



PHASE II SITE INVESTIGATION REPORT

**Norfolk & Western Railroad Property
South 5th Street and 5th Street Northeast
Lafayette, Tippecanoe County, Indiana
Community-Wide Assessment Grant Initiative - Lafayette
USEPA Cooperative Agreement: 4B-00E03203
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TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	iii
1.0 INTRODUCTION	1
2.0 SITE BACKGROUND/HISTORY	1
3.0 POTENTIAL AND KNOWN CONTAMINANTS OF CONCERN (COCs).....	1
4.0 PROPOSED REUSE OF SITE AND REGULATORY GUIDANCE	2
5.0 SCOPE OF WORK & METHODOLOGIES	2
5.1 Proposed Scope of Work.....	2
5.2 Geophysical Survey Methodology	3
5.3 Subsurface Soil Sampling & Decontamination Methodology	3
5.4 Groundwater Sampling & Decontamination Methodology	4
5.5 Exterior Soil Vapor Probe Installation & Sampling Methodology	6
6.0 GEOPHYSICAL SURVEY RESULTS	6
7.0 SOIL BORING INSTALLATION & SAMPLING ACTIVITIES.....	7
7.1 Soil Sampling Activities.....	7
7.2 Groundwater Gauging Activities & Groundwater Elevation Data	7
7.3 Groundwater Sampling Activities.....	8
7.4 Exterior Soil Vapor Sampling Activities	8
8.0 SOIL INVESTIGATION RESULTS	9
8.1 Lithological Description & Site Hydrogeology	9
8.2 Laboratory Analytical Results Summary – Soil.....	9
9.0 GROUNDWATER INVESTIGATION RESULTS	10
10.0 EXTERIOR SOIL VAPOR INVESTIGATION RESULTS	11

11.0	WELLHEAD PROTECTION	11
12.0	QAPP FIELD AUDIT & DATA ASSESSMENT REPORT	11
13.0	SUMMARY AND RECOMMENDATIONS.....	11

TABLES

Table 1	Summary of Groundwater and Well Measurements
Table 2	Summary of Subsurface Soil Analytical Results
Table 3	Summary of Surface Soil Analytical Results
Table 4	Summary of Groundwater Analytical Results
Table 5	Summary of Exterior Soil Vapor Analytical Results

FIGURES

Figure 1	Site Location
Figure 2	Site Map
Figure 3	Potentiometric Map (5/6/24)
Figure 4a	Soil Analytical Results Map-Surface Samples
Figure 4b	Soil Analytical Results Map-Subsurface Samples
Figure 5	Groundwater Analytical Map
Figure 6	Exterior Soil Vapor Analytical Map

APPENDICES

Appendix A	Soil Boring Logs, Temporary Well Diagrams, & Soil Gas Vapor Probe Logs
Appendix B	Sage GPR Survey Report
Appendix C	Laboratory Analytical Reports – Soil, Groundwater, & Soil Gas Vapor
Appendix D	Field Sampling Forms-Low Flow & Soil Gas Vapor Sampling
Appendix E	Field Audit Report and Data Assessment Report

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EXECUTIVE SUMMARY

In accordance with the Indiana Brownfields Program (IBP) and United States Environmental Protection Agency (EPA) approved Sampling and Analysis Plan (SAP) dated March 28, 2024, Industrial Waste Management Consulting Group, LLC (IWM Consulting) conducted a Phase II Environmental Site Assessment (ESA) of the Norfolk & Western Railroad property located at South 5th Street and 5th Street Northeast in Lafayette, Tippecanoe County, Indiana (site). This assessment was conducted to determine the presence/absence, nature, and potential extent of surface and subsurface contamination due to historical activities or operations conducted at or in the immediate vicinity of the site. The environmental investigation was completed between April 15 and May 6, 2024.

The following is a summary of the report. Please refer to the full text of this report in its entirety for a comprehensive understanding of the information presented in this Executive Summary, as specifics are not fully discussed in this section.

