L	10.0	0.78	1	05/15/24 20:38	05/16/24 13:25	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/10/24 15:02	05/11/24 11:55	7440-36-0	
Arsenic	**4.3**	ug/L	1.0	0.10	1	05/10/24 15:02	05/11/24 11:55	7440-38-2	
Barium	**56.0**	ug/L	1.0	0.062	1	05/10/24 15:02	05/11/24 11:55	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/10/24 15:02	05/11/24 11:55	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/10/24 15:02	05/11/24 11:55	7440-48-4	
Manganese	**6050**	ug/L	50.0	7.4	50	05/10/24 15:02	05/11/24 11:51	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/10/24 15:02	05/11/24 11:55	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/10/24 15:02	05/11/24 11:55	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	05/11/24 15:18	05/15/24 05:56	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	05/15/24 19:26	05/16/24 09:36	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

Sample: MW-16 **Lab ID: 50372468001** Collected: 05/07/24 13:00 Received: 05/08/24 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**425**	mg/L	10.0	10.0	1		05/08/24 20:24		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2350**	mg/L	40.0	40.0	1		05/09/24 11:44		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.8**	Std. Units	0.10	0.10	1		05/14/24 15:16		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/10/24 10:36	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/08/24 20:59	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**1.6**	mg/L	0.15	0.13	1	05/16/24 12:45	05/20/24 19:36		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**5.4**	mg/L	1.0	0.25	1		05/14/24 01:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 789056
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372468001

METHOD BLANK: 3609805 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/13/24 10:28	
Fluoride	mg/L	ND	0.10	0.017	05/13/24 10:28	
Sulfate	mg/L	ND	0.25	0.19	05/13/24 10:28	

LABORATORY CONTROL SAMPLE: 3609806

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.3	93	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.9	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609810 3609811

Parameter	Units	50372481002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.4	2.5	2.5	6.8	6.8	97	99	80-120	1	15	
Fluoride	mg/L	0.16	1	1	1.2	1.2	99	100	80-120	1	15	
Sulfate	mg/L	49.5	5	5	54.3	54.6	97	102	80-120	0	15	E

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 790071
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372468001

METHOD BLANK: 3614868 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	05/16/24 09:04	

LABORATORY CONTROL SAMPLE: 3614869

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614870 3614871

Parameter	Units	50372252004 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	4.9	4.9	97	97	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614872 3614873

Parameter	Units	50372470001 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	4.9	4.9	96	97	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 788885
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372468001

METHOD BLANK: 3609062 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	05/12/24 21:30	
Cadmium	ug/L	ND	2.0	0.74	05/12/24 21:30	
Calcium	ug/L	ND	1000	56.7	05/12/24 21:30	
Chromium	ug/L	ND	10.0	1.4	05/12/24 21:30	
Iron	ug/L	ND	100	18.1	05/12/24 21:30	
Lead	ug/L	ND	10.0	4.0	05/12/24 21:30	
Lithium	ug/L	ND	20.0	5.1	05/12/24 21:30	
Magnesium	ug/L	ND	1000	32.8	05/12/24 21:30	
Molybdenum	ug/L	ND	10.0	1.1	05/12/24 21:30	
Potassium	ug/L	ND	1000	120	05/12/24 21:30	
Sodium	ug/L	ND	1000	48.2	05/12/24 21:30	

LABORATORY CONTROL SAMPLE: 3609063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	996	100	80-120	
Cadmium	ug/L	1000	957	96	80-120	
Calcium	ug/L	10000	10400	104	80-120	
Chromium	ug/L	1000	1020	102	80-120	
Iron	ug/L	10000	9720	97	80-120	
Lead	ug/L	1000	934	93	80-120	
Lithium	ug/L	1000	1030	103	80-120	
Magnesium	ug/L	10000	10000	100	80-120	
Molybdenum	ug/L	1000	1030	103	80-120	
Potassium	ug/L	10000	10100	101	80-120	
Sodium	ug/L	10000	10000	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609064 3609065

Parameter	Units	50372470001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	101	1000	1000	1130	1160	103	105	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	962	990	96	99	75-125	3	20	
Calcium	ug/L	177000	10000	10000	184000	184000	71	69	75-125	0	20	P6
Chromium	ug/L	20.2	1000	1000	1020	1060	100	104	75-125	3	20	
Iron	ug/L	26800	10000	10000	35800	36100	90	92	75-125	1	20	
Lead	ug/L	18.2	1000	1000	913	941	89	92	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609064 3609065

Parameter	Units	50372470001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	ND	1000	1000	1050	1070	104	105	75-125	2	20	
Magnesium	ug/L	59100	10000	10000	68100	68200	90	91	75-125	0	20	
Molybdenum	ug/L	14.5	1000	1000	1050	1080	103	106	75-125	3	20	
Potassium	ug/L	5940	10000	10000	16600	16600	107	107	75-125	0	20	
Sodium	ug/L	10200	10000	10000	20000	20100	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 789956
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372468001

METHOD BLANK: 3614479 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	05/16/24 12:56	
Lithium, Dissolved	ug/L	ND	20.0	6.8	05/16/24 12:56	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	05/16/24 12:56	

LABORATORY CONTROL SAMPLE: 3614480

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	944	94	80-120	
Lithium, Dissolved	ug/L	1000	971	97	80-120	
Molybdenum, Dissolved	ug/L	1000	991	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614481 3614482

Parameter	Units	50372488023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	233	1000	1000	1250	1230	102	99	75-125	2	20	
Lithium, Dissolved	ug/L	<20.0	1000	1000	1030	1020	101	100	75-125	1	20	
Molybdenum, Dissolved	ug/L	<10.0	1000	1000	1040	1020	104	102	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 789097
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372468001

METHOD BLANK: 3610042 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/11/24 10:15	
Arsenic	ug/L	ND	1.0	0.10	05/11/24 10:15	
Barium	ug/L	ND	1.0	0.062	05/11/24 10:15	
Beryllium	ug/L	ND	0.20	0.020	05/11/24 10:15	
Cobalt	ug/L	ND	1.0	0.060	05/11/24 10:15	
Manganese	ug/L	ND	1.0	0.15	05/11/24 10:15	
Selenium	ug/L	ND	1.0	0.36	05/11/24 10:15	
Thallium	ug/L	ND	1.0	0.079	05/11/24 10:15	

LABORATORY CONTROL SAMPLE: 3610043

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	43.3	108	80-120	
Arsenic	ug/L	40	41.0	103	80-120	
Barium	ug/L	40	40.0	100	80-120	
Beryllium	ug/L	40	39.8	100	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Manganese	ug/L	40	41.7	104	80-120	
Selenium	ug/L	40	41.0	103	80-120	
Thallium	ug/L	40	39.6	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610044 3610045

Parameter	Units	50372593002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	44.5	44.7	111	111	75-125	0	20	
Arsenic	ug/L	ND	40	40	41.7	42.2	104	105	75-125	1	20	
Barium	ug/L	20.7	40	40	60.0	60.1	98	98	75-125	0	20	
Beryllium	ug/L	ND	40	40	39.9	40.2	100	100	75-125	1	20	
Cobalt	ug/L	ND	40	40	38.4	38.7	95	96	75-125	1	20	
Manganese	ug/L	168	40	40	204	206	88	93	75-125	1	20	
Selenium	ug/L	2.4	40	40	44.3	45.7	105	108	75-125	3	20	
Thallium	ug/L	ND	40	40	39.5	39.8	99	99	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 789335
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372468001

METHOD BLANK: 3611447 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	4.4	05/13/24 12:13	

LABORATORY CONTROL SAMPLE: 3611448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	401	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3611449 3611450

Parameter	Units	50372488022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	<10.0	400	400	414	408	103	101	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 788838
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372468001

METHOD BLANK: 3608731 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/08/24 20:24	

LABORATORY CONTROL SAMPLE: 3608732

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.9	100	90-110	

SAMPLE DUPLICATE: 3608733

Parameter	Units	50372420001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	318	323	1	20	

SAMPLE DUPLICATE: 3608734

Parameter	Units	50372420003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	242	247	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 788902
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372468001

METHOD BLANK: 3609148 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/09/24 11:37	

LABORATORY CONTROL SAMPLE: 3609149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	287	96	80-120	

SAMPLE DUPLICATE: 3609150

Parameter	Units	50372425001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1170	1180	1	10	

SAMPLE DUPLICATE: 3609151

Parameter	Units	50372468001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2350	2420	3	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 789794
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372468001

SAMPLE DUPLICATE: 3613638

Parameter	Units	50372421001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.6	6.6	0	2	H3

SAMPLE DUPLICATE: 3613639

Parameter	Units	50372534001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.2	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 789189
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372468001

METHOD BLANK: 3610625 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/10/24 10:36	

LABORATORY CONTROL SAMPLE: 3610626

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610627 3610628

Parameter	Units	50372541001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	0.066J	0.5	0.5	0.53	0.52	93	92	90-110	1	20	

MATRIX SPIKE SAMPLE: 3610629

Parameter	Units	50372421004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.48	96	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 788852
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372468001

METHOD BLANK: 3608839 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/08/24 20:46	

LABORATORY CONTROL SAMPLE: 3608840

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608841 3608842

Parameter	Units	50372443004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.0	1.0	99	99	90-110	0	20	

MATRIX SPIKE SAMPLE: 3608843

Parameter	Units	50372467001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.0	100	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 790284
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372468001

METHOD BLANK: 3615992 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/20/24 21:46	

LABORATORY CONTROL SAMPLE: 3615993

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3615994 3615995

Parameter	Units	50372442001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			3.0	1.4				70		

MATRIX SPIKE SAMPLE: 3615996

Parameter	Units	50372467001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	ND		1.6			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 789532
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372468001

METHOD BLANK: 3612703 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/13/24 20:30	

LABORATORY CONTROL SAMPLE: 3612704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3612705 3612706

Parameter	Units	50372420003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.9	10	10	11.2	10.8	93	89	80-120	4	20	

MATRIX SPIKE SAMPLE: 3612707

Parameter	Units	50372468001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	5.4	10	15.0	96	80-120	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

Sample: MW-16 **Lab ID: 50372468001** Collected: 05/07/24 13:00 Received: 05/08/24 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.116 ± 0.680 (1.27) C:NA T:87%**	pCi/L	05/28/24 14:35	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.766 ± 0.398 (0.702) C:88% T:86%**	pCi/L	05/23/24 15:49	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.882 ± 1.08 (1.97)**	pCi/L	05/31/24 11:17	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 667920
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372468001

METHOD BLANK: 3252200 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0224 ± 0.279 (0.650) C:97% T:77%	pCi/L	05/23/24 15:47	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

QC Batch: 667919
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372468001

METHOD BLANK: 3252199 Matrix: Water
Associated Lab Samples: 50372468001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.219 (0.445) C:NA T:85%	pCi/L	05/28/24 14:35	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R3
Pace Project No.: 50372468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372468001	**MW-16**	EPA 9056	789056		
50372468001	**MW-16**	EPA 3010	788885	EPA 6010	789466
50372468001	**MW-16**	EPA 3010	789956	EPA 6010	790381
50372468001	**MW-16**	EPA 200.2	789097	EPA 6020	789382
50372468001	**MW-16**	EPA 200.2	789335	EPA 6020	789473
50372468001	**MW-16**	EPA 7470	790071	EPA 7470	790266
50372468001	**MW-16**	EPA 903.1	667919		
50372468001	**MW-16**	EPA 904.0	667920		
50372468001	**MW-16**	Total Radium Calculation	672363		
50372468001	**MW-16**	SM 2320B	788838		
50372468001	**MW-16**	SM 2540C	788902		
50372468001	**MW-16**	SM 4500-H+B	789794		
50372468001	**MW-16**	SM 4500-S2-D	789189		
50372468001	**MW-16**	EPA 353.2	788852		
50372468001	**MW-16**	EPA 365.1	790284	EPA 365.1	790975
50372468001	**MW-16**	SM 5310C	789532		

WO# : 50372468

50372468

Pace Analytical
WWW.PACELABS.COM

Request Document

...evant fields must be completed accurately.

Page : 1 Of 1

Section A
Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100
	Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone: (317)579-4082	Fax
Requested Due Date:	

Section B
Required Project Information:

Report To:	Mark Breting
Copy To:	
Purchase Order #:	
Project Name:	Petersburg May 2024 P2R3
Project #:	

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/59

Regulatory Agency

State / Location
IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Total Metals 6010/6020/7470	Diss. Metals 6010/6020	DOC by 5310	Alkalinity/pH	Cl, F, SO4 by 9056	TDS by 2540C	Nitrate by 353.2	Phosphate by 365.1	Sulfide by 4500	Rad 226/228 + Sum to PA			Residual Chlorine (Y/N)	
1	MW-16	WT	G			5/1/24	1300		10	X	X	X		X					X	X	X	X	X	X	X	X	X	X				001
2																																	
3																																	
4																																	
5																																	
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Metals* 6010: B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li (11)	Josh O'Brien	5-8-24	745	Jay Williams	5/8/24	745
6020: Be, Mn, Co, As, Se, Sb, Ba, Tl (8). 7470: Hg (1)	Jay Williams	5/8	1000	David Houston/Pace	5/8/24	1000
Diss 6010: B, Mo, Li (3). Diss 6020: Al, Mn (2)						

SAMPLE CONDITIONS			
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh O'Brien

SIGNATURE of SAMPLER: Josh O'B

DATE Signed: 5-7-24

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: DMP 05/08/24 10:18

1. Courier: ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 A B C D E (F) G H
4. Cooler Temperature(s): (Initial/Corrected) 1.3/1.2 RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____
6. Ice Type: ☑ Wet ☐ Blue ☐ None
7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No N/A
Cooler temp should be above freezing to 6°C
8. EZ Bottle Order? ☐ Yes ☑ No
If yes but not on COC what is the EZ Bottle Order Number?: N/A

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 preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl. Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: Nitrate by 353.2	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 12:21		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)		N/A	Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE 1 of 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit	Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1													1			3	1	2	1	1	1		1				WT	✓	✓		✓
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 13, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372949001	**MW-4C**	Water	05/12/24 12:40	05/13/24 09:45
50372949002	**Field Blank**	Water	05/12/24 08:00	05/13/24 09:45
50372949003	**MW-3**	Water	05/12/24 14:15	05/13/24 09:45
50372949004	**DUP-1**	Water	05/12/24 08:00	05/13/24 09:45
50372949005	**MW-4C MS**	Water	05/12/24 12:40	05/13/24 09:45
50372949006	**MW-4C MSD**	Water	05/12/24 12:40	05/13/24 09:45

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372949001	**MW-4C**	EPA 9056	KBB	3	PASI-I
		EPA 6010	ELK	11	PASI-I
		EPA 6010	JPK	3	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	MTM	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372949002	**Field Blank**	EPA 9056	KBB	3	PASI-I
		EPA 6010	ELK	11	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
50372949003	**MW-3**	EPA 9056	KBB	3	PASI-I
		EPA 6010	ELK	11	PASI-I
		EPA 6010	JPK	3	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	MTM	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372949004	**DUP-1**	EPA 9056	KBB	3	PASI-I
		EPA 6010	ELK	11	PASI-I
		EPA 6010	JPK	3	PASI-I
		EPA 6020	MTM	8	PASI-I
		EPA 6020	MTM	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372949005	**MW-4C MS**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
50372949006	**MW-4C MSD**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372949001	**MW-4C**					
EPA 9056	Chloride	44.3	mg/L	2.5	05/23/24 19:50	
EPA 9056	Fluoride	0.23	mg/L	0.10	05/23/24 19:34	
EPA 9056	Sulfate	1340	mg/L	25.0	05/23/24 20:07	
EPA 6010	Boron	3970	ug/L	100	05/21/24 14:07	
EPA 6010	Calcium	622000	ug/L	5000	05/21/24 17:41	
EPA 6010	Lithium	350	ug/L	20.0	05/21/24 14:07	
EPA 6010	Magnesium	51600	ug/L	1000	05/21/24 14:07	
EPA 6010	Potassium	64900	ug/L	1000	05/21/24 14:07	
EPA 6010	Sodium	84100	ug/L	1000	05/21/24 14:07	
EPA 6010	Boron, Dissolved	4100	ug/L	100	05/21/24 03:03	
EPA 6010	Lithium, Dissolved	382	ug/L	20.0	05/21/24 03:03	
EPA 6010	Molybdenum, Dissolved	10.1	ug/L	10.0	05/21/24 03:03	
EPA 6020	Barium	27.4	ug/L	1.0	05/21/24 23:06	
EPA 6020	Cobalt	1.1	ug/L	1.0	05/19/24 01:00	
EPA 6020	Manganese	2670	ug/L	20.0	05/18/24 08:51	
EPA 903.1	Radium-226	0.000 ± 0.424 (0.837) C:NA T:89%	pCi/L		06/05/24 14:46	
EPA 904.0	Radium-228	0.995 ± 0.459 (0.780) C:83% T:84%	pCi/L		05/31/24 15:48	
Total Radium Calculation	Total Radium	0.995 ± 0.883 (1.62)	pCi/L		06/05/24 17:05	
SM 2320B	Alkalinity, Total as CaCO3	429	mg/L	10.0	05/15/24 20:48	
SM 2540C	Total Dissolved Solids	2640	mg/L	40.0	05/15/24 12:20	
SM 4500-H+B	pH at 25 Degrees C	6.8	Std. Units	0.10	05/21/24 17:39	H3
SM 5310C	Dissolved Organic Carbon	2.3	mg/L	1.0	05/24/24 18:42	
50372949002	**Field Blank**					
EPA 903.1	Radium-226	-0.302 ± 0.758 (1.51) C:NA T:93%	pCi/L		06/05/24 14:46	
EPA 904.0	Radium-228	0.385 ± 0.374 (0.766) C:83% T:80%	pCi/L		05/31/24 15:48	
Total Radium Calculation	Total Radium	0.385 ± 1.13 (2.28)	pCi/L		06/05/24 17:05	
SM 4500-H+B	pH at 25 Degrees C	7.0	Std. Units	0.10	05/21/24 17:40	H3
50372949003	**MW-3**					
EPA 9056	Chloride	52.4	mg/L	2.5	05/23/24 23:17	
EPA 9056	Sulfate	1260	mg/L	25.0	05/23/24 23:35	
EPA 6010	Boron	863	ug/L	100	05/21/24 14:17	
EPA 6010	Calcium	430000	ug/L	5000	05/21/24 18:19	
EPA 6010	Lithium	1620	ug/L	20.0	05/21/24 14:17	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372949003	**MW-3**					
EPA 6010	Magnesium	9050	ug/L	1000	05/21/24 14:17	
EPA 6010	Molybdenum	426	ug/L	10.0	05/21/24 14:17	
EPA 6010	Potassium	221000	ug/L	5000	05/21/24 18:19	
EPA 6010	Sodium	90600	ug/L	1000	05/21/24 14:17	
EPA 6010	Boron, Dissolved	879	ug/L	100	05/21/24 03:08	
EPA 6010	Lithium, Dissolved	1680	ug/L	20.0	05/21/24 03:08	
EPA 6010	Molybdenum, Dissolved	433	ug/L	10.0	05/21/24 03:08	
EPA 6020	Antimony	2.1	ug/L	1.0	05/18/24 09:59	
EPA 6020	Arsenic	234	ug/L	2.0	05/19/24 00:32	
EPA 6020	Barium	70.5	ug/L	1.0	05/18/24 09:59	
EPA 6020	Cobalt	1.9	ug/L	1.0	05/18/24 09:59	
EPA 6020	Manganese	2260	ug/L	20.0	05/18/24 09:55	
EPA 903.1	Radium-226	0.642 ± 0.736 (1.21) C:NA T:87%	pCi/L		06/05/24 14:58	
EPA 904.0	Radium-228	0.288 ± 0.301 (0.617) C:80% T:87%	pCi/L		05/31/24 15:48	
Total Radium Calculation	Total Radium	0.930 ± 1.04 (1.83)	pCi/L		06/05/24 17:05	
SM 2320B	Alkalinity, Total as CaCO3	98.4	mg/L	10.0	05/15/24 20:48	
SM 2540C	Total Dissolved Solids	2080	mg/L	40.0	05/15/24 12:26	
SM 4500-H+B	pH at 25 Degrees C	8.5	Std. Units	0.10	05/21/24 17:41	H3
EPA 365.1	Phosphate as P04	0.45	mg/L	0.15	05/28/24 12:25	
SM 5310C	Dissolved Organic Carbon	1.3	mg/L	1.0	05/24/24 20:19	
50372949004	**DUP-1**					
EPA 9056	Chloride	54.5	mg/L	2.5	05/24/24 00:45	
EPA 9056	Sulfate	1230	mg/L	25.0	05/24/24 01:02	
EPA 6010	Boron	866	ug/L	100	05/21/24 14:19	
EPA 6010	Calcium	426000	ug/L	5000	05/21/24 18:21	
EPA 6010	Lithium	1650	ug/L	20.0	05/21/24 14:19	
EPA 6010	Magnesium	8900	ug/L	1000	05/21/24 14:19	
EPA 6010	Molybdenum	428	ug/L	10.0	05/21/24 14:19	
EPA 6010	Potassium	223000	ug/L	5000	05/21/24 18:21	
EPA 6010	Sodium	91900	ug/L	1000	05/21/24 14:19	
EPA 6010	Boron, Dissolved	882	ug/L	100	05/21/24 03:13	
EPA 6010	Lithium, Dissolved	1680	ug/L	20.0	05/21/24 03:13	
EPA 6010	Molybdenum, Dissolved	438	ug/L	10.0	05/21/24 03:13	
EPA 6020	Antimony	2.1	ug/L	1.0	05/19/24 00:44	
EPA 6020	Arsenic	253	ug/L	2.0	05/19/24 00:40	
EPA 6020	Barium	69.3	ug/L	1.0	05/19/24 00:44	
EPA 6020	Cobalt	1.9	ug/L	1.0	05/19/24 00:44	
EPA 6020	Manganese	2310	ug/L	20.0	05/19/24 00:36	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372949004	**DUP-1**					
EPA 903.1	Radium-226	0.979 ± 0.688 (0.971) C:NA T:89%	pCi/L		06/05/24 14:58	
EPA 904.0	Radium-228	0.890 ± 0.391 (0.610) C:85% T:85%	pCi/L		05/31/24 15:48	
Total Radium Calculation	Total Radium	1.87 ± 1.08 (1.58)	pCi/L		06/05/24 17:05	
SM 2320B	Alkalinity, Total as CaCO3	101	mg/L	10.0	05/15/24 20:48	
SM 2540C	Total Dissolved Solids	2080	mg/L	40.0	05/15/24 12:27	
SM 4500-H+B	pH at 25 Degrees C	6.6	Std. Units	0.10	05/21/24 17:42	H3
EPA 365.1	Phosphate as P04	0.44	mg/L	0.15	05/28/24 12:27	
SM 5310C	Dissolved Organic Carbon	3.2	mg/L	1.0	05/24/24 20:39	
50372949005	**MW-4C MS**					
EPA 903.1	Radium-226	72.61 %REC ± NA (NA) C:NA T:NA	pCi/L		06/05/24 14:58	
EPA 904.0	Radium-228	92.82 %REC ± NA (NA) C:NA T:NA	pCi/L		05/31/24 15:48	
50372949006	**MW-4C MSD**					
EPA 903.1	Radium-226	92.51 %REC 24.10RPD ± NA (NA) C:NA T:NA	pCi/L		06/05/24 14:58	
EPA 904.0	Radium-228	85.52 %REC 8.19RPD ± NA (NA) C:NA T:NA	pCi/L		05/31/24 15:48	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: MW-4C **Lab ID: 50372949001** Collected: 05/12/24 12:40 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**44.3**	mg/L	2.5	0.67	10		05/23/24 19:50	16887-00-6	
Fluoride	**0.23**	mg/L	0.10	0.017	1		05/23/24 19:34	16984-48-8	
Sulfate	**1340**	mg/L	25.0	19.0	100		05/23/24 20:07	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**3970**	ug/L	100	6.2	1	05/20/24 16:18	05/21/24 14:07	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/20/24 16:18	05/21/24 14:07	7440-43-9	
Calcium	**622000**	ug/L	5000	338	5	05/20/24 16:18	05/21/24 17:41	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/20/24 16:18	05/21/24 14:07	7440-47-3	
Iron	ND	ug/L	100	30.0	1	05/20/24 16:18	05/21/24 14:07	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/20/24 16:18	05/21/24 14:07	7439-92-1	
Lithium	**350**	ug/L	20.0	6.8	1	05/20/24 16:18	05/21/24 14:07	7439-93-2	
Magnesium	**51600**	ug/L	1000	33.6	1	05/20/24 16:18	05/21/24 14:07	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	05/20/24 16:18	05/21/24 14:07	7439-98-7	
Potassium	**64900**	ug/L	1000	97.8	1	05/20/24 16:18	05/21/24 14:07	7440-09-7	
Sodium	**84100**	ug/L	1000	54.8	1	05/20/24 16:18	05/21/24 14:07	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**4100**	ug/L	100	6.2	1	05/20/24 16:11	05/21/24 03:03	7440-42-8	
Lithium, Dissolved	**382**	ug/L	20.0	6.8	1	05/20/24 16:11	05/21/24 03:03	7439-93-2	
Molybdenum, Dissolved	**10.1**	ug/L	10.0	0.78	1	05/20/24 16:11	05/21/24 03:03	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/17/24 09:45	05/19/24 01:00	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/17/24 09:45	05/21/24 23:06	7440-38-2	
Barium	**27.4**	ug/L	1.0	0.062	1	05/17/24 09:45	05/21/24 23:06	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/17/24 09:45	05/21/24 23:06	7440-41-7	
Cobalt	**1.1**	ug/L	1.0	0.060	1	05/17/24 09:45	05/19/24 01:00	7440-48-4	
Manganese	**2670**	ug/L	20.0	3.0	20	05/17/24 09:45	05/18/24 08:51	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/17/24 09:45	05/21/24 23:06	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/17/24 09:45	05/19/24 01:00	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.6	1	05/17/24 09:45	05/18/24 02:29	7429-90-5	1d
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/23/24 09:55	05/23/24 19:09	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: MW-4C **Lab ID: 50372949001** Collected: 05/12/24 12:40 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**429**	mg/L	10.0	10.0	1		05/15/24 20:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2640**	mg/L	40.0	40.0	1		05/15/24 12:20		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.8**	Std. Units	0.10	0.10	1		05/21/24 17:39		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/13/24 14:13	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/14/24 01:38	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/24/24 11:30	05/28/24 12:22		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.3**	mg/L	1.0	0.25	1		05/24/24 18:42		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: Field Blank **Lab ID: 50372949002** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	ND	mg/L	0.25	0.067	1		05/23/24 22:43	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/23/24 22:43	16984-48-8	
Sulfate	ND	mg/L	0.25	0.19	1		05/23/24 22:43	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	6.2	1	05/20/24 16:18	05/21/24 14:15	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/20/24 16:18	05/21/24 14:15	7440-43-9	
Calcium	ND	ug/L	1000	67.7	1	05/20/24 16:18	05/21/24 14:15	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/20/24 16:18	05/21/24 14:15	7440-47-3	
Iron	ND	ug/L	100	30.0	1	05/20/24 16:18	05/21/24 14:15	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/20/24 16:18	05/21/24 14:15	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	05/20/24 16:18	05/21/24 14:15	7439-93-2	
Magnesium	ND	ug/L	1000	33.6	1	05/20/24 16:18	05/21/24 14:15	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	05/20/24 16:18	05/21/24 14:15	7439-98-7	
Potassium	ND	ug/L	1000	97.8	1	05/20/24 16:18	05/21/24 14:15	7440-09-7	
Sodium	ND	ug/L	1000	54.8	1	05/20/24 16:18	05/21/24 14:15	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/17/24 09:45	05/18/24 09:47	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/17/24 09:45	05/18/24 09:47	7440-38-2	
Barium	ND	ug/L	1.0	0.062	1	05/17/24 09:45	05/18/24 09:47	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/17/24 09:45	05/18/24 09:47	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/17/24 09:45	05/18/24 09:47	7440-48-4	
Manganese	ND	ug/L	1.0	0.15	1	05/17/24 09:45	05/18/24 09:47	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/17/24 09:45	05/18/24 09:47	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/17/24 09:45	05/18/24 09:47	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/23/24 09:55	05/23/24 19:16	7439-97-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	ND	mg/L	10.0	10.0	1		05/15/24 20:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		05/15/24 12:21		PL
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.0**	Std. Units	0.10	0.10	1		05/21/24 17:40		H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: Field Blank **Lab ID: 50372949002** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/13/24 14:13	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/14/24 01:32	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	05/24/24 11:30	05/28/24 12:23		

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: MW-3 **Lab ID: 50372949003** Collected: 05/12/24 14:15 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**52.4**	mg/L	2.5	0.67	10		05/23/24 23:17	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/23/24 23:00	16984-48-8	
Sulfate	**1260**	mg/L	25.0	19.0	100		05/23/24 23:35	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**863**	ug/L	100	6.2	1	05/20/24 16:18	05/21/24 14:17	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/20/24 16:18	05/21/24 14:17	7440-43-9	
Calcium	**430000**	ug/L	5000	338	5	05/20/24 16:18	05/21/24 18:19	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/20/24 16:18	05/21/24 14:17	7440-47-3	
Iron	ND	ug/L	100	30.0	1	05/20/24 16:18	05/21/24 14:17	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/20/24 16:18	05/21/24 14:17	7439-92-1	
Lithium	**1620**	ug/L	20.0	6.8	1	05/20/24 16:18	05/21/24 14:17	7439-93-2	
Magnesium	**9050**	ug/L	1000	33.6	1	05/20/24 16:18	05/21/24 14:17	7439-95-4	
Molybdenum	**426**	ug/L	10.0	0.78	1	05/20/24 16:18	05/21/24 14:17	7439-98-7	
Potassium	**221000**	ug/L	5000	489	5	05/20/24 16:18	05/21/24 18:19	7440-09-7	
Sodium	**90600**	ug/L	1000	54.8	1	05/20/24 16:18	05/21/24 14:17	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**879**	ug/L	100	6.2	1	05/20/24 16:11	05/21/24 03:08	7440-42-8	
Lithium, Dissolved	**1680**	ug/L	20.0	6.8	1	05/20/24 16:11	05/21/24 03:08	7439-93-2	
Molybdenum, Dissolved	**433**	ug/L	10.0	0.78	1	05/20/24 16:11	05/21/24 03:08	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	**2.1**	ug/L	1.0	0.26	1	05/17/24 09:45	05/18/24 09:59	7440-36-0	
Arsenic	**234**	ug/L	2.0	0.20	2	05/17/24 09:45	05/19/24 00:32	7440-38-2	
Barium	**70.5**	ug/L	1.0	0.062	1	05/17/24 09:45	05/18/24 09:59	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/17/24 09:45	05/18/24 09:59	7440-41-7	
Cobalt	**1.9**	ug/L	1.0	0.060	1	05/17/24 09:45	05/18/24 09:59	7440-48-4	
Manganese	**2260**	ug/L	20.0	3.0	20	05/17/24 09:45	05/18/24 09:55	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/17/24 09:45	05/18/24 09:59	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/17/24 09:45	05/18/24 09:59	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.6	1	05/17/24 09:45	05/18/24 03:01	7429-90-5	1d
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/23/24 09:55	05/23/24 19:19	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: MW-3 **Lab ID: 50372949003** Collected: 05/12/24 14:15 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**98.4**	mg/L	10.0	10.0	1		05/15/24 20:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2080**	mg/L	40.0	40.0	1		05/15/24 12:26		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**8.5**	Std. Units	0.10	0.10	1		05/21/24 17:41		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.50	0.12	5		05/15/24 14:09	18496-25-8	D3
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/14/24 01:47	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.45**	mg/L	0.15	0.13	1	05/24/24 11:30	05/28/24 12:25		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.3**	mg/L	1.0	0.25	1		05/24/24 20:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: DUP-1 **Lab ID: 50372949004** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**54.5**	mg/L	2.5	0.67	10		05/24/24 00:45	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/24/24 00:27	16984-48-8	
Sulfate	**1230**	mg/L	25.0	19.0	100		05/24/24 01:02	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**866**	ug/L	100	6.2	1	05/20/24 16:18	05/21/24 14:19	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	05/20/24 16:18	05/21/24 14:19	7440-43-9	
Calcium	**426000**	ug/L	5000	338	5	05/20/24 16:18	05/21/24 18:21	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	05/20/24 16:18	05/21/24 14:19	7440-47-3	
Iron	ND	ug/L	100	30.0	1	05/20/24 16:18	05/21/24 14:19	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	05/20/24 16:18	05/21/24 14:19	7439-92-1	
Lithium	**1650**	ug/L	20.0	6.8	1	05/20/24 16:18	05/21/24 14:19	7439-93-2	
Magnesium	**8900**	ug/L	1000	33.6	1	05/20/24 16:18	05/21/24 14:19	7439-95-4	
Molybdenum	**428**	ug/L	10.0	0.78	1	05/20/24 16:18	05/21/24 14:19	7439-98-7	
Potassium	**223000**	ug/L	5000	489	5	05/20/24 16:18	05/21/24 18:21	7440-09-7	
Sodium	**91900**	ug/L	1000	54.8	1	05/20/24 16:18	05/21/24 14:19	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**882**	ug/L	100	6.2	1	05/20/24 16:11	05/21/24 03:13	7440-42-8	
Lithium, Dissolved	**1680**	ug/L	20.0	6.8	1	05/20/24 16:11	05/21/24 03:13	7439-93-2	
Molybdenum, Dissolved	**438**	ug/L	10.0	0.78	1	05/20/24 16:11	05/21/24 03:13	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	**2.1**	ug/L	1.0	0.26	1	05/17/24 09:45	05/19/24 00:44	7440-36-0	
Arsenic	**253**	ug/L	2.0	0.20	2	05/17/24 09:45	05/19/24 00:40	7440-38-2	
Barium	**69.3**	ug/L	1.0	0.062	1	05/17/24 09:45	05/19/24 00:44	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/17/24 09:45	05/19/24 00:44	7440-41-7	
Cobalt	**1.9**	ug/L	1.0	0.060	1	05/17/24 09:45	05/19/24 00:44	7440-48-4	
Manganese	**2310**	ug/L	20.0	3.0	20	05/17/24 09:45	05/19/24 00:36	7439-96-5	
Selenium	ND	ug/L	1.0	0.36	1	05/17/24 09:45	05/19/24 00:44	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/17/24 09:45	05/19/24 00:44	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	2.6	1	05/17/24 09:45	05/18/24 03:04	7429-90-5	1d
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/23/24 09:55	05/23/24 19:21	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: DUP-1 **Lab ID: 50372949004** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**101**	mg/L	10.0	10.0	1		05/15/24 20:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2080**	mg/L	40.0	40.0	1		05/15/24 12:27		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**6.6**	Std. Units	0.10	0.10	1		05/21/24 17:42		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.50	0.12	5		05/15/24 14:09	18496-25-8	D3
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/14/24 01:34	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.44**	mg/L	0.15	0.13	1	05/24/24 11:30	05/28/24 12:27		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**3.2**	mg/L	1.0	0.25	1		05/24/24 20:39		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 791634
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

METHOD BLANK: 3622402 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/23/24 17:54	
Fluoride	mg/L	ND	0.10	0.017	05/23/24 17:54	
Sulfate	mg/L	ND	0.25	0.19	05/23/24 17:54	

LABORATORY CONTROL SAMPLE: 3622403

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	0.96	96	80-120	
Sulfate	mg/L	5	4.7	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3622404 3622405

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	44.3	25	25	69.0	69.3	99	100	80-120	0	15	
Fluoride	mg/L	0.23	1	1	1.2	1.2	101	94	80-120	6	15	
Sulfate	mg/L	1340	500	500	1900	1740	114	81	80-120	9	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 791144
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

METHOD BLANK: 3620147 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	05/23/24 18:42	

LABORATORY CONTROL SAMPLE: 3620148

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3620149 3620150

Parameter	Units	50372949001 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	5.0	5.0	100	100	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 789981
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

METHOD BLANK: 3614587 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	05/21/24 13:30	
Cadmium	ug/L	ND	2.0	0.60	05/21/24 13:30	
Calcium	ug/L	ND	1000	67.7	05/21/24 13:30	
Chromium	ug/L	ND	10.0	0.42	05/21/24 13:30	
Iron	ug/L	ND	100	30.0	05/21/24 13:30	
Lead	ug/L	ND	10.0	2.5	05/21/24 13:30	
Lithium	ug/L	ND	20.0	6.8	05/21/24 13:30	
Magnesium	ug/L	ND	1000	33.6	05/21/24 13:30	
Molybdenum	ug/L	ND	10.0	0.78	05/21/24 13:30	
Potassium	ug/L	ND	1000	97.8	05/21/24 13:30	
Sodium	ug/L	ND	1000	54.8	05/21/24 13:30	

LABORATORY CONTROL SAMPLE: 3614588

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	935	93	80-120	
Cadmium	ug/L	1000	921	92	80-120	
Calcium	ug/L	10000	9710	97	80-120	
Chromium	ug/L	1000	953	95	80-120	
Iron	ug/L	10000	9340	93	80-120	
Lead	ug/L	1000	913	91	80-120	
Lithium	ug/L	1000	932	93	80-120	
Magnesium	ug/L	10000	9200	92	80-120	
Molybdenum	ug/L	1000	972	97	80-120	
Potassium	ug/L	10000	9440	94	80-120	
Sodium	ug/L	10000	9130	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614589 3614590

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	149	1000	1000	1130	1160	98	101	75-125	3	20	
Cadmium	ug/L	ND	1000	1000	966	990	97	99	75-125	2	20	
Calcium	ug/L	101000	10000	10000	112000	113000	111	123	75-125	1	20	
Chromium	ug/L	ND	1000	1000	981	1010	98	101	75-125	3	20	
Iron	ug/L	1420	10000	10000	11000	11300	95	99	75-125	3	20	
Lead	ug/L	ND	1000	1000	928	951	93	95	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614589 3614590

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	ND	1000	1000	1010	1000	101	100	75-125	1	20	
Magnesium	ug/L	29900	10000	10000	39500	40200	96	103	75-125	2	20	
Molybdenum	ug/L	ND	1000	1000	1020	1050	102	105	75-125	3	20	
Potassium	ug/L	2030	10000	10000	12400	12100	104	101	75-125	2	20	
Sodium	ug/L	19200	10000	10000	30100	29300	109	101	75-125	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614591 3614592

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	3970	1000	1000	4760	4760	79	79	75-125	0	20	
Cadmium	ug/L	ND	1000	1000	981	953	98	95	75-125	3	20	
Calcium	ug/L	622000	10000	10000	594000	600000	-281	-222	75-125	1	20	P6
Chromium	ug/L	ND	1000	1000	974	948	97	95	75-125	3	20	
Iron	ug/L	ND	10000	10000	9420	9160	94	91	75-125	3	20	
Lead	ug/L	ND	1000	1000	903	877	90	88	75-125	3	20	
Lithium	ug/L	350	1000	1000	1320	1290	97	94	75-125	2	20	
Magnesium	ug/L	51600	10000	10000	58000	57600	64	61	75-125	1	20	P6
Molybdenum	ug/L	ND	1000	1000	1030	998	102	99	75-125	3	20	
Potassium	ug/L	64900	10000	10000	72400	71400	75	65	75-125	1	20	P6
Sodium	ug/L	84100	10000	10000	89700	89100	56	50	75-125	1	20	P6

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 789968
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949003, 50372949004

METHOD BLANK: 3614535 Matrix: Water
Associated Lab Samples: 50372949001, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	05/21/24 02:33	
Lithium, Dissolved	ug/L	ND	20.0	6.8	05/21/24 02:33	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	05/21/24 02:33	

LABORATORY CONTROL SAMPLE: 3614536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	966	97	80-120	
Lithium, Dissolved	ug/L	1000	999	100	80-120	
Molybdenum, Dissolved	ug/L	1000	1030	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614537 3614538

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	151	1000	1000	1120	1130	97	98	75-125	1	20	
Lithium, Dissolved	ug/L	ND	1000	1000	1010	987	100	98	75-125	2	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	1020	1020	102	102	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614539 3614540

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	4100	1000	1000	5040	5180	94	108	75-125	3	20	
Lithium, Dissolved	ug/L	382	1000	1000	1410	1440	103	106	75-125	2	20	
Molybdenum, Dissolved	ug/L	10.1	1000	1000	1060	1090	105	108	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 790472
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

METHOD BLANK: 3617134 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/18/24 07:15	
Arsenic	ug/L	ND	1.0	0.10	05/18/24 07:15	
Barium	ug/L	ND	1.0	0.062	05/18/24 07:15	
Beryllium	ug/L	ND	0.20	0.020	05/18/24 07:15	
Cobalt	ug/L	ND	1.0	0.060	05/18/24 07:15	
Manganese	ug/L	ND	1.0	0.15	05/18/24 07:15	
Selenium	ug/L	ND	1.0	0.36	05/18/24 07:15	
Thallium	ug/L	ND	1.0	0.079	05/18/24 07:15	

LABORATORY CONTROL SAMPLE: 3617135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	43.2	108	80-120	
Arsenic	ug/L	40	38.6	96	80-120	
Barium	ug/L	40	39.2	98	80-120	
Beryllium	ug/L	40	39.0	98	80-120	
Cobalt	ug/L	40	40.9	102	80-120	
Manganese	ug/L	40	41.1	103	80-120	
Selenium	ug/L	40	40.5	101	80-120	
Thallium	ug/L	40	39.8	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617136 3617137

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	44.5	45.2	111	113	75-125	2	20	
Arsenic	ug/L	ND	40	40	40.5	40.5	101	101	75-125	0	20	
Barium	ug/L	27.4	40	40	64.9	65.6	94	95	75-125	1	20	
Beryllium	ug/L	ND	40	40	39.1	40.1	98	100	75-125	2	20	
Cobalt	ug/L	1.1	40	40	38.4	38.5	93	94	75-125	0	20	
Manganese	ug/L	2670	40	40	2620	2720	-140	124	75-125	4	20	P6
Selenium	ug/L	ND	40	40	42.5	42.8	106	107	75-125	1	20	
Thallium	ug/L	ND	40	40	39.8	39.9	99	100	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 790471
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949003, 50372949004

METHOD BLANK: 3617128 Matrix: Water
Associated Lab Samples: 50372949001, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	2.6	05/18/24 00:37	1d

LABORATORY CONTROL SAMPLE: 3617129

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	399	100	80-120	IC

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617130 3617131

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	400	400	388	403	97	100	75-125	4	20	IC

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 790209 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

METHOD BLANK: 3615522 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/15/24 20:48	

LABORATORY CONTROL SAMPLE: 3615523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.8	104	90-110	

SAMPLE DUPLICATE: 3615524

Parameter	Units	50372949001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	429	436	2	20	

SAMPLE DUPLICATE: 3615525

Parameter	Units	50372994001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	661	672	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 790010
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002

METHOD BLANK: 3614682 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/15/24 12:15	