Phase II ESA Activities Summary & Recommendations

On April 15 through May 6, 2024, IWM Consulting supervised a ground penetrating radar (GPR) survey, the installation of five soil borings (NW-SB01 through NW-SB05), and installation and sampling of three exterior soil vapor probes (NW-SGe01 through NW-SGe03) to determine the presence/absence, nature and potential extent of surface and subsurface contamination due to historical activities or operations conducted at the site or in the immediate vicinity of the site. A total of 20 surface, near-surface, and subsurface soil samples, and five groundwater samples were collected for laboratory analysis [not including quality assurance/quality control (QA/QC) samples]. Additionally, two shallow exterior soil vapor (SGe) samples were able to be analyzed by the laboratory.

Soil Summary

All volatile organic compound (VOC) and polycyclic aromatic hydrocarbons (PAH) constituents were reported at concentrations below either their most stringent established Risk-Based Closure Guide (R2) Published Levels or the laboratory reporting limits in all surface, near-surface, and subsurface soil samples collected.

Arsenic was detected at a concentration above the R2 Residential Soil Published Level (RSPL) of 10 mg/kg, but below the R2 Commercial Soil Published Level (CSPL) of 30 mg/kg and Recreational Soil Published Level for a Community Park [Rec SPL (Park)] of 40 mg/kg, in four near surface soil samples and one surface soil sample. All other reported arsenic concentrations were below the R2 RSPL.

Lead was detected at a concentration above the RSPL of 400 mg/kg, but below the CSPL and Rec SPL (Park) of 800 mg/kg, in one near-surface soil sample collected [NW-SL-SB03 (3-4.5')]. All other reported lead

concentrations were below the RSPL.

Groundwater Summary

All VOCs and PAHs were reported at concentrations below the laboratory reporting limits.

Total lead and arsenic were reported above their respective R2 Groundwater Published Levels (GWPLs), however, dissolved lead and arsenic concentrations were below their respective GWPLs. This is most likely the result of turbidity in the samples and the temporary nature of the monitoring wells being that they were undeveloped.

Exterior Soil Vapor Summary

Only two SGe samples were sufficient for laboratory analysis. A total of 18 separate VOCs were detected in the SGe samples, however, no contaminants were detected in any SGe samples at concentrations exceeding their respective R2 Residential Shallow Soil Gas Published Levels (RSGPLs). Of note, tetrachloroethylene (PCE) was detected in samples NW-SGe03 and NW-SGe-FD1, however, PCE was not detected in any soil or groundwater samples collected from the site.

Conclusions

No VOC or PAH constituents were detected in the near surface or subsurface soils, groundwater, or exterior soil vapor above a published level at the site.

Arsenic and lead were detected in multiple near-surface and surface soil samples above their RSPLs but below commercial or recreational published levels. The residential published level is a conservative estimate that is known to be safe where children are present and exposure is continual. It is not expected that future use of the site will involve continual soil exposure. Its current use is as a “greenspace” adjacent to a community park. Should future use involve multi-family residential use, CSPLs would apply to property use.

The SGe results indicate no potential for vapor intrusion into future structures at the site of both petroleum constituents and chlorinated solvents above a residential published level for indoor air. Although only two SGe samples were able to be analyzed and a data gap exists in the center of the site, IDEM will typically expect vapor intrusion investigations at occupied structures if those structures are within 100 feet of a potential soil source of vapors, or underlain by or in contact with groundwater exceeding IDEM’s published groundwater levels for VOCs. No groundwater plume is evident at the site and VOCs were not detected in the soils at the site.

Based on the results of the soil, groundwater, and soil gas samples collected, redevelopment of this property for commercial or recreational purposes appears to be unencumbered.

1.0 INTRODUCTION

In accordance with the Indiana Brownfields Program (IBP) and United States Environmental Protection Agency (EPA) approved Sampling and Analysis Plan (SAP) dated April 3, 2024, Industrial Waste Management Consulting Group, LLC (IWM Consulting) conducted a Phase II Environmental Site Assessment (ESA) of the Norfolk & Western Railroad property located at South 5th Street and 5th Street Northeast in Lafayette, Tippecanoe County, Indiana (site). The objective of this assessment was to determine the presence/absence, nature, and potential extent of surface and subsurface contamination due to historical activities or operations conducted at the site or in the immediate vicinity of the site. The environmental investigation was completed between April 15 and May 6, 2024.

Please refer to the following sections of this report for a comprehensive understanding of the information presented in this Phase II ESA Report, as specifics are fully discussed in the following sections.

2.0 SITE BACKGROUND/HISTORY

The site is a narrow strip of land between Lingle Avenue and South 5th Street in Lafayette, Tippecanoe County, Indiana as indicated on **Figure 1 (Site Location Map)**. The site is generally rectangular in shape and contains a total of approximately 0.37 acres on one parcel. The site is currently vacant and used as a “greenspace” which is owned by the City of Lafayette. It is adjacent to a park (Triangle Park), that borders the site to the west-northwest. In addition to the park to the west-northwest, the site is bordered by residential areas to the north, east, and southeast and by South 5th Street, followed by a residential area to the west. A map depicting the surrounding area of the site is included as **Figure 2 (Site Map)**.

IWM Consulting reviewed publicly available information in the Indiana Department of Environmental Management’s (IDEM) Virtual File Cabinet (VFC) and available files related to the site. No known assessment activities have been conducted on the site.

Historic Sanborn maps show multiple railroad tracks on the site until at least 1999. In 2007, the railroad tracks were no longer present. Additionally, historic Sanborn maps and city directories show the adjacent Triangle Park property was used as a corn mill, as well as a coal and oil distribution company. The other surrounding properties are all residential with dwellings.

The EDR Radius Report listed several nearby former drycleaners including Buckles Laundry (aka Runk’s 4th Street Laundry, Bennett’s Laundry, Cripe’s Laundry & Dry Cleaning, and Wesner’s Coin Operated Laundry), located at 415 South 4th Street; Crown Laundry, located at 220 South 4th Street and 320 South 4th Street; and Lafayette Linen Supply, located at 228 South 4th Street, in the Indiana Drycleaners database. Although these drycleaners appear to have no reported releases or spills, their proximity (approximately 600 to 700 feet) and the potential for vapors to move in all directions via preferential pathways (utility conduits) results in these sites being considered a Recognized Environmental Condition (REC) and pose a potential Vapor Encroachment Condition (VEC) for the site.

3.0 POTENTIAL AND KNOWN CONTAMINANTS OF CONCERN (COCs)

Based upon the historical information obtained regarding the subject site, the former uses of the site and surrounding property uses, the following potential contaminants of concern (COCs) were characterized during the Phase II ESA activities:



- Volatile organic compounds (VOCs) using SW-846 Method 8260 (soil and groundwater);
- VOCs using SW-846 Method TO-15 (soil gas only)
- Polycyclic aromatic hydrocarbons (PAHs) using SW-846 Method 8270 SIM (soil and groundwater);
- Resource Conservation and Recovery Act (RCRA) 8 Metals using SW-846 Method 6010/7471 (soil only);
- Total/Dissolved RCRA 8 Metals using SW-846 Method 6010/7470 (groundwater only); and,
- Percent moisture (soil only).

4.0 PROPOSED REUSE OF SITE AND REGULATORY GUIDANCE

IWM Consulting currently recognizes that the future use of the site is potentially as a multi-family residential area for redevelopment. Residential properties are also located adjacent to the site. Soil, groundwater, and soil gas results were compared to the most recent version of Table 1 from Appendix A of the IDEM's *Risk-Based Closure Guide* (R2) which provides several default published levels (PLs) for various COCs relating to human health residential exposure scenarios including Residential Soil PLs (RSPLs), Community Park Recreational Soil PLs [Rec SPLs (Park)], Commercial Soil PLs (CSPLs), Groundwater PLs (GWPLs), and Residential Soil Gas PLs (RSGPLs).