LABORATORY CONTROL SAMPLE: 3614683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	275	92	80-120	

SAMPLE DUPLICATE: 3614684

Parameter	Units	50372871008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	414	415	0	10	

SAMPLE DUPLICATE: 3614685

Parameter	Units	50372949001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2640	2550	3	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 790012
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949003, 50372949004

METHOD BLANK: 3614686 Matrix: Water
Associated Lab Samples: 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/15/24 12:26	

LABORATORY CONTROL SAMPLE: 3614687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	280	93	80-120	

SAMPLE DUPLICATE: 3614688

Parameter	Units	50372949003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2080	2040	2	10	

SAMPLE DUPLICATE: 3614689

Parameter	Units	50372995007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2150	2110	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 791157
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

SAMPLE DUPLICATE: 3620207

Parameter	Units	50372871008 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	0	2	H3

SAMPLE DUPLICATE: 3620208

Parameter	Units	50372949001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.8	6.9	2	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 789602
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002

METHOD BLANK: 3612957 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/13/24 14:13	

LABORATORY CONTROL SAMPLE: 3612958

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3612959 3612960

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	0.29	0.29	58	58	90-110	1	20	M3

MATRIX SPIKE SAMPLE: 3612961

Parameter	Units	50372867001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	5.5J	5	9.9	89	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 790112
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949003, 50372949004

METHOD BLANK: 3615020 Matrix: Water
Associated Lab Samples: 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/15/24 14:09	

LABORATORY CONTROL SAMPLE: 3615021

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.48	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3615022 3615023

Parameter	Units	50372949003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	2.5	2.5	2.6	2.5	89	88	90-110	1	20	M3

MATRIX SPIKE SAMPLE: 3615024

Parameter	Units	50372995001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.16J	0.5	0.60	89	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 789705
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

METHOD BLANK: 3613402 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/14/24 01:25	

LABORATORY CONTROL SAMPLE: 3613403

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3613404 3613405

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	0.99	0.99	99	99	90-110	0	20	

MATRIX SPIKE SAMPLE: 3613406

Parameter	Units	50372949003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.0	100	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 791867
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

METHOD BLANK: 3623739 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	05/28/24 12:09	

LABORATORY CONTROL SAMPLE: 3623740

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3623741 3623742

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.6	1.6				4		

MATRIX SPIKE SAMPLE: 3623743

Parameter	Units	50372949003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	0.45		2.0			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 791657
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372949001, 50372949003, 50372949004

METHOD BLANK: 3622553 Matrix: Water
Associated Lab Samples: 50372949001, 50372949003, 50372949004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	05/23/24 20:33	

LABORATORY CONTROL SAMPLE: 3622554

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.2	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3622555 3622556

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	ND	10	10	10.5	10.1	97	93	80-120	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3622557 3622558

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	2.3	10	10	11.6	11.4	93	91	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: MW-4C **Lab ID: 50372949001** Collected: 05/12/24 12:40 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.424 (0.837) C:NA T:89%**	pCi/L	06/05/24 14:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.995 ± 0.459 (0.780) C:83% T:84%**	pCi/L	05/31/24 15:48	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.995 ± 0.883 (1.62)**	pCi/L	06/05/24 17:05	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: Field Blank **Lab ID: 50372949002** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.302 ± 0.758 (1.51) C:NA T:93%**	pCi/L	06/05/24 14:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.385 ± 0.374 (0.766) C:83% T:80%**	pCi/L	05/31/24 15:48	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.385 ± 1.13 (2.28)**	pCi/L	06/05/24 17:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: MW-3 **Lab ID: 50372949003** Collected: 05/12/24 14:15 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.642 ± 0.736 (1.21) C:NA T:87%**	pCi/L	06/05/24 14:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.288 ± 0.301 (0.617) C:80% T:87%**	pCi/L	05/31/24 15:48	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.930 ± 1.04 (1.83)**	pCi/L	06/05/24 17:05	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: DUP-1 **Lab ID: 50372949004** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.979 ± 0.688 (0.971) C:NA T:89%**	pCi/L	06/05/24 14:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.890 ± 0.391 (0.610) C:85% T:85%**	pCi/L	05/31/24 15:48	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.87 ± 1.08 (1.58)**	pCi/L	06/05/24 17:05	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: MW-4C MS **Lab ID: 50372949005** Collected: 05/12/24 12:40 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**72.61 %REC ± NA (NA) C:NA T:NA**	pCi/L	06/05/24 14:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**92.82 %REC ± NA (NA) C:NA T:NA**	pCi/L	05/31/24 15:48	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Sample: MW-4C MSD **Lab ID: 50372949006** Collected: 05/12/24 12:40 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**92.51 %REC 24.10RPD ± NA (NA) C:NA T:NA**	pCi/L	06/05/24 14:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**85.52 %REC 8.19RPD ± NA (NA) C:NA T:NA**	pCi/L	05/31/24 15:48	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 669130
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004, 50372949005, 50372949006

METHOD BLANK: 3258482 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004, 50372949005, 50372949006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0506 ± 0.231 (0.470) C:NA T:82%	pCi/L	06/05/24 14:46	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

QC Batch: 669131
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004, 50372949005, 50372949006

METHOD BLANK: 3258483 Matrix: Water
Associated Lab Samples: 50372949001, 50372949002, 50372949003, 50372949004, 50372949005, 50372949006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.245 ± 0.355 (0.873) C:81% T:80%	pCi/L	05/31/24 15:47	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1d	The initial calibration for this compound was outside of method control limits. Result unaffected by high bias. MTM 5/18/24
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H3	Sample was received or analysis requested beyond the recognized method holding time.
IC	The initial calibration for this compound was outside of method control limits. The result is estimated.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372949001	**MW-4C**	EPA 9056	791634		
50372949002	**Field Blank**	EPA 9056	791634		
50372949003	**MW-3**	EPA 9056	791634		
50372949004	**DUP-1**	EPA 9056	791634		
50372949001	**MW-4C**	EPA 3010	789981	EPA 6010	791166
50372949002	**Field Blank**	EPA 3010	789981	EPA 6010	791166
50372949003	**MW-3**	EPA 3010	789981	EPA 6010	791166
50372949004	**DUP-1**	EPA 3010	789981	EPA 6010	791166
50372949001	**MW-4C**	EPA 3010	789968	EPA 6010	791028
50372949003	**MW-3**	EPA 3010	789968	EPA 6010	791028
50372949004	**DUP-1**	EPA 3010	789968	EPA 6010	791028
50372949001	**MW-4C**	EPA 200.2	790472	EPA 6020	790701
50372949002	**Field Blank**	EPA 200.2	790472	EPA 6020	790701
50372949003	**MW-3**	EPA 200.2	790472	EPA 6020	790701
50372949004	**DUP-1**	EPA 200.2	790472	EPA 6020	790701
50372949001	**MW-4C**	EPA 200.2	790471	EPA 6020	790700
50372949003	**MW-3**	EPA 200.2	790471	EPA 6020	790700
50372949004	**DUP-1**	EPA 200.2	790471	EPA 6020	790700
50372949001	**MW-4C**	EPA 7470	791144	EPA 7470	791745
50372949002	**Field Blank**	EPA 7470	791144	EPA 7470	791745
50372949003	**MW-3**	EPA 7470	791144	EPA 7470	791745
50372949004	**DUP-1**	EPA 7470	791144	EPA 7470	791745
50372949001	**MW-4C**	EPA 903.1	669130		
50372949002	**Field Blank**	EPA 903.1	669130		
50372949003	**MW-3**	EPA 903.1	669130		
50372949004	**DUP-1**	EPA 903.1	669130		
50372949005	**MW-4C MS**	EPA 903.1	669130		
50372949006	**MW-4C MSD**	EPA 903.1	669130		
50372949001	**MW-4C**	EPA 904.0	669131		
50372949002	**Field Blank**	EPA 904.0	669131		
50372949003	**MW-3**	EPA 904.0	669131		
50372949004	**DUP-1**	EPA 904.0	669131		
50372949005	**MW-4C MS**	EPA 904.0	669131		
50372949006	**MW-4C MSD**	EPA 904.0	669131		
50372949001	**MW-4C**	Total Radium Calculation	673549		
50372949002	**Field Blank**	Total Radium Calculation	673549		
50372949003	**MW-3**	Total Radium Calculation	673549		
50372949004	**DUP-1**	Total Radium Calculation	673549		
50372949001	**MW-4C**	SM 2320B	790209		
50372949002	**Field Blank**	SM 2320B	790209		
50372949003	**MW-3**	SM 2320B	790209		
50372949004	**DUP-1**	SM 2320B	790209		
50372949001	**MW-4C**	SM 2540C	790010		
50372949002	**Field Blank**	SM 2540C	790010		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R1
Pace Project No.: 50372949

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372949003	**MW-3**	SM 2540C	790012		
50372949004	**DUP-1**	SM 2540C	790012		
50372949001	**MW-4C**	SM 4500-H+B	791157		
50372949002	**Field Blank**	SM 4500-H+B	791157		
50372949003	**MW-3**	SM 4500-H+B	791157		
50372949004	**DUP-1**	SM 4500-H+B	791157		
50372949001	**MW-4C**	SM 4500-S2-D	789602		
50372949002	**Field Blank**	SM 4500-S2-D	789602		
50372949003	**MW-3**	SM 4500-S2-D	790112		
50372949004	**DUP-1**	SM 4500-S2-D	790112		
50372949001	**MW-4C**	EPA 353.2	789705		
50372949002	**Field Blank**	EPA 353.2	789705		
50372949003	**MW-3**	EPA 353.2	789705		
50372949004	**DUP-1**	EPA 353.2	789705		
50372949001	**MW-4C**	EPA 365.1	791867	EPA 365.1	792297
50372949002	**Field Blank**	EPA 365.1	791867	EPA 365.1	792297
50372949003	**MW-3**	EPA 365.1	791867	EPA 365.1	792297
50372949004	**DUP-1**	EPA 365.1	791867	EPA 365.1	792297
50372949001	**MW-4C**	SM 5310C	791657		
50372949003	**MW-3**	SM 5310C	791657		
50372949004	**DUP-1**	SM 5310C	791657		

WO# : 50372949

50372949

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100
	Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone:	(317)579-4082 Fax:
Requested Due Date:	

Required Project Information:

Report To:	Mark Breting
Copy To:	
Purchase Order #:	
Project Name:	Petersburg May 2024 P2R1
Project #:	

Section C — Invoice Information:

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/59

Regulatory Agency:

State / Location: IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Total Metals 6010/6020/7470	Diss. Metals 6010/6020	DOC by 5310	Alkalinity/pH	Cl, F, SO4 by 9056	TDS by 2540C	Nitrate by 353.2	Phosphate by 365.1	Sulfide by 4500	Rad 226/228 + Sum to PA			Residual Chlorine (Y/N)	
1	MW-4C			5/12/24	1240				10	X	X	X		X					X	X	X	X	X	X	X	X	X				001
2	MS-1			5/12/24	1240				10	X	X	X		X					X	X	X	X	X	X	X	X	X				
3	MSD-1			5/12/24	1240				10	X	X	X		X					X	X	X	X	X	X	X	X	X				
4	Field Blank			5/12/24					8	X	X	X		X					X	X	X	X	X	X	X	X	X				002
5	MW-3			5/12/24	1415				10	X	X	X		X					X	X	X	X	X	X	X	X	X				003
6	DUP-1			5/12/24					10	X	X	X		X					X	X	X	X	X	X	X	X	X				004
7																															
8																															
9																															
10																															
11																															
12																															

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
letals* 6010: B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li (11)		5/13/24	7:00		5/13/24	7:00
020: Be, Mn, Co, As, Se, Sb, Ba, Tl (8). 7470: Hg (1)	Jay Williams	5/13/24	9:45		5/13/24	9:45
iss 6010: B, Mo, Li (3). Diss 6020: Al, Mn (2)						

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Josh O'Brian

SIGNATURE of SAMPLER: [signature] DATE Signed: 5-12-24

SAMPLE CONDITIONS	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	2.2	Y	Y	Y
	~~2.8~~ 1.9			
	2.4	Y	Y	Y
	2.7	Y	Y	Y

F-IN-Q-290-rev.26, 30Apr2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 5/13/24 1120 IL

1. **Courier:** ☐FED EX | UPS ☑CLIENT ☐PACE ☐NOW/JETT | 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 7 8 A B C D E F (G) H

4. **Cooler Temperature(s):** (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

2.4/2.2	2.4/2.4	2.9/2.7	

5. **Packing Material:** ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. **Ice Type:** ☑ Wet ☐ Blue ☐ None

7. **Was the PM notified of out of temp cooler?:** ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

8. **EZ Bottle Order?** ☐ Yes ☑ No

If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: Nitrate 3532	✓					
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1240			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	✓ 4/13	✓	Trip Blank Present?		✓	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			✓

COMMENTS: No time on all MS/MSD bottles. IL 5/13

COC PAGE 1 of 1

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1													3			6	3	6	3	3	3		3					WT	✓	✓		✓
2																																
3																				1,5,13												
4																2	1	2	1	1	1		1					WT	✓	✓		✓
5													1							1									✓	✓		✓
6																													✓	✓		✓
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 13, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372953001	**MW-4C**	Water	05/12/24 12:40	05/13/24 09:45
50372953002	**Field Blank**	Water	05/12/24 08:00	05/13/24 09:45
50372953003	**MW-3**	Water	05/12/24 14:15	05/13/24 09:45
50372953004	**DUP-1**	Water	05/12/24 08:00	05/13/24 09:45

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372953001	**MW-4C**	EPA 9056	KBB	3	PASI-I
		EPA 6010	NWB	9	PASI-I
		EPA 6020	MTM	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I
50372953002	**Field Blank**	EPA 9056	KBB	3	PASI-I
		EPA 6010	NWB	9	PASI-I
		EPA 6020	MTM	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I
50372953003	**MW-3**	EPA 9056	KBB	3	PASI-I
		EPA 6010	NWB	9	PASI-I
		EPA 6020	MTM	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I
50372953004	**DUP-1**	EPA 9056	KBB	3	PASI-I
		EPA 6010	NWB	9	PASI-I
		EPA 6020	MTM	9	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	SL	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372953001	**MW-4C**					
EPA 9056	Chloride	43.5	mg/L	2.5	05/24/24 01:37	
EPA 9056	Fluoride	0.24	mg/L	0.10	05/24/24 01:19	
EPA 9056	Sulfate	1440	mg/L	25.0	05/24/24 01:54	
EPA 6010	Boron	3940	ug/L	100	05/21/24 14:29	
EPA 6010	Calcium	574000	ug/L	5000	05/21/24 15:37	
EPA 6010	Lithium	366	ug/L	20.0	05/21/24 14:29	
EPA 6010	Manganese	2650	ug/L	10.0	05/21/24 14:29	
EPA 6020	Barium	27.5	ug/L	1.0	05/22/24 04:48	
EPA 6020	Cobalt	1.2	ug/L	1.0	05/22/24 04:48	
EPA 6020	Copper	3.3	ug/L	1.0	05/22/24 04:48	
EPA 903.1	Radium-226	0.115 ± 0.452 (0.866) C:NA T:91%	pCi/L		06/04/24 15:17	
EPA 904.0	Radium-228	0.431 ± 0.424 (0.874) C:82% T:81%	pCi/L		05/31/24 14:16	
Total Radium Calculation	Total Radium	0.546 ± 0.876 (1.74)	pCi/L		06/05/24 11:48	
SM 2540C	Total Dissolved Solids	2420	mg/L	40.0	05/15/24 12:27	
50372953002	**Field Blank**					
EPA 903.1	Radium-226	-0.250 ± 0.460 (1.04) C:NA T:92%	pCi/L		06/04/24 15:17	
EPA 904.0	Radium-228	-0.0631 ± 0.283 (0.685) C:80% T:85%	pCi/L		05/31/24 14:31	
Total Radium Calculation	Total Radium	0.000 ± 0.743 (1.73)	pCi/L		06/05/24 11:48	
50372953003	**MW-3**					
EPA 9056	Chloride	52.7	mg/L	2.5	05/24/24 02:47	
EPA 9056	Sulfate	1250	mg/L	25.0	05/24/24 03:04	
EPA 6010	Boron	842	ug/L	100	05/21/24 14:44	
EPA 6010	Calcium	390000	ug/L	5000	05/21/24 15:47	
EPA 6010	Lithium	1600	ug/L	20.0	05/21/24 14:44	
EPA 6010	Manganese	2140	ug/L	10.0	05/21/24 14:44	
EPA 6010	Molybdenum	414	ug/L	10.0	05/21/24 14:44	
EPA 6020	Antimony	2.4	ug/L	1.0	05/22/24 04:56	
EPA 6020	Arsenic	263	ug/L	2.0	05/23/24 08:26	
EPA 6020	Barium	72.9	ug/L	1.0	05/22/24 04:56	
EPA 6020	Cobalt	1.9	ug/L	1.0	05/22/24 04:56	
EPA 6020	Copper	2.0	ug/L	1.0	05/22/24 04:56	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372953003	**MW-3**					
EPA 903.1	Radium-226	0.530 ± 0.686 (1.15) C:NA T:88%	pCi/L		06/04/24 15:17	
EPA 904.0	Radium-228	0.967 ± 0.462 (0.771) C:75% T:85%	pCi/L		05/31/24 14:31	
Total Radium Calculation	Total Radium	1.50 ± 1.15 (1.92)	pCi/L		06/05/24 11:48	
SM 2540C	Total Dissolved Solids	2120	mg/L	40.0	05/15/24 12:28	
50372953004	**DUP-1**					
EPA 9056	Chloride	52.8	mg/L	2.5	05/24/24 04:14	
EPA 9056	Sulfate	1320	mg/L	25.0	05/24/24 04:31	
EPA 6010	Boron	882	ug/L	100	05/21/24 14:46	
EPA 6010	Calcium	404000	ug/L	5000	05/21/24 15:48	
EPA 6010	Lithium	1690	ug/L	20.0	05/21/24 14:46	
EPA 6010	Manganese	2220	ug/L	10.0	05/21/24 14:46	
EPA 6010	Molybdenum	429	ug/L	10.0	05/21/24 14:46	
EPA 6020	Antimony	2.4	ug/L	1.0	05/22/24 05:00	
EPA 6020	Arsenic	257	ug/L	2.0	05/23/24 08:30	
EPA 6020	Barium	72.4	ug/L	1.0	05/22/24 05:00	
EPA 6020	Cobalt	1.9	ug/L	1.0	05/22/24 05:00	
EPA 6020	Copper	2.1	ug/L	1.0	05/22/24 05:00	
EPA 903.1	Radium-226	0.477 ± 0.722 (1.24) C:NA T:92%	pCi/L		06/04/24 15:17	
EPA 904.0	Radium-228	1.01 ± 0.472 (0.790) C:79% T:84%	pCi/L		05/31/24 14:31	
Total Radium Calculation	Total Radium	1.49 ± 1.19 (2.03)	pCi/L		06/05/24 11:48	
SM 2540C	Total Dissolved Solids	2180	mg/L	20.0	05/15/24 12:28	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Sample: MW-4C **Lab ID: 50372953001** Collected: 05/12/24 12:40 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**43.5**	mg/L	2.5	0.67	10		05/24/24 01:37	16887-00-6	
Fluoride	**0.24**	mg/L	0.10	0.017	1		05/24/24 01:19	16984-48-8	
Sulfate	**1440**	mg/L	25.0	19.0	100		05/24/24 01:54	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**3940**	ug/L	100	11.4	1	05/20/24 21:57	05/21/24 14:29	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/20/24 21:57	05/21/24 14:29	7440-43-9	
Calcium	**574000**	ug/L	5000	284	5	05/20/24 21:57	05/21/24 15:37	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/20/24 21:57	05/21/24 14:29	7440-47-3	
Iron	ND	ug/L	100	18.1	1	05/20/24 21:57	05/21/24 14:29	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/20/24 21:57	05/21/24 14:29	7439-92-1	
Lithium	**366**	ug/L	20.0	5.1	1	05/20/24 21:57	05/21/24 14:29	7439-93-2	
Manganese	**2650**	ug/L	10.0	1.1	1	05/20/24 21:57	05/21/24 14:29	7439-96-5	
Molybdenum	ND	ug/L	10.0	1.1	1	05/20/24 21:57	05/21/24 14:29	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/17/24 09:45	05/22/24 04:48	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/17/24 09:45	05/22/24 04:48	7440-38-2	
Barium	**27.5**	ug/L	1.0	0.062	1	05/17/24 09:45	05/22/24 04:48	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/17/24 09:45	05/22/24 04:48	7440-41-7	
Cobalt	**1.2**	ug/L	1.0	0.060	1	05/17/24 09:45	05/22/24 04:48	7440-48-4	
Copper	**3.3**	ug/L	1.0	0.66	1	05/17/24 09:45	05/22/24 04:48	7440-50-8	
Selenium	ND	ug/L	1.0	0.36	1	05/17/24 09:45	05/22/24 04:48	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/17/24 09:45	05/22/24 04:48	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	05/17/24 09:45	05/22/24 04:48	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	05/22/24 18:05	05/23/24 10:30	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2420**	mg/L	40.0	40.0	1		05/15/24 12:27		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Sample: Field Blank **Lab ID: 50372953002** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	ND	mg/L	0.25	0.067	1		05/24/24 02:12	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/24/24 02:12	16984-48-8	
Sulfate	ND	mg/L	0.25	0.19	1		05/24/24 02:12	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	100	11.4	1	05/20/24 21:57	05/21/24 14:42	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/20/24 21:57	05/21/24 14:42	7440-43-9	
Calcium	ND	ug/L	1000	56.7	1	05/20/24 21:57	05/21/24 14:42	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/20/24 21:57	05/21/24 14:42	7440-47-3	
Iron	ND	ug/L	100	18.1	1	05/20/24 21:57	05/21/24 14:42	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/20/24 21:57	05/21/24 14:42	7439-92-1	
Lithium	ND	ug/L	20.0	5.1	1	05/20/24 21:57	05/21/24 14:42	7439-93-2	
Manganese	ND	ug/L	10.0	1.1	1	05/20/24 21:57	05/21/24 14:42	7439-96-5	
Molybdenum	ND	ug/L	10.0	1.1	1	05/20/24 21:57	05/21/24 14:42	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.26	1	05/17/24 09:45	05/22/24 04:52	7440-36-0	
Arsenic	ND	ug/L	1.0	0.10	1	05/17/24 09:45	05/22/24 04:52	7440-38-2	
Barium	ND	ug/L	1.0	0.062	1	05/17/24 09:45	05/22/24 04:52	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/17/24 09:45	05/22/24 04:52	7440-41-7	
Cobalt	ND	ug/L	1.0	0.060	1	05/17/24 09:45	05/22/24 04:52	7440-48-4	
Copper	ND	ug/L	1.0	0.66	1	05/17/24 09:45	05/22/24 04:52	7440-50-8	
Selenium	ND	ug/L	1.0	0.36	1	05/17/24 09:45	05/22/24 04:52	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/17/24 09:45	05/22/24 04:52	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	05/17/24 09:45	05/22/24 04:52	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	05/22/24 18:05	05/23/24 10:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		05/15/24 12:27		PL

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Sample: MW-3 **Lab ID: 50372953003** Collected: 05/12/24 14:15 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**52.7**	mg/L	2.5	0.67	10		05/24/24 02:47	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/24/24 02:29	16984-48-8	
Sulfate	**1250**	mg/L	25.0	19.0	100		05/24/24 03:04	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**842**	ug/L	100	11.4	1	05/20/24 21:57	05/21/24 14:44	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/20/24 21:57	05/21/24 14:44	7440-43-9	
Calcium	**390000**	ug/L	5000	284	5	05/20/24 21:57	05/21/24 15:47	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/20/24 21:57	05/21/24 14:44	7440-47-3	
Iron	ND	ug/L	100	18.1	1	05/20/24 21:57	05/21/24 14:44	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/20/24 21:57	05/21/24 14:44	7439-92-1	
Lithium	**1600**	ug/L	20.0	5.1	1	05/20/24 21:57	05/21/24 14:44	7439-93-2	
Manganese	**2140**	ug/L	10.0	1.1	1	05/20/24 21:57	05/21/24 14:44	7439-96-5	
Molybdenum	**414**	ug/L	10.0	1.1	1	05/20/24 21:57	05/21/24 14:44	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	**2.4**	ug/L	1.0	0.26	1	05/17/24 09:45	05/22/24 04:56	7440-36-0	
Arsenic	**263**	ug/L	2.0	0.20	2	05/17/24 09:45	05/23/24 08:26	7440-38-2	
Barium	**72.9**	ug/L	1.0	0.062	1	05/17/24 09:45	05/22/24 04:56	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/17/24 09:45	05/22/24 04:56	7440-41-7	
Cobalt	**1.9**	ug/L	1.0	0.060	1	05/17/24 09:45	05/22/24 04:56	7440-48-4	
Copper	**2.0**	ug/L	1.0	0.66	1	05/17/24 09:45	05/22/24 04:56	7440-50-8	
Selenium	ND	ug/L	1.0	0.36	1	05/17/24 09:45	05/22/24 04:56	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/17/24 09:45	05/22/24 04:56	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	05/17/24 09:45	05/22/24 04:56	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	05/22/24 18:05	05/23/24 10:35	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2120**	mg/L	40.0	40.0	1		05/15/24 12:28		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Sample: DUP-1 **Lab ID: 50372953004** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**52.8**	mg/L	2.5	0.67	10		05/24/24 04:14	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		05/24/24 03:56	16984-48-8	
Sulfate	**1320**	mg/L	25.0	19.0	100		05/24/24 04:31	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**882**	ug/L	100	11.4	1	05/20/24 21:57	05/21/24 14:46	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/20/24 21:57	05/21/24 14:46	7440-43-9	
Calcium	**404000**	ug/L	5000	284	5	05/20/24 21:57	05/21/24 15:48	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/20/24 21:57	05/21/24 14:46	7440-47-3	
Iron	ND	ug/L	100	18.1	1	05/20/24 21:57	05/21/24 14:46	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/20/24 21:57	05/21/24 14:46	7439-92-1	
Lithium	**1690**	ug/L	20.0	5.1	1	05/20/24 21:57	05/21/24 14:46	7439-93-2	
Manganese	**2220**	ug/L	10.0	1.1	1	05/20/24 21:57	05/21/24 14:46	7439-96-5	
Molybdenum	**429**	ug/L	10.0	1.1	1	05/20/24 21:57	05/21/24 14:46	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	**2.4**	ug/L	1.0	0.26	1	05/17/24 09:45	05/22/24 05:00	7440-36-0	
Arsenic	**257**	ug/L	2.0	0.20	2	05/17/24 09:45	05/23/24 08:30	7440-38-2	
Barium	**72.4**	ug/L	1.0	0.062	1	05/17/24 09:45	05/22/24 05:00	7440-39-3	
Beryllium	ND	ug/L	0.20	0.020	1	05/17/24 09:45	05/22/24 05:00	7440-41-7	
Cobalt	**1.9**	ug/L	1.0	0.060	1	05/17/24 09:45	05/22/24 05:00	7440-48-4	
Copper	**2.1**	ug/L	1.0	0.66	1	05/17/24 09:45	05/22/24 05:00	7440-50-8	
Selenium	ND	ug/L	1.0	0.36	1	05/17/24 09:45	05/22/24 05:00	7782-49-2	
Thallium	ND	ug/L	1.0	0.079	1	05/17/24 09:45	05/22/24 05:00	7440-28-0	
Zinc	ND	ug/L	3.0	1.3	1	05/17/24 09:45	05/22/24 05:00	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.12	1	05/22/24 18:05	05/23/24 10:37	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**2180**	mg/L	20.0	20.0	1		05/15/24 12:28		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

QC Batch: 791634
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

METHOD BLANK: 3622402 Matrix: Water
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/23/24 17:54	
Fluoride	mg/L	ND	0.10	0.017	05/23/24 17:54	
Sulfate	mg/L	ND	0.25	0.19	05/23/24 17:54	

LABORATORY CONTROL SAMPLE: 3622403

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	94	80-120	
Fluoride	mg/L	1	0.96	96	80-120	
Sulfate	mg/L	5	4.7	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3622404 3622405

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	44.3	25	25	69.0	69.3	99	100	80-120	0	15	
Fluoride	mg/L	0.23	1	1	1.2	1.2	101	94	80-120	6	15	
Sulfate	mg/L	1340	500	500	1900	1740	114	81	80-120	9	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

QC Batch: 791142
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

METHOD BLANK: 3620139 Matrix: Water
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	05/23/24 09:29	

LABORATORY CONTROL SAMPLE: 3620140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3620141 3620142

Parameter	Units	50372871008 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	4.6	4.8	92	95	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

QC Batch: 789982
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

METHOD BLANK: 3614593 Matrix: Water
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	05/21/24 14:26	
Cadmium	ug/L	ND	2.0	0.74	05/21/24 14:26	
Calcium	ug/L	ND	1000	56.7	05/21/24 14:26	
Chromium	ug/L	ND	10.0	1.4	05/21/24 14:26	
Iron	ug/L	ND	100	18.1	05/21/24 14:26	
Lead	ug/L	ND	10.0	4.0	05/21/24 14:26	
Lithium	ug/L	ND	20.0	5.1	05/21/24 14:26	
Manganese	ug/L	ND	10.0	1.1	05/21/24 14:26	
Molybdenum	ug/L	ND	10.0	1.1	05/21/24 14:26	

LABORATORY CONTROL SAMPLE: 3614594

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	941	94	80-120	
Cadmium	ug/L	1000	937	94	80-120	
Calcium	ug/L	10000	10100	101	80-120	
Chromium	ug/L	1000	963	96	80-120	
Iron	ug/L	10000	9580	96	80-120	
Lead	ug/L	1000	936	94	80-120	
Lithium	ug/L	1000	978	98	80-120	
Manganese	ug/L	1000	986	99	80-120	
Molybdenum	ug/L	1000	982	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614595 3614596

Parameter	Units	50372953001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	3940	1000	1000	4830	4750	89	81	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	978	941	98	94	75-125	4	20	
Calcium	ug/L	574000	10000	10000	595000	563000	206	-110	75-125	5	20	P6
Chromium	ug/L	ND	1000	1000	986	937	99	94	75-125	5	20	
Iron	ug/L	ND	10000	10000	9510	9140	95	91	75-125	4	20	
Lead	ug/L	ND	1000	1000	904	867	90	87	75-125	4	20	
Lithium	ug/L	366	1000	1000	1380	1310	101	94	75-125	5	20	
Manganese	ug/L	2650	1000	1000	3610	3450	96	80	75-125	5	20	
Molybdenum	ug/L	ND	1000	1000	1050	990	104	98	75-125	6	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

QC Batch: 790475
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

METHOD BLANK: 3617156 Matrix: Water
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.26	05/22/24 04:32	
Arsenic	ug/L	ND	1.0	0.10	05/22/24 04:32	
Barium	ug/L	ND	1.0	0.062	05/22/24 04:32	
Beryllium	ug/L	ND	0.20	0.020	05/22/24 04:32	
Cobalt	ug/L	ND	1.0	0.060	05/22/24 04:32	
Copper	ug/L	ND	1.0	0.66	05/22/24 04:32	
Selenium	ug/L	ND	1.0	0.36	05/22/24 04:32	
Thallium	ug/L	ND	1.0	0.079	05/22/24 04:32	
Zinc	ug/L	ND	3.0	1.3	05/22/24 04:32	

LABORATORY CONTROL SAMPLE: 3617157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	44.2	110	80-120	
Arsenic	ug/L	40	41.7	104	80-120	
Barium	ug/L	40	40.1	100	80-120	
Beryllium	ug/L	40	39.0	98	80-120	
Cobalt	ug/L	40	41.4	103	80-120	
Copper	ug/L	40	38.3	96	80-120	
Selenium	ug/L	40	37.4	94	80-120	
Thallium	ug/L	40	40.3	101	80-120	
Zinc	ug/L	40	40.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617158 3617159

Parameter	Units	50372570005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	43.5	43.3	109	108	75-125	0	20	
Arsenic	ug/L	ND	40	40	40.3	40.2	101	100	75-125	0	20	
Barium	ug/L	0.12 mg/L	40	40	159	159	97	97	75-125	0	20	
Beryllium	ug/L	ND	40	40	38.9	38.3	97	96	75-125	2	20	
Cobalt	ug/L	ND	40	40	38.7	38.4	96	95	75-125	1	20	
Copper	ug/L	ND	40	40	35.6	35.3	87	86	75-125	1	20	
Selenium	ug/L	ND	40	40	38.8	40.3	97	100	75-125	4	20	
Thallium	ug/L	ND	40	40	40.8	40.6	102	101	75-125	1	20	
Zinc	ug/L	ND	40	40	37.5	37.0	91	90	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

QC Batch: 790012 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

METHOD BLANK: 3614686 Matrix: Water
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/15/24 12:26	

LABORATORY CONTROL SAMPLE: 3614687

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	280	93	80-120	

SAMPLE DUPLICATE: 3614688

Parameter	Units	50372949003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2080	2040	2	10	

SAMPLE DUPLICATE: 3614689

Parameter	Units	50372995007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2150	2110	2	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Sample: MW-4C **Lab ID: 50372953001** Collected: 05/12/24 12:40 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.115 ± 0.452 (0.866) C:NA T:91%**	pCi/L	06/04/24 15:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.431 ± 0.424 (0.874) C:82% T:81%**	pCi/L	05/31/24 14:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.546 ± 0.876 (1.74)**	pCi/L	06/05/24 11:48	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Sample: Field Blank **Lab ID: 50372953002** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.250 ± 0.460 (1.04) C:NA T:92%**	pCi/L	06/04/24 15:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.0631 ± 0.283 (0.685) C:80% T:85%**	pCi/L	05/31/24 14:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000 ± 0.743 (1.73)**	pCi/L	06/05/24 11:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Sample: MW-3 **Lab ID: 50372953003** Collected: 05/12/24 14:15 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.530 ± 0.686 (1.15) C:NA T:88%**	pCi/L	06/04/24 15:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.967 ± 0.462 (0.771) C:75% T:85%**	pCi/L	05/31/24 14:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.50 ± 1.15 (1.92)**	pCi/L	06/05/24 11:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Sample: DUP-1 **Lab ID: 50372953004** Collected: 05/12/24 08:00 Received: 05/13/24 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.477 ± 0.722 (1.24) C:NA T:92%**	pCi/L	06/04/24 15:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.01 ± 0.472 (0.790) C:79% T:84%**	pCi/L	05/31/24 14:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.49 ± 1.19 (2.03)**	pCi/L	06/05/24 11:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

QC Batch: 668772
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

METHOD BLANK: 3256730 Matrix: Water
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.176 ± 0.274 (0.475) C:NA T:97%	pCi/L	06/04/24 15:17	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

QC Batch: 668773
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

METHOD BLANK: 3256731 Matrix: Water
Associated Lab Samples: 50372953001, 50372953002, 50372953003, 50372953004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.347 ± 0.373 (0.774) C:73% T:82%	pCi/L	05/31/24 14:16	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PL	The minimum mass of dried residue of 2.5 mg could not be obtained using the routine sample volume of 100 mL.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P1R1
Pace Project No.: 50372953

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372953001	**MW-4C**	EPA 9056	791634		
50372953002	**Field Blank**	EPA 9056	791634		
50372953003	**MW-3**	EPA 9056	791634		
50372953004	**DUP-1**	EPA 9056	791634		
50372953001	**MW-4C**	EPA 3010	789982	EPA 6010	791135
50372953002	**Field Blank**	EPA 3010	789982	EPA 6010	791135
50372953003	**MW-3**	EPA 3010	789982	EPA 6010	791135
50372953004	**DUP-1**	EPA 3010	789982	EPA 6010	791135
50372953001	**MW-4C**	EPA 200.2	790475	EPA 6020	790702
50372953002	**Field Blank**	EPA 200.2	790475	EPA 6020	790702
50372953003	**MW-3**	EPA 200.2	790475	EPA 6020	790702
50372953004	**DUP-1**	EPA 200.2	790475	EPA 6020	790702
50372953001	**MW-4C**	EPA 7470	791142	EPA 7470	791577
50372953002	**Field Blank**	EPA 7470	791142	EPA 7470	791577
50372953003	**MW-3**	EPA 7470	791142	EPA 7470	791577
50372953004	**DUP-1**	EPA 7470	791142	EPA 7470	791577
50372953001	**MW-4C**	EPA 903.1	668772		
50372953002	**Field Blank**	EPA 903.1	668772		
50372953003	**MW-3**	EPA 903.1	668772		
50372953004	**DUP-1**	EPA 903.1	668772		
50372953001	**MW-4C**	EPA 904.0	668773		
50372953002	**Field Blank**	EPA 904.0	668773		
50372953003	**MW-3**	EPA 904.0	668773		
50372953004	**DUP-1**	EPA 904.0	668773		
50372953001	**MW-4C**	Total Radium Calculation	673404		
50372953002	**Field Blank**	Total Radium Calculation	673404		
50372953003	**MW-3**	Total Radium Calculation	673404		
50372953004	**DUP-1**	Total Radium Calculation	673404		
50372953001	**MW-4C**	SM 2540C	790012		
50372953002	**Field Blank**	SM 2540C	790012		
50372953003	**MW-3**	SM 2540C	790012		
50372953004	**DUP-1**	SM 2540C	790012		

WO# : 50372953

50372953

Pace Analytical
WWW.PACELABS.COM

AIN-OF-CUSTODY / Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Atlas Indianapolis
Address:	7988 Centerpoint Drive Suite 100
	Indianapolis, IN 46256
Email:	mark.breting@oneatlas.com
Phone:	(317)579-4082 Fax:
Requested Due Date:	

Section B

Report To:	Mark Breting
Copy To:	
Purchase Order #:	
Project Name:	Petersburg May 2024 P1R1
Project #:	

Section C — Invoice Information:

Attention:	Accounts Payable - Paula Sedam
Company Name:	Atlas Indianapolis
Address:	
Pace Quote:	
Pace Project Manager:	Will Statz
Pace Profile #:	10498/58

Regulatory Agency: | State / Location: IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals by 6010/6020/7470	Cl, F, SO4 by 9056	TDS by 2540C	Rad-226/228 + Sum	Residual Chlorine (Y/N)	
1	MW-4C			5/12/24	1240				5	X		X							X	X	X	X		001
2	Field Blank			5/12/24					5	X		X							X	X	X	X		002
3	MW-3			5/12/24	1415				5	X		X							X	X	X	X		003
4	DUP-1			5/12/24					5	X		X							X	X	X	X		004
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)	Josh O'Brian	5/13/24	7:00	Jay Williams	5/13/24	7:00				
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg	Jay Williams	5/13/24	9:45	Hammond	5/13/24	0945	2.7	Y	Y	Y
Rad to Pace PA							2.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Josh O'Brian					
SIGNATURE of SAMPLER:	Josh O'B	DATE Signed: 5-12-24				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 5/13/24 1120 IL

1. **Courier:** ☐FED EX | UPS ☑CLIENT ☐PACE ☐NOW/JETT | 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 7 8 A B C D E F G H

4. **Cooler Temperature(s):** (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

2.9/2.7	2.2/2.0		

5. **Packing Material:** ☑ Bubble Wrap | ☐ Bubble Bags | ☐ None | ☐ Other _____

6. **Ice Type:** ☑ Wet ☐ Blue ☐ None

7. **Was the PM notified of out of temp cooler?:** ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

8. **EZ Bottle Order?** | Yes | No

If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
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:

COC PAGE \ of \

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																2		2	1									WT	✓			
2																													✓			
3																													✓			
4																													✓			
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic
BP3R	250mL Unpres. FF SO4/OH buffer
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 22, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50373806001	**MW-15B**	Water	05/21/24 13:00	05/22/24 09:30

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50373806001	**MW-15B**	EPA 9056	ADM	3	PASI-I
		EPA 6010	ABH	11	PASI-I
		EPA 6010	JPK	3	PASI-I
		EPA 6020	DMT	8	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	1	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	ATS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50373806001	**MW-15B**					
EPA 9056	Chloride	33.1	mg/L	2.5	05/28/24 17:50	
EPA 9056	Fluoride	0.11	mg/L	0.10	05/28/24 17:33	
EPA 9056	Sulfate	617	mg/L	25.0	05/28/24 18:07	
EPA 6010	Boron	1210	ug/L	100	05/30/24 20:25	
EPA 6010	Calcium	184000	ug/L	1000	05/30/24 20:25	
EPA 6010	Iron	5010	ug/L	100	05/30/24 20:25	
EPA 6010	Lithium	622	ug/L	20.0	05/30/24 20:25	
EPA 6010	Magnesium	26800	ug/L	1000	05/30/24 20:25	
EPA 6010	Molybdenum	15.7	ug/L	10.0	05/30/24 20:25	
EPA 6010	Potassium	70200	ug/L	1000	05/30/24 20:25	
EPA 6010	Sodium	51000	ug/L	1000	05/30/24 20:25	
EPA 6010	Boron, Dissolved	1210	ug/L	100	05/29/24 23:24	
EPA 6010	Lithium, Dissolved	633	ug/L	20.0	05/29/24 23:24	
EPA 6010	Molybdenum, Dissolved	15.8	ug/L	10.0	05/29/24 23:24	
EPA 6020	Arsenic	1.4	ug/L	1.0	05/30/24 09:50	
EPA 6020	Barium	45.7	ug/L	1.0	05/30/24 09:50	
EPA 6020	Manganese	1310	ug/L	10.0	06/02/24 22:25	
EPA 6020	Aluminum, Dissolved	14.1	ug/L	10.0	05/30/24 05:31	
EPA 903.1	Radium-226	0.293 ± 0.932 (1.69) C:NA T:85%	pCi/L		06/14/24 16:02	
EPA 904.0	Radium-228	0.426 ± 0.414 (0.856) C:82% T:88%	pCi/L		06/12/24 16:05	
Total Radium Calculation	Total Radium	0.719 ± 1.35 (2.55)	pCi/L		06/14/24 17:34	
SM 2320B	Alkalinity, Total as CaCO3	196	mg/L	10.0	05/29/24 20:38	
SM 2540C	Total Dissolved Solids	1070	mg/L	20.0	05/28/24 11:32	
SM 4500-H+B	pH at 25 Degrees C	7.7	Std. Units	0.10	06/05/24 13:11	H3
EPA 365.1	Phosphate as P04	0.51	mg/L	0.15	06/06/24 15:37	
SM 5310C	Dissolved Organic Carbon	2.0	mg/L	1.0	06/06/24 19:49	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

Sample: MW-15B **Lab ID: 50373806001** Collected: 05/21/24 13:00 Received: 05/22/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**33.1**	mg/L	2.5	0.67	10		05/28/24 17:50	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	0.017	1		05/28/24 17:33	16984-48-8	
Sulfate	**617**	mg/L	25.0	19.0	100		05/28/24 18:07	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**1210**	ug/L	100	11.4	1	05/28/24 08:33	05/30/24 20:25	7440-42-8	
Cadmium	ND	ug/L	2.0	0.74	1	05/28/24 08:33	05/30/24 20:25	7440-43-9	
Calcium	**184000**	ug/L	1000	56.7	1	05/28/24 08:33	05/30/24 20:25	7440-70-2	
Chromium	ND	ug/L	10.0	1.4	1	05/28/24 08:33	05/30/24 20:25	7440-47-3	
Iron	**5010**	ug/L	100	18.1	1	05/28/24 08:33	05/30/24 20:25	7439-89-6	
Lead	ND	ug/L	10.0	4.0	1	05/28/24 08:33	05/30/24 20:25	7439-92-1	
Lithium	**622**	ug/L	20.0	5.1	1	05/28/24 08:33	05/30/24 20:25	7439-93-2	
Magnesium	**26800**	ug/L	1000	32.8	1	05/28/24 08:33	05/30/24 20:25	7439-95-4	
Molybdenum	**15.7**	ug/L	10.0	1.1	1	05/28/24 08:33	05/30/24 20:25	7439-98-7	
Potassium	**70200**	ug/L	1000	120	1	05/28/24 08:33	05/30/24 20:25	7440-09-7	
Sodium	**51000**	ug/L	1000	48.2	1	05/28/24 08:33	05/30/24 20:25	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**1210**	ug/L	100	6.2	1	05/28/24 21:16	05/29/24 23:24	7440-42-8	
Lithium, Dissolved	**633**	ug/L	20.0	6.8	1	05/28/24 21:16	05/29/24 23:24	7439-93-2	
Molybdenum, Dissolved	**15.8**	ug/L	10.0	0.78	1	05/28/24 21:16	05/29/24 23:24	7439-98-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.27	1	05/29/24 15:17	05/30/24 09:50	7440-36-0	
Arsenic	**1.4**	ug/L	1.0	0.11	1	05/29/24 15:17	05/30/24 09:50	7440-38-2	
Barium	**45.7**	ug/L	1.0	0.090	1	05/29/24 15:17	05/30/24 09:50	7440-39-3	
Beryllium	ND	ug/L	0.20	0.030	1	05/29/24 15:17	05/30/24 09:50	7440-41-7	
Cobalt	ND	ug/L	1.0	0.16	1	05/29/24 15:17	05/30/24 09:50	7440-48-4	
Manganese	**1310**	ug/L	10.0	2.6	10	05/29/24 15:17	06/02/24 22:25	7439-96-5	
Selenium	ND	ug/L	1.0	0.22	1	05/29/24 15:17	05/30/24 09:50	7782-49-2	
Thallium	ND	ug/L	1.0	0.043	1	05/29/24 15:17	05/30/24 09:50	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	**14.1**	ug/L	10.0	1.5	1	05/29/24 15:17	05/30/24 05:31	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	05/31/24 09:59	06/02/24 20:13	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

Sample: MW-15B **Lab ID: 50373806001** Collected: 05/21/24 13:00 Received: 05/22/24 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**196**	mg/L	10.0	10.0	1		05/29/24 20:38		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**1070**	mg/L	20.0	20.0	1		05/28/24 11:32		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.7**	Std. Units	0.10	0.10	1		06/05/24 13:11		H3
4500-S2-F Sulfide, Iodometric	Analytical Method: SM 4500-S2-F-2011 Pace Analytical Services - Greensburg								
Sulfide	ND	mg/L	1.0	0.34	1		05/28/24 13:29	18496-25-8	1d
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	ND	mg/L	0.10	0.013	1		05/22/24 23:12	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	**0.51**	mg/L	0.15	0.13	1	05/31/24 13:00	06/06/24 15:37		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**2.0**	mg/L	1.0	0.25	1		06/06/24 19:49		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 792003
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50373806001

METHOD BLANK: 3624455 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	05/28/24 18:24	
Fluoride	mg/L	ND	0.10	0.017	05/28/24 18:24	
Sulfate	mg/L	ND	0.25	0.19	05/28/24 18:24	

LABORATORY CONTROL SAMPLE: 3624456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	97	80-120	
Fluoride	mg/L	1	1.1	108	80-120	
Sulfate	mg/L	5	5.0	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3624457 3624458

Parameter	Units	50373603011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	199	25	25	219	219	80	77	80-120	0	15	M0
Fluoride	mg/L	0.15	1	1	1.3	1.3	113	110	80-120	2	15	
Sulfate	mg/L	1030	500	500	1480	1480	90	89	80-120	0	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 792955
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50373806001

METHOD BLANK: 3628508 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	06/02/24 19:01	

LABORATORY CONTROL SAMPLE: 3628509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628510 3628511

Parameter	Units	50373771002 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	4.8	4.7	96	94	75-125	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628512 3628513

Parameter	Units	50373786001 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	4.7	4.6	94	92	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 791535
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50373806001

METHOD BLANK: 3622060 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	11.4	05/30/24 19:29	
Cadmium	ug/L	ND	2.0	0.74	05/30/24 19:29	
Calcium	ug/L	ND	1000	56.7	05/30/24 19:29	
Chromium	ug/L	ND	10.0	1.4	05/30/24 19:29	
Iron	ug/L	ND	100	18.1	05/30/24 19:29	
Lead	ug/L	ND	10.0	4.0	05/30/24 19:29	
Lithium	ug/L	ND	20.0	5.1	05/30/24 19:29	
Magnesium	ug/L	ND	1000	32.8	05/30/24 19:29	
Molybdenum	ug/L	ND	10.0	1.1	05/30/24 19:29	
Potassium	ug/L	ND	1000	120	05/30/24 19:29	
Sodium	ug/L	ND	1000	48.2	05/30/24 19:29	

LABORATORY CONTROL SAMPLE: 3622061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	964	96	80-120	
Cadmium	ug/L	1000	967	97	80-120	
Calcium	ug/L	10000	9810	98	80-120	
Chromium	ug/L	1000	965	97	80-120	
Iron	ug/L	10000	9670	97	80-120	
Lead	ug/L	1000	946	95	80-120	
Lithium	ug/L	1000	991	99	80-120	
Magnesium	ug/L	10000	9710	97	80-120	
Molybdenum	ug/L	1000	1030	103	80-120	
Potassium	ug/L	10000	9540	95	80-120	
Sodium	ug/L	10000	9390	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3622062 3622063

Parameter	Units	50373774013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	11.9 mg/L	1000	1000	12900	12700	103	84	75-125	2	20	
Cadmium	ug/L	ND	1000	1000	981	972	98	97	75-125	1	20	
Calcium	ug/L	145 mg/L	10000	10000	154000	153000	91	81	75-125	1	20	
Chromium	ug/L	ND	1000	1000	968	955	97	95	75-125	1	20	
Iron	ug/L	ND	10000	10000	9680	9540	97	95	75-125	1	20	
Lead	ug/L	ND	1000	1000	926	919	93	92	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3622062 3622063

Parameter	Units	50373774013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	ND	1000	1000	1020	1010	102	100	75-125	2	20	
Magnesium	ug/L	31.5 mg/L	10000	10000	41100	40900	95	93	75-125	0	20	
Molybdenum	ug/L	ND	1000	1000	1060	1040	105	104	75-125	1	20	
Potassium	ug/L	5.9 mg/L	10000	10000	15700	15500	98	96	75-125	1	20	
Sodium	ug/L	58.9 mg/L	10000	10000	67300	66800	83	79	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 792203
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50373806001

METHOD BLANK: 3625827 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	6.2	05/29/24 22:26	
Lithium, Dissolved	ug/L	ND	20.0	6.8	05/29/24 22:26	
Molybdenum, Dissolved	ug/L	ND	10.0	0.78	05/29/24 22:26	

LABORATORY CONTROL SAMPLE: 3625828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	941	94	80-120	
Lithium, Dissolved	ug/L	1000	972	97	80-120	
Molybdenum, Dissolved	ug/L	1000	982	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3625829 3625830

Parameter	Units	50373563003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	156	1000	1000	1130	1080	97	93	75-125	4	20	
Lithium, Dissolved	ug/L	ND	1000	1000	954	942	95	93	75-125	1	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	975	947	97	94	75-125	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3625831 3625832

Parameter	Units	50373986006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	161	1000	1000	1090	1140	93	98	75-125	4	20	
Lithium, Dissolved	ug/L	16.4J	1000	1000	940	1010	92	100	75-125	8	20	
Molybdenum, Dissolved	ug/L	11.9	1000	1000	959	997	95	98	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 792492
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50373806001

METHOD BLANK: 3626611 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.27	05/30/24 09:43	
Arsenic	ug/L	ND	1.0	0.11	05/30/24 09:43	
Barium	ug/L	ND	1.0	0.090	05/30/24 09:43	
Beryllium	ug/L	ND	0.20	0.030	05/30/24 09:43	
Cobalt	ug/L	ND	1.0	0.16	05/30/24 09:43	
Manganese	ug/L	ND	1.0	0.26	05/30/24 09:43	
Selenium	ug/L	ND	1.0	0.22	05/30/24 09:43	
Thallium	ug/L	ND	1.0	0.043	05/30/24 09:43	

LABORATORY CONTROL SAMPLE: 3626612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.8	104	80-120	
Arsenic	ug/L	40	37.9	95	80-120	
Barium	ug/L	40	38.1	95	80-120	
Beryllium	ug/L	40	37.6	94	80-120	
Cobalt	ug/L	40	40.1	100	80-120	
Manganese	ug/L	40	40.2	101	80-120	
Selenium	ug/L	40	38.3	96	80-120	
Thallium	ug/L	40	40.7	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3626613 3626614

Parameter	Units	50373986006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	42.3	41.6	106	104	75-125	2	20	
Arsenic	ug/L	11.4	40	40	50.7	49.4	98	95	75-125	3	20	
Barium	ug/L	136	40	40	175	171	98	89	75-125	2	20	
Beryllium	ug/L	ND	40	40	37.3	36.5	93	91	75-125	2	20	CL
Cobalt	ug/L	0.69J	40	40	37.6	36.8	92	90	75-125	2	20	
Manganese	ug/L	187	40	40	226	221	98	86	75-125	2	20	E
Selenium	ug/L	ND	40	40	41.1	39.3	102	98	75-125	4	20	
Thallium	ug/L	ND	40	40	42.0	41.3	105	103	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 792493
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50373806001

METHOD BLANK: 3626617 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	1.5	05/30/24 05:24	

LABORATORY CONTROL SAMPLE: 3626618

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	405	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3626619 3626620

Parameter	Units	50373986006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	5.4J	400	400	406	408	100	101	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 792666
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50373806001

METHOD BLANK: 3627391 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	05/29/24 20:38	

LABORATORY CONTROL SAMPLE: 3627392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.7	105	90-110	

SAMPLE DUPLICATE: 3627393

Parameter	Units	50373769001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	242	247	2	20	

SAMPLE DUPLICATE: 3627394

Parameter	Units	50373785002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	333	340	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 792208
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50373806001

METHOD BLANK: 3625841 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/28/24 11:30	

LABORATORY CONTROL SAMPLE: 3625842

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	295	98	80-120	

SAMPLE DUPLICATE: 3625843

Parameter	Units	50373805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	377	373	1	10	

SAMPLE DUPLICATE: 3625844

Parameter	Units	50373813001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	464	471	1	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 793901
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50373806001

SAMPLE DUPLICATE: 3632345

Parameter	Units	50373774013 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.3	1	2	H3

SAMPLE DUPLICATE: 3632346

Parameter	Units	50373785002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.4	7.4	0	2	H3

SAMPLE DUPLICATE: 3632347

Parameter	Units	50373786001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	0	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 671650
QC Batch Method: SM 4500-S2-F-2011
Analysis Method: SM 4500-S2-F-2011
Analysis Description: 4500S2F Sulfide, Iodometric
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50373806001

METHOD BLANK: 3270414 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	1.0	0.34	05/28/24 13:17	1d

LABORATORY CONTROL SAMPLE & LCSD: 3270415 3270416

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Sulfide	mg/L	5.7	5.6	5.6	98	98	85-115	0	20	1d

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 791520
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50373806001

METHOD BLANK: 3621887 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/22/24 22:44	

LABORATORY CONTROL SAMPLE: 3621888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3621889 3621890

Parameter	Units	50373774013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	0.97	1	1	2.0	2.0	104	103	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3621891 3621892

Parameter	Units	50373785002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	ND	1	1	1.0	1.0	101	102	90-110	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 793005
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50373806001

METHOD BLANK: 3628638 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	06/06/24 15:28	

LABORATORY CONTROL SAMPLE: 3628639

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628640 3628641

Parameter	Units	50373785002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	ND			1.5	1.5				1		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628642 3628643

Parameter	Units	50373786001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	1.3			1.7	1.7				3		

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 794194
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50373806001

METHOD BLANK: 3633531 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	06/06/24 15:05	

LABORATORY CONTROL SAMPLE: 3633532

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.6	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3633533 3633534

Parameter	Units	50373785002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.4	10	10	10.9	10.5	94	90	80-120	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3633535 3633536

Parameter	Units	50373786001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.5	10	10	10.8	10.6	92	90	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

Sample: MW-15B **Lab ID: 50373806001** Collected: 05/21/24 13:00 Received: 05/22/24 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.293 ± 0.932 (1.69) C:NA T:85%**	pCi/L	06/14/24 16:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.426 ± 0.414 (0.856) C:82% T:88%**	pCi/L	06/12/24 16:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.719 ± 1.35 (2.55)**	pCi/L	06/14/24 17:34	7440-14-4	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 671182
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50373806001

METHOD BLANK: 3268465 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0493 ± 0.256 (0.530) C:NA T:90%	pCi/L	06/14/24 15:36	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

QC Batch: 671183
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50373806001

METHOD BLANK: 3268466 Matrix: Water
Associated Lab Samples: 50373806001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0528 ± 0.269 (0.618) C:77% T:90%	pCi/L	06/12/24 12:34	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 671650

[1]	Due to limited volume for MS/MSD, LCSD was anlayzed

ANALYTE QUALIFIERS

1d	Due to limited volume for MS/MSD, LCSD was anlayzed
CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P2R3
Pace Project No.: 50373806

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50373806001	**MW-15B**	EPA 9056	792003		
50373806001	**MW-15B**	EPA 3010	791535	EPA 6010	792924
50373806001	**MW-15B**	EPA 3010	792203	EPA 6010	792688
50373806001	**MW-15B**	EPA 200.2	792492	EPA 6020	792690
50373806001	**MW-15B**	EPA 200.2	792493	EPA 6020	792691
50373806001	**MW-15B**	EPA 7470	792955	EPA 7470	793265
50373806001	**MW-15B**	EPA 903.1	671182		
50373806001	**MW-15B**	EPA 904.0	671183		
50373806001	**MW-15B**	Total Radium Calculation	676067		
50373806001	**MW-15B**	SM 2320B	792666		
50373806001	**MW-15B**	SM 2540C	792208		
50373806001	**MW-15B**	SM 4500-H+B	793901		
50373806001	**MW-15B**	SM 4500-S2-F-2011	671650		
50373806001	**MW-15B**	EPA 353.2	791520		
50373806001	**MW-15B**	EPA 365.1	793005	EPA 365.1	794260
50373806001	**MW-15B**	SM 5310C	794194		

50373806

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : Of

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4 May 2024	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:	P2 R3	Pace Profile #:	10498/60

Regulatory Agency:

State / Location: IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity,pH	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum				Residual Chlorine (Y/N)	
																		Requested Analysis Filtered (Y/N)				Y			Y						
1	MW-15B	WT	G	5/21	1:00				10	3	2	4		1					✓	✓	✓	✓	✓	✓	✓	✓	✓				004 001
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
* Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li) (11)	Jacob Rager	5-21-24	2:32	Fedex	5/21/24		
6020 (Be, Mn, Co, As, Se, Sb, Ba, Tl) (8), 7470 (Hg)	Fedex	5/22/24	930	Marlee	5/22/24	930	Y Y Y
** Dissolved FF 6010 (B, Mo, Mg, K, Li) (5) FF 6020 (Al) (1)							
Rad 226/2228 to Pace PA							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jacob Rager

SIGNATURE of SAMPLER: Jacob Rager

DATE Signed: 5-21-24

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

F-IN-Q-290-rev.26, 30Apr2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: BC 5-22-24 11:04

1. Courier: ☑FED EX | UPS ☐CLIENT ☐PACE ☐NOW/JETT | 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 7 8 A B C D E F G H

4. Cooler Temperature(s): (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

0.3/0.3	1.2/1.2		

5. Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

8. EZ Bottle Order? ☐ Yes ☑ No

If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.**			
Short Hold Time Analysis (48 hours or less)? Analysis: NO3	✓		**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: 1200			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:

COC PAGE 2 of 2 (1 of 1) WHS 5/22/24

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS / DI / R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1													1			2	1	2	1	1	1		1					WT	✓	✓		✓
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

July 24, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on May 24, 2024. 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 - Greensburg

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50374203001	**MW-20B**	Water	05/24/24 10:30	05/24/24 12:00
50374203002	**MW-20I**	Water	05/24/24 10:15	05/24/24 12:00

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50374203001	**MW-20B**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	NWB	5	PASI-I
		EPA 6020	DMT	8	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50374203002	**MW-20I**	EPA 9056	ADM	3	PASI-I
		EPA 6010	JPK	11	PASI-I
		EPA 6010	NWB	5	PASI-I
		EPA 6020	DMT	8	PASI-I
		EPA 6020	DMT	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 4500-H+B	LHZ	1	PASI-I
		SM 4500-S2-D	AEL	1	PASI-I
		EPA 353.2	DAW	1	PASI-I
		EPA 365.1	YAM	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50374203001	**MW-20B**					
EPA 9056	Chloride	16.2	mg/L	0.25	06/07/24 17:09	
EPA 9056	Sulfate	56.9	mg/L	2.5	06/07/24 17:27	
EPA 6010	Boron	468	ug/L	100	06/05/24 02:38	
EPA 6010	Calcium	166000	ug/L	1000	06/05/24 02:38	
EPA 6010	Magnesium	27200	ug/L	1000	06/05/24 02:38	
EPA 6010	Sodium	11500	ug/L	1000	06/05/24 02:38	
EPA 6010	Boron, Dissolved	468	ug/L	100	06/07/24 10:38	
EPA 6010	Magnesium, Dissolved	26300	ug/L	1000	06/07/24 10:38	
EPA 6020	Barium	100	ug/L	1.0	06/04/24 05:02	
EPA 6020	Manganese	2.0	ug/L	1.0	06/04/24 05:02	
EPA 6020	Selenium	9.4	ug/L	1.0	06/04/24 05:02	
EPA 903.1	Radium-226	-0.116 ± 0.508 (1.05) C:NA T:96%	pCi/L		06/18/24 16:04	
EPA 904.0	Radium-228	0.477 ± 0.465 (0.945) C:81% T:84%	pCi/L		06/13/24 19:27	
Total Radium Calculation	Total Radium	0.477 ± 0.973 (2.00)	pCi/L		06/18/24 17:24	
SM 2320B	Alkalinity, Total as CaCO3	470	mg/L	10.0	06/04/24 21:27	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	470	mg/L	10.0	06/04/24 21:27	
SM 2540C	Total Dissolved Solids	552	mg/L	10.0	05/31/24 07:46	
SM 4500-H+B	pH at 25 Degrees C	7.4	Std. Units	0.10	06/10/24 12:41	H3
EPA 353.2	Nitrogen, Nitrate	3.9	mg/L	0.10	05/24/24 23:27	
SM 5310C	Dissolved Organic Carbon	1.1	mg/L	1.0	06/07/24 02:30	
50374203002	**MW-20I**					
EPA 9056	Chloride	8.9	mg/L	0.25	06/07/24 18:19	
EPA 9056	Sulfate	39.2	mg/L	0.25	06/07/24 18:19	
EPA 6010	Boron	284	ug/L	100	06/05/24 02:40	
EPA 6010	Calcium	121000	ug/L	1000	06/05/24 02:40	
EPA 6010	Magnesium	26600	ug/L	1000	06/05/24 02:40	
EPA 6010	Sodium	4850	ug/L	1000	06/05/24 02:40	
EPA 6010	Boron, Dissolved	264	ug/L	100	06/07/24 10:43	
EPA 6010	Magnesium, Dissolved	24200	ug/L	1000	06/07/24 10:43	
EPA 6020	Barium	47.1	ug/L	1.0	06/04/24 05:06	
EPA 6020	Cobalt	1.2	ug/L	1.0	06/04/24 05:06	
EPA 6020	Manganese	1650	ug/L	10.0	06/04/24 10:20	
EPA 6020	Selenium	3.5	ug/L	1.0	06/04/24 05:06	
EPA 903.1	Radium-226	0.376 ± 0.675 (1.18) C:NA T:91%	pCi/L		06/18/24 16:04	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50374203002	**MW-20I**					
EPA 904.0	Radium-228	0.813 ± 0.507 (0.932) C:85% T:85%	pCi/L		06/13/24 19:27	
Total Radium Calculation	Total Radium	1.19 ± 1.18 (2.11)	pCi/L		06/18/24 17:24	
SM 2320B	Alkalinity, Total as CaCO3	353	mg/L	10.0	06/04/24 21:27	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	353	mg/L	10.0	06/04/24 21:27	
SM 2540C	Total Dissolved Solids	382	mg/L	10.0	05/31/24 07:46	
SM 4500-H+B	pH at 25 Degrees C	7.5	Std. Units	0.10	06/10/24 12:41	H3
EPA 353.2	Nitrogen, Nitrate	1.2	mg/L	0.10	05/24/24 23:25	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Sample: MW-20B **Lab ID: 50374203001** Collected: 05/24/24 10:30 Received: 05/24/24 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**16.2**	mg/L	0.25	0.067	1		06/07/24 17:09	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		06/07/24 17:09	16984-48-8	
Sulfate	**56.9**	mg/L	2.5	1.9	10		06/07/24 17:27	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**468**	ug/L	100	6.2	1	06/04/24 08:20	06/05/24 02:38	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	06/04/24 08:20	06/05/24 02:38	7440-43-9	
Calcium	**166000**	ug/L	1000	67.7	1	06/04/24 08:20	06/05/24 02:38	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	06/04/24 08:20	06/05/24 02:38	7440-47-3	
Iron	ND	ug/L	100	30.0	1	06/04/24 08:20	06/05/24 02:38	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	06/04/24 08:20	06/05/24 02:38	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	06/04/24 08:20	06/05/24 02:38	7439-93-2	
Magnesium	**27200**	ug/L	1000	33.6	1	06/04/24 08:20	06/05/24 02:38	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	06/04/24 08:20	06/05/24 02:38	7439-98-7	
Potassium	ND	ug/L	1000	97.8	1	06/04/24 08:20	06/05/24 02:38	7440-09-7	
Sodium	**11500**	ug/L	1000	54.8	1	06/04/24 08:20	06/05/24 02:38	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**468**	ug/L	100	11.4	1	06/06/24 16:12	06/07/24 10:38	7440-42-8	
Lithium, Dissolved	ND	ug/L	20.0	5.1	1	06/06/24 16:12	06/07/24 10:38	7439-93-2	
Magnesium, Dissolved	**26300**	ug/L	1000	32.8	1	06/06/24 16:12	06/07/24 10:38	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	1.1	1	06/06/24 16:12	06/07/24 10:38	7439-98-7	
Potassium, Dissolved	ND	ug/L	1000	120	1	06/06/24 16:12	06/07/24 10:38	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.044	1	06/03/24 15:29	06/04/24 05:02	7440-36-0	
Arsenic	ND	ug/L	1.0	0.064	1	06/03/24 15:29	06/04/24 05:02	7440-38-2	
Barium	**100**	ug/L	1.0	0.067	1	06/03/24 15:29	06/04/24 05:02	7440-39-3	
Beryllium	ND	ug/L	0.20	0.026	1	06/03/24 15:29	06/04/24 11:57	7440-41-7	
Cobalt	ND	ug/L	1.0	0.024	1	06/03/24 15:29	06/04/24 05:02	7440-48-4	
Manganese	**2.0**	ug/L	1.0	0.043	1	06/03/24 15:29	06/04/24 05:02	7439-96-5	
Selenium	**9.4**	ug/L	1.0	0.23	1	06/03/24 15:29	06/04/24 05:02	7782-49-2	
Thallium	ND	ug/L	1.0	0.042	1	06/03/24 15:29	06/04/24 05:02	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	06/04/24 14:57	06/05/24 10:38	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	06/07/24 13:58	06/09/24 19:33	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Sample: MW-20B **Lab ID: 50374203001** Collected: 05/24/24 10:30 Received: 05/24/24 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**470**	mg/L	10.0	10.0	1		06/04/24 21:27		
Alkalinity,Bicarbonate (CaCO3)	**470**	mg/L	10.0	10.0	1		06/04/24 21:27		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		06/04/24 21:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**552**	mg/L	10.0	10.0	1		05/31/24 07:46		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.4**	Std. Units	0.10	0.10	1		06/10/24 12:41		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/30/24 14:20	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**3.9**	mg/L	0.10	0.013	1		05/24/24 23:27	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	06/06/24 11:30	06/11/24 12:53		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	**1.1**	mg/L	1.0	0.25	1		06/07/24 02:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Sample: MW-20I **Lab ID: 50374203002** Collected: 05/24/24 10:15 Received: 05/24/24 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis								
Chloride	**8.9**	mg/L	0.25	0.067	1		06/07/24 18:19	16887-00-6	
Fluoride	ND	mg/L	0.10	0.017	1		06/07/24 18:19	16984-48-8	
Sulfate	**39.2**	mg/L	0.25	0.19	1		06/07/24 18:19	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron	**284**	ug/L	100	6.2	1	06/04/24 08:20	06/05/24 02:40	7440-42-8	
Cadmium	ND	ug/L	2.0	0.60	1	06/04/24 08:20	06/05/24 02:40	7440-43-9	
Calcium	**121000**	ug/L	1000	67.7	1	06/04/24 08:20	06/05/24 02:40	7440-70-2	
Chromium	ND	ug/L	10.0	0.42	1	06/04/24 08:20	06/05/24 02:40	7440-47-3	
Iron	ND	ug/L	100	30.0	1	06/04/24 08:20	06/05/24 02:40	7439-89-6	
Lead	ND	ug/L	10.0	2.5	1	06/04/24 08:20	06/05/24 02:40	7439-92-1	
Lithium	ND	ug/L	20.0	6.8	1	06/04/24 08:20	06/05/24 02:40	7439-93-2	
Magnesium	**26600**	ug/L	1000	33.6	1	06/04/24 08:20	06/05/24 02:40	7439-95-4	
Molybdenum	ND	ug/L	10.0	0.78	1	06/04/24 08:20	06/05/24 02:40	7439-98-7	
Potassium	ND	ug/L	1000	97.8	1	06/04/24 08:20	06/05/24 02:40	7440-09-7	
Sodium	**4850**	ug/L	1000	54.8	1	06/04/24 08:20	06/05/24 02:40	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis								
Boron, Dissolved	**264**	ug/L	100	11.4	1	06/06/24 16:12	06/07/24 10:43	7440-42-8	
Lithium, Dissolved	ND	ug/L	20.0	5.1	1	06/06/24 16:12	06/07/24 10:43	7439-93-2	
Magnesium, Dissolved	**24200**	ug/L	1000	32.8	1	06/06/24 16:12	06/07/24 10:43	7439-95-4	
Molybdenum, Dissolved	ND	ug/L	10.0	1.1	1	06/06/24 16:12	06/07/24 10:43	7439-98-7	
Potassium, Dissolved	ND	ug/L	1000	120	1	06/06/24 16:12	06/07/24 10:43	7440-09-7	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Antimony	ND	ug/L	1.0	0.044	1	06/03/24 15:29	06/04/24 05:06	7440-36-0	
Arsenic	ND	ug/L	1.0	0.064	1	06/03/24 15:29	06/04/24 05:06	7440-38-2	
Barium	**47.1**	ug/L	1.0	0.067	1	06/03/24 15:29	06/04/24 05:06	7440-39-3	
Beryllium	ND	ug/L	0.20	0.026	1	06/03/24 15:29	06/04/24 12:05	7440-41-7	
Cobalt	**1.2**	ug/L	1.0	0.024	1	06/03/24 15:29	06/04/24 05:06	7440-48-4	
Manganese	**1650**	ug/L	10.0	0.43	10	06/03/24 15:29	06/04/24 10:20	7439-96-5	
Selenium	**3.5**	ug/L	1.0	0.23	1	06/03/24 15:29	06/04/24 05:06	7782-49-2	
Thallium	ND	ug/L	1.0	0.042	1	06/03/24 15:29	06/04/24 05:06	7440-28-0	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Aluminum, Dissolved	ND	ug/L	10.0	4.4	1	06/04/24 14:57	06/05/24 10:42	7429-90-5	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	0.20	0.091	1	06/07/24 13:58	06/09/24 19:36	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Sample: MW-20I **Lab ID: 50374203002** Collected: 05/24/24 10:15 Received: 05/24/24 12:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis								
Alkalinity, Total as CaCO3	**353**	mg/L	10.0	10.0	1		06/04/24 21:27		
Alkalinity,Bicarbonate (CaCO3)	**353**	mg/L	10.0	10.0	1		06/04/24 21:27		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	10.0	10.0	1		06/04/24 21:27		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis								
Total Dissolved Solids	**382**	mg/L	10.0	10.0	1		05/31/24 07:46		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Indianapolis								
pH at 25 Degrees C	**7.5**	Std. Units	0.10	0.10	1		06/10/24 12:41		H3
4500S2D Sulfide Water	Analytical Method: SM 4500-S2-D Pace Analytical Services - Indianapolis								
Sulfide	ND	mg/L	0.10	0.025	1		05/30/24 14:20	18496-25-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis								
Nitrogen, Nitrate	**1.2**	mg/L	0.10	0.013	1		05/24/24 23:25	14797-55-8	
365.1 Total Phosphorus	Analytical Method: EPA 365.1 Preparation Method: EPA 365.1 Pace Analytical Services - Indianapolis								
Phosphate as P04	ND	mg/L	0.15	0.13	1	06/06/24 11:30	06/11/24 12:54		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis								
Dissolved Organic Carbon	ND	mg/L	1.0	0.25	1		06/07/24 02:55		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 794417
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3634602 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	0.25	0.067	06/07/24 15:08	
Fluoride	mg/L	ND	0.10	0.017	06/07/24 15:08	
Sulfate	mg/L	ND	0.25	0.19	06/07/24 15:08	

LABORATORY CONTROL SAMPLE: 3634603

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	2.4	95	80-120	
Fluoride	mg/L	1	0.97	97	80-120	
Sulfate	mg/L	5	4.7	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3634604 3634605

Parameter	Units	50374210001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	252	250	250	482	480	92	91	80-120	1	15	
Fluoride	mg/L	0.36	1	1	1.3	1.3	98	98	80-120	0	15	
Sulfate	mg/L	72.8	50	50	118	118	91	90	80-120	1	15	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 793918
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3632398 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.091	06/09/24 18:32	

LABORATORY CONTROL SAMPLE: 3632399

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3632400 3632401

Parameter	Units	50374082002 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	4.7	5.0	93	101	75-125	8	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 793488
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3630699 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	100	6.2	06/05/24 01:40	
Cadmium	ug/L	ND	2.0	0.60	06/05/24 01:40	
Calcium	ug/L	ND	1000	67.7	06/05/24 01:40	
Chromium	ug/L	ND	10.0	0.42	06/05/24 01:40	
Iron	ug/L	ND	100	30.0	06/05/24 01:40	
Lead	ug/L	ND	10.0	2.5	06/05/24 01:40	
Lithium	ug/L	ND	20.0	6.8	06/05/24 01:40	
Magnesium	ug/L	ND	1000	33.6	06/05/24 01:40	
Molybdenum	ug/L	ND	10.0	0.78	06/05/24 01:40	
Potassium	ug/L	ND	1000	97.8	06/05/24 01:40	
Sodium	ug/L	ND	1000	54.8	06/05/24 01:40	

LABORATORY CONTROL SAMPLE: 3630700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	996	100	80-120	
Cadmium	ug/L	1000	991	99	80-120	
Calcium	ug/L	10000	9990	100	80-120	
Chromium	ug/L	1000	986	99	80-120	
Iron	ug/L	10000	10300	103	80-120	
Lead	ug/L	1000	985	98	80-120	
Lithium	ug/L	1000	1030	103	80-120	
Magnesium	ug/L	10000	10300	103	80-120	
Molybdenum	ug/L	1000	1060	106	80-120	
Potassium	ug/L	10000	9760	98	80-120	
Sodium	ug/L	10000	9720	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3630701 3630702

Parameter	Units	50374196007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	65.4J	1000	1000	1100	1070	103	100	75-125	3	20	
Cadmium	ug/L	ND	1000	1000	1010	977	101	98	75-125	4	20	
Calcium	ug/L	94000	10000	10000	103000	101000	88	74	75-125	1	20	P6
Chromium	ug/L	1.9J	1000	1000	1000	962	100	96	75-125	4	20	
Iron	ug/L	28400	10000	10000	38500	37600	101	93	75-125	2	20	
Lead	ug/L	ND	1000	1000	988	944	99	94	75-125	5	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3630701 3630702

Parameter	Units	50374196007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	ug/L	35.9	1000	1000	1090	1040	106	100	75-125	5	20	
Magnesium	ug/L	27100	10000	10000	37100	36400	100	93	75-125	2	20	
Molybdenum	ug/L	17.0	1000	1000	1100	1060	108	104	75-125	4	20	CH
Potassium	ug/L	7160	10000	10000	17400	16500	103	94	75-125	5	20	
Sodium	ug/L	24200	10000	10000	34300	33000	101	88	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 793779
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3632002 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Dissolved	ug/L	ND	100	11.4	06/07/24 09:50	
Lithium, Dissolved	ug/L	ND	20.0	5.1	06/07/24 09:50	
Magnesium, Dissolved	ug/L	ND	1000	32.8	06/07/24 09:50	
Molybdenum, Dissolved	ug/L	ND	10.0	1.1	06/07/24 09:50	
Potassium, Dissolved	ug/L	ND	1000	120	06/07/24 09:50	

LABORATORY CONTROL SAMPLE: 3632003

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron, Dissolved	ug/L	1000	969	97	80-120	
Lithium, Dissolved	ug/L	1000	1010	101	80-120	
Magnesium, Dissolved	ug/L	10000	9930	99	80-120	
Molybdenum, Dissolved	ug/L	1000	1030	103	80-120	
Potassium, Dissolved	ug/L	10000	9970	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3632004 3632005

Parameter	Units	50374076001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron, Dissolved	ug/L	ND	1000	1000	929	987	91	97	75-125	6	20	
Lithium, Dissolved	ug/L	ND	1000	1000	934	992	93	99	75-125	6	20	
Magnesium, Dissolved	ug/L	25.2 mg/L	10000	10000	33200	34700	79	94	75-125	4	20	
Molybdenum, Dissolved	ug/L	ND	1000	1000	955	1010	95	101	75-125	6	20	
Potassium, Dissolved	ug/L	ND	10000	10000	9990	10600	93	99	75-125	6	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 793167
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3629307 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.044	06/04/24 03:14	
Arsenic	ug/L	ND	1.0	0.064	06/04/24 03:14	
Barium	ug/L	ND	1.0	0.067	06/04/24 03:14	
Beryllium	ug/L	ND	0.20	0.026	06/04/24 03:14	
Cobalt	ug/L	ND	1.0	0.024	06/04/24 03:14	
Manganese	ug/L	ND	1.0	0.043	06/04/24 03:14	
Selenium	ug/L	ND	1.0	0.23	06/04/24 03:14	
Thallium	ug/L	ND	1.0	0.042	06/04/24 03:14	

LABORATORY CONTROL SAMPLE: 3629308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.2	105	80-120	
Arsenic	ug/L	40	37.2	93	80-120	
Barium	ug/L	40	39.0	97	80-120	
Beryllium	ug/L	40	39.1	98	80-120	
Cobalt	ug/L	40	39.5	99	80-120	
Manganese	ug/L	40	40.7	102	80-120	
Selenium	ug/L	40	38.6	97	80-120	
Thallium	ug/L	40	41.3	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3629309 3629310

Parameter	Units	50374019025 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	42.8	43.4	107	108	75-125	1	20	
Arsenic	ug/L	ND	40	40	37.7	37.4	93	93	75-125	1	20	
Barium	ug/L	105	40	40	143	143	94	95	75-125	0	20	
Beryllium	ug/L	ND	40	40	40.2	40.3	100	101	75-125	0	20	
Cobalt	ug/L	1.3	40	40	38.1	37.6	92	91	75-125	2	20	
Manganese	ug/L	189	40	40	227	224	94	87	75-125	1	20	
Selenium	ug/L	4.0	40	40	42.2	41.5	96	94	75-125	2	20	
Thallium	ug/L	ND	40	40	43.0	42.8	107	107	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 793563
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3630905 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	10.0	4.4	06/05/24 10:13	

LABORATORY CONTROL SAMPLE: 3630906

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	400	390	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3630907 3630908

Parameter	Units	50374354001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	<0.010 mg/L	400	400	396	391	98	97	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 793748
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3631777 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	10.0	10.0	06/04/24 21:27	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	10.0	10.0	06/04/24 21:27	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	10.0	10.0	06/04/24 21:27	

LABORATORY CONTROL SAMPLE: 3631778

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	54.5	109	90-110	

SAMPLE DUPLICATE: 3631779

Parameter	Units	50374086003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	177	180	2	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	177	180	2	20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	ND		20	

SAMPLE DUPLICATE: 3631780

Parameter	Units	50374144003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	7230	7280	1	20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	6860	6900	1	20	
Alkalinity,Carbonate (CaCO3)	mg/L	368	380	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 792989
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3628598 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	05/31/24 07:45	

LABORATORY CONTROL SAMPLE: 3628599

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	259	86	80-120	

SAMPLE DUPLICATE: 3628600

Parameter	Units	50374203002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	382	383	0	10	

SAMPLE DUPLICATE: 3628601

Parameter	Units	50374238001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	429	453	5	10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 794739
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

SAMPLE DUPLICATE: 3636410

Parameter	Units	50374090006 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.5	7.6	0	2	H3

SAMPLE DUPLICATE: 3636411

Parameter	Units	50374210001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.5	7.6	1	2	H3

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 792844
QC Batch Method: SM 4500-S2-D
Analysis Method: SM 4500-S2-D
Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3628006 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.025	05/30/24 14:20	

LABORATORY CONTROL SAMPLE: 3628007

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.48	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3628008 3628009

Parameter	Units	50374453006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	ND	0.5	0.5	.07J	.069J	13	13	90-110		20	M3

MATRIX SPIKE SAMPLE: 3628010

Parameter	Units	50374203001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	0.5	0.30	58	90-110	M0

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 792056
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3624891 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	0.013	05/24/24 22:52	

LABORATORY CONTROL SAMPLE: 3624892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1	1.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3624893 3624894

Parameter	Units	50374164007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Nitrate	mg/L	1.2	1	1	2.2	2.2	109	109	90-110	0	20	

MATRIX SPIKE SAMPLE: 3624895

Parameter	Units	50374164004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1	1.0	101	90-110	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 794099
QC Batch Method: EPA 365.1
Analysis Method: EPA 365.1
Analysis Description: 365.1 Total Phosphorus
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3633172 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Phosphate as P04	mg/L	ND	0.15	0.13	06/11/24 12:47	

LABORATORY CONTROL SAMPLE: 3633173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L		1.5			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3633174 3633175

Parameter	Units	50374144003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phosphate as P04	mg/L	32.4			69.6	68.6				1		

MATRIX SPIKE SAMPLE: 3633176

Parameter	Units	50374203001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphate as P04	mg/L	ND		1.6			

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 794197
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Dissolved Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3633542 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	ND	1.0	0.25	06/07/24 10:26	

LABORATORY CONTROL SAMPLE: 3633543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	10	9.5	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3633544 3633545

Parameter	Units	50373951004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	ND	10	10	9.6	9.4	93	90	80-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3633546 3633547

Parameter	Units	50374033006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dissolved Organic Carbon	mg/L	1.6J	40	40	39.6	39.3	95	94	80-120	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Sample: MW-20B **Lab ID: 50374203001** Collected: 05/24/24 10:30 Received: 05/24/24 12:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.116 ± 0.508 (1.05) C:NA T:96%**	pCi/L	06/18/24 16:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.477 ± 0.465 (0.945) C:81% T:84%**	pCi/L	06/13/24 19:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.477 ± 0.973 (2.00)**	pCi/L	06/18/24 17:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Sample: MW-20I **Lab ID: 50374203002** Collected: 05/24/24 10:15 Received: 05/24/24 12:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.376 ± 0.675 (1.18) C:NA T:91%**	pCi/L	06/18/24 16:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.813 ± 0.507 (0.932) C:85% T:85%**	pCi/L	06/13/24 19:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.19 ± 1.18 (2.11)**	pCi/L	06/18/24 17:24	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 672982
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3276137 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.207 ± 0.353 (0.623) C:NA T:89%	pCi/L	06/18/24 15:51	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL - RADIOCHEMISTRY

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

QC Batch: 672983
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 50374203001, 50374203002

METHOD BLANK: 3276144 Matrix: Water
Associated Lab Samples: 50374203001, 50374203002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.165 ± 0.321 (0.706) C:83% T:83%	pCi/L	06/13/24 16:10	

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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

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.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P4R3
Pace Project No.: 50374203

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50374203001	**MW-20B**	EPA 9056	794417		
50374203002	**MW-20I**	EPA 9056	794417		
50374203001	**MW-20B**	EPA 3010	793488	EPA 6010	793790
50374203002	**MW-20I**	EPA 3010	793488	EPA 6010	793790
50374203001	**MW-20B**	EPA 3010	793779	EPA 6010	794419
50374203002	**MW-20I**	EPA 3010	793779	EPA 6010	794419
50374203001	**MW-20B**	EPA 200.2	793167	EPA 6020	793503
50374203002	**MW-20I**	EPA 200.2	793167	EPA 6020	793503
50374203001	**MW-20B**	EPA 200.2	793563	EPA 6020	793781
50374203002	**MW-20I**	EPA 200.2	793563	EPA 6020	793781
50374203001	**MW-20B**	EPA 7470	793918	EPA 7470	794644
50374203002	**MW-20I**	EPA 7470	793918	EPA 7470	794644
50374203001	**MW-20B**	EPA 903.1	672982		
50374203002	**MW-20I**	EPA 903.1	672982		
50374203001	**MW-20B**	EPA 904.0	672983		
50374203002	**MW-20I**	EPA 904.0	672983		
50374203001	**MW-20B**	Total Radium Calculation	676708		
50374203002	**MW-20I**	Total Radium Calculation	676708		
50374203001	**MW-20B**	SM 2320B	793748		
50374203002	**MW-20I**	SM 2320B	793748		
50374203001	**MW-20B**	SM 2540C	792989		
50374203002	**MW-20I**	SM 2540C	792989		
50374203001	**MW-20B**	SM 4500-H+B	794739		
50374203002	**MW-20I**	SM 4500-H+B	794739		
50374203001	**MW-20B**	SM 4500-S2-D	792844		
50374203002	**MW-20I**	SM 4500-S2-D	792844		
50374203001	**MW-20B**	EPA 353.2	792056		
50374203002	**MW-20I**	EPA 353.2	792056		
50374203001	**MW-20B**	EPA 365.1	794099	EPA 365.1	795058
50374203002	**MW-20I**	EPA 365.1	794099	EPA 365.1	795058
50374203001	**MW-20B**	SM 5310C	794197		
50374203002	**MW-20I**	SM 5310C	794197		