5.0 SCOPE OF WORK & METHODOLOGIES

5.1 Proposed Scope of Work

Per the approved SAP, IWM Consulting conducted the following scope of work:

- Performed a geophysical survey of the site to clear boring locations of possible underground utilities and attempt to locate former or current utility corridors;
- Located all sample locations with a Global Positioning System (GPS) unit so they may be properly mapped and located in the future, if necessary;
- Installed five soil borings (NW-SB01 through NW-SB05) on the site to investigate potential near-surface and subsurface soil and groundwater impacts from historical on- and off-site activities;
- Converted the soil borings into temporary 2-inch diameter temporary monitoring wells (NW-GP01 through NW-GP05) using 10 feet of 0.010-inch slotted polyvinyl chloride (PVC) screen and varying lengths of PVC casing (dependent upon the actual depth of each boring) to obtain groundwater samples;
- Collected 10 surface soil samples (NW-SS01 through NW-SS10) on the site to investigate potential surface soil impacts from historical backfilling, property uses, or illegal dumping;
- Surveyed the top of casing (TOC) of the temporary monitoring wells and gauged groundwater elevations to determine the groundwater flow direction at the site;

- Low-flow groundwater sampled the temporary monitoring wells to evaluate the potential presence of COCs at the site; and
- Installed and sampled three exterior soil vapor (NW-SGe01 through NW-SGe03) probes at locations across the site to evaluate for potential vapor intrusion risks.

The above scope of work was successfully completed (with limited exceptions) as discussed in the following sections of this report. Site features, utility lines, and boring locations are illustrated in **Figure 2 (Site Map)**.

5.2 Geophysical Survey Methodology

A geophysical survey was performed on the site by Sage Group (Sage) on April 15, 2024, to determine the presence/absence of the utilities near boring locations on the site. Sage utilized an RD7000+ Radio Frequency detector to identify buried live electric lines and a GSSI Utility Scan ground penetrating radar (GPR) with a 350 MHz antenna to identify buried objects on the site and clear the borings before the subsurface investigation.

5.3 Soil Sampling & Decontamination Methodology

On April 30, 2024, five soil borings (NW-SB01 through NW-SB05) were advanced at the site. Soil boring locations were selected to provide area-wide coverage of the site as related to areas potentially impacted by historical activities or operations conducted at or near the site. The general soil boring locations are illustrated in **Figure 2 (Site Map)**.

The soil borings were installed utilizing a direct-push Geoprobe unit. The direct-push probe utilizes hydraulics to advance a sampler into the soil. Soil samples pass through the sampler cutting shoe and are retained within a sealed disposable PVC plastic sampling tube. The PVC sleeve containing the soil sample is then removed while the stainless-steel outer casing remains in place. A new PVC sleeve is placed inside the casing for continued sampling and advancement of the borehole.

A direct-push probe unit can obtain soil samples in intervals of one to five feet, or at any desired sampling depths. In this case, continuous sampling at 4-foot-long sampling intervals/drives was utilized. Each boring was sampled utilizing a Geoprobe DT 22 dual-tube sampler, providing a 1.125-inch diameter soil core by 4-foot-long sample, that was advanced within a 2.25-inch diameter outer casing to collect continuous soil samples to the terminus of each boring.

Field screening of all samples for VOCs was performed in the field using a Mini-Rae 3000 photoionization detector (PID), which was calibrated daily following the Quality Assurance Project Plan (QAPP) to minimize error through instrument drift. Soil samples were field screened in 2-foot intervals per the QAPP, and the soil was visually examined and logged to document the lithology beneath the site.