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Ana

The Chain-of-Custody is a LEGAL DOCU

WO# : 50374203

50374203

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:			Of
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sec...		
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis		
	Indianapolis, IN 46256			Address:		Regulatory Agency	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:			
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg P4 May 2024	Pace Project Manager:	Will Statz	State / Location	
Requested Due Date:		Project #:	P4R3	Pace Profile #:	10498/60		IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	TDS/ NO3 Wet	(Cl, F, SO4) IC	Metals, Total*	Metals Diss. Field Filtered**	Alkalinity,pH	DOC by 5310C	Sulfide	Phosphate	Rad-226/228 + Sum	Residual Chlorine (Y/N)
	MATRIX: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS																	Requested Analysis Filtered (Y/N)				Y			Y				
1	MW-20B	WT	G	5/24/24	1030				10	3	2	4		1				↓	↓	↓	↓	↓	↓	↓	↓	↓		
2	MW-20I	↓	↓	↓	1015				↓	↓	↓	↓		↓				↓	↓	↓	↓	↓	↓	↓	↓	↓		
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals: 6010 (B, Cd, Cr, Fe, Pb, Mo, Ca, Mg, Na, K, Li) (11)	Mohammed Bazlamit	5/24/24	1200	PACE	5/24/24	1200	1.9	Y	N	Y
6020 (Be, Mn, Co, As, Se, Sb, Ba, Tl) (8), 7470 (Hg)										
* Dissolved FF 6010 (B, Mo, Mg, K, Li) (5) FF 6020 (Al) (1)										
Rad 226/2228 to Pace PA										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Mohammed Bazlamit		
SIGNATURE of SAMPLER:		DATE Signed:	5/24/24

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

F-IN-Q-290-rev.26, 30Apr2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 5/24/24 1535

1. **Courier:** ☐FED EX | UPS ☑CLIENT ☐PACE ☐NOW/JETT | 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 7 8 A B (C) D E F G H
4. **Cooler Temperature(s):** 1.4/1.4 | | | |
   (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** ✓ Bubble Wrap ✓ Bubble Bags | | None | | Other _____
6. **Ice Type:** ☑ Wet ☐ Blue ☐ None
7. **Was the PM notified of out of temp cooler?:** | | Yes ☐ No
   Cooler temp should be above freezing to 6°C
8. **EZ Bottle Order?** | Yes ✓ No
   If yes but not on COC what is the EZ Bottle Order Number?:

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis: ~~RAD's~~ NO3	✓	✗				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: 1915		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:

COC PAGE \ of \

Sample Container Count

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

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit	Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1												1				2	1	2	1	1	1		1				WT	✓	✓		✓
2												1				2	1	2	1	1	1		1				WT	✓	✓		✓
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

August 2024 (Verification Resampling)

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

August 22, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on August 14, 2024. 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,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50380227001	**MW-2R**	Water	08/13/24 12:15	08/14/24 15:06
50380227002	**MW-3**	Water	08/13/24 10:42	08/14/24 15:06
50380227003	**MW-13**	Water	08/14/24 10:30	08/14/24 15:06

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50380227001	**MW-2R**	EPA 6020	MTM	1	PASI-I
50380227002	**MW-3**	EPA 6020	MTM	1	PASI-I
50380227003	**MW-13**	EPA 6020	MTM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50380227001	**MW-2R**					
EPA 6020	Barium	84.9	ug/L	1.0	08/18/24 02:51	
50380227002	**MW-3**					
EPA 6020	Barium	35.8	ug/L	1.0	08/18/24 02:55	
50380227003	**MW-13**					
EPA 6020	Selenium	25.5	ug/L	1.0	08/18/24 02:59	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

Sample: MW-2R **Lab ID: 50380227001** Collected: 08/13/24 12:15 Received: 08/14/24 15:06 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Barium	**84.9**	ug/L	1.0	0.11	1	08/17/24 00:40	08/18/24 02:51	7440-39-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

Sample: MW-3 **Lab ID: 50380227002** Collected: 08/13/24 10:42 Received: 08/14/24 15:06 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Barium	**35.8**	ug/L	1.0	0.11	1	08/17/24 00:40	08/18/24 02:55	7440-39-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

Sample: MW-13 **Lab ID: 50380227003** Collected: 08/14/24 10:30 Received: 08/14/24 15:06 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Selenium	**25.5**	ug/L	1.0	0.26	1	08/17/24 00:40	08/18/24 02:59	7782-49-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

QC Batch: 804776
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50380227001, 50380227002, 50380227003

METHOD BLANK: 3681054 Matrix: Water
Associated Lab Samples: 50380227001, 50380227002, 50380227003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	ND	1.0	0.11	08/18/24 02:35	
Selenium	ug/L	ND	1.0	0.26	08/18/24 02:35	

LABORATORY CONTROL SAMPLE: 3681055

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	40	39.0	97	80-120	
Selenium	ug/L	40	39.6	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3681056 3681057

Parameter	Units	50380250002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	44.8	40	40	82.2	84.6	93	100	75-125	3	20	
Selenium	ug/L	ND	40	40	40.8	40.6	101	101	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

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.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P1R1
Pace Project No.: 50380227

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50380227001	**MW-2R**	EPA 200.2	804776	EPA 6020	804990
50380227002	**MW-3**	EPA 200.2	804776	EPA 6020	804990
50380227003	**MW-13**	EPA 200.2	804776	EPA 6020	804990

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / A

The Chain-of-Custody is a LEGAL DO

WO# : 50380227

50380227

Page: 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P1R1	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/58

Regulatory Agency

State / Location: IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals by 6010/6020/7470	Cl, F, SO4 by 9056	TDS by 2540C	Rad-226/228 + Sum	Total Barium (6020)	Total Selenium (6020)	Residual Chlorine (Y/N)	
1	MW-2R	WT	G			8/13/24	1215		1			1											X			001
2	MW-3	WT	G			8/13/24	1042		1			1											X			002
3	MW-13	WT	G			8/14/24	1030		1			1												X		003
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)	JON HILL/ATLAS	8/14/24			8.19	15:06	1.2	Y	N	Y
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg										
Rad to Pace PA										

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	JON HILL			
SIGNATURE of SAMPLER:	Mark Breting for/ JON HILL	DATE Signed:	8/14/24	

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: CW 8.14.24 15:06

1. Courier: ☐ FED EX ☐ UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT ☑ OTHER Walk-in

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 7 8 9 A B C D E F (G) H I

4. Cooler Temperature(s): 1.4/1.2 | | | |
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

6. Ice Type: ☑ Wet ☐ Blue ☐ None

7. Was the PM notified of out of temp cooler?: ☐ Yes ☐ No
Cooler temp should be above freezing to 6°C

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

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		X
Short Hold Time Analysis (48 hours or less)? Analysis:		X
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		X
Custody Signatures Present?	X	
Containers Intact?:	X	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	X	
Extra labels on Terracore Vials? (soils only)		

	Yes	No	N/A
All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: **(HNO3 (<2)) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	X		
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			X
Residual Chlorine Check (Total/Amenable/Free Cyanide)			X
Headspace Wisconsin Sulfide?			X
Headspace in VOA Vials (>6mm): See Containter Count form for details			No VOA Vials Sent X
Trip Blank Present?		X	
Trip Blank Custody Seals?:			X

COMMENTS:

COC PAGE ____ of ____

Sample Container Count

** Place a PINK dot on containers that are out of conformance **

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS (>6mm)	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit			Matrix
1																													WT
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
Red	Yellow	Green	Black
HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
✓			
✓			
✓			

Container Codes

Glass

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	CG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic
DG9T	40mL Na Thio amber vial	CG3U	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
CG3F	250mL clear glass HCl, Field Filter	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic
BG1H	1L HCl clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic
BG1S	1L H2SO4 clear glass	AG3B	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic

Plastic

NT3U	Non Teflon 250mL unpreserved plastic
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

August 2024 (Surface Water Sampling)

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

September 11, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg Surface Water
Pace Project No.: 50380603

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on August 19, 2024. 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

This revised report replaces the version sent on 9/3/24. The project name was changed to Petersburg Surface Water.
WHS 9/11/24

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

Sincerely,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg Surface Water
Pace Project No.: 50380603

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg Surface Water
Pace Project No.: 50380603

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50380603001	**SB-1**	Water	08/19/24 09:15	08/19/24 13:15
50380603002	**SC-1**	Water	08/19/24 09:27	08/19/24 13:15
50380603003	**SB-2**	Water	08/19/24 09:42	08/19/24 13:15
50380603004	**SC-2**	Water	08/19/24 09:55	08/19/24 13:15
50380603005	**SB-3**	Water	08/19/24 10:05	08/19/24 13:15
50380603006	**SC-3**	Water	08/19/24 10:10	08/19/24 13:15
50380603007	**Dup-1**	Water	08/19/24 08:00	08/19/24 13:15
50380603008	**EQ. Blank**	Water	08/19/24 09:12	08/19/24 13:15

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg Surface Water
Pace Project No.: 50380603

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50380603001	**SB-1**	EPA 200.7	ELK	1	PASI-I
		EPA 200.8	MTM	1	PASI-I
50380603002	**SC-1**	EPA 200.7	ELK	1	PASI-I
		EPA 200.8	MTM	1	PASI-I
50380603003	**SB-2**	EPA 200.7	ELK	1	PASI-I
		EPA 200.8	MTM	1	PASI-I
50380603004	**SC-2**	EPA 200.7	ELK	1	PASI-I
		EPA 200.8	MTM	1	PASI-I
50380603005	**SB-3**	EPA 200.7	ELK	1	PASI-I
		EPA 200.8	MTM	1	PASI-I
50380603006	**SC-3**	EPA 200.7	ELK	1	PASI-I
		EPA 200.8	MTM	1	PASI-I
50380603007	**Dup-1**	EPA 200.7	ELK	1	PASI-I
		EPA 200.8	MTM	1	PASI-I
50380603008	**EQ. Blank**	EPA 200.7	ELK	1	PASI-I
		EPA 200.8	MTM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg Surface Water
Pace Project No.: 50380603

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50380603001	**SB-1**					
EPA 200.8	Boron	54.9	ug/L	5.0	08/22/24 02:03	
50380603002	**SC-1**					
EPA 200.8	Boron	52.2	ug/L	5.0	08/22/24 02:31	
50380603003	**SB-2**					
EPA 200.8	Boron	96.6	ug/L	5.0	08/22/24 02:35	
50380603004	**SC-2**					
EPA 200.8	Boron	96.3	ug/L	5.0	08/22/24 02:39	
50380603005	**SB-3**					
EPA 200.8	Boron	2470	ug/L	250	08/22/24 02:43	
50380603006	**SC-3**					
EPA 200.8	Boron	62.2	ug/L	5.0	08/22/24 02:47	
50380603007	**Dup-1**					
EPA 200.8	Boron	62.5	ug/L	5.0	08/22/24 02:59	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Surface Water
Pace Project No.: 50380603

Sample: SB-1 **Lab ID: 50380603001** Collected: 08/19/24 09:15 Received: 08/19/24 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Indianapolis								
Molybdenum	ND	ug/L	10.0	1.4	1	08/20/24 21:16	08/21/24 12:00	7439-98-7	
200.8 Metals, Total ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Indianapolis								
Boron	**54.9**	ug/L	5.0	2.8	1	08/21/24 07:30	08/22/24 02:03	7440-42-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Surface Water
Pace Project No.: 50380603

Sample: SC-1 **Lab ID: 50380603002** Collected: 08/19/24 09:27 Received: 08/19/24 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Indianapolis								
Molybdenum	ND	ug/L	10.0	1.4	1	08/20/24 21:16	08/21/24 12:10	7439-98-7	
200.8 Metals, Total ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Indianapolis								
Boron	**52.2**	ug/L	5.0	2.8	1	08/21/24 07:30	08/22/24 02:31	7440-42-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Surface Water
Pace Project No.: 50380603

Sample: SB-2 **Lab ID: 50380603003** Collected: 08/19/24 09:42 Received: 08/19/24 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Indianapolis								
Molybdenum	ND	ug/L	10.0	1.4	1	08/20/24 21:16	08/21/24 12:17	7439-98-7	
200.8 Metals, Total ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Indianapolis								
Boron	**96.6**	ug/L	5.0	2.8	1	08/21/24 07:30	08/22/24 02:35	7440-42-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Surface Water
Pace Project No.: 50380603

Sample: SC-2 **Lab ID: 50380603004** Collected: 08/19/24 09:55 Received: 08/19/24 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Indianapolis								
Molybdenum	ND	ug/L	10.0	1.4	1	08/20/24 21:16	08/21/24 12:19	7439-98-7	
200.8 Metals, Total ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Indianapolis								
Boron	**96.3**	ug/L	5.0	2.8	1	08/21/24 07:30	08/22/24 02:39	7440-42-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Surface Water
Pace Project No.: 50380603

Sample: SB-3 **Lab ID: 50380603005** Collected: 08/19/24 10:05 Received: 08/19/24 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Indianapolis								
Molybdenum	ND	ug/L	10.0	1.4	1	08/20/24 21:16	08/21/24 12:23	7439-98-7	
200.8 Metals, Total ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Indianapolis								
Boron	**2470**	ug/L	250	140	50	08/21/24 07:30	08/22/24 02:43	7440-42-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Surface Water
Pace Project No.: 50380603

Sample: SC-3 **Lab ID: 50380603006** Collected: 08/19/24 10:10 Received: 08/19/24 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Indianapolis								
Molybdenum	ND	ug/L	10.0	1.4	1	08/20/24 21:16	08/21/24 12:25	7439-98-7	
200.8 Metals, Total ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Indianapolis								
Boron	**62.2**	ug/L	5.0	2.8	1	08/21/24 07:30	08/22/24 02:47	7440-42-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Surface Water
Pace Project No.: 50380603

Sample: Dup-1 **Lab ID: 50380603007** Collected: 08/19/24 08:00 Received: 08/19/24 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Indianapolis								
Molybdenum	ND	ug/L	10.0	1.4	1	08/20/24 21:16	08/21/24 12:27	7439-98-7	
200.8 Metals, Total ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Indianapolis								
Boron	**62.5**	ug/L	5.0	2.8	1	08/21/24 07:30	08/22/24 02:59	7440-42-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg Surface Water
Pace Project No.: 50380603

Sample: EQ. Blank **Lab ID: 50380603008** Collected: 08/19/24 09:12 Received: 08/19/24 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Indianapolis								
Molybdenum	ND	ug/L	10.0	1.4	1	08/20/24 21:16	08/21/24 12:30	7439-98-7	
200.8 Metals, Total ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Indianapolis								
Boron	ND	ug/L	5.0	2.8	1	08/21/24 07:30	08/22/24 03:03	7440-42-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Surface Water
Pace Project No.: 50380603

QC Batch: 805161
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50380603001, 50380603002, 50380603003, 50380603004, 50380603005, 50380603006, 50380603007, 50380603008

METHOD BLANK: 3682918 Matrix: Water
Associated Lab Samples: 50380603001, 50380603002, 50380603003, 50380603004, 50380603005, 50380603006, 50380603007, 50380603008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Molybdenum	ug/L	ND	10.0	1.4	08/21/24 11:54	

LABORATORY CONTROL SAMPLE: 3682919

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Molybdenum	ug/L	1000	986	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3682920 3682921

Parameter	Units	50380603001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Molybdenum	ug/L	ND	1000	1000	961	989	96	99	70-130	3	20	

MATRIX SPIKE SAMPLE: 3682922

Parameter	Units	50380603004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Molybdenum	ug/L	ND	1000	976	97	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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg Surface Water
Pace Project No.: 50380603

QC Batch: 805199 | Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 | Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50380603001, 50380603002, 50380603003, 50380603004, 50380603005, 50380603006, 50380603007, 50380603008

METHOD BLANK: 3683011 Matrix: Water
Associated Lab Samples: 50380603001, 50380603002, 50380603003, 50380603004, 50380603005, 50380603006, 50380603007, 50380603008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	5.0	2.8	08/22/24 01:47	

LABORATORY CONTROL SAMPLE: 3683012

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	40	41.4	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3683013 3683014

Parameter	Units	50380603001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	54.9	40	40	97.1	99.1	106	110	70-130	2	20	

MATRIX SPIKE SAMPLE: 3683015

Parameter	Units	50380360004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	0.019 mg/L	40	58.2	98	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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg Surface Water
Pace Project No.: 50380603

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.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg Surface Water
Pace Project No.: 50380603

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50380603001	**SB-1**	EPA 200.7	805161	EPA 200.7	805495
50380603002	**SC-1**	EPA 200.7	805161	EPA 200.7	805495
50380603003	**SB-2**	EPA 200.7	805161	EPA 200.7	805495
50380603004	**SC-2**	EPA 200.7	805161	EPA 200.7	805495
50380603005	**SB-3**	EPA 200.7	805161	EPA 200.7	805495
50380603006	**SC-3**	EPA 200.7	805161	EPA 200.7	805495
50380603007	**Dup-1**	EPA 200.7	805161	EPA 200.7	805495
50380603008	**EQ. Blank**	EPA 200.7	805161	EPA 200.7	805495
50380603001	**SB-1**	EPA 200.8	805199	EPA 200.8	805600
50380603002	**SC-1**	EPA 200.8	805199	EPA 200.8	805600
50380603003	**SB-2**	EPA 200.8	805199	EPA 200.8	805600
50380603004	**SC-2**	EPA 200.8	805199	EPA 200.8	805600
50380603005	**SB-3**	EPA 200.8	805199	EPA 200.8	805600
50380603006	**SC-3**	EPA 200.8	805199	EPA 200.8	805600
50380603007	**Dup-1**	EPA 200.8	805199	EPA 200.8	805600
50380603008	**EQ. Blank**	EPA 200.8	805199	EPA 200.8	805600

Pace® Location Requested (City/State):
Pace Analytical Indianapolis
7726 Moller Road, Indianapolis, IN 46268

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

WO# : 50380603

50380603

Company Name:	Atlas Indianapolis	Contact/Report To:	Mark Breting
Street Address:	7988 Centerpoint Drive Suite 100 Indianapolis, IN 46256	Phone #:	579-4082
		E-Mail:	mark.breting@atcgs.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Petersburg Stormwater	Invoice To:	Accounts Payable
		Invoice E-Mail:	paula.sedam@atcgs.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET		County / State origin of sample(s):	Indiana
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other	Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No		
	Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____	DW PWSID # or WW Permit # as applicable:	
	Date Results Requested:	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	200.8 Boron	200.7 Molybdenum	Sample Comment
SB-1	WT	G			8.19.23	915	1					001
SC-1						927						002
SB-2						942						003
SC-2						955						004
SB-3						1005						005
SC-3						1010						006
Dup-1						—						007
MS						915						SB-1
MSD						915						SB-1
EQ. Blank						912						008

Identify Container Preservative Type***

Analysis Requested

Specify Container Size: e: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: **Will Statz**

AcctNum / Client ID:

Table #:

Profile / Template: **10498-61**

Prelog / Bottle Ord. ID: **EZ 3148694**

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:

Collected By: (Printed Name) Jon Hill

Signature: J Hill

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
1	C	0	5.6	5.6	Y

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
J Hill / Atlas	8.19.24 / 1315	Pace	8/19/24 1315
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Tracking Number:

Delivered by: [/] In-Person [ ] Courier [ ] FedEX [ ] UPS [ ] Other

Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORQ-0019_v02_110123 ©

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TW 8/19/24 1440

1. **Courier:** ☐ FED EX ☐ UPS ☑ CLIENT ☐ PACE ☐ NOW/JETT ☐ 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 7 8 9 A B C D E F G H I
4. **Cooler Temperature(s):** 5.6/5.6 | | | |
   (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____
6. **Ice Type:** ☑ Wet ☐ Blue ☐ None
7. **Was the PM notified of out of temp cooler?:** ☐ Yes ☐ No
   Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
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:

COC PAGE ____ of ____

Sample Container Count

** Place a PINK dot on containers that are out of conformance **

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS (>6mm)	VG9U DG9U	VG9T	AMBER GLASS: AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit			Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																			3										WT	✓			
2																			1														
3																																	
4																																	
5																																	
6																																	
7																														✓			
8																																	
9																																	
10																			1											✓			
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	CG3H	250mL HCl Clear Glass
DG9T	40mL Na Thio amber vial	CG3U	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
WGKU	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
CG3F	250mL clear glass HCl, Field Filter	AG3SF	250mL H2SO4 amb glass -field filtered
BG1H	1L HCl clear glass	AG3U	250mL unpres amber glass
BG1S	1L H2SO4 clear glass	AG3B	250mL NaOH amber glass

Plastic

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic

NT3U	Non Teflon 250mL unpreserved plastic
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

September 2024

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

September 23, 2024

Mr. Mark Breting
ATC Group Services
7988 Centerpoint Drive
Suite 100
Indianapolis, IN 46256

RE: Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

Dear Mr. Breting:

Enclosed are the analytical results for sample(s) received by the laboratory on September 18, 2024. 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,

Will Statz
will.statz@pacelabs.com
(317)228-3105
Project Manager

Enclosures

cc: Mohammed Bazlamit, Atlas
Mr. Robert Miller, Haley & Aldrich

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

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
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50382809001	**MW-2R**	Water	09/17/24 10:50	09/18/24 15:45
50382809002	**MW-13**	Water	09/17/24 11:25	09/18/24 15:45

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50382809001	**MW-2R**	EPA 6020	DMT	1	PASI-I
50382809002	**MW-13**	EPA 6020	DMT	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50382809001	**MW-2R**					
EPA 6020	Barium	45.3	ug/L	1.0	09/23/24 03:05	
50382809002	**MW-13**					
EPA 6020	Selenium	15.7	ug/L	1.0	09/23/24 03:09	

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

Sample: MW-2R **Lab ID: 50382809001** Collected: 09/17/24 10:50 Received: 09/18/24 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Barium	**45.3**	ug/L	1.0	0.11	1	09/20/24 15:30	09/23/24 03:05	7440-39-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

Sample: MW-13 **Lab ID: 50382809002** Collected: 09/17/24 11:25 Received: 09/18/24 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis								
Selenium	**15.7**	ug/L	1.0	0.26	1	09/20/24 15:30	09/23/24 03:09	7782-49-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

QC Batch: 809757
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50382809001, 50382809002

METHOD BLANK: 3704066 Matrix: Water
Associated Lab Samples: 50382809001, 50382809002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	ND	1.0	0.11	09/23/24 02:58	
Selenium	ug/L	ND	1.0	0.26	09/23/24 02:58	

LABORATORY CONTROL SAMPLE: 3704067

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	40	38.8	97	80-120	
Selenium	ug/L	40	39.6	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3704068 3704069

Parameter	Units	50382809002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	22.4	40	40	60.8	61.5	96	98	75-125	1	20	
Selenium	ug/L	15.7	40	40	59.5	60.2	109	111	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

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

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.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Petersburg May 2024 P1R1
Pace Project No.: 50382809

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50382809001	**MW-2R**	EPA 200.2	809757	EPA 6020	810189
50382809002	**MW-13**	EPA 200.2	809757	EPA 6020	810189

Pace Analytical
WWW.PACELABS.COM

CHAIN-OF-CUSTODY / Analytical Request Do

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must

WO# : 50382809

50382809

Section A – Required Client Information:		Section B – Required Project Information:		Section C – Invoice Information:	
Company:	Atlas Indianapolis	Report To:	Mark Breting	Attention:	Accounts Payable - Paula Sedam
Address:	7988 Centerpoint Drive Suite 100	Copy To:		Company Name:	Atlas Indianapolis
	Indianapolis, IN 46256			Address:	
Email:	mark.breting@oneatlas.com	Purchase Order #:		Pace Quote:	
Phone:	(317)579-4082 Fax:	Project Name:	Petersburg May 2024 P1R1	Pace Project Manager:	Will Statz
Requested Due Date:		Project #:		Pace Profile #:	10498/58

Regulatory Agency
State / Location
IN

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH + ZnAcetate	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals by 6010/6020/7470	Cl, F, SO4 by 9056	TDS by 2540C	Rad-226/228 + Sum	Total Barium (6020)	Total Selenium (6020)	Residual Chlorine (Y/N)
1	MW-2R					9.17.24	1050		1			1											X		
2	MW-13					↓	1125		1			1												X		
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals* 6010: B, Cd, Cr, Fe, Pb, Mn, Mo, Ca, Li (9)		9.18.24	0800		9/18/24	1450				
6020: Be, Co, Cu, Zn, As, Se, Sb, Ba, Tl (9) 7470 Hg		9/18/24	1545		9/18/24	1545	2.4	4	4	4
Rad to Pace PA										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Jon Hill					
SIGNATURE of SAMPLER:		DATE Signed: 9.17.24				

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 9/18/24

1. **Courier:** ☐ FED EX ☐ UPS ☐ CLIENT ☒ PACE ☐ NOW/JETT ☐ 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 7 8 9 A B C D E F G H I
4. **Cooler Temperature(s):** 2.4 / 2.4 | | | |
   (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____
6. **Ice Type:** ☒ Wet ☐ Blue ☐ None
7. **Was the PM notified of out of temp cooler?:** ☐ Yes ☐ No
   Cooler temp should be above freezing to 6°C

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 preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, 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:

COC PAGE ____ of ____

Sample Container Count

** Place a PINK dot on containers that are out of conformance **

COC Line Item	WGFU	WGKU BG1U	MeOH (only) / SBS / DI / R	DG9H VG9H	VOA VIAL HS (>6mm)	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit			Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1																			1										WT	✓			
2																			1										WT	✓			
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	CG3H	250mL HCl Clear Glass
DG9T	40mL Na Thio amber vial	CG3U	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
WGKU	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
CG3F	250mL clear glass HCl, Field Filter	AG3SF	250mL H2SO4 amb glass -field filtered
BG1H	1L HCl clear glass	AG3U	250mL unpres amber glass
BG1S	1L H2SO4 clear glass	AG3B	250mL NaOH amber glass

Plastic

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic

NT3U	Non Teflon 250mL unpreserved plastic
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Appendix C: Statistical Analyses – Prediction Limits Documentation

November 2023

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony, total (Federal)	ug/L	MW-1	09/28/2016	ND	0.0500	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	10/19/2016	ND	50.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	11/09/2016	ND	50.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	12/12/2016	ND	5.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	02/05/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	03/24/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	05/16/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	06/20/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	08/08/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	09/12/2018	ND	1.4000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	11/07/2022	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	09/28/2016		3.9000		
Arsenic, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	11/09/2016		5.1000		
Arsenic, total (Federal)	ug/L	MW-1	12/12/2016	ND	5.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	02/05/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	03/24/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	05/16/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	06/20/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	08/08/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	09/12/2018	ND	1.2000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	11/07/2022	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	11/05/2023	ND	1.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Barium, total (Federal)	ug/L	MW-1	09/28/2016		43.0000		
Barium, total (Federal)	ug/L	MW-1	10/19/2016		51.0000		
Barium, total (Federal)	ug/L	MW-1	11/09/2016		59.0000		
Barium, total (Federal)	ug/L	MW-1	12/12/2016		56.0000		
Barium, total (Federal)	ug/L	MW-1	02/05/2017		52.0000		
Barium, total (Federal)	ug/L	MW-1	03/24/2017		50.0000		
Barium, total (Federal)	ug/L	MW-1	05/16/2017		48.0000		
Barium, total (Federal)	ug/L	MW-1	06/20/2017		49.0000		
Barium, total (Federal)	ug/L	MW-1	08/08/2017		47.0000		
Barium, total (Federal)	ug/L	MW-1	05/10/2018		47.0000		
Barium, total (Federal)	ug/L	MW-1	09/12/2018		49.0000		
Barium, total (Federal)	ug/L	MW-1	05/17/2019		29.4000		
Barium, total (Federal)	ug/L	MW-1	11/06/2019		41.9000		
Barium, total (Federal)	ug/L	MW-1	05/06/2020		42.6000		
Barium, total (Federal)	ug/L	MW-1	11/03/2020		41.3000		
Barium, total (Federal)	ug/L	MW-1	05/05/2021		52.2000		
Barium, total (Federal)	ug/L	MW-1	11/01/2021		58.4000		
Barium, total (Federal)	ug/L	MW-1	05/04/2022		48.0000		
Barium, total (Federal)	ug/L	MW-1	11/07/2022		45.7000		
Barium, total (Federal)	ug/L	MW-1	05/02/2023		50.5000		
Barium, total (Federal)	ug/L	MW-1	11/05/2023		41.8000		
Beryllium, total (Federal)	ug/L	MW-1	09/28/2016	ND	10.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/09/2016	ND	10.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	12/12/2016	ND	10.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	02/05/2017	ND	4.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	03/24/2017	ND	1.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/16/2017	ND	1.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	06/20/2017	ND	1.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	08/08/2017	ND	1.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	09/12/2018	ND	0.6500		
Beryllium, total (Federal)	ug/L	MW-1	05/17/2019	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/06/2019	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/06/2020	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/03/2020	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/05/2021	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/01/2021	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/04/2022	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/07/2022	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/02/2023	ND	0.2000	0.6500	**

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Cadmium, total (Federal)	ug/L	MW-1	09/28/2016	ND	10.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	11/09/2016	ND	10.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	12/12/2016	ND	10.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	02/05/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	03/24/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	05/16/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	06/20/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	08/08/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	09/12/2018	ND	0.5500	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	05/17/2019	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	11/06/2019	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	05/06/2020	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	11/03/2020	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	05/05/2021	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	11/01/2021	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	05/04/2022	ND	0.2000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	11/07/2022	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	05/02/2023	ND	2.0000		
Chromium, total (Federal)	ug/L	MW-1	09/28/2016	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	11/09/2016	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	12/12/2016	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	02/05/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	03/24/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/16/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	06/20/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	08/08/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/10/2018	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/17/2019	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/06/2020	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/05/2021	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	11/01/2021	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/04/2022		2.2000		
Chromium, total (Federal)	ug/L	MW-1	11/07/2022	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/02/2023	ND	10.0000		
Cobalt, total (Federal)	ug/L	MW-1	09/28/2016	ND	20.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	10/19/2016	ND	20.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	11/09/2016	ND	20.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	12/12/2016	ND	20.0000	3.6000	**

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Cobalt, total (Federal)	ug/L	MW-1	02/05/2017	ND	20.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	03/24/2017	ND	20.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	05/16/2017	ND	20.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	06/20/2017	ND	20.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	08/08/2017	ND	20.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	05/10/2018	ND	20.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	09/12/2018	ND	3.6000		
Cobalt, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	11/07/2022	ND	1.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000	3.6000	**
Cobalt, total (Federal)	ug/L	MW-1	11/05/2023	ND	1.0000	3.6000	**
Fluoride (Federal)	mg/L	MW-1	09/28/2016	ND	0.5000	5.0000	**
Fluoride (Federal)	mg/L	MW-1	10/19/2016	ND	5.0000		
Fluoride (Federal)	mg/L	MW-1	11/09/2016	ND	0.5000	5.0000	**
Fluoride (Federal)	mg/L	MW-1	12/12/2016	ND	5.0000		
Fluoride (Federal)	mg/L	MW-1	02/05/2017	ND	5.0000		
Fluoride (Federal)	mg/L	MW-1	03/24/2017	ND	5.0000		
Fluoride (Federal)	mg/L	MW-1	05/16/2017	ND	5.0000		
Fluoride (Federal)	mg/L	MW-1	06/20/2017	ND	5.0000		
Fluoride (Federal)	mg/L	MW-1	08/08/2017	ND	5.0000		
Fluoride (Federal)	mg/L	MW-1	05/10/2018	ND	5.0000		
Fluoride (Federal)	mg/L	MW-1	09/12/2018	ND	0.6000	5.0000	**
Fluoride (Federal)	mg/L	MW-1	05/17/2019	ND	0.1000	5.0000	**
Fluoride (Federal)	mg/L	MW-1	11/06/2019		0.1200		
Fluoride (Federal)	mg/L	MW-1	05/06/2020		0.1300		
Fluoride (Federal)	mg/L	MW-1	11/03/2020		0.1400		
Fluoride (Federal)	mg/L	MW-1	05/05/2021		0.1000		
Fluoride (Federal)	mg/L	MW-1	11/01/2021		0.1100		
Fluoride (Federal)	mg/L	MW-1	05/04/2022	ND	0.1000	5.0000	**
Fluoride (Federal)	mg/L	MW-1	11/07/2022		0.1050		
Fluoride (Federal)	mg/L	MW-1	05/02/2023		0.1200		
Fluoride (Federal)	mg/L	MW-1	11/05/2023		0.1300		
Lead, total (Federal)	ug/L	MW-1	09/28/2016	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/09/2016	ND	10.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Lead, total (Federal)	ug/L	MW-1	12/12/2016	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	02/05/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	03/24/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/16/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	06/20/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	08/08/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/10/2018	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/17/2019	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/06/2019	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/06/2020	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/03/2020	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/05/2021	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/01/2021	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000	10.0000	**
Lead, total (Federal)	ug/L	MW-1	11/07/2022	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/02/2023	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/05/2023	ND	10.0000		
Lithium, total (Federal)	ug/L	MW-1	09/28/2016	ND	2.8000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	10/19/2016	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	11/09/2016		4.1000		
Lithium, total (Federal)	ug/L	MW-1	12/12/2016	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	02/05/2017		5.2000		
Lithium, total (Federal)	ug/L	MW-1	03/24/2017	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	05/16/2017	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	06/20/2017	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	08/08/2017	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	05/10/2018	ND	6.2000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	09/12/2018	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	05/17/2019	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/06/2019	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	05/06/2020	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/03/2020	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	05/05/2021	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/01/2021	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	05/04/2022	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/07/2022	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	05/02/2023	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/05/2023	ND	20.0000		
Mercury, total (Federal)	ug/L	MW-1	09/28/2016	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	10/19/2016	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	11/09/2016	ND	0.2000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Mercury, total (Federal)	ug/L	MW-1	12/12/2016	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	02/05/2017	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	03/24/2017	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	05/16/2017	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	06/20/2017		0.6700		
Mercury, total (Federal)	ug/L	MW-1	08/08/2017	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	05/10/2018	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	05/17/2019	ND	2.0000	0.2000	**
Mercury, total (Federal)	ug/L	MW-1	05/06/2020	ND	2.0000	0.2000	**
Mercury, total (Federal)	ug/L	MW-1	05/05/2021	ND	2.0000	0.2000	**
Mercury, total (Federal)	ug/L	MW-1	11/01/2021	ND	2.0000	0.2000	**
Mercury, total (Federal)	ug/L	MW-1	05/04/2022	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	05/02/2023	ND	0.2000		
Molybdenum, total (Federal)	ug/L	MW-1	09/28/2016	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	10/19/2016	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	11/09/2016	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	12/12/2016	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	02/05/2017	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	03/24/2017	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	05/16/2017	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	06/20/2017	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	08/08/2017	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	05/10/2018	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	09/12/2018	ND	100.0000		
Molybdenum, total (Federal)	ug/L	MW-1	05/17/2019	ND	10.0000	100.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	11/06/2019	ND	10.0000	100.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	05/06/2020	ND	10.0000	100.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	11/03/2020	ND	10.0000	100.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	05/05/2021	ND	10.0000	100.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	11/01/2021	ND	10.0000	100.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000	100.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	11/07/2022	ND	10.0000	100.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	05/02/2023	ND	10.0000	100.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	11/05/2023	ND	10.0000	100.0000	**
Selenium, total (Federal)	ug/L	MW-1	09/28/2016	ND	1.6000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	11/09/2016		8.6000		
Selenium, total (Federal)	ug/L	MW-1	12/12/2016	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	02/05/2017	ND	30.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	03/24/2017	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	05/16/2017	ND	5.0000	1.0000	**

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Selenium, total (Federal)	ug/L	MW-1	06/20/2017	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	08/08/2017	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	09/12/2018	ND	0.9000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/07/2022	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/05/2023	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	09/28/2016	ND	50.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	10/19/2016	ND	50.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	11/09/2016	ND	50.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	12/12/2016	ND	50.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	02/05/2017	ND	2.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	03/24/2017	ND	5.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	05/16/2017	ND	5.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	06/20/2017	ND	5.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	08/08/2017	ND	5.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	05/10/2018	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	09/12/2018	ND	0.6000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	11/05/2023	ND	1.0000		
Total Radium (Federal)	pCi/L	MW-1	09/28/2016		2.6000		
Total Radium (Federal)	pCi/L	MW-1	10/19/2016		1.3000		
Total Radium (Federal)	pCi/L	MW-1	11/09/2016		1.2800		
Total Radium (Federal)	pCi/L	MW-1	12/12/2016		1.1200		
Total Radium (Federal)	pCi/L	MW-1	02/05/2017		1.8600		
Total Radium (Federal)	pCi/L	MW-1	03/24/2017	ND	0.5700	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	05/16/2017		0.8200		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Total Radium (Federal)	pCi/L	MW-1	06/20/2017		4.4600		
Total Radium (Federal)	pCi/L	MW-1	08/08/2017		1.4300		
Total Radium (Federal)	pCi/L	MW-1	05/10/2018	ND	1.0000	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	09/12/2018	ND	1.0000	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	05/17/2019	ND	1.7800	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	11/06/2019	ND	1.4700	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	05/06/2020	ND	1.8200	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	11/03/2020		1.1300		
Total Radium (Federal)	pCi/L	MW-1	05/05/2021	ND	1.6400	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	11/01/2021	ND	1.9100	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	05/04/2022	ND	1.5100	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	11/07/2022	ND	1.9400	1.6300	**
Total Radium (Federal)	pCi/L	MW-1	05/02/2023	ND	1.6300		
Total Radium (Federal)	pCi/L	MW-1	11/05/2023	ND	1.8200	1.6300	**

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Antimony, total (Federal)	ug/L	MW-10	05/02/2023	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-11	05/02/2023	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-12	05/02/2023	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-13	05/02/2023	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-2R	05/09/2023	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/07/2023	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-4C	05/09/2023	ND	1.0000		1.0000
Arsenic, total (Federal)	ug/L	MW-10	11/06/2023		84.0000	***	5.1000
Arsenic, total (Federal)	ug/L	MW-11	11/05/2023		1.3000		5.1000
Arsenic, total (Federal)	ug/L	MW-12	11/05/2023	ND	1.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-13	11/05/2023	ND	1.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/08/2023		7.5000	***	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/08/2023		59.3000	***	5.1000
Arsenic, total (Federal)	ug/L	MW-4C	11/08/2023	ND	1.0000		5.1000
Barium, total (Federal)	ug/L	MW-10	11/06/2023		58.2000	**	64.8581
Barium, total (Federal)	ug/L	MW-11	11/05/2023		37.6000		64.8581
Barium, total (Federal)	ug/L	MW-12	11/05/2023		25.0000		64.8581
Barium, total (Federal)	ug/L	MW-13	11/05/2023		20.9000		64.8581
Barium, total (Federal)	ug/L	MW-2R	11/08/2023		45.2000	**	64.8581
Barium, total (Federal)	ug/L	MW-3	11/08/2023		59.1000		64.8581
Barium, total (Federal)	ug/L	MW-4C	11/08/2023		28.6000		64.8581
Beryllium, total (Federal)	ug/L	MW-10	05/02/2023	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	05/02/2023	ND	0.2000	**	0.6500
Beryllium, total (Federal)	ug/L	MW-12	05/02/2023	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-13	05/02/2023	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-2R	05/09/2023	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-3	05/07/2023	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-4C	05/09/2023	ND	0.2000		0.6500
Cadmium, total (Federal)	ug/L	MW-10	05/02/2023	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-11	05/02/2023	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-12	05/02/2023	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-13	05/02/2023	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-2R	05/09/2023	ND	0.2000		2.0000
Cadmium, total (Federal)	ug/L	MW-3	05/07/2023	ND	0.2000		2.0000
Cadmium, total (Federal)	ug/L	MW-4C	05/09/2023		0.3900		2.0000
Chromium, total (Federal)	ug/L	MW-10	05/02/2023	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	05/02/2023	ND	10.0000	**	10.0000
Chromium, total (Federal)	ug/L	MW-12	05/02/2023	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-13	05/02/2023	ND	10.0000		10.0000

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table C-2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Chromium, total (Federal)	ug/L	MW-2R	05/09/2023	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-3	05/07/2023	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-4C	05/09/2023	ND	10.0000		10.0000
Cobalt, total (Federal)	ug/L	MW-10	11/06/2023		2.6000		3.6000
Cobalt, total (Federal)	ug/L	MW-11	11/05/2023	ND	1.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-12	11/05/2023	ND	1.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-13	11/05/2023	ND	1.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	11/08/2023		2.7000	**	3.6000
Cobalt, total (Federal)	ug/L	MW-3	11/08/2023		2.2000		3.6000
Cobalt, total (Federal)	ug/L	MW-4C	11/08/2023		1.1000		3.6000
Fluoride (Federal)	mg/L	MW-10	11/06/2023		0.4900		5.0000
Fluoride (Federal)	mg/L	MW-11	11/05/2023		0.1700		5.0000
Fluoride (Federal)	mg/L	MW-12	11/05/2023		0.1500		5.0000
Fluoride (Federal)	mg/L	MW-13	11/05/2023		0.8600		5.0000
Fluoride (Federal)	mg/L	MW-2R	11/08/2023	ND	0.1000		5.0000
Fluoride (Federal)	mg/L	MW-3	11/08/2023	ND	0.1000		5.0000
Fluoride (Federal)	mg/L	MW-4C	11/08/2023		0.1600		5.0000
Lead, total (Federal)	ug/L	MW-10	11/06/2023	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-11	11/05/2023	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-12	11/05/2023	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-13	11/05/2023	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-2R	11/08/2023	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-3	11/08/2023	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-4C	11/08/2023	ND	10.0000		10.0000
Lithium, total (Federal)	ug/L	MW-10	11/06/2023		23.4000	***	20.0000
Lithium, total (Federal)	ug/L	MW-11	11/05/2023	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-12	11/05/2023	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	11/05/2023		456.0000	***	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/08/2023		638.0000	***	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/08/2023		1640.0000	***	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/08/2023		351.0000	***	20.0000
Mercury, total (Federal)	ug/L	MW-10	05/02/2023	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-11	05/02/2023	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-12	05/02/2023	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-13	05/02/2023	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-2R	05/09/2023	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-3	05/07/2023	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-4C	05/09/2023	ND	0.2000		0.6700
Molybdenum, total (Federal)	ug/L	MW-10	11/06/2023		11.1000		100.0000

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table C-2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Molybdenum, total (Federal)	ug/L	MW-11	11/05/2023	ND	10.0000		100.0000
Molybdenum, total (Federal)	ug/L	MW-12	11/05/2023	ND	10.0000		100.0000
Molybdenum, total (Federal)	ug/L	MW-13	11/05/2023		82.6000		100.0000
Molybdenum, total (Federal)	ug/L	MW-2R	11/08/2023		10.6000		100.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/08/2023		242.0000	***	100.0000
Molybdenum, total (Federal)	ug/L	MW-4C	11/08/2023	ND	10.0000		100.0000
Selenium, total (Federal)	ug/L	MW-10	11/06/2023	ND	1.0000		8.6000
Selenium, total (Federal)	ug/L	MW-11	11/05/2023		3.5000		8.6000
Selenium, total (Federal)	ug/L	MW-12	11/05/2023	ND	1.0000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/05/2023		19.1000	*	8.6000
Selenium, total (Federal)	ug/L	MW-2R	11/08/2023	ND	1.0000		8.6000
Selenium, total (Federal)	ug/L	MW-3	11/08/2023	ND	1.0000		8.6000
Selenium, total (Federal)	ug/L	MW-4C	11/08/2023	ND	1.0000		8.6000
Thallium, total (Federal)	ug/L	MW-10	11/06/2023	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-11	11/05/2023	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-12	11/05/2023	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-13	11/05/2023	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-2R	11/08/2023	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-3	11/08/2023	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-4C	11/08/2023	ND	1.0000		1.0000
Total Radium (Federal)	pCi/L	MW-10	11/06/2023		1.0600		4.4600
Total Radium (Federal)	pCi/L	MW-11	11/05/2023		1.2800		4.4600
Total Radium (Federal)	pCi/L	MW-12	11/05/2023	ND	1.8600		4.4600
Total Radium (Federal)	pCi/L	MW-13	11/05/2023	ND	1.6300		4.4600
Total Radium (Federal)	pCi/L	MW-2R	11/08/2023		1.3800		4.4600
Total Radium (Federal)	pCi/L	MW-3	11/08/2023		2.1100		4.4600
Total Radium (Federal)	pCi/L	MW-4C	11/08/2023		1.5700		4.4600

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table C-3

Detection Frequencies in Upgradient and Downgradient Wells

Constituent	Upgradient Detect	Upgradient N	Upgradient Proportion	Downgradient Detect	Downgradient N	Downgradient Proportion
Antimony, total (Federal)	0	20	0.000	3	143	0.021
Arsenic, total (Federal)	2	21	0.095	59	150	0.393
Barium, total (Federal)	21	21	1.000	149	150	0.993
Beryllium, total (Federal)	0	20	0.000	9	143	0.063
Cadmium, total (Federal)	0	20	0.000	3	143	0.021
Chromium, total (Federal)	1	17	0.059	4	122	0.033
Cobalt, total (Federal)	0	21	0.000	43	150	0.287
Fluoride (Federal)	8	21	0.381	58	150	0.387
Lead, total (Federal)	0	20	0.000	7	143	0.049
Lithium, total (Federal)	2	21	0.095	93	150	0.620
Mercury, total (Federal)	1	16	0.063	4	115	0.035
Molybdenum, total (Federal)	0	21	0.000	52	150	0.347
Selenium, total (Federal)	1	21	0.048	42	150	0.280
Thallium, total (Federal)	0	20	0.000	3	143	0.021
Total Radium (Federal)	9	21	0.429	96	145	0.662

N = Total number of measurements in all wells.
Detect = Total number of detections in all wells.
Proportion = Detect/N.