All soil samples collected for laboratory analysis of VOCs were collected following the QAPP and EPA Sampling Method 5035 using bulk TerraCore Sampling supplies, including the 5-gram T-handle sampling device. Standard protocols were observed for sample collection, sample handling and preservation, and chain-of-custody documentation. Samples were placed in a cooler containing ice and maintained at a temperature of approximately 4° Celsius before analysis.

Strict decontamination procedures were followed by contractors and enforced during the investigation activities by IWM Consulting personnel to reduce the potential for cross-contamination. Drilling and all non-disposable, down-hole sampling equipment were decontaminated before first use on-site, and thereafter between borings, using a vigorous heavy scrubbing wash in Alconox® solution, followed by a water rinse. Equipment blanks were also collected by pouring laboratory-prepared de-ionized water through the field sampling equipment (i.e., the cutting shoe) and collecting the rinsate in the proper sample containers for laboratory analysis.

In accordance with the approved SAP (IWM Consulting, April 2, 2024), two soil samples were selected for laboratory analysis from each boring. One soil sample was generally collected from zero to two feet below ground surface (bgs) and a second soil sample was collected from an interval greater than two feet in depth exhibiting the greatest potential for being impacted (i.e., highest PID reading, staining, odors, etc.) that was located above the observed water table. Each soil sample collected was analyzed for VOCs using SW-846 Method 8260, PAHs using SW-846 Method 8270 SIM, RCRA 8 Metals using SW-846 Methods 6010/7471, and percent moisture.

Additionally, 10 surface soil samples (NW-SS01 through NW-SS10) were collected using a hand auger or shovel at locations across the site from depths of up to one-foot bgs for laboratory analysis.

For quality assurance/quality control (QA/QC) purposes, one field duplicate, one equipment blank, and one matrix spike/matrix spike duplicate (MS/MSD) sample per 20 samples from each matrix type were collected as part of this investigation. One trip blank accompanied each cooler shipment which contained samples for VOC analyses. The soil samples were delivered under chain-of-custody controls to Pace Analytical Services LLC (Pace) located in Indianapolis, Indiana for analysis.

5.4 Groundwater Sampling & Decontamination Methodology

Upon the completion of the soil sampling, temporary 2-inch diameter PVC screens (10 feet in length) and risers (varying lengths) were installed in the boreholes via direct push methods to facilitate the collection of one-time low-flow groundwater samples. Pre-washed quartz sand was placed around the well screens (extending approximately two feet above the top of the screened interval) and then bentonite was placed within the borehole from the top of the sand to the ground surface.

On May 6, 2024, low-flow sampling activities were initiated. Low-flow sampling does not require the removal of a large volume of water from the sampling point before a representative sample can be obtained. Low-flow purging and sampling techniques reduce the potential for turbulence in the water column during purging and sampling activities and typically provide more accurate results with respect to VOC and metals samples.

A QED Sample Pro® Portable MicroPurge bladder pump (1.75-inch) and a YSI 556 were used to collect low-flow groundwater samples from the five temporary monitoring wells (NW-GP01 through NW-GP05). The pump is equipped with a disposable bladder sleeve which was exchanged between temporary wells. Dedicated, 0.25-inch diameter Teflon™-lined polyethylene tubing was used for sampling each temporary well.

The multi-probe field meter includes probes for temperature, pH, specific conductance, dissolved oxygen (DO), and oxidation-reduction potential (ORP) and was mounted within a flow-through cell block. Purge rates were established to ensure minimal drawdown. Minimal drawdown was defined as being less than

0.33 feet of drawdown during the purge cycle. Water levels were monitored continuously in each monitoring well during purging.