Table C-4

Shapiro-Wilk Multiple Group Test of Normality

Constituent	Detect	N	Detect Freq	G raw	G log	G cbrt	G sqrt	G sqr	G cub	Crit Value	Dist Form	Model Type
Antimony, total (Federal)	0	20	0.000	5.153	5.153					2.326	non-norm	nonpar
Arsenic, total (Federal)	2	21	0.095	8.322	8.362					2.326	non-norm	nonpar
Barium, total (Federal)	21	21	1.000	0.774	2.108					2.326	normal	normal
Beryllium, total (Federal)	0	20	0.000	5.153	5.153					2.326	non-norm	nonpar
Cadmium, total (Federal)	0	20	0.000	5.153	5.153					2.326	non-norm	nonpar
Chromium, total (Federal)	1	17	0.059	21.983	21.983					2.326	non-norm	nonpar
Cobalt, total (Federal)	0	21	0.000	5.291	5.291					2.326	non-norm	nonpar
Fluoride (Federal)	8	21	0.381	5.189	5.037					2.326	non-norm	nonpar
Lead, total (Federal)	0	20	0.000	5.153	5.153					2.326	non-norm	nonpar
Lithium, total (Federal)	2	21	0.095	8.440	8.372					2.326	non-norm	nonpar
Mercury, total (Federal)	1	16	0.063	4.567	4.567					2.326	non-norm	nonpar
Molybdenum, total (Federal)	0	21	0.000	5.291	5.291					2.326	non-norm	nonpar
Selenium, total (Federal)	1	21	0.048	5.291	5.291					2.326	non-norm	nonpar
Thallium, total (Federal)	0	20	0.000	5.153	5.153					2.326	non-norm	nonpar
Total Radium (Federal)	9	21	0.429	5.341	3.502					2.326	non-norm	nonpar

* - Distribution override for that constituent.
Fit to distribution is confirmed if G <= critical value.
Model type may not match distributional form when detection frequency < 50%.

Table C-5

Summary Statistics and Prediction Limits

Constituent	Units	Detect	N	Mean	SD	alpha	Factor	Pred Limit	Type		Conf
Antimony, total (Federal)	ug/L	0	20					1.0000	nonpar	***	0.97
Arsenic, total (Federal)	ug/L	2	21					5.1000	nonpar		0.97
Barium, total (Federal)	ug/L	21	21	47.7524	6.6133	0.0100	2.5866	64.8581	normal		
Beryllium, total (Federal)	ug/L	0	20					0.6500	nonpar	***	0.97
Cadmium, total (Federal)	ug/L	0	20					2.0000	nonpar	***	0.97
Chromium, total (Federal)	ug/L	1	17					10.0000	nonpar	***	0.96
Cobalt, total (Federal)	ug/L	0	21					3.6000	nonpar	***	0.97
Fluoride (Federal)	mg/L	8	21					5.0000	nonpar	***	0.97
Lead, total (Federal)	ug/L	0	20					10.0000	nonpar	***	0.97
Lithium, total (Federal)	ug/L	2	21					20.0000	nonpar	***	0.97
Mercury, total (Federal)	ug/L	1	16					0.6700	nonpar		0.96
Molybdenum, total (Federal)	ug/L	0	21					100.0000	nonpar	***	0.97
Selenium, total (Federal)	ug/L	1	21					8.6000	nonpar		0.97
Thallium, total (Federal)	ug/L	0	20					1.0000	nonpar	***	0.97
Total Radium (Federal)	pCi/L	9	21					4.4600	nonpar		0.97

Conf = confidence level for passing initial test or one verification resample at all downgradient wells for a single constituent (nonparametric test only).
* - Insufficient Data.
** - Calculated limit raised to Manual Reporting Limit.
*** - Nonparametric limit based on ND value.
For transformed data, mean and SD in transformed units and prediction limit in original units.
All sample sizes and statistics are based on outlier free data.
For nonparametric limits, median reporting limits are substituted for extreme reporting limit values.

Table C-6

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value

N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Arsenic, total (Federal)	ug/L	MW-10	03/16/2017		48.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	03/17/2017		44.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	03/24/2017		76.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	04/20/2017		60.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	04/24/2017		57.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/25/2017		55.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	06/20/2017		49.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	07/19/2017		57.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	08/08/2017		58.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/09/2018		47.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	09/12/2018		63.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/17/2019		30.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/06/2019		127.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/05/2020		95.4000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/04/2020		104.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/05/2021		96.4000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/02/2021		102.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/04/2022		78.8000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/07/2022		90.1000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/02/2023		67.7000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/06/2023		84.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	09/28/2016		4.3000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	10/19/2016	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/09/2016		6.4000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	12/12/2016	ND	5.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	03/16/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	03/17/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	03/24/2017	ND	40.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	04/20/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	04/24/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/16/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	06/20/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	08/08/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/09/2018		31.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	09/12/2018		11.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/16/2019		8.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/06/2019		10.5000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/13/2020		14.7000	*	5.1000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Arsenic, total (Federal)	ug/L	MW-2R	11/03/2020		8.9000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/05/2021		6.2000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/01/2021		9.9000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/08/2022		16.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/07/2022		10.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/09/2023		78.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/08/2023		7.5000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	09/28/2016		4.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	10/19/2016	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/09/2016		7.4000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	12/12/2016	ND	5.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	02/05/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	03/24/2017	ND	40.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/25/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	06/20/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	08/08/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/09/2018	ND	5.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	09/12/2018	ND	5.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/16/2019		12.9000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/06/2019		10.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/13/2020		16.2000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/03/2020		20.5000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/05/2021		17.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/01/2021		17.9000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/08/2022		14.8000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/07/2022		17.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/07/2023		32.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/08/2023		59.3000	*	5.1000
Barium, total (Federal)	ug/L	MW-10	03/16/2017		140.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	03/17/2017		160.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	03/24/2017		130.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	04/20/2017		110.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	04/24/2017		140.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	05/25/2017		130.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	06/20/2017		130.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	07/19/2017		99.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	08/08/2017		110.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	05/09/2018		68.0000	*	64.8581

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total (Federal)	ug/L	MW-10	09/12/2018		64.0000		64.8581
Barium, total (Federal)	ug/L	MW-10	05/17/2019		41.2000		64.8581
Barium, total (Federal)	ug/L	MW-10	11/06/2019		150.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	05/05/2020		68.5000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	11/04/2020		69.8000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	05/05/2021		120.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	11/02/2021		86.2000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	05/04/2022		102.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	11/07/2022		68.1000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	05/02/2023		67.4000	*	64.8581
Barium, total (Federal)	ug/L	MW-10	11/06/2023		58.2000		64.8581
Barium, total (Federal)	ug/L	MW-2R	09/28/2016		43.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	10/19/2016		37.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	11/09/2016		37.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	12/12/2016		29.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	03/16/2017		53.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	03/17/2017		66.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-2R	03/24/2017		54.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	04/20/2017		46.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	04/24/2017		56.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	05/16/2017		46.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	06/20/2017		45.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	08/08/2017		42.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	05/09/2018		73.0000	*	64.8581
Barium, total (Federal)	ug/L	MW-2R	09/12/2018		44.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	05/16/2019		35.5000		64.8581
Barium, total (Federal)	ug/L	MW-2R	11/06/2019		39.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	05/13/2020		42.5000		64.8581
Barium, total (Federal)	ug/L	MW-2R	11/03/2020		45.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	05/05/2021		44.6000		64.8581
Barium, total (Federal)	ug/L	MW-2R	11/01/2021		54.0000		64.8581
Barium, total (Federal)	ug/L	MW-2R	05/08/2022		45.2000		64.8581
Barium, total (Federal)	ug/L	MW-2R	11/07/2022		48.6000		64.8581
Barium, total (Federal)	ug/L	MW-2R	05/09/2023		80.4000	*	64.8581
Barium, total (Federal)	ug/L	MW-2R	11/08/2023		45.2000		64.8581
Beryllium, total (Federal)	ug/L	MW-11	03/16/2017	ND	1.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	03/17/2017	ND	1.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	03/24/2017	ND	4.0000		0.6500

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Beryllium, total (Federal)	ug/L	MW-11	04/20/2017	ND	1.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	04/24/2017	ND	1.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	05/25/2017	ND	1.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	06/20/2017	ND	1.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	07/19/2017	ND	1.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	08/08/2017	ND	1.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	05/09/2018	ND	5.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	09/12/2018	ND	5.0000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	05/17/2019	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	11/06/2019		0.6300		0.6500
Beryllium, total (Federal)	ug/L	MW-11	05/05/2020	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	11/04/2020		0.8900	*	0.6500
Beryllium, total (Federal)	ug/L	MW-11	05/06/2021	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	11/02/2021		1.0000	*	0.6500
Beryllium, total (Federal)	ug/L	MW-11	05/04/2022	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	11/07/2022		0.6600	*	0.6500
Beryllium, total (Federal)	ug/L	MW-11	05/02/2023	ND	0.2000		0.6500
Chromium, total (Federal)	ug/L	MW-11	03/16/2017	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	03/17/2017	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	03/24/2017	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	04/20/2017	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	04/24/2017	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	05/25/2017	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	06/20/2017	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	07/19/2017	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	08/08/2017	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	05/09/2018	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	05/17/2019	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	05/05/2020	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	05/06/2021	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	11/02/2021		23.5000	*	10.0000
Chromium, total (Federal)	ug/L	MW-11	05/04/2022	ND	2.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	11/07/2022		12.9000	*	10.0000
Chromium, total (Federal)	ug/L	MW-11	05/02/2023	ND	10.0000		10.0000
Cobalt, total (Federal)	ug/L	MW-2R	09/28/2016	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	10/19/2016	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	11/09/2016	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	12/12/2016	ND	20.0000		3.6000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Cobalt, total (Federal)	ug/L	MW-2R	03/16/2017	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	03/17/2017	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	03/24/2017	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	04/20/2017	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	04/24/2017	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	05/16/2017	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	06/20/2017	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	08/08/2017	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	05/09/2018	ND	20.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	09/12/2018	ND	3.6000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	05/16/2019		3.3000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	11/06/2019		3.1000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	05/13/2020		2.8000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	11/03/2020		3.1000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	05/05/2021		2.9000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	11/01/2021		2.2000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	05/08/2022		3.3000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	11/07/2022		2.0000		3.6000
Cobalt, total (Federal)	ug/L	MW-2R	05/09/2023		3.7000	*	3.6000
Cobalt, total (Federal)	ug/L	MW-2R	11/08/2023		2.7000		3.6000
Lithium, total (Federal)	ug/L	MW-10	03/16/2017		32.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	03/17/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	03/24/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	04/20/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	04/24/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	05/25/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	06/20/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	07/19/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	08/08/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	05/09/2018	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	09/12/2018	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	05/17/2019	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	11/06/2019		48.5000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	05/05/2020		56.6000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	11/04/2020		40.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	05/05/2021		40.9000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	11/02/2021		60.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	05/04/2022		47.4000	*	20.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Lithium, total (Federal)	ug/L	MW-10	11/07/2022		44.6000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	05/02/2023		34.5000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	11/06/2023		23.4000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	03/16/2017		750.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	03/17/2017		740.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	03/24/2017		650.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	04/20/2017		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	04/24/2017		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/25/2017		840.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	06/20/2017		1400.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	07/19/2017		540.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	08/08/2017		220.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/09/2018	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	09/12/2018	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	05/17/2019	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	11/06/2019		28.6000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/05/2020		39.6000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	11/04/2020		238.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/06/2021	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	11/02/2021		492.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/04/2022		74.8000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	11/08/2022		385.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/02/2023		62.3000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	11/05/2023		456.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	09/28/2016		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	10/19/2016		820.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/09/2016		780.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	12/12/2016		510.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	03/16/2017		280.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	03/17/2017		410.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	03/24/2017		530.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	04/20/2017		780.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	04/24/2017		840.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/16/2017		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	06/20/2017		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	08/08/2017		1000.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/09/2018		960.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	09/12/2018		800.0000	*	20.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Lithium, total (Federal)	ug/L	MW-2R	05/16/2019		616.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/06/2019		495.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/13/2020		638.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/03/2020		522.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/05/2021		890.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/01/2021		912.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/08/2022		897.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/07/2022		812.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/09/2023		703.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/08/2023		638.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	09/28/2016		2000.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	10/19/2016		1900.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/09/2016		2200.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	12/12/2016		2200.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	02/05/2017		2100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	03/24/2017		2100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/25/2017		2000.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	06/20/2017		2000.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	08/08/2017		1600.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/09/2018		2600.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	09/12/2018		2600.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/16/2019		1260.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/06/2019		1930.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/13/2020		1520.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/03/2020		1760.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/05/2021		1820.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/01/2021		1880.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/08/2022		1960.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/07/2022		1980.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/07/2023		1710.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/08/2023		1640.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	09/28/2016		310.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	10/19/2016		280.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/09/2016		330.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	12/12/2016		260.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	02/05/2017		310.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	03/25/2017		290.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/25/2017		330.0000	*	20.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Lithium, total (Federal)	ug/L	MW-4C	06/20/2017		250.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	08/08/2017		230.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/09/2018		250.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	09/12/2018		280.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/16/2019		316.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/06/2019		284.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/13/2020		242.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/03/2020		287.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/05/2021		359.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/01/2021		334.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/08/2022		442.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/08/2022		411.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/09/2023		351.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/08/2023		351.0000	*	20.0000
Molybdenum, total (Federal)	ug/L	MW-3	09/28/2016		350.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	10/19/2016		330.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/09/2016		280.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	12/12/2016		390.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	02/05/2017		660.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	03/24/2017		660.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/25/2017		570.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	06/20/2017		510.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	08/08/2017		330.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/09/2018		390.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	09/12/2018		520.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/16/2019		338.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/06/2019		508.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/13/2020		529.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/03/2020		549.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/05/2021		532.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/01/2021		501.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/08/2022		273.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/07/2022		304.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/07/2023		345.0000	*	100.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/08/2023		242.0000	*	100.0000
Selenium, total (Federal)	ug/L	MW-13	03/16/2017		20.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	03/17/2017		21.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	03/24/2017		22.0000	*	8.6000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

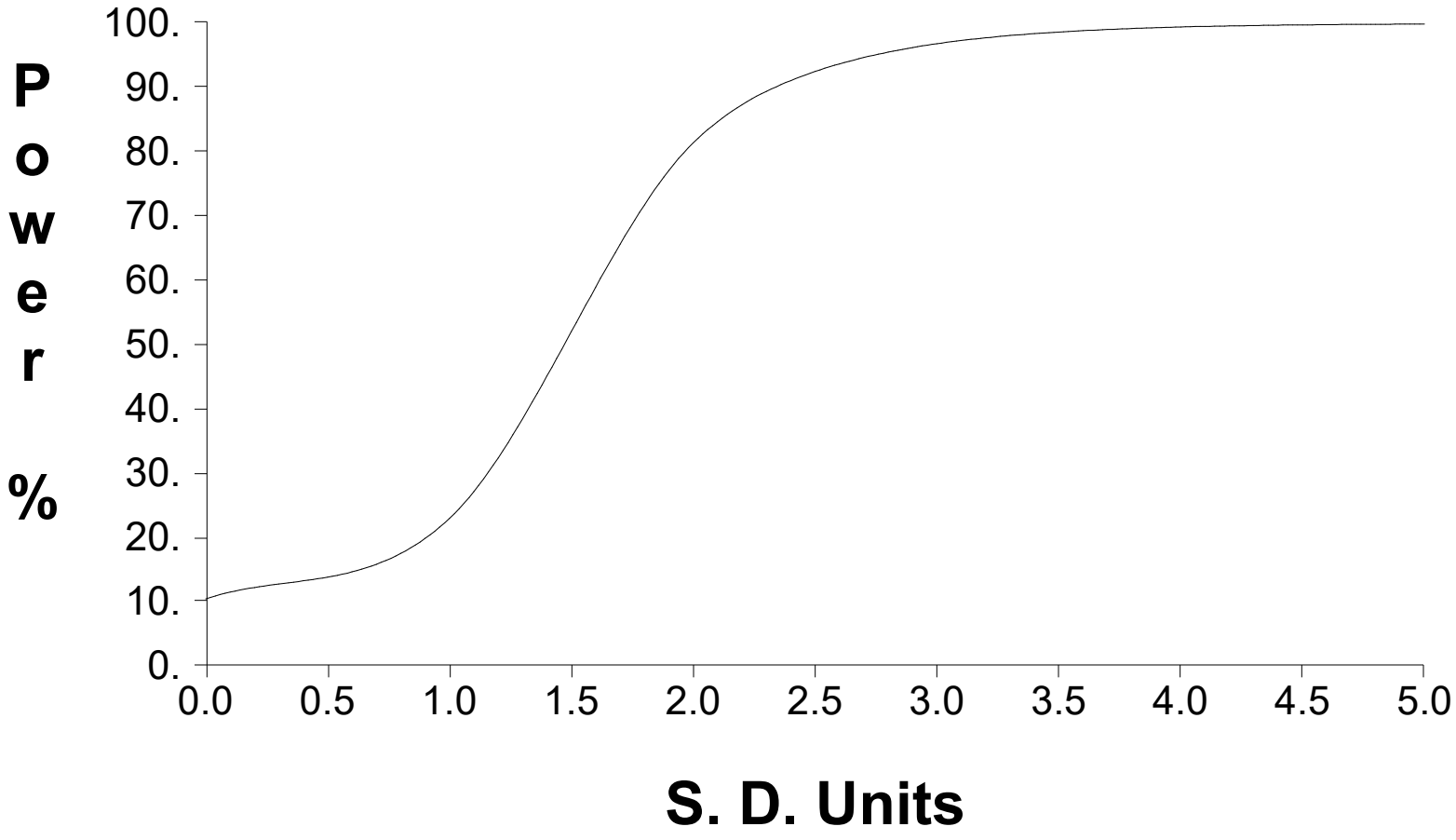
Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Selenium, total (Federal)	ug/L	MW-13	04/20/2017		17.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	04/24/2017		16.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	05/25/2017		8.4000		8.6000
Selenium, total (Federal)	ug/L	MW-13	06/20/2017		9.5000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	07/19/2017		14.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	08/08/2017		29.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	05/09/2018	ND	5.0000		8.6000
Selenium, total (Federal)	ug/L	MW-13	09/12/2018		11.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	05/17/2019		2.7000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/06/2019		2.9000		8.6000
Selenium, total (Federal)	ug/L	MW-13	05/05/2020		4.3000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/04/2020		4.7000		8.6000
Selenium, total (Federal)	ug/L	MW-13	05/06/2021		8.4000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/02/2021		8.5000		8.6000
Selenium, total (Federal)	ug/L	MW-13	05/04/2022		4.6000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/08/2022		8.6000		8.6000
Selenium, total (Federal)	ug/L	MW-13	05/02/2023		5.8000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/05/2023		19.1000	*	8.6000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

False Positive and False Negative Rates for Current Upgradient vs. Downgradient Monitoring Program



May 2024

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony, total (Federal)	ug/L	MW-1	09/28/2016	ND	0.0500	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	10/19/2016	ND	50.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	11/09/2016	ND	50.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	12/12/2016	ND	5.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	02/05/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	03/24/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	05/16/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	06/20/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	08/08/2017	ND	6.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	09/12/2018	ND	1.4000	1.0000	**
Antimony, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	11/07/2022	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000		
Antimony, total (Federal)	ug/L	MW-1	05/01/2024	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	09/28/2016		3.9000		
Arsenic, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	11/09/2016		5.1000		
Arsenic, total (Federal)	ug/L	MW-1	12/12/2016	ND	5.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	02/05/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	03/24/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	05/16/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	06/20/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	08/08/2017	ND	10.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	09/12/2018	ND	1.2000	1.0000	**
Arsenic, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	11/07/2022	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Arsenic, total (Federal)	ug/L	MW-1	11/05/2023	ND	1.0000		
Arsenic, total (Federal)	ug/L	MW-1	05/01/2024	ND	1.0000		
Barium, total (Federal)	ug/L	MW-1	09/28/2016		43.0000		
Barium, total (Federal)	ug/L	MW-1	10/19/2016		51.0000		
Barium, total (Federal)	ug/L	MW-1	11/09/2016		59.0000		
Barium, total (Federal)	ug/L	MW-1	12/12/2016		56.0000		
Barium, total (Federal)	ug/L	MW-1	02/05/2017		52.0000		
Barium, total (Federal)	ug/L	MW-1	03/24/2017		50.0000		
Barium, total (Federal)	ug/L	MW-1	05/16/2017		48.0000		
Barium, total (Federal)	ug/L	MW-1	06/20/2017		49.0000		
Barium, total (Federal)	ug/L	MW-1	08/08/2017		47.0000		
Barium, total (Federal)	ug/L	MW-1	05/10/2018		47.0000		
Barium, total (Federal)	ug/L	MW-1	09/12/2018		49.0000		
Barium, total (Federal)	ug/L	MW-1	05/17/2019		29.4000		
Barium, total (Federal)	ug/L	MW-1	11/06/2019		41.9000		
Barium, total (Federal)	ug/L	MW-1	05/06/2020		42.6000		
Barium, total (Federal)	ug/L	MW-1	11/03/2020		41.3000		
Barium, total (Federal)	ug/L	MW-1	05/05/2021		52.2000		
Barium, total (Federal)	ug/L	MW-1	11/01/2021		58.4000		
Barium, total (Federal)	ug/L	MW-1	05/04/2022		48.0000		
Barium, total (Federal)	ug/L	MW-1	11/07/2022		45.7000		
Barium, total (Federal)	ug/L	MW-1	05/02/2023		50.5000		
Barium, total (Federal)	ug/L	MW-1	11/05/2023		41.8000		
Barium, total (Federal)	ug/L	MW-1	05/01/2024		39.6000		
Beryllium, total (Federal)	ug/L	MW-1	09/28/2016	ND	10.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/09/2016	ND	10.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	12/12/2016	ND	10.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	02/05/2017	ND	4.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	03/24/2017	ND	1.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/16/2017	ND	1.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	06/20/2017	ND	1.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	08/08/2017	ND	1.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	09/12/2018	ND	0.6500		
Beryllium, total (Federal)	ug/L	MW-1	05/17/2019	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/06/2019	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/06/2020	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/03/2020	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/05/2021	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/01/2021	ND	0.2000	0.6500	**

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium, total (Federal)	ug/L	MW-1	05/04/2022	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	11/07/2022	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/02/2023	ND	0.2000	0.6500	**
Beryllium, total (Federal)	ug/L	MW-1	05/01/2024	ND	0.2000	0.6500	**
Cadmium, total (Federal)	ug/L	MW-1	09/28/2016	ND	10.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	11/09/2016	ND	10.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	12/12/2016	ND	10.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	02/05/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	03/24/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	05/16/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	06/20/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	08/08/2017	ND	1.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	09/12/2018	ND	0.5500	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	05/17/2019	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	11/06/2019	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	05/06/2020	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	11/03/2020	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	05/05/2021	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	11/01/2021	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	05/04/2022	ND	0.2000	2.0000	**
Cadmium, total (Federal)	ug/L	MW-1	11/07/2022	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	05/02/2023	ND	2.0000		
Cadmium, total (Federal)	ug/L	MW-1	05/01/2024	ND	2.0000		
Chromium, total (Federal)	ug/L	MW-1	09/28/2016	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	11/09/2016	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	12/12/2016	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	02/05/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	03/24/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/16/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	06/20/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	08/08/2017	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/10/2018	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/17/2019	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/06/2020	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/05/2021	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	11/01/2021	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/04/2022		2.2000		
Chromium, total (Federal)	ug/L	MW-1	11/07/2022	ND	10.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Chromium, total (Federal)	ug/L	MW-1	05/02/2023	ND	10.0000		
Chromium, total (Federal)	ug/L	MW-1	05/01/2024	ND	10.0000		
Cobalt, total (Federal)	ug/L	MW-1	09/28/2016	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	10/19/2016	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	11/09/2016	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	12/12/2016	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	02/05/2017	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	03/24/2017	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	05/16/2017	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	06/20/2017	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	08/08/2017	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	05/10/2018	ND	20.0000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	09/12/2018	ND	3.6000	1.0000	**
Cobalt, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	11/07/2022	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	11/05/2023	ND	1.0000		
Cobalt, total (Federal)	ug/L	MW-1	05/01/2024	ND	1.0000		
Fluoride (Federal)	mg/L	MW-1	09/28/2016	ND	0.5000		
Fluoride (Federal)	mg/L	MW-1	10/19/2016	ND	5.0000		*
Fluoride (Federal)	mg/L	MW-1	11/09/2016	ND	0.5000		
Fluoride (Federal)	mg/L	MW-1	12/12/2016	ND	5.0000		*
Fluoride (Federal)	mg/L	MW-1	02/05/2017	ND	5.0000		*
Fluoride (Federal)	mg/L	MW-1	03/24/2017	ND	5.0000		*
Fluoride (Federal)	mg/L	MW-1	05/16/2017	ND	5.0000		*
Fluoride (Federal)	mg/L	MW-1	06/20/2017	ND	5.0000		*
Fluoride (Federal)	mg/L	MW-1	08/08/2017	ND	5.0000		*
Fluoride (Federal)	mg/L	MW-1	05/10/2018	ND	5.0000		*
Fluoride (Federal)	mg/L	MW-1	09/12/2018	ND	0.6000	0.5000	**
Fluoride (Federal)	mg/L	MW-1	05/17/2019	ND	0.1000	0.5000	**
Fluoride (Federal)	mg/L	MW-1	11/06/2019		0.1200		
Fluoride (Federal)	mg/L	MW-1	05/06/2020		0.1300		
Fluoride (Federal)	mg/L	MW-1	11/03/2020		0.1400		
Fluoride (Federal)	mg/L	MW-1	05/05/2021		0.1000		
Fluoride (Federal)	mg/L	MW-1	11/01/2021		0.1100		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Fluoride (Federal)	mg/L	MW-1	05/04/2022	ND	0.1000	0.5000	**
Fluoride (Federal)	mg/L	MW-1	11/07/2022		0.1100		
Fluoride (Federal)	mg/L	MW-1	05/02/2023		0.1200		
Fluoride (Federal)	mg/L	MW-1	11/05/2023		0.1300		
Fluoride (Federal)	mg/L	MW-1	05/01/2024		0.1100		
Lead, total (Federal)	ug/L	MW-1	09/28/2016	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/09/2016	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	12/12/2016	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	02/05/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	03/24/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/16/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	06/20/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	08/08/2017	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/10/2018	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/17/2019	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/06/2019	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/06/2020	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/03/2020	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/05/2021	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/01/2021	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000	10.0000	**
Lead, total (Federal)	ug/L	MW-1	11/07/2022	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/02/2023	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	11/05/2023	ND	10.0000		
Lead, total (Federal)	ug/L	MW-1	05/01/2024	ND	10.0000		
Lithium, total (Federal)	ug/L	MW-1	09/28/2016	ND	2.8000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	10/19/2016	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	11/09/2016		4.1000		
Lithium, total (Federal)	ug/L	MW-1	12/12/2016	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	02/05/2017		5.2000		
Lithium, total (Federal)	ug/L	MW-1	03/24/2017	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	05/16/2017	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	06/20/2017	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	08/08/2017	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	05/10/2018	ND	6.2000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	09/12/2018	ND	100.0000	20.0000	**
Lithium, total (Federal)	ug/L	MW-1	05/17/2019	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/06/2019	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	05/06/2020	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/03/2020	ND	20.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Lithium, total (Federal)	ug/L	MW-1	05/05/2021	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/01/2021	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	05/04/2022	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/07/2022	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	05/02/2023	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	11/05/2023	ND	20.0000		
Lithium, total (Federal)	ug/L	MW-1	05/01/2024	ND	20.0000		
Mercury, total (Federal)	ug/L	MW-1	09/28/2016	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	10/19/2016	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	11/09/2016	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	12/12/2016	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	02/05/2017	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	03/24/2017	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	05/16/2017	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	06/20/2017		0.6700		
Mercury, total (Federal)	ug/L	MW-1	08/08/2017	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	05/10/2018	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	05/17/2019	ND	2.0000	0.2000	**
Mercury, total (Federal)	ug/L	MW-1	05/06/2020	ND	2.0000	0.2000	**
Mercury, total (Federal)	ug/L	MW-1	05/05/2021	ND	2.0000	0.2000	**
Mercury, total (Federal)	ug/L	MW-1	11/01/2021	ND	2.0000	0.2000	**
Mercury, total (Federal)	ug/L	MW-1	05/04/2022	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	05/02/2023	ND	0.2000		
Mercury, total (Federal)	ug/L	MW-1	05/01/2024	ND	0.2000		
Molybdenum, total (Federal)	ug/L	MW-1	09/28/2016	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	10/19/2016	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	11/09/2016	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	12/12/2016	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	02/05/2017	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	03/24/2017	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	05/16/2017	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	06/20/2017	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	08/08/2017	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	05/10/2018	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	09/12/2018	ND	100.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	05/17/2019	ND	10.0000		
Molybdenum, total (Federal)	ug/L	MW-1	11/06/2019	ND	10.0000		
Molybdenum, total (Federal)	ug/L	MW-1	05/06/2020	ND	10.0000		
Molybdenum, total (Federal)	ug/L	MW-1	11/03/2020	ND	10.0000		
Molybdenum, total (Federal)	ug/L	MW-1	05/05/2021	ND	10.0000		
Molybdenum, total (Federal)	ug/L	MW-1	11/01/2021	ND	10.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Molybdenum, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000	10.0000	**
Molybdenum, total (Federal)	ug/L	MW-1	11/07/2022	ND	10.0000		
Molybdenum, total (Federal)	ug/L	MW-1	05/02/2023	ND	10.0000		
Molybdenum, total (Federal)	ug/L	MW-1	11/05/2023	ND	10.0000		
Molybdenum, total (Federal)	ug/L	MW-1	05/01/2024	ND	10.0000		
Selenium, total (Federal)	ug/L	MW-1	09/28/2016	ND	1.6000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	10/19/2016	ND	10.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	11/09/2016		8.6000		
Selenium, total (Federal)	ug/L	MW-1	12/12/2016	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	02/05/2017	ND	30.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	03/24/2017	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	05/16/2017	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	06/20/2017	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	08/08/2017	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	05/10/2018	ND	5.0000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	09/12/2018	ND	0.9000	1.0000	**
Selenium, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/07/2022	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	11/05/2023	ND	1.0000		
Selenium, total (Federal)	ug/L	MW-1	05/01/2024	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	09/28/2016	ND	50.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	10/19/2016	ND	50.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	11/09/2016	ND	50.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	12/12/2016	ND	50.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	02/05/2017	ND	2.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	03/24/2017	ND	5.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	05/16/2017	ND	5.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	06/20/2017	ND	5.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	08/08/2017	ND	5.0000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	05/10/2018	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	09/12/2018	ND	0.6000	1.0000	**
Thallium, total (Federal)	ug/L	MW-1	05/17/2019	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	11/06/2019	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	05/06/2020	ND	1.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Thallium, total (Federal)	ug/L	MW-1	11/03/2020	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	05/05/2021	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	11/01/2021	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	05/04/2022	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	05/02/2023	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	11/05/2023	ND	1.0000		
Thallium, total (Federal)	ug/L	MW-1	05/01/2024	ND	1.0000		
Total Radium (Federal)	pCi/L	MW-1	09/28/2016		2.6000		
Total Radium (Federal)	pCi/L	MW-1	10/19/2016		1.3000		
Total Radium (Federal)	pCi/L	MW-1	11/09/2016		1.2800		
Total Radium (Federal)	pCi/L	MW-1	12/12/2016		1.1200		
Total Radium (Federal)	pCi/L	MW-1	02/05/2017		1.8600		
Total Radium (Federal)	pCi/L	MW-1	03/24/2017	ND	0.5700	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	05/16/2017		0.8200		
Total Radium (Federal)	pCi/L	MW-1	06/20/2017		4.4600		
Total Radium (Federal)	pCi/L	MW-1	08/08/2017		1.4300		
Total Radium (Federal)	pCi/L	MW-1	05/10/2018	ND	1.0000	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	09/12/2018	ND	1.0000	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	05/17/2019	ND	1.7800	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	11/06/2019	ND	1.4700	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	05/06/2020	ND	1.8200	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	11/03/2020		1.1300		
Total Radium (Federal)	pCi/L	MW-1	05/05/2021	ND	1.6400		
Total Radium (Federal)	pCi/L	MW-1	11/01/2021	ND	1.9100	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	05/04/2022	ND	1.5100	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	11/07/2022	ND	1.9400	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	05/02/2023	ND	1.6300	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	11/05/2023	ND	1.8200	1.6400	**
Total Radium (Federal)	pCi/L	MW-1	05/01/2024	ND	1.7400	1.6400	**

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table C-2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Antimony, total (Federal)	ug/L	MW-10	05/06/2024	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-11	05/02/2024	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-12	05/02/2024	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-13	05/02/2024	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-2R	05/02/2024	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/12/2024		2.1000	*	1.0000
Antimony, total (Federal)	ug/L	MW-4C	05/12/2024	ND	1.0000		1.0000
Arsenic, total (Federal)	ug/L	MW-10	05/06/2024		62.6000	***	5.1000
Arsenic, total (Federal)	ug/L	MW-11	05/02/2024	ND	1.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-12	05/02/2024		2.4000		5.1000
Arsenic, total (Federal)	ug/L	MW-13	05/02/2024	ND	1.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/02/2024		10.8000	***	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/12/2024		234.0000	***	5.1000
Arsenic, total (Federal)	ug/L	MW-4C	05/12/2024	ND	1.0000		5.1000
Barium, total (Federal)	ug/L	MW-10	05/06/2024		79.1000	*	64.5825
Barium, total (Federal)	ug/L	MW-11	05/02/2024		29.6000		64.5825
Barium, total (Federal)	ug/L	MW-12	05/02/2024		30.4000		64.5825
Barium, total (Federal)	ug/L	MW-13	05/02/2024		31.8000		64.5825
Barium, total (Federal)	ug/L	MW-2R	05/02/2024		53.6000		64.5825
Barium, total (Federal)	ug/L	MW-3	05/12/2024		70.5000	*	64.5825
Barium, total (Federal)	ug/L	MW-4C	05/12/2024		27.4000		64.5825
Beryllium, total (Federal)	ug/L	MW-10	05/06/2024	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-11	05/02/2024	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-12	05/02/2024	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-13	05/02/2024	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-2R	05/02/2024	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-3	05/12/2024	ND	0.2000		0.6500
Beryllium, total (Federal)	ug/L	MW-4C	05/12/2024	ND	0.2000		0.6500
Cadmium, total (Federal)	ug/L	MW-10	05/06/2024	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-11	05/02/2024	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-12	05/02/2024	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-13	05/02/2024	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-2R	05/02/2024	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-3	05/12/2024	ND	2.0000		2.0000
Cadmium, total (Federal)	ug/L	MW-4C	05/12/2024	ND	2.0000		2.0000
Chromium, total (Federal)	ug/L	MW-10	05/06/2024	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-11	05/02/2024	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-12	05/02/2024	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-13	05/02/2024	ND	10.0000		10.0000

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table C-2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Chromium, total (Federal)	ug/L	MW-2R	05/02/2024	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-3	05/12/2024	ND	10.0000		10.0000
Chromium, total (Federal)	ug/L	MW-4C	05/12/2024	ND	10.0000		10.0000
Cobalt, total (Federal)	ug/L	MW-10	05/06/2024		2.2000	***	1.0000
Cobalt, total (Federal)	ug/L	MW-11	05/02/2024	ND	1.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-12	05/02/2024	ND	1.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-13	05/02/2024	ND	1.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	05/02/2024		3.3000	***	1.0000
Cobalt, total (Federal)	ug/L	MW-3	05/12/2024		1.9000	***	1.0000
Cobalt, total (Federal)	ug/L	MW-4C	05/12/2024		1.1000	***	1.0000
Fluoride (Federal)	mg/L	MW-10	05/06/2024	ND	0.1000		0.5000
Fluoride (Federal)	mg/L	MW-11	05/02/2024		0.1500		0.5000
Fluoride (Federal)	mg/L	MW-12	05/02/2024		0.1200		0.5000
Fluoride (Federal)	mg/L	MW-13	05/02/2024		0.7400	***	0.5000
Fluoride (Federal)	mg/L	MW-2R	05/02/2024	ND	0.1000		0.5000
Fluoride (Federal)	mg/L	MW-3	05/12/2024	ND	0.1000		0.5000
Fluoride (Federal)	mg/L	MW-4C	05/12/2024		0.2300		0.5000
Lead, total (Federal)	ug/L	MW-10	05/06/2024	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-11	05/02/2024	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-12	05/02/2024	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-13	05/02/2024	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-2R	05/02/2024	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-3	05/12/2024	ND	10.0000		10.0000
Lead, total (Federal)	ug/L	MW-4C	05/12/2024	ND	10.0000		10.0000
Lithium, total (Federal)	ug/L	MW-10	05/06/2024		24.9000	***	20.0000
Lithium, total (Federal)	ug/L	MW-11	05/02/2024	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-12	05/02/2024	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	05/02/2024		594.0000	***	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/02/2024		778.0000	***	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/12/2024		1620.0000	***	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/12/2024		350.0000	***	20.0000
Mercury, total (Federal)	ug/L	MW-10	05/06/2024	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-11	05/02/2024	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-12	05/02/2024	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-13	05/02/2024	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-2R	05/02/2024	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-3	05/12/2024	ND	0.2000		0.6700
Mercury, total (Federal)	ug/L	MW-4C	05/12/2024	ND	0.2000		0.6700
Molybdenum, total (Federal)	ug/L	MW-10	05/06/2024		12.9000	***	10.0000

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table C-2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Molybdenum, total (Federal)	ug/L	MW-11	05/02/2024	ND	10.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-12	05/02/2024	ND	10.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	05/02/2024		45.5000	***	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	05/02/2024		10.4000	***	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/12/2024		426.0000	***	10.0000
Molybdenum, total (Federal)	ug/L	MW-4C	05/12/2024	ND	10.0000		10.0000
Selenium, total (Federal)	ug/L	MW-10	05/06/2024	ND	1.0000		8.6000
Selenium, total (Federal)	ug/L	MW-11	05/02/2024		3.0000		8.6000
Selenium, total (Federal)	ug/L	MW-12	05/02/2024		1.2000		8.6000
Selenium, total (Federal)	ug/L	MW-13	05/02/2024		21.0000	***	8.6000
Selenium, total (Federal)	ug/L	MW-2R	05/02/2024	ND	1.0000		8.6000
Selenium, total (Federal)	ug/L	MW-3	05/12/2024	ND	1.0000		8.6000
Selenium, total (Federal)	ug/L	MW-4C	05/12/2024	ND	1.0000		8.6000
Thallium, total (Federal)	ug/L	MW-10	05/06/2024	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-11	05/02/2024	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-12	05/02/2024	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-13	05/02/2024	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-2R	05/02/2024	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-3	05/12/2024	ND	1.0000		1.0000
Thallium, total (Federal)	ug/L	MW-4C	05/12/2024	ND	1.0000		1.0000
Total Radium (Federal)	pCi/L	MW-10	05/06/2024		1.3500		4.4600
Total Radium (Federal)	pCi/L	MW-11	05/02/2024	ND	2.4400		4.4600
Total Radium (Federal)	pCi/L	MW-12	05/02/2024	ND	2.3800		4.4600
Total Radium (Federal)	pCi/L	MW-13	05/02/2024		1.6200		4.4600
Total Radium (Federal)	pCi/L	MW-2R	05/02/2024		1.6900		4.4600
Total Radium (Federal)	pCi/L	MW-3	05/12/2024		0.9300		4.4600
Total Radium (Federal)	pCi/L	MW-4C	05/12/2024		0.9950		4.4600

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table C-3

Detection Frequencies in Upgradient and Downgradient Wells

Constituent	Detect	Upgradient N	Proportion	Detect	Downgradient N	Proportion
Antimony, total (Federal)	0	21	0.000	4	150	0.027
Arsenic, total (Federal)	2	22	0.091	63	157	0.401
Barium, total (Federal)	22	22	1.000	156	157	0.994
Beryllium, total (Federal)	0	21	0.000	9	150	0.060
Cadmium, total (Federal)	0	21	0.000	3	150	0.020
Chromium, total (Federal)	1	18	0.056	4	129	0.031
Cobalt, total (Federal)	0	22	0.000	47	157	0.299
Fluoride (Federal)	9	14	0.643	62	157	0.395
Lead, total (Federal)	0	21	0.000	7	150	0.047
Lithium, total (Federal)	2	22	0.091	98	157	0.624
Mercury, total (Federal)	1	17	0.059	4	122	0.033
Molybdenum, total (Federal)	0	22	0.000	56	156	0.359
Selenium, total (Federal)	1	22	0.045	45	157	0.287
Thallium, total (Federal)	0	21	0.000	3	150	0.020
Total Radium (Federal)	9	22	0.409	101	152	0.664

N = Total number of measurements in all wells.
Detect = Total number of detections in all wells.
Proportion = Detect/N.