Field parameters were measured continuously and periodically recorded with groundwater samples collected after the field parameters had stabilized or as approved after a maximum of 30 minutes of purge time. Care was taken to ensure the bladder pump discharge tubing and flow-through cell had evacuated several volumes of water before the samples were collected when feasible. Groundwater stabilization criteria that were utilized during the purging activities are listed below:

- Temperature ± 0.2 °C
- pH ± 0.1 pH units
- Specific Conductance $\pm 3\%$ of reading
- Dissolved Oxygen $\pm 10\%$ of reading or ± 0.2 mg/L
- ORP ± 10 millivolts

The groundwater samples were placed into the appropriate laboratory-provided pre-labeled containers. The groundwater samples from the temporary monitoring wells were analyzed for VOCs using SW-846 Method 8260, PAHs using SW-846 Method 8270 SIM, and total and dissolved RCRA 8 Metals SW-846 Method 6010/7470. The groundwater samples were delivered under chain-of-custody controls to Pace located in Indianapolis, Indiana for analysis.

Strict decontamination procedures were also followed during low-flow groundwater sampling activities by IWM Consulting personnel to minimize the potential for cross-contamination. IWM Consulting personnel, while wearing dedicated nitrile gloves, changed out the disposable bladders, gripper plates, stainless steel check balls, and o-rings on the bladder pumps between each sampling location. The flow-through cell block was decontaminated between sampling points using a brush and a Liquinox® and distilled water solution and was then rinsed with distilled water. Additionally, the bladder pump was double washed with brushes and a separate Liquinox® and distilled water solution and was then rinsed with distilled water between each sampling location.

For QA/QC purposes, one field duplicate, one equipment blank, and one MS/MSD sample per 20 samples from each matrix type were obtained as part of this investigation. One trip blank accompanied each cooler shipment which contained samples for VOC analyses.

To determine the site-specific groundwater flow direction, each temporary monitoring well location utilized was located using a GPS unit, and the TOC elevations for the temporary monitoring wells were surveyed to a common benchmark using transit-stadia surveying techniques by IWM Consulting personnel. Depth to groundwater measurements were obtained from the wells before the groundwater sampling event on May 6, 2024, using a water level indicator, which alerts the user with a tone when the probe makes contact with water. The distance between the TOC riser pipe elevation and the water table was read from the incremented probe line. All elevation measurements were recorded to the nearest 0.01 foot. The elevation data along with groundwater gauging data from each monitoring well location was used to calculate groundwater flow direction and gradient for the site.

Upon completion of the site assessment activities, each of the temporary monitoring wells was abandoned. The PVC well materials were removed where possible, or the PVC casing material was unscrewed from the well screen at least several feet bgs, the borings were sealed with bentonite chips, and the ground surface at each location was capped with material similar to its surroundings.

5.5 Exterior Soil Vapor Probe Installation & Sampling Methodology

To facilitate the collection of one-time exterior soil vapor samples from the shallow subsurface, three SGe probes (NW-SGe01 through NW-SGe03) were installed at locations adjacent to various soil borings to provide coverage across the site for potential vapor intrusion assessment.

The SGe borings were advanced utilizing direct-push technology as previously described to obtain continuous soil samples to determine the final installation depth of five feet bgs was in the vadose zone and free of saturated or semi-saturated zones. The soil samples were field screened at the installation depth and detections were recorded. Per the approved scope of the work activities, soil samples were not submitted for laboratory analysis since they were co-located with soil borings. Due to the semi-saturated zone encountered during installation, soil vapor probe NW-SGe03 was constructed at a depth of only four feet bgs.

The temporary SGe sampling points were constructed of 6-inch stainless-steel screen soil vapor probes connected to Teflon™-lined polyethylene tubing to terminal depth. A coarse sand pack was installed in the annular space to six inches above the vapor probe. Benseal® granular bentonite was then placed in the annular space from the top of the sand pack to the ground surface in lifts and hydrated. Boring logs detailing the lithology and construction details of the SGe sampling points are included in **Appendix A**.

Post installation, the soil vapor probes, including tubing and annular backfilled space, were purged of up to three volumes of air using a graduated syringe to develop the soil vapor sampling point when possible. The volume of vapor purged was measured by collecting the purge vapor into a 1-liter Tedlar bag. The subsurface was allowed to equilibrate at least 24 hours before sampling.

One-time soil vapor samples were collected utilizing 10-minute flow regulators (100 ml/min max) from the soil vapor probes in laboratory-provided, batch-certified, 1-liter Summa® sample canisters. A helium shroud was utilized for leak detection since a vacuum was detected on all of the points during initial purging activities post-installation. Immediately before soil vapor sample collection, the sampling apparatus “dead volume” (tubing and implant screen volume) was removed.

IWM Consulting personnel recorded the start and end sampling time along with the initial and final vacuum measurements of each sample canister during the sampling activities. IWM Consulting personnel made sure that none of the sample canisters reached below the recommended minimum final vacuum reading of three inches of mercury at the end of the respective sampling periods.

Upon completion of the SGe sampling activities, each soil vapor probe was abandoned. The tubing was removed and the borings were sealed with bentonite chips and the ground surface at each location was capped with concrete or similar surface material (i.e., soil, gravel).

6.0 GEOPHYSICAL SURVEY RESULTS

A geophysical survey was performed on the site by Sage on April 15, 2024, to determine the presence/absence of the utilities, possible underground storage tanks, and/or product piping near boring locations on the site. No buried metallic objects were discovered, however, utilities were detected/identified (electric lines) near boring locations requiring the final installation locations to be slightly altered compared to the proposed boring locations. A GPR survey report provided by Sage describing their findings is



provided in **Appendix B**.

7.0 SOIL BORING INSTALLATION & SAMPLING ACTIVITIES

IWM Consulting personnel supervised Strata Environmental Contractors, LLC (Strata) personnel during the advancement of seven soil borings (NW-SB01 through NW-SB05) on April 30, 2024. The PID readings from the screened soil samples were all recorded at background, 0.0 parts per million by volume (ppmv).

Temporary 2-inch diameter PVC screens (10 feet in length) and risers (varying lengths) were placed in the borings to facilitate the collection of groundwater samples. Groundwater samples were obtained from the borings/temporary groundwater sampling points using low-flow sampling techniques. The borings are displayed by location in **Figure 2 (Site Map)**.

7.1 Soil Sampling Activities

IWM Consulting collected 20 soil samples comprised of surface, near-surface, and subsurface soil samples per the methodologies described in Section 5.3 of this report. The soil samples were delivered under chain-of-custody controls to Pace located in Indianapolis, Indiana for analysis using the methods outlined in Sections 5.3 and 3.0 of this report.

For QA/QC purposes, IWM Consulting also submitted two duplicate (FD) samples and two MS/MSD soil samples to account for all parameters analyzed at a rate of one per 20 samples submitted. The following table provides the parent sample information related to the field duplicate and MS/MSD samples:

QA/QC Sample Type/ ID	Parent Sample ID
NW-SL-FD1	NW-SS03 (0.0-1')
MS/MSD	NW-SS09 (0.0-1')

An equipment blank sample (NW-SL-EB1) was also prepared by pouring laboratory-provided deionized water over the hand auger after it had been field-decontaminated. The equipment blank, MS/MSD, and duplicate soil samples were submitted for laboratory analysis of the same parameters. A trip blanks (NW-SL-TB1) accompanied all soil samples obtained for VOC analyses, and the trip blanks were submitted for laboratory analysis of VOCs. The samples were analyzed using Level II QA/QC reporting protocols.

7.2 Groundwater Gauging Activities & Groundwater Elevation Data

IWM Consulting personnel conducted groundwater gauging activities of the temporary monitoring well network for potentiometric map generation purposes on May 6, 2024. All groundwater measurements were recorded to the nearest 0.01 foot using a water level indicator.

To provide a better correlation of groundwater flow direction, groundwater elevation data from seven additional temporary wells were utilized from a concurrent investigation being conducted on an adjacent property for determining the groundwater flow direction. The additional temporary wells included were TP-GP01 through TP-GP07 from the Triangle Park Property located at 425 South 5th Street which is located to the northwest of the site.