Table C-4

Shapiro-Wilk Multiple Group Test of Normality

Constituent	Detect	N	Detect Freq	G raw	G log	G cbrt	G sqrt	G sqr	G cub	Crit Value	Dist Form	Model Type
Antimony, total (Federal)	0	21	0.000	5.291	5.291					2.326	non-norm	nonpar
Arsenic, total (Federal)	2	22	0.091	8.547	8.587					2.326	non-norm	nonpar
Barium, total (Federal)	22	22	1.000	0.250	1.670					2.326	normal	normal
Beryllium, total (Federal)	0	21	0.000	5.291	5.291					2.326	non-norm	nonpar
Cadmium, total (Federal)	0	21	0.000	5.291	5.291					2.326	non-norm	nonpar
Chromium, total (Federal)	1	18	0.056	4.885	4.885					2.326	non-norm	nonpar
Cobalt, total (Federal)	0	22	0.000	5.413	5.413					2.326	non-norm	nonpar
Fluoride (Federal)	9	14	0.643	4.083	3.640					2.326	non-norm	nonpar
Lead, total (Federal)	0	21	0.000	5.291	5.291					2.326	non-norm	nonpar
Lithium, total (Federal)	2	22	0.091	8.665	8.597					2.326	non-norm	nonpar
Mercury, total (Federal)	1	17	0.059	21.983	21.983					2.326	non-norm	nonpar
Molybdenum, total (Federal)	0	22	0.000	5.413	5.413					2.326	non-norm	nonpar
Selenium, total (Federal)	1	22	0.045	25.541	25.541					2.326	non-norm	nonpar
Thallium, total (Federal)	0	21	0.000	5.291	5.291					2.326	non-norm	nonpar
Total Radium (Federal)	9	22	0.409	5.505	3.706					2.326	non-norm	nonpar

* - Distribution override for that constituent.
Fit to distribution is confirmed if G <= critical value.
Model type may not match distributional form when detection frequency < 50%.

Table C-5

Summary Statistics and Prediction Limits

Constituent	Units	Detect	N	Mean	SD	alpha	Factor	Pred Limit	Type		Conf
Antimony, total (Federal)	ug/L	0	21					1.0000	nonpar	***	0.97
Arsenic, total (Federal)	ug/L	2	22					5.1000	nonpar		0.98
Barium, total (Federal)	ug/L	22	22	47.3818	6.6839	0.0100	2.5735	64.5825	normal		
Beryllium, total (Federal)	ug/L	0	21					0.6500	nonpar	***	0.97
Cadmium, total (Federal)	ug/L	0	21					2.0000	nonpar	***	0.97
Chromium, total (Federal)	ug/L	1	18					10.0000	nonpar	***	0.97
Cobalt, total (Federal)	ug/L	0	22					1.0000	nonpar	***	0.98
Fluoride (Federal)	mg/L	9	14					0.5000	nonpar	***	0.95
Lead, total (Federal)	ug/L	0	21					10.0000	nonpar	***	0.97
Lithium, total (Federal)	ug/L	2	22					20.0000	nonpar	***	0.98
Mercury, total (Federal)	ug/L	1	17					0.6700	nonpar		0.96
Molybdenum, total (Federal)	ug/L	0	22					10.0000	nonpar	***	0.98
Selenium, total (Federal)	ug/L	1	22					8.6000	nonpar		0.98
Thallium, total (Federal)	ug/L	0	21					1.0000	nonpar	***	0.97
Total Radium (Federal)	pCi/L	9	22					4.4600	nonpar		0.98

Conf = confidence level for passing initial test or one verification resample at all downgradient wells for a single constituent (nonparametric test only).
* - Insufficient Data.
** - Calculated limit raised to Manual Reporting Limit.
*** - Nonparametric limit based on ND value.
For transformed data, mean and SD in transformed units and prediction limit in original units.
All sample sizes and statistics are based on outlier free data.
For nonparametric limits, median reporting limits are substituted for extreme reporting limit values.

Table C-6

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Barium, total (Federal)	ug/L	MW-1	05/17/2019	29.4000		09/28/2016-05/01/2024	22	0.5162
Fluoride (Federal)	mg/L	MW-1	09/28/2016	0.5000	< 0.5000	09/28/2016-05/01/2024	14	0.6174
Fluoride (Federal)	mg/L	MW-1	11/09/2016	0.5000	< 0.5000	09/28/2016-05/01/2024	14	0.6174
Fluoride (Federal)	mg/L	MW-1	09/12/2018	0.6000	< 0.6000	09/28/2016-05/01/2024	14	0.6174
Total Radium (Federal)	pCi/L	MW-1	06/20/2017	4.4600		09/28/2016-05/01/2024	22	0.5162

N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Antimony, total (Federal)	ug/L	MW-3	09/28/2016	ND	0.0500		1.0000
Antimony, total (Federal)	ug/L	MW-3	10/19/2016	ND	50.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	11/09/2016	ND	50.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	12/12/2016	ND	5.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	02/05/2017	ND	6.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	03/24/2017	ND	24.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/25/2017	ND	6.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	06/20/2017	ND	6.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	08/08/2017	ND	6.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/09/2018	ND	5.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	09/12/2018	ND	1.4000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/16/2019	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	11/06/2019	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/13/2020	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	11/03/2020	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/05/2021	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	11/01/2021	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/08/2022	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	11/07/2022	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/07/2023	ND	1.0000		1.0000
Antimony, total (Federal)	ug/L	MW-3	05/12/2024		2.1000	*	1.0000
Arsenic, total (Federal)	ug/L	MW-10	03/16/2017		48.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	03/17/2017		44.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	03/24/2017		76.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	04/20/2017		60.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	04/24/2017		57.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/25/2017		55.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	06/20/2017		49.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	07/19/2017		57.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	08/08/2017		58.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/09/2018		47.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	09/12/2018		63.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/17/2019		30.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/06/2019		127.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/05/2020		95.4000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/04/2020		104.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/05/2021		96.4000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/02/2021		102.0000	*	5.1000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Arsenic, total (Federal)	ug/L	MW-10	05/04/2022		78.8000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/07/2022		90.1000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/02/2023		67.7000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	11/06/2023		84.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-10	05/06/2024		62.6000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	09/28/2016		4.3000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	10/19/2016	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/09/2016		6.4000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	12/12/2016	ND	5.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	03/16/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	03/17/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	03/24/2017	ND	40.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	04/20/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	04/24/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/16/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	06/20/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	08/08/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/09/2018		31.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	09/12/2018		11.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/16/2019		8.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/06/2019		10.5000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/13/2020		14.7000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/03/2020		8.9000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/05/2021		6.2000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/01/2021		9.9000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/08/2022		16.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/07/2022		10.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/09/2023		78.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	11/08/2023		7.5000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-2R	05/02/2024		10.8000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	09/28/2016		4.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	10/19/2016	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/09/2016		7.4000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	12/12/2016	ND	5.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	02/05/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	03/24/2017	ND	40.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/25/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	06/20/2017	ND	10.0000		5.1000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Arsenic, total (Federal)	ug/L	MW-3	08/08/2017	ND	10.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/09/2018	ND	5.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	09/12/2018	ND	5.0000		5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/16/2019		12.9000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/06/2019		10.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/13/2020		16.2000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/03/2020		20.5000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/05/2021		17.0000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/01/2021		17.9000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/08/2022		14.8000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/07/2022		17.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/07/2023		32.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	11/08/2023		59.3000	*	5.1000
Arsenic, total (Federal)	ug/L	MW-3	05/12/2024		234.0000	*	5.1000
Barium, total (Federal)	ug/L	MW-10	03/16/2017		140.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	03/17/2017		160.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	03/24/2017		130.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	04/20/2017		110.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	04/24/2017		140.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	05/25/2017		130.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	06/20/2017		130.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	07/19/2017		99.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	08/08/2017		110.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	05/09/2018		68.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	09/12/2018		64.0000		64.5825
Barium, total (Federal)	ug/L	MW-10	05/17/2019		41.2000		64.5825
Barium, total (Federal)	ug/L	MW-10	11/06/2019		150.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	05/05/2020		68.5000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	11/04/2020		69.8000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	05/05/2021		120.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	11/02/2021		86.2000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	05/04/2022		102.0000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	11/07/2022		68.1000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	05/02/2023		67.4000	*	64.5825
Barium, total (Federal)	ug/L	MW-10	11/06/2023		58.2000		64.5825
Barium, total (Federal)	ug/L	MW-10	05/06/2024		79.1000	*	64.5825
Barium, total (Federal)	ug/L	MW-3	09/28/2016		32.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	10/19/2016		31.0000		64.5825

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total (Federal)	ug/L	MW-3	11/09/2016		36.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	12/12/2016		29.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	02/05/2017		37.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	03/24/2017		32.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	05/25/2017		36.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	06/20/2017		36.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	08/08/2017		40.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	05/09/2018		38.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	09/12/2018		45.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	05/16/2019		28.6000		64.5825
Barium, total (Federal)	ug/L	MW-3	11/06/2019		42.8000		64.5825
Barium, total (Federal)	ug/L	MW-3	05/13/2020		43.7000		64.5825
Barium, total (Federal)	ug/L	MW-3	11/03/2020		39.4000		64.5825
Barium, total (Federal)	ug/L	MW-3	05/05/2021		37.3000		64.5825
Barium, total (Federal)	ug/L	MW-3	11/01/2021		38.2000		64.5825
Barium, total (Federal)	ug/L	MW-3	05/08/2022		55.0000		64.5825
Barium, total (Federal)	ug/L	MW-3	11/07/2022		46.1000		64.5825
Barium, total (Federal)	ug/L	MW-3	05/07/2023		61.6000		64.5825
Barium, total (Federal)	ug/L	MW-3	11/08/2023		59.1000		64.5825
Barium, total (Federal)	ug/L	MW-3	05/12/2024		70.5000	*	64.5825
Cobalt, total (Federal)	ug/L	MW-10	03/16/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	03/17/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	03/24/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	04/20/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	04/24/2017	ND	200.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	05/25/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	06/20/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	07/19/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	08/08/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	05/09/2018	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-10	09/12/2018		3.9000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	05/17/2019		10.3000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	11/06/2019		9.2000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	05/05/2020		3.7000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	11/04/2020		3.5000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	05/05/2021		5.5000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	11/02/2021		2.9000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	05/04/2022		3.7000	*	1.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Cobalt, total (Federal)	ug/L	MW-10	11/07/2022		2.3000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	05/02/2023		2.1000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	11/06/2023		2.6000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-10	05/06/2024		2.2000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	09/28/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	10/19/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	11/09/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	12/12/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	03/16/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	03/17/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	03/24/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	04/20/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	04/24/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	05/16/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	06/20/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	08/08/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	05/09/2018	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	09/12/2018	ND	3.6000		1.0000
Cobalt, total (Federal)	ug/L	MW-2R	05/16/2019		3.3000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	11/06/2019		3.1000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	05/13/2020		2.8000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	11/03/2020		3.1000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	05/05/2021		2.9000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	11/01/2021		2.2000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	05/08/2022		3.3000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	11/07/2022		2.0000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	05/09/2023		3.7000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	11/08/2023		2.7000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-2R	05/02/2024		3.3000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	09/28/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	10/19/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	11/09/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	12/12/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	02/05/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	03/24/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	05/25/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	06/20/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	08/08/2017	ND	20.0000		1.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Cobalt, total (Federal)	ug/L	MW-3	05/09/2018	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	09/12/2018	ND	3.6000		1.0000
Cobalt, total (Federal)	ug/L	MW-3	05/16/2019		2.0000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	11/06/2019		2.6000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	05/13/2020		2.7000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	11/03/2020		2.1000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	05/05/2021		2.1000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	11/01/2021		2.3000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	05/08/2022		1.8000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	11/07/2022		2.6000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	05/07/2023		2.3000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	11/08/2023		2.2000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-3	05/12/2024		1.9000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-4C	09/28/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	10/19/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	11/09/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	12/12/2016	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	02/05/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	03/25/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	05/25/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	06/20/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	08/08/2017	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	05/09/2018	ND	20.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	09/12/2018	ND	3.6000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	05/16/2019		1.0000	**	1.0000
Cobalt, total (Federal)	ug/L	MW-4C	11/06/2019	ND	1.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	05/13/2020	ND	1.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	11/03/2020		1.0000	**	1.0000
Cobalt, total (Federal)	ug/L	MW-4C	05/05/2021		1.2000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-4C	11/01/2021		1.1000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-4C	05/08/2022	ND	1.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	11/08/2022		1.1000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-4C	05/09/2023	ND	1.0000		1.0000
Cobalt, total (Federal)	ug/L	MW-4C	11/08/2023		1.1000	*	1.0000
Cobalt, total (Federal)	ug/L	MW-4C	05/12/2024		1.1000	*	1.0000
Fluoride (Federal)	mg/L	MW-13	03/16/2017	ND	5.0000		0.5000
Fluoride (Federal)	mg/L	MW-13	03/17/2017	ND	5.0000		0.5000
Fluoride (Federal)	mg/L	MW-13	03/24/2017		0.6800	*	0.5000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Fluoride (Federal)	mg/L	MW-13	04/20/2017		0.5800	*	0.5000
Fluoride (Federal)	mg/L	MW-13	04/24/2017		0.6700	*	0.5000
Fluoride (Federal)	mg/L	MW-13	05/25/2017	ND	5.0000		0.5000
Fluoride (Federal)	mg/L	MW-13	06/20/2017	ND	5.0000		0.5000
Fluoride (Federal)	mg/L	MW-13	07/19/2017		0.8000	*	0.5000
Fluoride (Federal)	mg/L	MW-13	08/08/2017	ND	5.0000		0.5000
Fluoride (Federal)	mg/L	MW-13	05/09/2018	ND	5.0000		0.5000
Fluoride (Federal)	mg/L	MW-13	09/12/2018	ND	0.6000		0.5000
Fluoride (Federal)	mg/L	MW-13	05/17/2019		0.6900	*	0.5000
Fluoride (Federal)	mg/L	MW-13	11/06/2019		0.6100	*	0.5000
Fluoride (Federal)	mg/L	MW-13	05/05/2020		0.7200	*	0.5000
Fluoride (Federal)	mg/L	MW-13	11/04/2020		0.8000	*	0.5000
Fluoride (Federal)	mg/L	MW-13	05/06/2021		0.6500	*	0.5000
Fluoride (Federal)	mg/L	MW-13	11/02/2021		0.7300	*	0.5000
Fluoride (Federal)	mg/L	MW-13	05/04/2022		0.5300	*	0.5000
Fluoride (Federal)	mg/L	MW-13	11/08/2022		0.7550	*	0.5000
Fluoride (Federal)	mg/L	MW-13	05/02/2023		0.6600	*	0.5000
Fluoride (Federal)	mg/L	MW-13	11/05/2023		0.8600	*	0.5000
Fluoride (Federal)	mg/L	MW-13	05/02/2024		0.7400	*	0.5000
Lithium, total (Federal)	ug/L	MW-10	03/16/2017		32.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	03/17/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	03/24/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	04/20/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	04/24/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	05/25/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	06/20/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	07/19/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	08/08/2017	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	05/09/2018	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	09/12/2018	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	05/17/2019	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-10	11/06/2019		48.5000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	05/05/2020		56.6000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	11/04/2020		40.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	05/05/2021		40.9000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	11/02/2021		60.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	05/04/2022		47.4000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	11/07/2022		44.6000	*	20.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Lithium, total (Federal)	ug/L	MW-10	05/02/2023		34.5000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	11/06/2023		23.4000	*	20.0000
Lithium, total (Federal)	ug/L	MW-10	05/06/2024		24.9000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	03/16/2017		750.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	03/17/2017		740.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	03/24/2017		650.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	04/20/2017		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	04/24/2017		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/25/2017		840.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	06/20/2017		1400.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	07/19/2017		540.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	08/08/2017		220.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/09/2018	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	09/12/2018	ND	100.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	05/17/2019	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	11/06/2019		28.6000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/05/2020		39.6000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	11/04/2020		238.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/06/2021	ND	20.0000		20.0000
Lithium, total (Federal)	ug/L	MW-13	11/02/2021		492.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/04/2022		74.8000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	11/08/2022		385.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/02/2023		62.3000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	11/05/2023		456.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-13	05/02/2024		594.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	09/28/2016		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	10/19/2016		820.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/09/2016		780.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	12/12/2016		510.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	03/16/2017		280.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	03/17/2017		410.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	03/24/2017		530.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	04/20/2017		780.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	04/24/2017		840.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/16/2017		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	06/20/2017		1100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	08/08/2017		1000.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/09/2018		960.0000	*	20.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Lithium, total (Federal)	ug/L	MW-2R	09/12/2018		800.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/16/2019		616.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/06/2019		495.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/13/2020		638.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/03/2020		522.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/05/2021		890.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/01/2021		912.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/08/2022		897.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/07/2022		812.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/09/2023		703.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	11/08/2023		638.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-2R	05/02/2024		778.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	09/28/2016		2000.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	10/19/2016		1900.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/09/2016		2200.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	12/12/2016		2200.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	02/05/2017		2100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	03/24/2017		2100.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/25/2017		2000.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	06/20/2017		2000.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	08/08/2017		1600.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/09/2018		2600.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	09/12/2018		2600.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/16/2019		1260.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/06/2019		1930.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/13/2020		1520.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/03/2020		1760.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/05/2021		1820.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/01/2021		1880.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/08/2022		1960.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/07/2022		1980.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/07/2023		1710.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	11/08/2023		1640.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-3	05/12/2024		1620.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	09/28/2016		310.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	10/19/2016		280.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/09/2016		330.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	12/12/2016		260.0000	*	20.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Lithium, total (Federal)	ug/L	MW-4C	02/05/2017		310.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	03/25/2017		290.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/25/2017		330.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	06/20/2017		250.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	08/08/2017		230.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/09/2018		250.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	09/12/2018		280.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/16/2019		316.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/06/2019		284.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/13/2020		242.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/03/2020		287.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/05/2021		359.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/01/2021		334.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/08/2022		442.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/08/2022		411.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/09/2023		351.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	11/08/2023		351.0000	*	20.0000
Lithium, total (Federal)	ug/L	MW-4C	05/12/2024		350.0000	*	20.0000
Molybdenum, total (Federal)	ug/L	MW-10	03/16/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	03/17/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	03/24/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	04/20/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	05/25/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	06/20/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	07/19/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	08/08/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	05/09/2018	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	09/12/2018	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	05/17/2019	ND	10.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-10	11/06/2019		25.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-10	05/05/2020		21.4000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-10	11/04/2020		14.9000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-10	05/05/2021		27.5000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-10	11/02/2021		17.8000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-10	05/04/2022		14.9000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-10	11/07/2022		14.7000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-10	05/02/2023		15.7000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-10	11/06/2023		11.1000	*	10.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Molybdenum, total (Federal)	ug/L	MW-10	05/06/2024		12.9000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	03/16/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	03/17/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	03/24/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	04/20/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	04/24/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	05/25/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	06/20/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	07/19/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	08/08/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	05/09/2018	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	09/12/2018	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-13	05/17/2019		47.6000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	11/06/2019		37.6000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	05/05/2020		48.9000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	11/04/2020		76.2000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	05/06/2021		45.3000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	11/02/2021		75.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	05/04/2022		37.8000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	11/08/2022		65.2000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	05/02/2023		39.8000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	11/05/2023		82.6000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-13	05/02/2024		45.5000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	09/28/2016	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	10/19/2016	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	11/09/2016	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	12/12/2016	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	03/16/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	03/17/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	03/24/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	04/20/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	04/24/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	05/16/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	06/20/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	08/08/2017	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	05/09/2018	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	09/12/2018	ND	100.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	05/16/2019		11.2000	*	10.0000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Molybdenum, total (Federal)	ug/L	MW-2R	11/06/2019	ND	10.0000		10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	05/13/2020		11.7000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	11/03/2020		12.8000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	05/05/2021		10.3000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	11/01/2021		11.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	05/08/2022		10.2000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	11/07/2022		10.7000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	05/09/2023		10.4000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	11/08/2023		10.6000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-2R	05/02/2024		10.4000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	09/28/2016		350.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	10/19/2016		330.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/09/2016		280.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	12/12/2016		390.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	02/05/2017		660.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	03/24/2017		660.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/25/2017		570.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	06/20/2017		510.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	08/08/2017		330.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/09/2018		390.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	09/12/2018		520.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/16/2019		338.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/06/2019		508.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/13/2020		529.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/03/2020		549.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/05/2021		532.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/01/2021		501.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/08/2022		273.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/07/2022		304.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/07/2023		345.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	11/08/2023		242.0000	*	10.0000
Molybdenum, total (Federal)	ug/L	MW-3	05/12/2024		426.0000	*	10.0000
Selenium, total (Federal)	ug/L	MW-13	03/16/2017		20.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	03/17/2017		21.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	03/24/2017		22.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	04/20/2017		17.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	04/24/2017		16.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	05/25/2017		8.4000		8.6000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

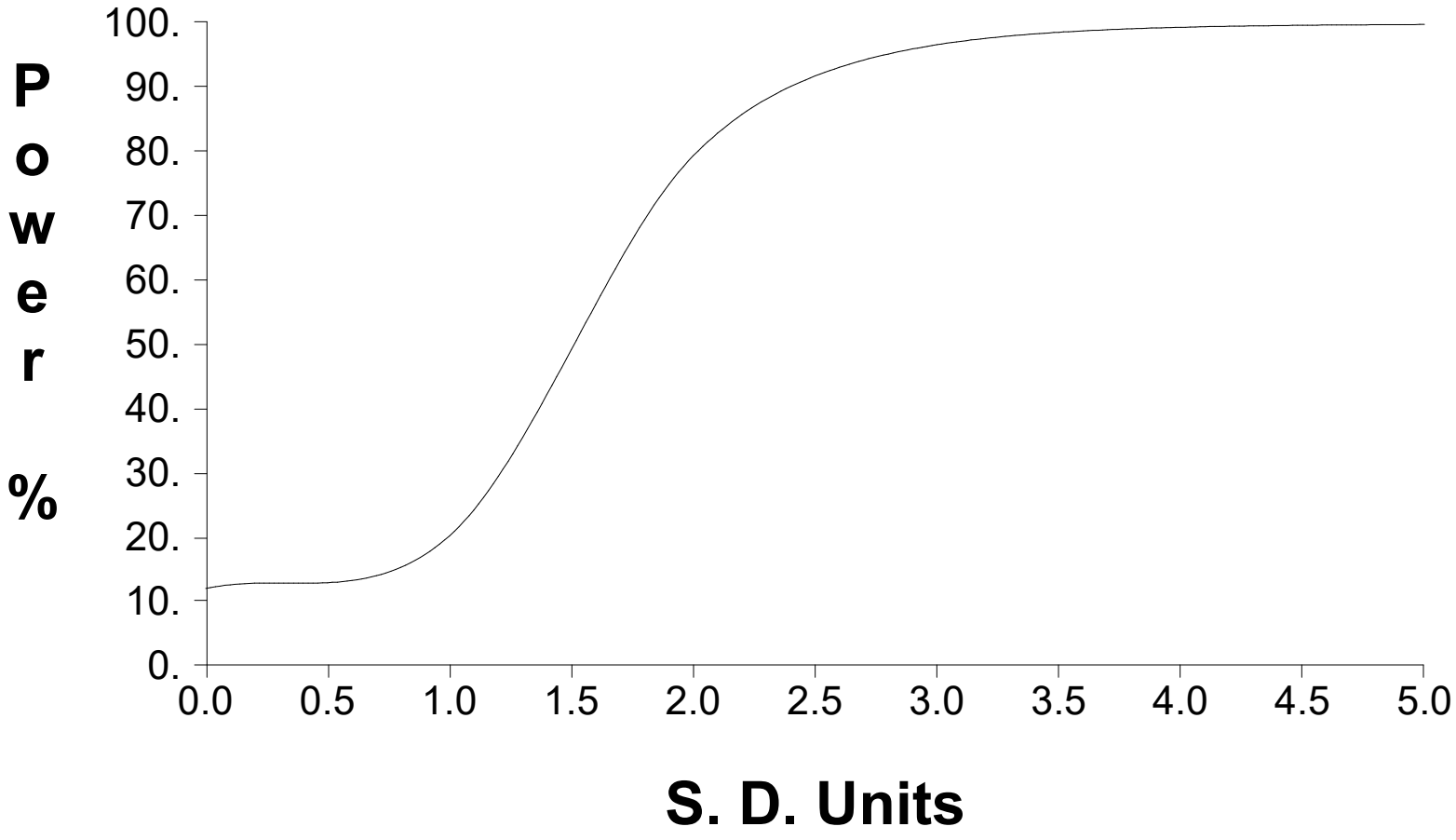
Table C-7

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Selenium, total (Federal)	ug/L	MW-13	06/20/2017		9.5000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	07/19/2017		14.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	08/08/2017		29.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	05/09/2018	ND	5.0000		8.6000
Selenium, total (Federal)	ug/L	MW-13	09/12/2018		11.0000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	05/17/2019		2.7000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/06/2019		2.9000		8.6000
Selenium, total (Federal)	ug/L	MW-13	05/05/2020		4.3000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/04/2020		4.7000		8.6000
Selenium, total (Federal)	ug/L	MW-13	05/06/2021		8.4000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/02/2021		8.5000		8.6000
Selenium, total (Federal)	ug/L	MW-13	05/04/2022		4.6000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/08/2022		8.6000		8.6000
Selenium, total (Federal)	ug/L	MW-13	05/02/2023		5.8000		8.6000
Selenium, total (Federal)	ug/L	MW-13	11/05/2023		19.1000	*	8.6000
Selenium, total (Federal)	ug/L	MW-13	05/02/2024		21.0000	*	8.6000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

False Positive and False Negative Rates for Current Upgradient vs. Downgradient Monitoring Program



Appendix C: Statistical Analyses – 95% Lower Confidence Limit Documentation

November 2023

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Antimony, total (Federal)	ug/L	MW-10	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-11	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-12	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-13	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-2R	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-3	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-4C	4	0.500	0.000	1.176	0.500	0.500	6.000		
Arsenic, total (Federal)	ug/L	MW-10	4	80.150	9.498	1.176	68.977	91.323	10.000		**
Arsenic, total (Federal)	ug/L	MW-11	4	3.025	4.532	1.176	0.000	8.356	10.000		
Arsenic, total (Federal)	ug/L	MW-12	4	1.150	0.574	1.176	0.474	1.826	10.000		
Arsenic, total (Federal)	ug/L	MW-13	4	0.500	0.000	1.176	0.500	0.500	10.000		
Arsenic, total (Federal)	ug/L	MW-2R	4	27.950	33.571	1.176	0.000	67.440	10.000		
Arsenic, total (Federal)	ug/L	MW-3	4	30.925	20.434	1.176	6.888	54.962	10.000		
Arsenic, total (Federal)	ug/L	MW-4C	4	0.500	0.000	1.176	0.500	0.500	10.000		
Barium, total (Federal)	ug/L	MW-10	4	73.925	19.253	1.176	51.278	96.572	2000.000		
Barium, total (Federal)	ug/L	MW-11	4	44.525	20.854	1.176	19.995	69.055	2000.000		
Barium, total (Federal)	ug/L	MW-12	4	28.850	4.241	1.176	23.861	33.839	2000.000		
Barium, total (Federal)	ug/L	MW-13	4	20.900	1.699	1.176	18.901	22.899	2000.000		
Barium, total (Federal)	ug/L	MW-2R	4	54.850	17.109	1.176	34.725	74.975	2000.000		
Barium, total (Federal)	ug/L	MW-3	4	55.450	6.801	1.176	47.450	63.450	2000.000		
Barium, total (Federal)	ug/L	MW-4C	4	28.825	2.646	1.176	25.712	31.938	2000.000		
Beryllium, total (Federal)	ug/L	MW-10	4	0.390	0.396	1.176	0.000	0.856	4.000		
Beryllium, total (Federal)	ug/L	MW-11	4	0.465	0.444	1.176	0.000	0.987	4.000		
Beryllium, total (Federal)	ug/L	MW-12	4	0.100	0.000	1.176	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-13	4	0.100	0.000	1.176	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-2R	4	0.100	0.000	1.176	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-3	4	0.100	0.000	1.176	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-4C	4	0.100	0.000	1.176	0.100	0.100	4.000		
Cadmium, total (Federal)	ug/L	MW-10	4	0.805	0.390	1.176	0.346	1.264	5.000		
Cadmium, total (Federal)	ug/L	MW-11	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-12	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-13	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-2R	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-3	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-4C	4	0.818	0.291	1.176	0.476	1.159	5.000		
Chromium, total (Federal)	ug/L	MW-10	4	5.075	0.150	1.176	4.899	5.251	100.000		
Chromium, total (Federal)	ug/L	MW-11	4	11.600	8.764	1.176	1.291	21.909	100.000		
Chromium, total (Federal)	ug/L	MW-12	4	5.000	0.000	1.176	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-13	4	5.000	0.000	1.176	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-2R	4	5.000	0.000	1.176	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Chromium, total (Federal)	ug/L	MW-3	4	5.000	0.000	1.176	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-4C	4	5.000	0.000	1.176	5.000	5.000	100.000		
Cobalt, total (Federal)	ug/L	MW-10	4	2.675	0.714	1.176	1.836	3.514	6.000	dec	
Cobalt, total (Federal)	ug/L	MW-11	4	1.025	1.050	1.176	0.000	2.260	6.000		
Cobalt, total (Federal)	ug/L	MW-12	4	0.675	0.350	1.176	0.263	1.087	6.000		
Cobalt, total (Federal)	ug/L	MW-13	4	0.500	0.000	1.176	0.500	0.500	6.000		
Cobalt, total (Federal)	ug/L	MW-2R	4	2.925	0.741	1.176	2.053	3.797	6.000		
Cobalt, total (Federal)	ug/L	MW-3	4	2.225	0.330	1.176	1.836	2.614	6.000		
Cobalt, total (Federal)	ug/L	MW-4C	4	0.800	0.346	1.176	0.393	1.207	6.000		
Fluoride (Federal)	mg/L	MW-10	4	0.359	0.143	1.176	0.190	0.527	4.000		
Fluoride (Federal)	mg/L	MW-11	4	0.129	0.054	1.176	0.065	0.192	4.000		
Fluoride (Federal)	mg/L	MW-12	4	0.120	0.050	1.176	0.062	0.178	4.000		
Fluoride (Federal)	mg/L	MW-13	4	0.701	0.140	1.176	0.536	0.866	4.000		
Fluoride (Federal)	mg/L	MW-2R	4	0.050	0.000	1.176	0.050	0.050	4.000		
Fluoride (Federal)	mg/L	MW-3	4	0.073	0.045	1.176	0.020	0.125	4.000	dec	
Fluoride (Federal)	mg/L	MW-4C	4	0.110	0.070	1.176	0.028	0.192	4.000		
Lead, total (Federal)	ug/L	MW-10	4	5.700	1.400	1.176	4.053	7.347	15.000		
Lead, total (Federal)	ug/L	MW-11	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-12	4	4.025	1.950	1.176	1.731	6.319	15.000		
Lead, total (Federal)	ug/L	MW-13	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-2R	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-3	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-4C	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lithium, total (Federal)	ug/L	MW-10	4	37.475	10.897	1.176	24.657	50.293	40.000		
Lithium, total (Federal)	ug/L	MW-11	4	10.000	0.000	1.176	10.000	10.000	40.000		
Lithium, total (Federal)	ug/L	MW-12	4	10.000	0.000	1.176	10.000	10.000	40.000		
Lithium, total (Federal)	ug/L	MW-13	4	244.525	205.319	1.176	3.011	486.039	40.000		
Lithium, total (Federal)	ug/L	MW-2R	4	762.500	114.864	1.176	627.387	897.613	40.000		**
Lithium, total (Federal)	ug/L	MW-3	4	1822.500	172.892	1.176	1619.129	2025.871	40.000		**
Lithium, total (Federal)	ug/L	MW-4C	4	388.750	45.390	1.176	335.358	442.142	40.000		**
Mercury, total (Federal)	ug/L	MW-10	4	1.000	0.000	1.176	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-11	4	1.000	0.000	1.176	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-12	4	1.000	0.000	1.176	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-13	4	1.000	0.000	1.176	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-2R	4	1.000	0.000	1.176	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-3	4	1.000	0.000	1.176	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-4C	4	1.000	0.000	1.176	1.000	1.000	2.000		
Molybdenum, total (Federal)	ug/L	MW-10	4	14.100	2.046	1.176	11.693	16.507	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-11	4	4.000	2.000	1.176	1.647	6.353	100.000		
Molybdenum, total (Federal)	ug/L	MW-12	4	5.000	0.000	1.176	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Molybdenum, total (Federal)	ug/L	MW-13	4	56.350	21.489	1.176	31.072	81.628	100.000		
Molybdenum, total (Federal)	ug/L	MW-2R	4	10.475	0.222	1.176	10.214	10.736	100.000		
Molybdenum, total (Federal)	ug/L	MW-3	4	291.000	44.008	1.176	239.234	342.766	100.000	dec	**
Molybdenum, total (Federal)	ug/L	MW-4C	4	6.500	1.740	1.176	4.454	8.546	100.000		
Selenium, total (Federal)	ug/L	MW-10	4	0.925	0.568	1.176	0.257	1.593	50.000		
Selenium, total (Federal)	ug/L	MW-11	4	4.350	0.896	1.176	3.296	5.404	50.000		
Selenium, total (Federal)	ug/L	MW-12	4	0.500	0.000	1.176	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-13	4	9.525	6.600	1.176	1.762	17.288	50.000		
Selenium, total (Federal)	ug/L	MW-2R	4	0.500	0.000	1.176	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-3	4	0.500	0.000	1.176	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-4C	4	0.500	0.000	1.176	0.500	0.500	50.000		
Thallium, total (Federal)	ug/L	MW-10	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-11	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-12	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-13	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-2R	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-3	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-4C	4	0.500	0.000	1.176	0.500	0.500	2.000		
Total Radium (Federal)	pCi/L	MW-10	4	1.270	0.345	1.176	0.865	1.675	5.000		
Total Radium (Federal)	pCi/L	MW-11	4	1.703	1.558	1.176	0.000	3.535	5.000		
Total Radium (Federal)	pCi/L	MW-12	4	0.775	0.090	1.176	0.670	0.881	5.000		
Total Radium (Federal)	pCi/L	MW-13	4	0.785	0.061	1.176	0.714	0.856	5.000		
Total Radium (Federal)	pCi/L	MW-2R	4	1.270	0.165	1.176	1.076	1.464	5.000		
Total Radium (Federal)	pCi/L	MW-3	4	1.235	0.635	1.176	0.488	1.982	5.000		
Total Radium (Federal)	pCi/L	MW-4C	4	1.073	0.383	1.176	0.623	1.523	5.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Antimony, total (Federal)	ug/L	MW-10	7	0.500	0.000	0.734	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-11	8	2.500	0.000	0.670	2.500	2.500	6.000		
Antimony, total (Federal)	ug/L	MW-12	8	2.500	0.000	0.670	2.500	2.500	6.000		
Antimony, total (Federal)	ug/L	MW-13	7	0.500	0.000	0.734	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-2R	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-3	7	0.500	0.000	0.734	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-4C	8	0.700	0.000	0.670	0.700	0.700	6.000		
Arsenic, total (Federal)	ug/L	MW-10	8	89.800	12.355	0.670	81.524	98.076	10.000		**
Arsenic, total (Federal)	ug/L	MW-11	8	6.913	4.004	0.670	4.231	9.594	10.000		
Arsenic, total (Federal)	ug/L	MW-12	8	2.925	1.823	0.670	1.704	4.146	10.000		
Arsenic, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	10.000		
Arsenic, total (Federal)	ug/L	MW-2R	8	18.938	24.109	0.670	2.789	35.086	10.000		
Arsenic, total (Federal)	ug/L	MW-3	8	24.413	15.130	0.670	14.278	34.547	10.000		**
Arsenic, total (Federal)	ug/L	MW-4C	8	0.500	0.000	0.670	0.500	0.500	10.000		
Barium, total (Federal)	ug/L	MW-10	8	80.025	21.160	0.670	65.851	94.199	2000.000		
Barium, total (Federal)	ug/L	MW-11	8	55.100	28.479	0.670	36.024	74.176	2000.000		
Barium, total (Federal)	ug/L	MW-12	8	31.475	5.300	0.670	27.925	35.025	2000.000	dec	
Barium, total (Federal)	ug/L	MW-13	8	21.825	3.745	0.670	19.317	24.333	2000.000		
Barium, total (Federal)	ug/L	MW-2R	8	50.688	12.506	0.670	42.311	59.064	2000.000		
Barium, total (Federal)	ug/L	MW-3	8	47.550	9.726	0.670	41.036	54.064	2000.000		
Barium, total (Federal)	ug/L	MW-4C	8	29.200	1.973	0.670	27.879	30.521	2000.000		
Beryllium, total (Federal)	ug/L	MW-10	7	0.496	0.469	0.734	0.151	0.840	4.000		
Beryllium, total (Federal)	ug/L	MW-11	8	0.648	0.197	0.670	0.516	0.779	4.000		
Beryllium, total (Federal)	ug/L	MW-12	8	0.500	0.000	0.670	0.500	0.500	4.000		
Beryllium, total (Federal)	ug/L	MW-13	7	0.100	0.000	0.734	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-2R	8	0.100	0.000	0.670	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-3	7	0.100	0.000	0.734	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-4C	8	0.325	0.000	0.670	0.325	0.325	4.000		
Cadmium, total (Federal)	ug/L	MW-10	7	0.889	0.295	0.734	0.672	1.105	5.000		
Cadmium, total (Federal)	ug/L	MW-11	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-12	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-13	7	1.000	0.000	0.734	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-2R	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-3	7	1.000	0.000	0.734	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-4C	8	0.909	0.214	0.670	0.766	1.052	5.000		
Chromium, total (Federal)	ug/L	MW-10	6	6.067	2.469	0.822	4.036	8.097	100.000		
Chromium, total (Federal)	ug/L	MW-11	8	8.300	6.735	0.670	3.789	12.811	100.000		
Chromium, total (Federal)	ug/L	MW-12	8	5.000	0.000	0.670	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-13	6	5.000	0.000	0.822	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-2R	8	5.000	0.000	0.670	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Chromium, total (Federal)	ug/L	MW-3	6	5.000	0.000	0.822	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-4C	8	5.000	0.000	0.670	5.000	5.000	100.000		
Cobalt, total (Federal)	ug/L	MW-10	8	3.288	1.088	0.670	2.559	4.016	6.000	dec	
Cobalt, total (Federal)	ug/L	MW-11	8	7.400	3.596	0.670	4.991	9.809	6.000		
Cobalt, total (Federal)	ug/L	MW-12	8	7.813	4.051	0.670	5.099	10.526	6.000		
Cobalt, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	6.000		
Cobalt, total (Federal)	ug/L	MW-2R	8	2.838	0.555	0.670	2.466	3.209	6.000		
Cobalt, total (Federal)	ug/L	MW-3	8	2.262	0.288	0.670	2.070	2.455	6.000		
Cobalt, total (Federal)	ug/L	MW-4C	8	4.438	4.606	0.670	1.352	7.523	6.000		
Fluoride (Federal)	mg/L	MW-10	8	0.412	0.113	0.670	0.336	0.488	4.000		
Fluoride (Federal)	mg/L	MW-11	8	0.291	0.388	0.670	0.031	0.551	4.000		
Fluoride (Federal)	mg/L	MW-12	8	0.156	0.041	0.670	0.129	0.184	4.000		
Fluoride (Federal)	mg/L	MW-13	8	0.713	0.101	0.670	0.645	0.781	4.000		
Fluoride (Federal)	mg/L	MW-2R	8	0.067	0.032	0.670	0.046	0.089	4.000		
Fluoride (Federal)	mg/L	MW-3	8	0.131	0.100	0.670	0.064	0.198	4.000	dec	
Fluoride (Federal)	mg/L	MW-4C	8	1.034	1.214	0.670	0.220	1.847	4.000		
Lead, total (Federal)	ug/L	MW-10	8	6.038	2.052	0.670	4.663	7.412	15.000		
Lead, total (Federal)	ug/L	MW-11	8	6.550	2.941	0.670	4.580	8.520	15.000		
Lead, total (Federal)	ug/L	MW-12	8	4.513	1.379	0.670	3.589	5.436	15.000		
Lead, total (Federal)	ug/L	MW-13	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-2R	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-3	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-4C	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lithium, total (Federal)	ug/L	MW-10	8	43.425	11.737	0.670	35.564	51.286	40.000		
Lithium, total (Federal)	ug/L	MW-11	8	50.000	0.000	0.670	50.000	50.000	40.000		**
Lithium, total (Federal)	ug/L	MW-12	8	50.000	0.000	0.670	50.000	50.000	40.000		**
Lithium, total (Federal)	ug/L	MW-13	8	219.713	199.937	0.670	85.792	353.633	40.000		**
Lithium, total (Federal)	ug/L	MW-2R	8	751.500	146.658	0.670	653.266	849.734	40.000		**
Lithium, total (Federal)	ug/L	MW-3	8	1783.750	158.739	0.670	1677.424	1890.076	40.000		**
Lithium, total (Federal)	ug/L	MW-4C	8	347.125	63.348	0.670	304.694	389.556	40.000		**
Mercury, total (Federal)	ug/L	MW-10	5	1.000	0.000	0.953	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-11	8	0.100	0.000	0.670	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-12	8	0.100	0.000	0.670	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-13	5	1.000	0.000	0.953	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-2R	7	1.000	0.000	0.734	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-3	5	1.000	0.000	0.953	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-4C	8	0.100	0.000	0.670	0.100	0.100	2.000		
Molybdenum, total (Federal)	ug/L	MW-10	8	17.250	5.076	0.670	13.850	20.650	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-11	8	43.875	17.324	0.670	32.271	55.479	100.000		
Molybdenum, total (Federal)	ug/L	MW-12	8	50.000	0.000	0.670	50.000	50.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Molybdenum, total (Federal)	ug/L	MW-13	8	58.850	17.948	0.670	46.828	70.872	100.000		
Molybdenum, total (Federal)	ug/L	MW-2R	8	10.963	0.883	0.670	10.371	11.554	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-3	8	409.375	130.438	0.670	322.006	496.744	100.000	dec	**
Molybdenum, total (Federal)	ug/L	MW-4C	8	39.500	19.443	0.670	26.477	52.523	100.000		
Selenium, total (Federal)	ug/L	MW-10	8	0.813	0.470	0.670	0.497	1.128	50.000		
Selenium, total (Federal)	ug/L	MW-11	8	3.838	1.034	0.670	3.145	4.530	50.000		
Selenium, total (Federal)	ug/L	MW-12	8	2.500	0.000	0.670	2.500	2.500	50.000		
Selenium, total (Federal)	ug/L	MW-13	8	8.000	4.854	0.670	4.748	11.252	50.000		
Selenium, total (Federal)	ug/L	MW-2R	8	0.500	0.000	0.670	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-3	8	0.500	0.000	0.670	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-4C	8	0.800	0.000	0.670	0.800	0.800	50.000		
Thallium, total (Federal)	ug/L	MW-10	7	0.500	0.000	0.734	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-11	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-12	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-13	7	0.500	0.000	0.734	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-2R	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-3	7	0.500	0.000	0.734	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-4C	8	0.500	0.000	0.670	0.500	0.500	2.000		
Total Radium (Federal)	pCi/L	MW-10	8	1.216	0.279	0.670	1.029	1.402	5.000		
Total Radium (Federal)	pCi/L	MW-11	8	1.187	1.195	0.670	0.387	1.987	5.000		
Total Radium (Federal)	pCi/L	MW-12	8	0.597	0.101	0.670	0.529	0.665	5.000		
Total Radium (Federal)	pCi/L	MW-13	8	0.800	0.043	0.670	0.771	0.829	5.000		
Total Radium (Federal)	pCi/L	MW-2R	8	1.163	0.288	0.670	0.969	1.356	5.000		
Total Radium (Federal)	pCi/L	MW-3	8	1.452	0.667	0.670	1.005	1.899	5.000		
Total Radium (Federal)	pCi/L	MW-4C	8	1.169	0.504	0.670	0.831	1.507	5.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Antimony, total (Federal)	ug/L	MW-10	8	0.675	0.495	0.670	0.343	1.007	6.000		
Antimony, total (Federal)	ug/L	MW-11	9	2.500	0.000	0.620	2.500	2.500	6.000		
Antimony, total (Federal)	ug/L	MW-12	9	2.500	0.000	0.620	2.500	2.500	6.000		
Antimony, total (Federal)	ug/L	MW-13	7	0.500	0.000	0.734	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-2R	9	0.500	0.000	0.620	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-3	7	0.500	0.000	0.734	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-4C	9	0.700	0.000	0.620	0.700	0.700	6.000		
Arsenic, total (Federal)	ug/L	MW-10	9	93.933	16.951	0.620	83.427	104.440	10.000	dec	**
Arsenic, total (Federal)	ug/L	MW-11	9	7.056	3.770	0.620	4.719	9.392	10.000		
Arsenic, total (Federal)	ug/L	MW-12	9	3.156	1.841	0.620	2.015	4.296	10.000		
Arsenic, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	10.000		
Arsenic, total (Federal)	ug/L	MW-2R	9	18.000	22.726	0.620	3.913	32.087	10.000		
Arsenic, total (Federal)	ug/L	MW-3	8	24.413	15.130	0.670	14.278	34.547	10.000		**
Arsenic, total (Federal)	ug/L	MW-4C	9	0.500	0.000	0.620	0.500	0.500	10.000		
Barium, total (Federal)	ug/L	MW-10	9	87.800	30.592	0.620	68.838	106.762	2000.000	dec	
Barium, total (Federal)	ug/L	MW-11	9	55.478	26.664	0.620	38.951	72.005	2000.000		
Barium, total (Federal)	ug/L	MW-12	9	30.900	5.249	0.620	27.646	34.154	2000.000	dec	
Barium, total (Federal)	ug/L	MW-13	8	21.825	3.745	0.670	19.317	24.333	2000.000		
Barium, total (Federal)	ug/L	MW-2R	9	49.389	12.330	0.620	41.746	57.032	2000.000		
Barium, total (Federal)	ug/L	MW-3	8	47.550	9.726	0.670	41.036	54.064	2000.000		
Barium, total (Federal)	ug/L	MW-4C	9	29.189	1.846	0.620	28.045	30.333	2000.000		
Beryllium, total (Federal)	ug/L	MW-10	8	0.846	1.082	0.670	0.121	1.571	4.000		
Beryllium, total (Federal)	ug/L	MW-11	9	0.631	0.190	0.620	0.513	0.749	4.000		
Beryllium, total (Federal)	ug/L	MW-12	9	0.500	0.000	0.620	0.500	0.500	4.000		
Beryllium, total (Federal)	ug/L	MW-13	7	0.100	0.000	0.734	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-2R	9	0.100	0.000	0.620	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-3	7	0.100	0.000	0.734	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-4C	9	0.325	0.000	0.620	0.325	0.325	4.000		
Cadmium, total (Federal)	ug/L	MW-10	8	0.903	0.276	0.670	0.718	1.087	5.000		
Cadmium, total (Federal)	ug/L	MW-11	9	1.000	0.000	0.620	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-12	9	1.000	0.000	0.620	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-13	7	1.000	0.000	0.734	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-2R	9	1.000	0.000	0.620	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-3	7	1.000	0.000	0.734	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-4C	9	0.919	0.202	0.620	0.794	1.044	5.000		
Chromium, total (Federal)	ug/L	MW-10	6	6.067	2.469	0.822	4.036	8.097	100.000		
Chromium, total (Federal)	ug/L	MW-11	9	7.933	6.396	0.620	3.969	11.898	100.000		
Chromium, total (Federal)	ug/L	MW-12	9	5.000	0.000	0.620	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-13	6	5.000	0.000	0.822	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-2R	8	5.000	0.000	0.670	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Chromium, total (Federal)	ug/L	MW-3	6	5.000	0.000	0.822	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-4C	9	5.000	0.000	0.620	5.000	5.000	100.000		
Cobalt, total (Federal)	ug/L	MW-10	9	3.944	2.218	0.620	2.570	5.319	6.000	dec	
Cobalt, total (Federal)	ug/L	MW-11	9	6.811	3.800	0.620	4.456	9.166	6.000		
Cobalt, total (Federal)	ug/L	MW-12	9	8.056	3.858	0.620	5.664	10.447	6.000		
Cobalt, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	6.000		
Cobalt, total (Federal)	ug/L	MW-2R	9	2.867	0.527	0.620	2.540	3.193	6.000		
Cobalt, total (Federal)	ug/L	MW-3	8	2.262	0.288	0.670	2.070	2.455	6.000		
Cobalt, total (Federal)	ug/L	MW-4C	9	5.056	4.691	0.620	2.148	7.963	6.000		
Fluoride (Federal)	mg/L	MW-10	9	0.415	0.106	0.620	0.349	0.481	4.000		
Fluoride (Federal)	mg/L	MW-11	9	0.273	0.367	0.620	0.045	0.500	4.000		
Fluoride (Federal)	mg/L	MW-12	9	0.153	0.039	0.620	0.129	0.178	4.000		
Fluoride (Federal)	mg/L	MW-13	8	0.713	0.101	0.670	0.645	0.781	4.000		
Fluoride (Federal)	mg/L	MW-2R	9	0.066	0.031	0.620	0.046	0.085	4.000		
Fluoride (Federal)	mg/L	MW-3	8	0.131	0.100	0.670	0.064	0.198	4.000	dec	
Fluoride (Federal)	mg/L	MW-4C	9	0.932	1.176	0.620	0.203	1.661	4.000		
Lead, total (Federal)	ug/L	MW-10	9	8.644	8.053	0.620	3.653	13.636	15.000		
Lead, total (Federal)	ug/L	MW-11	9	6.378	2.799	0.620	4.643	8.113	15.000		
Lead, total (Federal)	ug/L	MW-12	9	4.567	1.300	0.620	3.761	5.372	15.000		
Lead, total (Federal)	ug/L	MW-13	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-2R	9	5.000	0.000	0.620	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-3	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-4C	9	5.000	0.000	0.620	5.000	5.000	15.000		
Lithium, total (Federal)	ug/L	MW-10	9	43.989	11.108	0.620	37.104	50.874	40.000		
Lithium, total (Federal)	ug/L	MW-11	9	50.000	0.000	0.620	50.000	50.000	40.000		**
Lithium, total (Federal)	ug/L	MW-12	9	50.000	0.000	0.620	50.000	50.000	40.000		**
Lithium, total (Federal)	ug/L	MW-13	8	219.713	199.937	0.670	85.792	353.633	40.000		**
Lithium, total (Federal)	ug/L	MW-2R	9	723.000	161.649	0.620	622.804	823.196	40.000		**
Lithium, total (Federal)	ug/L	MW-3	8	1783.750	158.739	0.670	1677.424	1890.076	40.000		**
Lithium, total (Federal)	ug/L	MW-4C	9	340.111	62.882	0.620	301.135	379.088	40.000		**
Mercury, total (Federal)	ug/L	MW-10	5	1.000	0.000	0.953	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-11	9	0.100	0.000	0.620	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-12	9	0.100	0.000	0.620	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-13	5	1.000	0.000	0.953	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-2R	7	1.000	0.000	0.734	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-3	5	1.000	0.000	0.953	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-4C	9	0.128	0.083	0.620	0.076	0.179	2.000		
Molybdenum, total (Federal)	ug/L	MW-10	9	18.111	5.405	0.620	14.761	21.462	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-11	9	44.556	16.333	0.620	34.432	54.680	100.000		
Molybdenum, total (Federal)	ug/L	MW-12	9	50.000	0.000	0.620	50.000	50.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Molybdenum, total (Federal)	ug/L	MW-13	8	58.850	17.948	0.670	46.828	70.872	100.000		
Molybdenum, total (Federal)	ug/L	MW-2R	9	15.300	13.039	0.620	7.218	23.382	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-3	8	409.375	130.438	0.670	322.006	496.744	100.000	dec	**
Molybdenum, total (Federal)	ug/L	MW-4C	9	40.667	18.521	0.620	29.187	52.146	100.000		
Selenium, total (Federal)	ug/L	MW-10	9	0.933	0.570	0.620	0.580	1.287	50.000		
Selenium, total (Federal)	ug/L	MW-11	9	3.789	0.978	0.620	3.183	4.395	50.000		
Selenium, total (Federal)	ug/L	MW-12	9	2.500	0.000	0.620	2.500	2.500	50.000		
Selenium, total (Federal)	ug/L	MW-13	8	8.000	4.854	0.670	4.748	11.252	50.000		
Selenium, total (Federal)	ug/L	MW-2R	9	0.500	0.000	0.620	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-3	8	0.500	0.000	0.670	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-4C	9	0.800	0.000	0.620	0.800	0.800	50.000		
Thallium, total (Federal)	ug/L	MW-10	8	0.650	0.424	0.670	0.366	0.934	2.000		
Thallium, total (Federal)	ug/L	MW-11	9	0.500	0.000	0.620	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-12	9	0.500	0.000	0.620	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-13	7	0.500	0.000	0.734	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-2R	9	0.500	0.000	0.620	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-3	7	0.500	0.000	0.734	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-4C	9	0.500	0.000	0.620	0.500	0.500	2.000		
Total Radium (Federal)	pCi/L	MW-10	9	1.219	0.261	0.620	1.058	1.381	5.000		
Total Radium (Federal)	pCi/L	MW-11	9	1.764	2.060	0.620	0.487	3.041	5.000		
Total Radium (Federal)	pCi/L	MW-12	9	0.660	0.210	0.620	0.529	0.790	5.000		
Total Radium (Federal)	pCi/L	MW-13	8	0.800	0.043	0.670	0.771	0.829	5.000		
Total Radium (Federal)	pCi/L	MW-2R	9	1.128	0.289	0.620	0.949	1.307	5.000		
Total Radium (Federal)	pCi/L	MW-3	8	1.452	0.667	0.670	1.005	1.899	5.000		
Total Radium (Federal)	pCi/L	MW-4C	9	1.095	0.522	0.620	0.771	1.418	5.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Antimony, total (Federal)	ug/L	MW-10	12	2.450	0.173	0.518	2.360	2.540	6.000		
Antimony, total (Federal)	ug/L	MW-11	12	2.500	0.000	0.518	2.500	2.500	6.000		
Antimony, total (Federal)	ug/L	MW-12	12	2.500	0.000	0.518	2.500	2.500	6.000		
Antimony, total (Federal)	ug/L	MW-13	7	0.500	0.000	0.734	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-2R	11	0.500	0.000	0.546	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-3	7	0.500	0.000	0.734	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-4C	12	0.700	0.000	0.518	0.700	0.700	6.000		
Arsenic, total (Federal)	ug/L	MW-10	12	82.142	26.695	0.518	68.308	95.975	10.000	inc	**
Arsenic, total (Federal)	ug/L	MW-11	12	6.542	3.346	0.518	4.807	8.276	10.000		
Arsenic, total (Federal)	ug/L	MW-12	12	3.617	1.778	0.518	2.696	4.538	10.000		
Arsenic, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	10.000		
Arsenic, total (Federal)	ug/L	MW-2R	12	17.692	20.097	0.518	7.277	28.106	10.000		
Arsenic, total (Federal)	ug/L	MW-3	8	24.413	15.130	0.670	14.278	34.547	10.000		**
Arsenic, total (Federal)	ug/L	MW-4C	12	0.500	0.000	0.518	0.500	0.500	10.000		
Barium, total (Federal)	ug/L	MW-10	12	80.283	30.059	0.518	64.707	95.860	2000.000	dec	
Barium, total (Federal)	ug/L	MW-11	12	48.875	25.697	0.518	35.559	62.191	2000.000		
Barium, total (Federal)	ug/L	MW-12	12	30.908	5.216	0.518	28.205	33.611	2000.000	dec	
Barium, total (Federal)	ug/L	MW-13	8	21.825	3.745	0.670	19.317	24.333	2000.000		
Barium, total (Federal)	ug/L	MW-2R	12	49.750	13.464	0.518	42.773	56.727	2000.000		
Barium, total (Federal)	ug/L	MW-3	8	47.550	9.726	0.670	41.036	54.064	2000.000		
Barium, total (Federal)	ug/L	MW-4C	12	27.658	4.659	0.518	25.244	30.073	2000.000		
Beryllium, total (Federal)	ug/L	MW-10	12	0.831	0.818	0.518	0.407	1.255	4.000		
Beryllium, total (Federal)	ug/L	MW-11	12	0.598	0.173	0.518	0.509	0.688	4.000		
Beryllium, total (Federal)	ug/L	MW-12	12	0.500	0.000	0.518	0.500	0.500	4.000		
Beryllium, total (Federal)	ug/L	MW-13	7	0.100	0.000	0.734	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-2R	11	0.100	0.000	0.546	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-3	7	0.100	0.000	0.734	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-4C	12	0.325	0.000	0.518	0.325	0.325	4.000		
Cadmium, total (Federal)	ug/L	MW-10	12	0.935	0.225	0.518	0.818	1.052	5.000		
Cadmium, total (Federal)	ug/L	MW-11	12	1.000	0.000	0.518	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-12	12	1.000	0.000	0.518	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-13	7	1.000	0.000	0.734	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-2R	11	1.000	0.000	0.546	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-3	7	1.000	0.000	0.734	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-4C	12	0.939	0.176	0.518	0.848	1.031	5.000		
Chromium, total (Federal)	ug/L	MW-10	12	5.533	1.755	0.518	4.624	6.443	100.000		
Chromium, total (Federal)	ug/L	MW-11	12	7.200	5.613	0.518	4.291	10.109	100.000		
Chromium, total (Federal)	ug/L	MW-12	12	5.000	0.000	0.518	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-13	6	5.000	0.000	0.822	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-2R	8	5.000	0.000	0.670	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Chromium, total (Federal)	ug/L	MW-3	6	5.000	0.000	0.822	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-4C	12	5.000	0.000	0.518	5.000	5.000	100.000		
Cobalt, total (Federal)	ug/L	MW-10	12	4.975	3.070	0.518	3.384	6.566	6.000	dec	
Cobalt, total (Federal)	ug/L	MW-11	12	7.608	3.547	0.518	5.770	9.446	6.000		
Cobalt, total (Federal)	ug/L	MW-12	12	8.542	3.406	0.518	6.777	10.307	6.000		**
Cobalt, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	6.000		
Cobalt, total (Federal)	ug/L	MW-2R	12	2.725	0.636	0.518	2.396	3.054	6.000		
Cobalt, total (Federal)	ug/L	MW-3	8	2.262	0.288	0.670	2.070	2.455	6.000		
Cobalt, total (Federal)	ug/L	MW-4C	12	5.542	4.657	0.518	3.128	7.955	6.000		
Fluoride (Federal)	mg/L	MW-10	12	0.745	0.827	0.518	0.316	1.173	4.000		
Fluoride (Federal)	mg/L	MW-11	12	0.425	0.498	0.518	0.167	0.683	4.000		
Fluoride (Federal)	mg/L	MW-12	12	0.168	0.052	0.518	0.141	0.194	4.000		
Fluoride (Federal)	mg/L	MW-13	8	0.713	0.101	0.670	0.645	0.781	4.000		
Fluoride (Federal)	mg/L	MW-2R	12	0.062	0.027	0.518	0.048	0.076	4.000		
Fluoride (Federal)	mg/L	MW-3	8	0.131	0.100	0.670	0.064	0.198	4.000	dec	
Fluoride (Federal)	mg/L	MW-4C	12	1.125	1.214	0.518	0.496	1.754	4.000		
Lead, total (Federal)	ug/L	MW-10	12	7.733	7.063	0.518	4.073	11.393	15.000		
Lead, total (Federal)	ug/L	MW-11	12	6.033	2.467	0.518	4.755	7.312	15.000		
Lead, total (Federal)	ug/L	MW-12	12	4.675	1.126	0.518	4.092	5.258	15.000		
Lead, total (Federal)	ug/L	MW-13	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-2R	11	5.000	0.000	0.546	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-3	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-4C	12	5.000	0.000	0.518	5.000	5.000	15.000		
Lithium, total (Federal)	ug/L	MW-10	12	45.492	9.856	0.518	40.384	50.599	40.000		**
Lithium, total (Federal)	ug/L	MW-11	12	50.000	0.000	0.518	50.000	50.000	40.000		**
Lithium, total (Federal)	ug/L	MW-12	12	50.000	0.000	0.518	50.000	50.000	40.000		**
Lithium, total (Federal)	ug/L	MW-13	8	219.713	199.937	0.670	85.792	353.633	40.000		**
Lithium, total (Federal)	ug/L	MW-2R	12	740.250	159.265	0.518	657.718	822.782	40.000		**
Lithium, total (Federal)	ug/L	MW-3	8	1783.750	158.739	0.670	1677.424	1890.076	40.000		**
Lithium, total (Federal)	ug/L	MW-4C	12	325.583	61.360	0.518	293.787	357.380	40.000		**
Mercury, total (Federal)	ug/L	MW-10	12	0.119	0.066	0.518	0.085	0.154	2.000		
Mercury, total (Federal)	ug/L	MW-11	12	0.100	0.000	0.518	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-12	12	0.109	0.032	0.518	0.093	0.126	2.000		
Mercury, total (Federal)	ug/L	MW-13	5	1.000	0.000	0.953	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-2R	7	1.000	0.000	0.734	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-3	5	1.000	0.000	0.953	1.000	1.000	2.000		
Mercury, total (Federal)	ug/L	MW-4C	12	0.121	0.072	0.518	0.083	0.158	2.000		
Molybdenum, total (Federal)	ug/L	MW-10	12	26.083	15.141	0.518	18.237	33.930	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-11	12	45.917	14.145	0.518	38.587	53.247	100.000		
Molybdenum, total (Federal)	ug/L	MW-12	12	50.000	0.000	0.518	50.000	50.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Molybdenum, total (Federal)	ug/L	MW-13	8	58.850	17.948	0.670	46.828	70.872	100.000		
Molybdenum, total (Federal)	ug/L	MW-2R	12	20.742	17.658	0.518	11.591	29.892	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-3	8	409.375	130.438	0.670	322.006	496.744	100.000	dec	**
Molybdenum, total (Federal)	ug/L	MW-4C	12	43.000	16.349	0.518	34.528	51.472	100.000		
Selenium, total (Federal)	ug/L	MW-10	12	2.158	0.547	0.518	1.875	2.442	50.000		
Selenium, total (Federal)	ug/L	MW-11	12	3.858	1.174	0.518	3.250	4.466	50.000		
Selenium, total (Federal)	ug/L	MW-12	12	2.500	0.000	0.518	2.500	2.500	50.000		
Selenium, total (Federal)	ug/L	MW-13	8	8.000	4.854	0.670	4.748	11.252	50.000		
Selenium, total (Federal)	ug/L	MW-2R	12	0.500	0.000	0.518	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-3	8	0.500	0.000	0.670	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-4C	12	0.800	0.000	0.518	0.800	0.800	50.000		
Thallium, total (Federal)	ug/L	MW-10	12	0.600	0.346	0.518	0.420	0.780	2.000		
Thallium, total (Federal)	ug/L	MW-11	12	0.500	0.000	0.518	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-12	12	0.692	0.664	0.518	0.348	1.036	2.000		
Thallium, total (Federal)	ug/L	MW-13	7	0.500	0.000	0.734	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-2R	11	0.664	0.543	0.546	0.367	0.960	2.000		
Thallium, total (Federal)	ug/L	MW-3	7	0.500	0.000	0.734	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-4C	12	0.500	0.000	0.518	0.500	0.500	2.000		
Total Radium (Federal)	pCi/L	MW-10	12	1.158	0.412	0.518	0.944	1.371	5.000		
Total Radium (Federal)	pCi/L	MW-11	12	1.448	1.848	0.518	0.491	2.406	5.000		
Total Radium (Federal)	pCi/L	MW-12	12	0.693	0.261	0.518	0.558	0.828	5.000		
Total Radium (Federal)	pCi/L	MW-13	8	0.800	0.043	0.670	0.771	0.829	5.000		
Total Radium (Federal)	pCi/L	MW-2R	12	1.196	0.412	0.518	0.982	1.409	5.000		
Total Radium (Federal)	pCi/L	MW-3	8	1.452	0.667	0.670	1.005	1.899	5.000		
Total Radium (Federal)	pCi/L	MW-4C	12	0.970	0.504	0.518	0.709	1.231	5.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1: 95% LCL Compared to GWPS
Petersburg RWS III Landfill
AES Indiana
Petersburg Generating Station, Petersburg, Indiana
ATC Project No. 170LF01503

Sample ID	Through Sample Date	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Cobalt, Total	Fluoride	Lead, Total	Lithium, Total	Mercury, Total	Molybdenum, Total	Selenium, Total	Thallium, Total	Radium 226/228 Combined
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
	GWPS (greater of MCL/USEPA Amendment Level, or background PL)	**6**	**10**	**2000**	**4**	**5**	**100**	**6**	**4****	**15**	**40**	**2**	**100**	**50**	**2**	**5**
	MCL	6	10	2000	4	5	100	-	4	15	-	2	-	50	2	5
	USEPA'S Amendments to the National Minimum Criteria*	-	-	-	-	-	-	6	-	15	40	-	100	-	-	-
	Prediction Limit (based on background data through November 2023)	1	5.1	64.8581	0.65	2	10	3.6	5	10	20	0.67	100	8.6	1	4.46
MW-2R	September 2018	3	0	34	1	1	5	10	2.5	5	**818**	0	50	1	2	0.114
	May 2019	3	0	29	1	1	5	4	2.5	5	**638**	0	17	2	2	0.194
	November 2019	3	3	28	1	1	5	2	2.5	5	**477**	0	17	2	2	0.179
	May 2020	3	8	36	1	1	5	1	0.505	5	**490**	0	5	2	2	0.366
	November 2020	3	7	36	1	1	5	3	0	5	**486**	0	0	2	2	0.543
	May 2021	3	6	40	1	1	5	3	0	5	**424**	0	0	2	2	0.453
	November 2021	2.500	5.754 7.311 (N=8)	40.523	0.500	1.000	5.000	2.294	0	5.000	**515.247**	0.100	10.196	2.500	2.500	0.289
	May 2022	2.500	5.292 8.366 (N=9)	41.859	0.500	1.000	5.000	2.312	0.505	5.000	**582.865**	0.100	9.659	2.500	2.500	0.313
	November 2022	0.5	5.67 8.711 (N=9)	43.031	0.1	1	5	1.888	0.05	5	**825.071**	1	10.115	0.500	0.500	0.785
	May 2023	0.5	0 3.285 (N=8) 7.247 (N=11)	38.25	0.1	1	5	1.825	0.05	5	**718.048**	1	10.163	0.500	0.500	0.824
	November 2023	0.5	0 2.789 (N=8) 7.277 (N=12)	34.725	0.1	1	5	2.053	0.05	5	**627.387**	1	10.214	0.500	0.500	1.076
MW-3	September 2018	3	5	35	2	2	5	10	2.5	5	**1624**	0	**328**	2	2	0.311
	May 2019	3	2	30	2	1	5	3	0.564	0	**1204**	0	**291**	2	2	0.211
	November 2019	3	4	30	2	1	5	1	0	0	**1343**	0	**334**	2	2	0
	May 2020	2	6	31	1	1	5	0	0	0	**1140**	0	**367**	2	2	0
	November 2020	2	**10.3**	30	1	1	5	2	0.096	0	**1274**	0	**367**	2	2	0
	May 2021	2	**11**	37	1	1	5	2	0.076	5	**1554**	0	**510**	2	1	0.575
	November 2021	2.500	**15.704**	36.317	0.500	1.000	5.000	1.967	0.06	5.000	**1559.385**	0.100	**504.354**	2.500	1.000	0.83
	May 2022	0.700	**14.776**	32.601	0.500	1.000	5.000	1.833	0	5.000	**1754.498**	0.100	**312.35**	2.500	0.500	0.674
	November 2022	0.5	**15.159**	34.454	0.1	1	5.000	1.804	0.034	5	**1823.029**	1	**246.234**	0.500	0.500	0.586
	May 2023	0.5	**11.246**	38.194	0.1	1	5	1.86	0.034	5	**1737.995**	1	**236.682**	0.500	0.500	0.623
	November 2023	0.5	6.888 **14.278 (N=8)**	47.45	0.1	1	5.000	1.836	0.02	5	**1619.129**	1	**239.234**	0.500	0.500	0.488

Table 1: 95% LCL Compared to GWPS
Petersburg RWS III Landfill
AES Indiana
Petersburg Generating Station, Petersburg, Indiana
ATC Project No. 170LF01503

Sample ID	Through Sample Date	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Cobalt, Total	Fluoride	Lead, Total	Lithium, Total	Mercury, Total	Molybdenum, Total	Selenium, Total	Thallium, Total	Radium 226/228 Combined
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
	GWPS (greater of MCL/USEPA Amendment Level, or background PL)	**6**	**10**	**2000**	**4**	**5**	**100**	**6**	**4****	**15**	**40**	**2**	**100**	**50**	**2**	**5**
	MCL	6	10	2000	4	5	100	-	4	15	-	2	-	50	2	5
	USEPA'S Amendments to the National Minimum Criteria*	-	-	-	-	-	-	6	-	15	40	-	100	-	-	-
	Prediction Limit (based on background data through November 2023)	1	5.1	64.8581	0.65	2	10	3.6	5	10	20	0.67	100	8.6	1	4.46
MW-4C	September 2018	3	5	16	2	2	5	10	2.5	5	**228**	0	50	2	2	0.055
	May 2019	3	5	16	2	1	5	2	0.497	5	**225**	0	50	2	2	0.096
	November 2019	3	5	16	2	1	5	2	0	5	**251**	0	50	2	2	0.403
	May 2020	3	2	27	1	1	5	2	0	5	**245**	0	50	2	2	0.403
	November 2020	2	2	26	1	1	5	0	0.092	5	**246**	0	50	2	2	0.352
	May 2021	2	2	28	1	1	5	0	0	5	**236**	0	50	2	1	0.189
	November 2021	2.500	2.500	28.04	0.500	1.000	5.000	0	0	5.000	**244.571**	0.100	50.000	2.500	1.000	0.500
	May 2022	2.500	0.600	26.836	0.500	0.899	5.000	0	0	5.000	**279.12**	0.100	14.630	2.500	0.500	0.911
	November 2022	0.5	0.5	26.572	0.1	0.899	5	0.598	0.026	5	**328.902**	1	4.053	0.500	0.500	0.618
	May 2023	0.5	0.5	26.067	0.1	0.476	5	0.393	0.026	5	**324.98**	1	4.454	0.500	0.500	0.691
	November 2023	0.5	0.5	25.712	0.1	0.476	5	0.393	0.028	5	**335.358**	1	4.454	0.500	0.500	0.623
MW-10	September 2018	3	**48**	59	1	1	5	5	2.5	5	50	0	50	2	2	0.390
	May 2019	3	**33**	37	1	1	5	5	0.572	5	50	0	50	2	2	0.390
	November 2019	2	**17**	25	0	1	0	5	0	0	49	0	29	2	2	0.457
	May 2020	2	**30**	25	0	1	5	3	0	0	47	0	18	2	2	0.489
	November 2020	2	**40**	27	0	1	5	2	0.241	0	**41**	0	10	2	2	0.487
	May 2021	2	**88**	55	0	1	3	2	0.413	0	37	0	16	1	2	1.127
	November 2021	3.000	**94.510**	57.921	0.196	0.500	2.937	2.583 4.001 (N=8)	0.413	3.14	37.673 **40.858 (N=5)** 27.804 (N=6) 44.919 (N=8)	0.100	14.014	1.494	2.500	0.547
	May 2022	3.000	**81.819**	69.221	0.313	0.265	3.067	2.583	0.266	3.973	36.223 **44.576 (N=8)**	0.100	11.746	1.294	2.500	0.544
	November 2022	0.500	**80.119**	68.022	0.062	0.346	3.067	1.964	0.270	3.973	38.475 **41.43 (N=8)**	1.000	11.645	0.530	0.500	0.851
	May 2023	0.5	**67.306**	61.485	0	0.346	4.899	1.904	0.194	4.053	34.277 **40.844 (N=8)**	1	14.108	0.257	0.500	0.751
	November 2023	0.5	**68.977**	51.278	0	0.346	4.899	1.836	0.190	4.053	24.657 37.104 (N=9)	1	11.693	0.257	0.500	0.865

Table 1: 95% LCL Compared to GWPS
Petersburg RWS III Landfill
AES Indiana
Petersburg Generating Station, Petersburg, Indiana
ATC Project No. 170LF01503

Sample ID	Through Sample Date	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Cobalt, Total	Fluoride	Lead, Total	Lithium, Total	Mercury, Total	Molybdenum, Total	Selenium, Total	Thallium, Total	Radium 226/228 Combined
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
	GWPS (greater of MCL/USEPA Amendment Level, or background PL)	**6**	**10**	**2000**	**4**	**5**	**100**	**6**	**4****	**15**	**40**	**2**	**100**	**50**	**2**	**5**
	MCL	6	10	2000	4	5	100	-	4	15	-	2	-	50	2	5
	USEPA'S Amendments to the National Minimum Criteria*	-	-	-	-	-	-	6	-	15	40	-	100	-	-	-
	Prediction Limit (based on background data through November 2023)	1	5.1	64.8581	0.65	2	10	3.6	5	10	20	0.67	100	8.6	1	4.46
MW-11	September 2018	3	5	25	1	1	5	10	2.5	5	50	0	50	2	2	0.133
	May 2019	3	5	27	1	1	5	10	0.522	5	50	0	50	2	2	0.042
	November 2019	3	4	19	0	1	3	3	0	5	50	0	50	2	2	0
	May 2020	3	4	21	0	1	5	3	0	5	50	0	50	2	2	0
	November 2020	3	4	19	0	1	5	1	0.126	3	50	0	50	2	2	0
	May 2021	3	4	26	0	1	5	1	0.115	3	50	0	50	2	2	0
	November 2021	3.000	3.544	25.623	0.416	1.000	0	2.096 4.863 (N=8)	0.123	3.735	50	0.100	50.000	2.155	2.500	0.333
	May 2022	2.500	3.544	25.492	0.416	0.500	0	2.096 4.863 (N=8) 7.409 (N=16)[1]	0	3.735	50	0.100	8.931	2.526	0.500	0.216
	November 2022	0.5	0	25.083	0	1	1.291	0	0.062	2.498	10	1	1.647	3.244	0.500	0.000
	May 2023	0.5	0	20.755	0	1	1.291	0	0.065	2.498	10	1	1.647	3.832	0.500	0.000
	November 2023	0.5	0	19.995	0	1	1.291	0	0.065	5	10	1	8.931	3.296	0.500	0.000
MW-12	September 2018	3	5	25	1	1	5	10	0.25	5	50	0	50	2	2	0
	May 2019	3	5	25	1	1	5	10	0.149	5	50	0	50	2	2	0
	November 2019	3	5	23	1	1	5	10	0.109	5	50	0	50	2	2	0.144
	May 2020	3	5	25	1	1	5	10	0.101	5	50	0	50	2	2	0.144
	November 2020	3	5	27	1	1	5	10	0.125	5	50	0	50	2	2	0.386
	May 2021	3	3	25	1	1	5	3	0.119	5	50	0	50	2	2	0.377
	November 2021	3.000	1.474	27.746	0.500	1.000	5.000	2.708 6.852 (N=8)[1]	0.122	5.000	50	0.100	50.000	2.500	2.500	0.387
	May 2022	2.500	0.467	25.721	0.500	0.500	5.000	2.708 6.852 (N=8)[1]	0.097	1.731	50	0.100	50.000	2.500	2.500	0.387
	November 2022	0.5	0.541	24.289	0.1	1	5	0.229	0.061	1.731	10	1	5	0.500	0.500	0.820
	May 2023	0.5	0.905	26.435	0.1	1	5	0.263	0.061	1.731	10	1	5	0.500	0.500	0.670
	November 2023	0.5	0.474	23.861	0.1	1	5	0.263	0.062	1.731	10	1	5	0.500	0.500	0.670

Table 1: 95% LCL Compared to GWPS
Petersburg RWS III Landfill
AES Indiana
Petersburg Generating Station, Petersburg, Indiana
ATC Project No. 170LF01503

Sample ID	Through Sample Date	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Cobalt, Total	Fluoride	Lead, Total	Lithium, Total	Mercury, Total	Molybdenum, Total	Selenium, Total	Thallium, Total	Radium 226/228 Combined
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
	GWPS (greater of MCL/USEPA Amendment Level, or background PL)	**6**	**10**	**2000**	**4**	**5**	**100**	**6**	**4****	**15**	**40**	**2**	**100**	**50**	**2**	**5**
	MCL	6	10	2000	4	5	100	-	4	15	-	2	-	50	2	5
	USEPA'S Amendments to the National Minimum Criteria*	-	-	-	-	-	-	6	-	15	40	-	100	-	-	-
	Prediction Limit (based on background data through November 2023)	1	5.1	64.8581	0.65	2	10	3.6	5	10	20	0.67	100	8.6	1	4.46
MW-13	September 2018	3	5	9	1	1	5	10	1.075	5	0	0	50	1	2	0.108
	May 2019	3	5	7	1	1	5	10	0.983	5	0	0	48	0	2	0
	November 2019	1	5	7	1	1	5	10	0.318	5	32	0	39	0	2	0
	May 2020	1	5	18	1	1	5	10	0.054	5	30	0	39	1	2	0.435
	November 2020	1	5	18	1	1	5	10	0.613	5	0	0	33	2	2	0.435
	May 2021	1	5	17	1	1	5	10	0.597	5	0	0	32	2	2	0.522
	November 2021	3.000	5.000	16.575	0.500	1.000	5.000	10	0.653	5.000	0 0 (N=6) 0 (N=8)	0.100	41.909	3.785	2.500	0.565
	May 2022	3.000	2.500	17.593	0.500	0.500	5.000	10	0.541	5.000	0 0 (N=8) **217.267 (N=16)**	0.100	35.165	3.968	0.500	0.521
	November 2022	2.5	2.5	17.029	0.5	1	5	1.8	0.547	5	0 **202.414 (N=16)**	0.1	35.550	5.229	0.500	0.682
	May 2023	2.5	0.5	17.759	0.1	1	5	0.5	0.55	5	0 **42.862 (N=8)**	0.1	32.657	4.528	0.500	0.682
	November 2023	0.5	0.5	18.901	0.1	1	5	0.5	0.536	5	3.011 **85.792 (N=8)**	1	31.072	1.762	0.500	0.704

Notes:
GWPS = Groundwater Protection Standard
MCL = Maximum Contaminant Level based on National Primary Drinking Water Regulations
LCL = Lower Confidence Limit
Bold font with gray shading indicates 95% LCL of the mean of the last four measurements that is in exceedance of GWPS.
Bold font with green shading indicates 95% LCL of the mean of the last eight measurements that is in exceedance of GWPS.
Bold font with gold shading indicates 95% LCL of the mean based on a qualitative evaluation of dataset that didnt trigger a mean/LCL conflict but visually warranted evaluation of a larger dataset.
ug/L = micrograms per liter (ppb)
mg/L = milligrams per liter (ppm)
Std. Units = Standard Units
*USEPA'S *Amendments to the National Minimum Criteria (Phase One, Part One), Disposal of Coal Combustion Residuals from Electric Utilities;* effective August 29, 2018 (page 36444).
** Utilizing MCL as GWPS.
1 - Exceedance not declared due to historic elevated non-detect reporting limits being the primary factor in LCL exceedance calculated over the evaluated sample set.
Background prediction limits are re-calculated after each sampling event. If a background prediction limit value is utilized as the GWPS, the GWPS for the current summary may be different from previous events.
The 95% LCL statistic is based on the rolling set of the four most recent individual sample results for a parameter.
LCL calculations utilize 1/2 the median non-detect (ND) reporting limit (RL) from the full date range of non-detect sample results. If RL levels changed over time, the current calculated LCL value may be larger than the most recent four ND results.
DUMPStat summary table output limits the number of significant digits reported for a calculated LCL. An exceedingly small calculated LCL value (e.g. 0.00001 mg/L) may simply be reported as 0 in the output summary.
Reporting units of measure for certain constituents in DUMPStat output tables were changed from units of mg/L (ppm) to ug/L (ppb) beginning with November 2021 LCL analysis to allow for reporting of calculated LCLs to more significant digits.
Table updated to include November 2023 assessment sampling results.

May-June 2024

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Antimony, total (Federal)	ug/L	MW-10	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-11	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-12	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-13	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-2R	4	0.500	0.000	1.176	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-3	4	0.900	0.800	1.176	0.000	1.841	6.000		
Antimony, total (Federal)	ug/L	MW-4C	4	0.500	0.000	1.176	0.500	0.500	6.000		
Arsenic, total (Federal)	ug/L	MW-10	4	76.100	13.054	1.176	60.745	91.455	10.000	dec	**
Arsenic, total (Federal)	ug/L	MW-11	4	3.025	4.532	1.176	0.000	8.356	10.000		
Arsenic, total (Federal)	ug/L	MW-12	4	1.475	0.842	1.176	0.484	2.466	10.000		
Arsenic, total (Federal)	ug/L	MW-13	4	0.500	0.000	1.176	0.500	0.500	10.000		
Arsenic, total (Federal)	ug/L	MW-2R	4	26.575	34.312	1.176	0.000	66.936	10.000		
Arsenic, total (Federal)	ug/L	MW-3	4	85.725	100.366	1.176	0.000	203.784	10.000		
Arsenic, total (Federal)	ug/L	MW-4C	4	0.500	0.000	1.176	0.500	0.500	10.000		
Barium, total (Federal)	ug/L	MW-10	4	68.200	8.553	1.176	58.139	78.261	2000.000		
Barium, total (Federal)	ug/L	MW-11	4	44.300	21.059	1.176	19.528	69.072	2000.000		
Barium, total (Federal)	ug/L	MW-12	4	29.575	4.181	1.176	24.657	34.493	2000.000		
Barium, total (Federal)	ug/L	MW-13	4	23.350	5.838	1.176	16.483	30.217	2000.000		
Barium, total (Federal)	ug/L	MW-2R	4	56.950	16.009	1.176	38.118	75.782	2000.000		
Barium, total (Federal)	ug/L	MW-3	4	59.325	10.083	1.176	47.464	71.186	2000.000	inc	
Barium, total (Federal)	ug/L	MW-4C	4	29.025	2.445	1.176	26.150	31.900	2000.000		
Beryllium, total (Federal)	ug/L	MW-10	4	0.310	0.420	1.176	0.000	0.804	4.000		
Beryllium, total (Federal)	ug/L	MW-11	4	0.240	0.280	1.176	0.000	0.569	4.000		
Beryllium, total (Federal)	ug/L	MW-12	4	0.100	0.000	1.176	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-13	4	0.100	0.000	1.176	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-2R	4	0.100	0.000	1.176	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-3	4	0.100	0.000	1.176	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-4C	4	0.100	0.000	1.176	0.100	0.100	4.000		
Cadmium, total (Federal)	ug/L	MW-10	4	0.805	0.390	1.176	0.346	1.264	5.000		
Cadmium, total (Federal)	ug/L	MW-11	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-12	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-13	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-2R	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-3	4	1.000	0.000	1.176	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-4C	4	0.818	0.291	1.176	0.476	1.159	5.000		
Chromium, total (Federal)	ug/L	MW-10	4	5.075	0.150	1.176	4.899	5.251	100.000		
Chromium, total (Federal)	ug/L	MW-11	4	6.975	3.950	1.176	2.329	11.621	100.000		
Chromium, total (Federal)	ug/L	MW-12	4	5.000	0.000	1.176	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-13	4	5.000	0.000	1.176	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-2R	4	5.000	0.000	1.176	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Chromium, total (Federal)	ug/L	MW-3	4	5.000	0.000	1.176	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-4C	4	5.000	0.000	1.176	5.000	5.000	100.000		
Cobalt, total (Federal)	ug/L	MW-10	4	2.300	0.216	1.176	2.046	2.554	6.000	dec	
Cobalt, total (Federal)	ug/L	MW-11	4	1.025	1.050	1.176	0.000	2.260	6.000		
Cobalt, total (Federal)	ug/L	MW-12	4	0.675	0.350	1.176	0.263	1.087	6.000		
Cobalt, total (Federal)	ug/L	MW-13	4	0.500	0.000	1.176	0.500	0.500	6.000		
Cobalt, total (Federal)	ug/L	MW-2R	4	2.925	0.741	1.176	2.053	3.797	6.000		
Cobalt, total (Federal)	ug/L	MW-3	4	2.250	0.289	1.176	1.910	2.590	6.000		
Cobalt, total (Federal)	ug/L	MW-4C	4	0.950	0.300	1.176	0.597	1.303	6.000		
Fluoride (Federal)	mg/L	MW-10	4	0.311	0.211	1.176	0.063	0.559	4.000		
Fluoride (Federal)	mg/L	MW-11	4	0.154	0.012	1.176	0.139	0.168	4.000		
Fluoride (Federal)	mg/L	MW-12	4	0.138	0.021	1.176	0.113	0.162	4.000		
Fluoride (Federal)	mg/L	MW-13	4	0.754	0.082	1.176	0.657	0.850	4.000		
Fluoride (Federal)	mg/L	MW-2R	4	0.050	0.000	1.176	0.050	0.050	4.000		
Fluoride (Federal)	mg/L	MW-3	4	0.073	0.045	1.176	0.020	0.125	4.000	dec	
Fluoride (Federal)	mg/L	MW-4C	4	0.155	0.076	1.176	0.066	0.244	4.000		
Lead, total (Federal)	ug/L	MW-10	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-11	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-12	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-13	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-2R	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-3	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-4C	4	5.000	0.000	1.176	5.000	5.000	15.000		
Lithium, total (Federal)	ug/L	MW-10	4	31.850	9.820	1.176	20.299	43.401	40.000	dec	
Lithium, total (Federal)	ug/L	MW-11	4	10.000	0.000	1.176	10.000	10.000	40.000		
Lithium, total (Federal)	ug/L	MW-12	4	10.000	0.000	1.176	10.000	10.000	40.000		
Lithium, total (Federal)	ug/L	MW-13	4	374.325	225.390	1.176	109.202	639.448	40.000		**
Lithium, total (Federal)	ug/L	MW-2R	4	732.750	77.869	1.176	641.154	824.346	40.000		**
Lithium, total (Federal)	ug/L	MW-3	4	1737.500	166.208	1.176	1541.992	1933.008	40.000		**
Lithium, total (Federal)	ug/L	MW-4C	4	365.750	30.170	1.176	330.261	401.239	40.000		**
Mercury, total (Federal)	ug/L	MW-10	4	0.100	0.000	1.176	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-11	4	0.100	0.000	1.176	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-12	4	0.100	0.000	1.176	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-13	4	0.100	0.000	1.176	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-2R	4	0.100	0.000	1.176	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-3	4	0.100	0.000	1.176	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-4C	4	0.100	0.000	1.176	0.100	0.100	2.000		
Molybdenum, total (Federal)	ug/L	MW-10	4	13.600	2.030	1.176	11.212	15.988	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-11	4	5.000	0.000	1.176	5.000	5.000	100.000		
Molybdenum, total (Federal)	ug/L	MW-12	4	5.000	0.000	1.176	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Molybdenum, total (Federal)	ug/L	MW-13	4	58.275	19.529	1.176	35.303	81.247	100.000		
Molybdenum, total (Federal)	ug/L	MW-2R	4	10.525	0.150	1.176	10.349	10.701	100.000		
Molybdenum, total (Federal)	ug/L	MW-3	4	329.250	77.155	1.176	238.493	420.007	100.000	dec	**
Molybdenum, total (Federal)	ug/L	MW-4C	4	5.800	1.600	1.176	3.918	7.682	100.000		
Selenium, total (Federal)	ug/L	MW-10	4	0.625	0.250	1.176	0.331	0.919	50.000		
Selenium, total (Federal)	ug/L	MW-11	4	4.150	1.121	1.176	2.831	5.469	50.000		
Selenium, total (Federal)	ug/L	MW-12	4	0.675	0.350	1.176	0.263	1.087	50.000		
Selenium, total (Federal)	ug/L	MW-13	4	13.625	7.546	1.176	4.748	22.502	50.000	inc	
Selenium, total (Federal)	ug/L	MW-2R	4	0.500	0.000	1.176	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-3	4	0.500	0.000	1.176	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-4C	4	0.500	0.000	1.176	0.500	0.500	50.000		
Thallium, total (Federal)	ug/L	MW-10	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-11	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-12	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-13	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-2R	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-3	4	0.500	0.000	1.176	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-4C	4	0.500	0.000	1.176	0.500	0.500	2.000		
Total Radium (Federal)	pCi/L	MW-10	4	1.313	0.340	1.176	0.912	1.713	5.000		
Total Radium (Federal)	pCi/L	MW-11	4	1.755	1.516	1.176	0.000	3.538	5.000		
Total Radium (Federal)	pCi/L	MW-12	4	0.828	0.124	1.176	0.681	0.974	5.000		
Total Radium (Federal)	pCi/L	MW-13	4	1.016	0.403	1.176	0.543	1.490	5.000		
Total Radium (Federal)	pCi/L	MW-2R	4	1.388	0.258	1.176	1.084	1.691	5.000		
Total Radium (Federal)	pCi/L	MW-3	4	1.152	0.652	1.176	0.385	1.920	5.000		
Total Radium (Federal)	pCi/L	MW-4C	4	1.032	0.379	1.176	0.586	1.477	5.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Antimony, total (Federal)	ug/L	MW-10	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-11	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-12	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-2R	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-3	8	0.700	0.566	0.670	0.321	1.079	6.000		
Antimony, total (Federal)	ug/L	MW-4C	8	0.500	0.000	0.670	0.500	0.500	6.000		
Arsenic, total (Federal)	ug/L	MW-10	8	85.700	15.318	0.670	75.440	95.960	10.000	dec	**
Arsenic, total (Federal)	ug/L	MW-11	8	4.663	5.626	0.670	0.894	8.431	10.000		
Arsenic, total (Federal)	ug/L	MW-12	8	1.475	0.892	0.670	0.877	2.073	10.000		
Arsenic, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	10.000		
Arsenic, total (Federal)	ug/L	MW-2R	8	18.450	24.246	0.670	2.210	34.690	10.000		
Arsenic, total (Federal)	ug/L	MW-3	8	51.638	75.150	0.670	1.301	101.974	10.000		
Arsenic, total (Federal)	ug/L	MW-4C	8	0.500	0.000	0.670	0.500	0.500	10.000		
Barium, total (Federal)	ug/L	MW-10	8	81.350	20.662	0.670	67.511	95.189	2000.000		
Barium, total (Federal)	ug/L	MW-11	8	54.963	28.616	0.670	35.795	74.130	2000.000		
Barium, total (Federal)	ug/L	MW-12	8	31.363	5.314	0.670	27.803	34.922	2000.000		
Barium, total (Federal)	ug/L	MW-13	8	23.350	4.987	0.670	20.009	26.691	2000.000		
Barium, total (Federal)	ug/L	MW-2R	8	52.075	12.076	0.670	43.986	60.164	2000.000		
Barium, total (Federal)	ug/L	MW-3	8	50.900	12.446	0.670	42.564	59.236	2000.000	inc	
Barium, total (Federal)	ug/L	MW-4C	8	29.088	2.055	0.670	27.711	30.464	2000.000		
Beryllium, total (Federal)	ug/L	MW-10	8	0.446	0.456	0.670	0.141	0.752	4.000		
Beryllium, total (Federal)	ug/L	MW-11	8	0.381	0.399	0.670	0.114	0.649	4.000		
Beryllium, total (Federal)	ug/L	MW-12	8	0.100	0.000	0.670	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-13	8	0.100	0.000	0.670	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-2R	8	0.100	0.000	0.670	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-3	8	0.100	0.000	0.670	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-4C	8	0.100	0.000	0.670	0.100	0.100	4.000		
Cadmium, total (Federal)	ug/L	MW-10	8	0.903	0.276	0.670	0.718	1.087	5.000		
Cadmium, total (Federal)	ug/L	MW-11	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-12	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-13	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-2R	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-3	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-4C	8	0.909	0.214	0.670	0.766	1.052	5.000		
Chromium, total (Federal)	ug/L	MW-10	7	5.914	2.289	0.734	4.234	7.595	100.000		
Chromium, total (Federal)	ug/L	MW-11	7	8.771	7.131	0.734	3.537	14.006	100.000		
Chromium, total (Federal)	ug/L	MW-12	7	5.000	0.000	0.734	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-13	7	5.000	0.000	0.734	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-2R	7	5.000	0.000	0.734	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Chromium, total (Federal)	ug/L	MW-3	7	5.000	0.000	0.734	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-4C	7	5.000	0.000	0.734	5.000	5.000	100.000		
Cobalt, total (Federal)	ug/L	MW-10	8	3.100	1.135	0.670	2.340	3.860	6.000	dec	
Cobalt, total (Federal)	ug/L	MW-11	8	1.463	1.350	0.670	0.558	2.367	6.000		
Cobalt, total (Federal)	ug/L	MW-12	8	0.688	0.348	0.670	0.454	0.921	6.000		
Cobalt, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	6.000		
Cobalt, total (Federal)	ug/L	MW-2R	8	2.900	0.578	0.670	2.513	3.287	6.000		
Cobalt, total (Federal)	ug/L	MW-3	8	2.162	0.250	0.670	1.995	2.330	6.000		
Cobalt, total (Federal)	ug/L	MW-4C	8	0.950	0.283	0.670	0.761	1.139	6.000		
Fluoride (Federal)	mg/L	MW-10	8	0.358	0.166	0.670	0.247	0.469	4.000		
Fluoride (Federal)	mg/L	MW-11	8	0.137	0.038	0.670	0.111	0.162	4.000		
Fluoride (Federal)	mg/L	MW-12	8	0.126	0.035	0.670	0.103	0.149	4.000		
Fluoride (Federal)	mg/L	MW-13	8	0.716	0.102	0.670	0.648	0.784	4.000		
Fluoride (Federal)	mg/L	MW-2R	8	0.059	0.025	0.670	0.042	0.075	4.000		
Fluoride (Federal)	mg/L	MW-3	8	0.094	0.050	0.670	0.060	0.128	4.000	dec	
Fluoride (Federal)	mg/L	MW-4C	8	0.120	0.068	0.670	0.075	0.165	4.000		
Lead, total (Federal)	ug/L	MW-10	8	6.038	2.052	0.670	4.663	7.412	15.000		
Lead, total (Federal)	ug/L	MW-11	8	6.550	2.941	0.670	4.580	8.520	15.000		
Lead, total (Federal)	ug/L	MW-12	8	4.513	1.379	0.670	3.589	5.436	15.000		
Lead, total (Federal)	ug/L	MW-13	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-2R	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-3	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-4C	8	5.000	0.000	0.670	5.000	5.000	15.000		
Lithium, total (Federal)	ug/L	MW-10	8	39.462	12.001	0.670	31.424	47.501	40.000	dec	
Lithium, total (Federal)	ug/L	MW-11	8	10.000	0.000	0.670	10.000	10.000	40.000		
Lithium, total (Federal)	ug/L	MW-12	8	10.000	0.000	0.670	10.000	10.000	40.000		
Lithium, total (Federal)	ug/L	MW-13	8	289.013	223.305	0.670	139.440	438.585	40.000		**
Lithium, total (Federal)	ug/L	MW-2R	8	769.000	139.351	0.670	675.661	862.339	40.000		**
Lithium, total (Federal)	ug/L	MW-3	8	1796.250	137.523	0.670	1704.135	1888.365	40.000		**
Lithium, total (Federal)	ug/L	MW-4C	8	360.625	47.192	0.670	329.015	392.235	40.000		**
Mercury, total (Federal)	ug/L	MW-10	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-11	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-12	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-13	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-2R	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-3	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-4C	6	0.100	0.000	0.822	0.100	0.100	2.000		
Molybdenum, total (Federal)	ug/L	MW-10	8	16.188	4.972	0.670	12.857	19.518	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-11	8	4.500	1.414	0.670	3.553	5.447	100.000		
Molybdenum, total (Federal)	ug/L	MW-12	8	5.000	0.000	0.670	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Molybdenum, total (Federal)	ug/L	MW-13	8	58.425	18.255	0.670	46.198	70.652	100.000		
Molybdenum, total (Federal)	ug/L	MW-2R	8	10.800	0.847	0.670	10.233	11.367	100.000		
Molybdenum, total (Federal)	ug/L	MW-3	8	396.500	121.736	0.670	314.959	478.041	100.000	dec	**
Molybdenum, total (Federal)	ug/L	MW-4C	8	5.750	1.393	0.670	4.817	6.683	100.000		
Selenium, total (Federal)	ug/L	MW-10	8	0.813	0.470	0.670	0.497	1.128	50.000		
Selenium, total (Federal)	ug/L	MW-11	8	3.875	0.991	0.670	3.211	4.539	50.000		
Selenium, total (Federal)	ug/L	MW-12	8	0.588	0.247	0.670	0.422	0.753	50.000		
Selenium, total (Federal)	ug/L	MW-13	8	10.088	6.385	0.670	5.811	14.364	50.000	inc	
Selenium, total (Federal)	ug/L	MW-2R	8	0.500	0.000	0.670	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-3	8	0.500	0.000	0.670	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-4C	8	0.500	0.000	0.670	0.500	0.500	50.000		
Thallium, total (Federal)	ug/L	MW-10	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-11	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-12	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-2R	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-3	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-4C	8	0.500	0.000	0.670	0.500	0.500	2.000		
Total Radium (Federal)	pCi/L	MW-10	8	1.233	0.283	0.670	1.044	1.422	5.000		
Total Radium (Federal)	pCi/L	MW-11	8	1.369	1.086	0.670	0.642	2.097	5.000		
Total Radium (Federal)	pCi/L	MW-12	8	0.852	0.087	0.670	0.793	0.911	5.000		
Total Radium (Federal)	pCi/L	MW-13	8	0.901	0.294	0.670	0.704	1.097	5.000		
Total Radium (Federal)	pCi/L	MW-2R	8	1.247	0.334	0.670	1.024	1.471	5.000		
Total Radium (Federal)	pCi/L	MW-3	8	1.343	0.673	0.670	0.893	1.794	5.000		
Total Radium (Federal)	pCi/L	MW-4C	8	1.231	0.436	0.670	0.938	1.523	5.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Antimony, total (Federal)	ug/L	MW-10	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-11	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-12	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-2R	12	0.500	0.000	0.518	0.500	0.500	6.000		
Antimony, total (Federal)	ug/L	MW-3	8	0.700	0.566	0.670	0.321	1.079	6.000		
Antimony, total (Federal)	ug/L	MW-4C	8	0.500	0.000	0.670	0.500	0.500	6.000		
Arsenic, total (Federal)	ug/L	MW-10	9	86.778	14.689	0.620	77.673	95.883	10.000	dec	**
Arsenic, total (Federal)	ug/L	MW-11	9	4.200	5.442	0.620	0.827	7.573	10.000		
Arsenic, total (Federal)	ug/L	MW-12	9	1.367	0.896	0.620	0.811	1.922	10.000		
Arsenic, total (Federal)	ug/L	MW-13	9	0.500	0.000	0.620	0.500	0.500	10.000		
Arsenic, total (Federal)	ug/L	MW-2R	13	17.162	19.336	0.494	7.606	26.717	10.000		
Arsenic, total (Federal)	ug/L	MW-3	9	47.700	71.282	0.620	3.517	91.883	10.000		
Arsenic, total (Federal)	ug/L	MW-4C	9	0.500	0.000	0.620	0.500	0.500	10.000		
Barium, total (Federal)	ug/L	MW-10	9	79.922	19.796	0.620	67.652	92.193	2000.000		
Barium, total (Federal)	ug/L	MW-11	9	52.267	27.963	0.620	34.934	69.599	2000.000		
Barium, total (Federal)	ug/L	MW-12	9	31.356	4.971	0.620	28.275	34.437	2000.000		
Barium, total (Federal)	ug/L	MW-13	9	22.933	4.830	0.620	19.940	25.927	2000.000		
Barium, total (Federal)	ug/L	MW-2R	13	50.046	12.935	0.494	43.654	56.438	2000.000		
Barium, total (Federal)	ug/L	MW-3	9	50.100	11.887	0.620	42.732	57.468	2000.000	inc	
Barium, total (Federal)	ug/L	MW-4C	9	29.000	1.940	0.620	27.797	30.203	2000.000		
Beryllium, total (Federal)	ug/L	MW-10	8	0.446	0.456	0.670	0.141	0.752	4.000		
Beryllium, total (Federal)	ug/L	MW-11	8	0.381	0.399	0.670	0.114	0.649	4.000		
Beryllium, total (Federal)	ug/L	MW-12	8	0.100	0.000	0.670	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-13	8	0.100	0.000	0.670	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-2R	12	0.100	0.000	0.518	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-3	8	0.100	0.000	0.670	0.100	0.100	4.000		
Beryllium, total (Federal)	ug/L	MW-4C	8	0.100	0.000	0.670	0.100	0.100	4.000		
Cadmium, total (Federal)	ug/L	MW-10	8	0.903	0.276	0.670	0.718	1.087	5.000		
Cadmium, total (Federal)	ug/L	MW-11	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-12	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-13	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-2R	12	1.000	0.000	0.518	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-3	8	1.000	0.000	0.670	1.000	1.000	5.000		
Cadmium, total (Federal)	ug/L	MW-4C	8	0.909	0.214	0.670	0.766	1.052	5.000		
Chromium, total (Federal)	ug/L	MW-10	7	5.914	2.289	0.734	4.234	7.595	100.000		
Chromium, total (Federal)	ug/L	MW-11	7	8.771	7.131	0.734	3.537	14.006	100.000		
Chromium, total (Federal)	ug/L	MW-12	7	5.000	0.000	0.734	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-13	7	5.000	0.000	0.734	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-2R	9	5.000	0.000	0.620	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Chromium, total (Federal)	ug/L	MW-3	7	5.000	0.000	0.734	5.000	5.000	100.000		
Chromium, total (Federal)	ug/L	MW-4C	7	5.000	0.000	0.734	5.000	5.000	100.000		
Cobalt, total (Federal)	ug/L	MW-10	9	3.167	1.081	0.620	2.497	3.836	6.000	dec	
Cobalt, total (Federal)	ug/L	MW-11	9	1.356	1.303	0.620	0.548	2.163	6.000		
Cobalt, total (Federal)	ug/L	MW-12	9	0.667	0.332	0.620	0.461	0.872	6.000		
Cobalt, total (Federal)	ug/L	MW-13	9	0.500	0.000	0.620	0.500	0.500	6.000		
Cobalt, total (Federal)	ug/L	MW-2R	13	2.769	0.629	0.494	2.458	3.080	6.000		
Cobalt, total (Federal)	ug/L	MW-3	9	2.222	0.295	0.620	2.039	2.405	6.000		
Cobalt, total (Federal)	ug/L	MW-4C	9	0.900	0.304	0.620	0.711	1.089	6.000		
Fluoride (Federal)	mg/L	MW-10	9	0.372	0.161	0.620	0.272	0.471	4.000		
Fluoride (Federal)	mg/L	MW-11	9	0.142	0.038	0.620	0.118	0.165	4.000		
Fluoride (Federal)	mg/L	MW-12	9	0.130	0.034	0.620	0.109	0.151	4.000		
Fluoride (Federal)	mg/L	MW-13	9	0.716	0.095	0.620	0.657	0.775	4.000		
Fluoride (Federal)	mg/L	MW-2R	13	0.061	0.026	0.494	0.048	0.074	4.000		
Fluoride (Federal)	mg/L	MW-3	9	0.122	0.098	0.620	0.062	0.183	4.000	dec	
Fluoride (Federal)	mg/L	MW-4C	9	0.128	0.067	0.620	0.086	0.170	4.000		
Lead, total (Federal)	ug/L	MW-10	9	5.922	1.950	0.620	4.713	7.131	15.000		
Lead, total (Federal)	ug/L	MW-11	9	6.378	2.799	0.620	4.643	8.113	15.000		
Lead, total (Federal)	ug/L	MW-12	9	4.567	1.300	0.620	3.761	5.372	15.000		
Lead, total (Federal)	ug/L	MW-13	9	5.000	0.000	0.620	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-2R	12	5.000	0.000	0.518	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-3	9	5.000	0.000	0.620	5.000	5.000	15.000		
Lead, total (Federal)	ug/L	MW-4C	9	5.000	0.000	0.620	5.000	5.000	15.000		
Lithium, total (Federal)	ug/L	MW-10	9	41.367	12.596	0.620	33.559	49.174	40.000	dec	
Lithium, total (Federal)	ug/L	MW-11	9	10.000	0.000	0.620	10.000	10.000	40.000		
Lithium, total (Federal)	ug/L	MW-12	9	10.000	0.000	0.620	10.000	10.000	40.000		
Lithium, total (Federal)	ug/L	MW-13	9	261.300	224.819	0.620	121.948	400.652	40.000		**
Lithium, total (Federal)	ug/L	MW-2R	13	743.154	152.844	0.494	667.626	818.682	40.000		**
Lithium, total (Federal)	ug/L	MW-3	9	1765.556	158.202	0.620	1667.496	1863.615	40.000		**
Lithium, total (Federal)	ug/L	MW-4C	9	347.444	59.264	0.620	310.710	384.179	40.000		**
Mercury, total (Federal)	ug/L	MW-10	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-11	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-12	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-13	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-2R	8	0.100	0.000	0.670	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-3	6	0.100	0.000	0.822	0.100	0.100	2.000		
Mercury, total (Federal)	ug/L	MW-4C	6	0.100	0.000	0.822	0.100	0.100	2.000		
Molybdenum, total (Federal)	ug/L	MW-10	9	16.767	4.965	0.620	13.689	19.844	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-11	9	4.556	1.333	0.620	3.729	5.382	100.000		
Molybdenum, total (Federal)	ug/L	MW-12	9	5.000	0.000	0.620	5.000	5.000	100.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Molybdenum, total (Federal)	ug/L	MW-13	9	57.367	17.368	0.620	46.601	68.132	100.000		
Molybdenum, total (Federal)	ug/L	MW-2R	13	19.946	17.147	0.494	11.473	28.420	100.000	dec	
Molybdenum, total (Federal)	ug/L	MW-3	9	411.222	122.139	0.620	335.516	486.929	100.000	dec	**
Molybdenum, total (Federal)	ug/L	MW-4C	9	5.667	1.327	0.620	4.844	6.489	100.000		
Selenium, total (Federal)	ug/L	MW-10	9	0.778	0.452	0.620	0.498	1.058	50.000		
Selenium, total (Federal)	ug/L	MW-11	9	3.744	1.006	0.620	3.121	4.368	50.000		
Selenium, total (Federal)	ug/L	MW-12	9	0.578	0.233	0.620	0.433	0.722	50.000		
Selenium, total (Federal)	ug/L	MW-13	9	9.444	6.277	0.620	5.554	13.335	50.000	inc	
Selenium, total (Federal)	ug/L	MW-2R	13	0.500	0.000	0.494	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-3	9	0.500	0.000	0.620	0.500	0.500	50.000		
Selenium, total (Federal)	ug/L	MW-4C	9	0.500	0.000	0.620	0.500	0.500	50.000		
Thallium, total (Federal)	ug/L	MW-10	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-11	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-12	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-13	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-2R	12	0.650	0.520	0.518	0.381	0.919	2.000		
Thallium, total (Federal)	ug/L	MW-3	8	0.500	0.000	0.670	0.500	0.500	2.000		
Thallium, total (Federal)	ug/L	MW-4C	8	0.500	0.000	0.670	0.500	0.500	2.000		
Total Radium (Federal)	pCi/L	MW-10	9	1.231	0.264	0.620	1.067	1.394	5.000		
Total Radium (Federal)	pCi/L	MW-11	9	1.314	1.029	0.620	0.676	1.952	5.000		
Total Radium (Federal)	pCi/L	MW-12	9	0.856	0.083	0.620	0.805	0.908	5.000		
Total Radium (Federal)	pCi/L	MW-13	9	0.891	0.276	0.620	0.720	1.062	5.000		
Total Radium (Federal)	pCi/L	MW-2R	13	1.234	0.418	0.494	1.028	1.440	5.000		
Total Radium (Federal)	pCi/L	MW-3	9	1.394	0.648	0.620	0.993	1.796	5.000		
Total Radium (Federal)	pCi/L	MW-4C	9	1.205	0.416	0.620	0.947	1.462	5.000		

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

Table 1: 95% LCL Compared to GWPS
Petersburg RWS III Landfill
AES Indiana
Petersburg Generating Station, Petersburg, Indiana
Atlas Project No. 170AES0004

Sample ID	Through Sample Date	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Cobalt, Total	Fluoride	Lead, Total	Lithium, Total	Mercury, Total	Molybdenum, Total	Selenium, Total	Thallium, Total	Radium 226/228 Combined
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
	GWPS (greater of MCL/USEPA Amendment Level, or background PL)	**6**	**10**	**2000**	**4**	**5**	**100**	**6**	**4**	**15**	**40**	**2**	**100**	**50**	**2**	**5**
	MCL	6	10	2000	4	5	100	-	4	15	-	2	-	50	2	5
	USEPA'S Amendments to the National Minimum Criteria*	-	-	-	-	-	-	6	-	15	40	-	100	-	-	-
	Prediction Limit (based on background data through May 2024)	1	5.1	64.5825	0.65	2	10	1	0.5	10	20	0.67	10	8.6	1	4.46
MW-2R	September 2018	3	0	34	1	1	5	10	2.5	5	**818**	0	50	1	2	0.114
	May 2019	3	0	29	1	1	5	4	2.5	5	**638**	0	17	2	2	0.194
	November 2019	3	3	28	1	1	5	2	2.5	5	**477**	0	17	2	2	0.179
	May 2020	3	8	36	1	1	5	1	0.505	5	**490**	0	5	2	2	0.366
	November 2020	3	7	36	1	1	5	3	0	5	**486**	0	0	2	2	0.543
	May 2021	3	6	40	1	1	5	3	0	5	**424**	0	0	2	2	0.453
	November 2021	2.500	5.754 7.311 (N=8)	40.523	0.500	1.000	5.000	2.294	0	5.000	**515.247**	0.100	10.196	2.500	2.500	0.289
	May 2022	2.500	5.292 8.366 (N=9)	41.859	0.500	1.000	5.000	2.312	0.505	5.000	**582.865**	0.100	9.659	2.500	2.500	0.313
	November 2022	0.5	5.67 8.711 (N=9)	43.031	0.1	1	5	1.888	0.05	5	**825.071**	1	10.115	0.500	0.500	0.785
	May 2023	0.5	0 3.285 (N=8) 7.247 (N=11)	38.25	0.1	1	5	1.825	0.05	5	**718.048**	1	10.163	0.500	0.500	0.824
	November 2023	0.5	0 2.789 (N=8) 7.277 (N=12)	34.725	0.1	1	5	2.053	0.05	5	**627.387**	1	10.214	0.500	0.500	1.076
	May 2024	0.5	0 2.21 (N=8) 7.606 (N=13)	38.118	0.1	1	5	2.053	0.05	5	**641.154**	0.1	10.349	0.500	0.500	1.084
MW-3	September 2018	3	5	35	2	2	5	10	2.5	5	**1624**	0	**328**	2	2	0.311
	May 2019	3	2	30	2	1	5	3	0.564	0	**1204**	0	**291**	2	2	0.211
	November 2019	3	4	30	2	1	5	1	0	0	**1343**	0	**334**	2	2	0
	May 2020	2	6	31	1	1	5	0	0	0	**1140**	0	**367**	2	2	0
	November 2020	2	**10.3**	30	1	1	5	2	0.096	0	**1274**	0	**367**	2	2	0
	May 2021	2	**11**	37	1	1	5	2	0.076	5	**1554**	0	**510**	2	1	0.575
	November 2021	2.500	**15.704**	36.317	0.500	1.000	5.000	1.967	0.06	5.000	**1559.385**	0.100	**504.354**	2.500	1.000	0.83
	May 2022	0.700	**14.776**	32.601	0.500	1.000	5.000	1.833	0	5.000	**1754.498**	0.100	**312.35**	2.500	0.500	0.674
	November 2022	0.5	**15.159**	34.454	0.1	1	5.000	1.804	0.034	5	**1823.029**	1	**246.234**	0.500	0.500	0.586
	May 2023	0.5	**11.246**	38.194	0.1	1	5	1.86	0.034	5	**1737.995**	1	**236.682**	0.500	0.500	0.623
	November 2023	0.5	6.888 **14.278 (N=8)**	47.45	0.1	1	5.000	1.836	0.02	5	**1619.129**	1	**239.234**	0.500	0.500	0.488
	May 2024	0	0 1.301 (N=8)	47.464	0.1	1	5	1.91	0.02	5	**1541.992**	0.1	**238.493**	0.500	0.500	0.385

Table 1: 95% LCL Compared to GWPS
Petersburg RWS III Landfill
AES Indiana
Petersburg Generating Station, Petersburg, Indiana
Atlas Project No. 170AES0004

Sample ID	Through Sample Date	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Cobalt, Total	Fluoride	Lead, Total	Lithium, Total	Mercury, Total	Molybdenum, Total	Selenium, Total	Thallium, Total	Radium 226/228 Combined
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
	GWPS (greater of MCL/USEPA Amendment Level, or background PL)	**6**	**10**	**2000**	**4**	**5**	**100**	**6**	**4**	**15**	**40**	**2**	**100**	**50**	**2**	**5**
	MCL	6	10	2000	4	5	100	-	4	15	-	2	-	50	2	5
	USEPA'S Amendments to the National Minimum Criteria*	-	-	-	-	-	-	6	-	15	40	-	100	-	-	-
	Prediction Limit (based on background data through May 2024)	1	5.1	64.5825	0.65	2	10	1	0.5	10	20	0.67	10	8.6	1	4.46
MW-4C	September 2018	3	5	16	2	2	5	10	2.5	5	**228**	0	50	2	2	0.055
	May 2019	3	5	16	2	1	5	2	0.497	5	**225**	0	50	2	2	0.096
	November 2019	3	5	16	2	1	5	2	0	5	**251**	0	50	2	2	0.403
	May 2020	3	2	27	1	1	5	2	0	5	**245**	0	50	2	2	0.403
	November 2020	2	2	26	1	1	5	0	0.092	5	**246**	0	50	2	2	0.352
	May 2021	2	2	28	1	1	5	0	0	5	**236**	0	50	2	1	0.189
	November 2021	2.500	2.500	28.04	0.500	1.000	5.000	0	0	5.000	**244.571**	0.100	50.000	2.500	1.000	0.500
	May 2022	2.500	0.600	26.836	0.500	0.899	5.000	0	0	5.000	**279.12**	0.100	14.630	2.500	0.500	0.911
	November 2022	0.5	0.5	26.572	0.1	0.899	5	0.598	0.026	5	**328.902**	1	4.053	0.500	0.500	0.618
	May 2023	0.5	0.5	26.067	0.1	0.476	5	0.393	0.026	5	**324.98**	1	4.454	0.500	0.500	0.691
	November 2023	0.5	0.5	25.712	0.1	0.476	5	0.393	0.028	5	**335.358**	1	4.454	0.500	0.500	0.623
	May 2024	0.5	0.5	26.15	0.1	0.476	5	0.597	0.066	5	**330.261**	0.1	3.918	0.500	0.500	0.586
MW-10	September 2018	3	**48**	59	1	1	5	5	2.5	5	50	0	50	2	2	0.390
	May 2019	3	**33**	37	1	1	5	5	0.572	5	50	0	50	2	2	0.390
	November 2019	2	**17**	25	0	1	0	5	0	0	49	0	29	2	2	0.457
	May 2020	2	**30**	25	0	1	5	3	0	0	47	0	18	2	2	0.489
	November 2020	2	**40**	27	0	1	5	2	0.241	0	**41**	0	10	2	2	0.487
	May 2021	2	**88**	55	0	1	3	2	0.413	0	37	0	16	1	2	1.127
	November 2021	3.000	**94.510**	57.921	0.196	0.500	2.937	2.583 4.001 (N=8)	0.413	3.14	37.673 **40.858 (N=5)** 27.804 (N=6) 44.919 (N=8)	0.100	14.014	1.494	2.500	0.547
	May 2022	3.000	**81.819**	69.221	0.313	0.265	3.067	2.583	0.266	3.973	36.223 **44.576 (N=8)**	0.100	11.746	1.294	2.500	0.544
	November 2022	0.500	**80.119**	68.022	0.062	0.346	3.067	1.964	0.270	3.973	38.475 **41.43 (N=8)**	1.000	11.645	0.530	0.500	0.851
	May 2023	0.5	**67.306**	61.485	0	0.346	4.899	1.904	0.194	4.053	34.277 **40.844 (N=8)**	1	14.108	0.257	0.500	0.751
	November 2023	0.5	**68.977**	51.278	0	0.346	4.899	1.836	0.190	4.053	24.657 37.104 (N=9)	1	11.693	0.257	0.500	0.865
	May 2024	0.5	**60.745**	58.139	0	0.346	4.899	2.046	0.063	5	20.299	0.1	11.212	0.331	0.500	0.912

Table 1: 95% LCL Compared to GWPS
Petersburg RWS III Landfill
AES Indiana
Petersburg Generating Station, Petersburg, Indiana
Atlas Project No. 170AES0004

Sample ID	Through Sample Date	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Cobalt, Total	Fluoride	Lead, Total	Lithium, Total	Mercury, Total	Molybdenum, Total	Selenium, Total	Thallium, Total	Radium 226/228 Combined
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
	GWPS (greater of MCL/USEPA Amendment Level, or background PL)	**6**	**10**	**2000**	**4**	**5**	**100**	**6**	**4**	**15**	**40**	**2**	**100**	**50**	**2**	**5**
	MCL	6	10	2000	4	5	100	-	4	15	-	2	-	50	2	5
	USEPA'S Amendments to the National Minimum Criteria*	-	-	-	-	-	-	6	-	15	40	-	100	-	-	-
	Prediction Limit (based on background data through May 2024)	1	5.1	64.5825	0.65	2	10	1	0.5	10	20	0.67	10	8.6	1	4.46
MW-11	September 2018	3	5	25	1	1	5	10	2.5	5	50	0	50	2	2	0.133
	May 2019	3	5	27	1	1	5	10	0.522	5	50	0	50	2	2	0.042
	November 2019	3	4	19	0	1	3	3	0	5	50	0	50	2	2	0
	May 2020	3	4	21	0	1	5	3	0	5	50	0	50	2	2	0
	November 2020	3	4	19	0	1	5	1	0.126	3	50	0	50	2	2	0
	May 2021	3	4	26	0	1	5	1	0.115	3	50	0	50	2	2	0
	November 2021	3.000	3.544	25.623	0.416	1.000	0	2.096 4.863 (N=8)	0.123	3.735	50	0.100	50.000	2.155	2.500	0.333
	May 2022	2.500	3.544	25.492	0.416	0.500	0	2.096 4.863 (N=8) 7.409 (N=16)[1]	0	3.735	50	0.100	8.931	2.526	0.500	0.216
	November 2022	0.5	0	25.083	0	1	1.291	0	0.062	2.498	10	1	1.647	3.244	0.500	0.000
	May 2023	0.5	0	20.755	0	1	1.291	0	0.065	2.498	10	1	1.647	3.832	0.500	0.000
	November 2023	0.5	0	19.995	0	1	1.291	0	0.065	5	10	1	8.931	3.296	0.500	0.000
	May 2024	0.5	0	19.528	0	1	2.329	0	0.139	5	10	0.1	5	2.831	0.500	0.000
MW-12	September 2018	3	5	25	1	1	5	10	0.25	5	50	0	50	2	2	0
	May 2019	3	5	25	1	1	5	10	0.149	5	50	0	50	2	2	0
	November 2019	3	5	23	1	1	5	10	0.109	5	50	0	50	2	2	0.144
	May 2020	3	5	25	1	1	5	10	0.101	5	50	0	50	2	2	0.144
	November 2020	3	5	27	1	1	5	10	0.125	5	50	0	50	2	2	0.386
	May 2021	3	3	25	1	1	5	3	0.119	5	50	0	50	2	2	0.377
	November 2021	3.000	1.474	27.746	0.500	1.000	5.000	2.708 6.852 (N=8)[1]	0.122	5.000	50	0.100	50.000	2.500	2.500	0.387
	May 2022	2.500	0.467	25.721	0.500	0.500	5.000	2.708 6.852 (N=8)[1]	0.097	1.731	50	0.100	50.000	2.500	2.500	0.387
	November 2022	0.5	0.541	24.289	0.1	1	5	0.229	0.061	1.731	10	1	5	0.500	0.500	0.820
	May 2023	0.5	0.905	26.435	0.1	1	5	0.263	0.061	1.731	10	1	5	0.500	0.500	0.670
	November 2023	0.5	0.474	23.861	0.1	1	5	0.263	0.062	1.731	10	1	5	0.500	0.500	0.670
	May 2024	0.5	0.484	24.657	0.1	1	5	0.263	0.113	5	10	0.1	5	0.263	0.500	0.681

Table 1: 95% LCL Compared to GWPS
Petersburg RWS III Landfill
AES Indiana
Petersburg Generating Station, Petersburg, Indiana
Atlas Project No. 170AES0004

Sample ID	Through Sample Date	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Cobalt, Total	Fluoride	Lead, Total	Lithium, Total	Mercury, Total	Molybdenum, Total	Selenium, Total	Thallium, Total	Radium 226/228 Combined
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
	GWPS (greater of MCL/USEPA Amendment Level, or background PL)	**6**	**10**	**2000**	**4**	**5**	**100**	**6**	**4**	**15**	**40**	**2**	**100**	**50**	**2**	**5**
	MCL	6	10	2000	4	5	100	-	4	15	-	2	-	50	2	5
	USEPA'S Amendments to the National Minimum Criteria*	-	-	-	-	-	-	6	-	15	40	-	100	-	-	-
	Prediction Limit (based on background data through May 2024)	1	5.1	64.5825	0.65	2	10	1	0.5	10	20	0.67	10	8.6	1	4.46
MW-13	September 2018	3	5	9	1	1	5	10	1.075	5	0	0	50	1	2	0.108
	May 2019	3	5	7	1	1	5	10	0.983	5	0	0	48	0	2	0
	November 2019	1	5	7	1	1	5	10	0.318	5	32	0	39	0	2	0
	May 2020	1	5	18	1	1	5	10	0.054	5	30	0	39	1	2	0.435
	November 2020	1	5	18	1	1	5	10	0.613	5	0	0	33	2	2	0.435
	May 2021	1	5	17	1	1	5	10	0.597	5	0	0	32	2	2	0.522
	November 2021	3.000	5.000	16.575	0.500	1.000	5.000	10	0.653	5.000	0 0 (N=6) 0 (N=8)	0.100	41.909	3.785	2.500	0.565
	May 2022	3.000	2.500	17.593	0.500	0.500	5.000	10	0.541	5.000	0 0 (N=8) **217.267 (N=16)**	0.100	35.165	3.968	0.500	0.521
	November 2022	2.5	2.5	17.029	0.5	1	5	1.8	0.547	5	0 **202.414 (N=16)**	0.1	35.550	5.229	0.500	0.682
	May 2023	2.5	0.5	17.759	0.1	1	5	0.5	0.55	5	0 **42.862 (N=8)**	0.1	32.657	4.528	0.500	0.682
	November 2023	0.5	0.5	18.901	0.1	1	5	0.5	0.536	5	3.011 **85.792 (N=8)**	1	31.072	1.762	0.500	0.704
	May 2024	0.5	0.5	16.483	0.1	1	5	0.5	0.657	5	**109.202**	0.1	35.303	4.748	0.500	0.543

Notes:
GWPS = Groundwater Protection Standard
MCL = Maximum Contaminant Level based on National Primary Drinking Water Regulations
LCL = Lower Confidence Limit
Bold font with gray shading indicates 95% LCL of the mean of the last four measurements that is in exceedance of GWPS.
Bold font with green shading indicates 95% LCL of the mean of the last eight measurements that is in exceedance of GWPS.
Bold font with gold shading indicates 95% LCL of the mean based on a qualitative evaluation of dataset that didnt trigger a mean/LCL conflict but visually warranted evaluation of a larger dataset.
ug/L = micrograms per liter (ppb)
mg/L = milligrams per liter (ppm)
Std. Units = Standard Units
*USEPA'S *Amendments to the National Minimum Criteria (Phase One, Part One), Disposal of Coal Combustion Residuals from Electric Utilities;* effective August 29, 2018 (page 36444).
1 - Exceedance not declared due to historic elevated non-detect reporting limits being the primary factor in LCL exceedance calculated over the evaluated sample set.
Background prediction limits are re-calculated after each sampling event. If a background prediction limit value is utilized as the GWPS, the GWPS for the current summary may be different from previous events.
The 95% LCL statistic is based on the rolling set of the four most recent individual sample results for a parameter.
LCL calculations utilize 1/2 the median non-detect (ND) reporting limit (RL) from the full date range of non-detect sample results. If RL levels changed over time, the current calculated LCL value may be larger than the most recent four ND results.
DUMPStat summary table output limits the number of significant digits reported for a calculated LCL. An exceedingly small calculated LCL value (e.g. 0.00001 mg/L) may simply be reported as 0 in the output summary.
Historic elevated non-detect reporting limits for fluoride were removed from background prediction limit calculations beginning with May 2024 analyses.

Table 1: 95% LCL Compared to GWPS
Petersburg RWS III Landfill
AES Indiana
Petersburg Generating Station, Petersburg, Indiana
Atlas Project No. 170AES0004

Sample ID	Through Sample Date	Antimony, Total	Arsenic, Total	Barium, Total	Beryllium, Total	Cadmium, Total	Chromium, Total	Cobalt, Total	Fluoride	Lead, Total	Lithium, Total	Mercury, Total	Molybdenum, Total	Selenium, Total	Thallium, Total	Radium 226/228 Combined
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
	GWPS (greater of MCL/USEPA Amendment Level, or background PL)	**6**	**10**	**2000**	**4**	**5**	**100**	**6**	**4**	**15**	**40**	**2**	**100**	**50**	**2**	**5**
	MCL	6	10	2000	4	5	100	-	4	15	-	2	-	50	2	5
	USEPA'S Amendments to the National Minimum Criteria*	-	-	-	-	-	-	6	-	15	40	-	100	-	-	-
	Prediction Limit (based on background data through May 2024)	1	5.1	64.5825	0.65	2	10	1	0.5	10	20	0.67	10	8.6	1	4.46

April 2017 data point for MW-10 Molybdenum that was non-detect at RL of 1000 ug/L was removed from dataset that was obscuring resolution of a decreasing trend.
Reporting units of measure for certain constituents in DUMPStat output tables were changed from units of mg/L (ppm) to ug/L (ppb) beginning with November 2021 LCL analysis to allow for reporting of calculated LCLs to more significant digits.
Table updated to include May 2024 assessment sampling results.