The survey corrected potentiometric groundwater surface elevations recorded during the May 6, 2024 groundwater gauging activities for the two properties and used for contouring purposes ranged from a high of 88.95 feet at NW-GP05 to a low of 85.55 feet at TP-GP01. A groundwater elevation map based on this gauging data is provided in **Figure 3 [Potentiometric Map (5/6/24)]**. As per **Figure 3**, the inferred groundwater flow direction is northwest following the terrain's slope. Depth to groundwater and TOC elevation information for all the data locations utilized is also included in **Table 1 – Summary of Groundwater and Well Measurements**.

7.3 Groundwater Sampling Activities

IWM Consulting collected a total of five groundwater samples from temporary monitoring wells on May 6, 2024, utilizing the low-flow methods described in Section 5.4 of this report. Low flow stabilization criteria were not achieved at all sample locations attempted. Low-flow Field Sampling Forms with field notes regarding the sampling procedures are included in **Appendix D**. The groundwater samples were delivered under chain-of-custody controls to Pace located in Indianapolis, Indiana for analysis of VOCs, PAHs, and total and dissolved RCRA 8 Metals using the analytical methods outlined in Sections 3.0 and 5.4 of this report.

For QA/QC purposes, IWM Consulting also submitted one duplicate (FD) sample and one MS/MSD groundwater sample to account for all parameters analyzed at a rate of one per 20 samples submitted. The following table provides the parent sample information related to the field duplicate and MS/MSD samples:

QA/QC Sample Type/ ID	Parent Sample ID
NW-GW-FD01	NW-GW-GP02
MS/MSD	NW-GW-GP01

One equipment blank (NW-GW-EB01) was also prepared by pouring laboratory-provided deionized water over the low-flow pump after it had been field-decontaminated. The MS/MSD and duplicate groundwater samples were submitted for laboratory analysis of the same parameters. A trip blank (NW-GW-TB01) accompanied all groundwater samples obtained for VOC analyses, and the trip blank was submitted for laboratory analysis of VOCs. The samples were analyzed using Level II QA/QC reporting protocols.

Upon completion of the site assessment activities, each of the temporary wells was abandoned. The PVC well materials were removed where possible, or the PVC casing material was unscrewed from the well screen at least several feet bgs. The borings were sealed with bentonite chips to near ground surface and each location was capped with material similar to its surroundings.

7.4 Exterior Soil Vapor Sampling Activities

SGe samples were collected from three temporary soil vapor probes (NW-SGe01 through NW-SGe03) on May 2, 2024, in accordance with the methodologies described in Section 5.5 in this report. Weather conditions during the sampling event were partly cloudy with temperatures averaging from 80 degrees to 86 degrees Fahrenheit throughout sampling.

The SGe samples were delivered to Pace in Mt. Juliet, Tennessee under chain-of-custody controls for analysis of VOCs by EPA Method TO-15. SGe sampling field information forms are included in **Appendix D**. Due to “tight” geologic conditions encountered at NW-SGe02, an insufficient volume of soil vapor was collected over a 122-minute sampling interval despite using a 10-minute flow regulator. The sample from NW-SGe02 could not be analyzed by the laboratory.



For QA/QC purposes, IWM Consulting also submitted one duplicate SGe sample (NW-SGe-FD1) collected from parent SGe sample location NW-SGe03. The duplicate sample was collected simultaneously with NW-SGe03 with the canisters being connected to the sampling point using a “T fitting”. The duplicate was also analyzed for the same parameters using Level II QA/QC reporting standards.

8.0 SOIL INVESTIGATION RESULTS

8.1 Lithological Description & Site Hydrogeology

The site is grass-covered with a layer of brown silty clay covering fill material consisting of silty and sandy clays mixed with gravel and cinders extending to depths ranging between 1.5 feet to 6.5 feet bgs. Native soils beneath this consisted of silty clays extending to depths of 7.5 to 10.75 feet bgs where sands, sometimes clayey, extended to the terminal depth of borings at 24 feet bgs. Groundwater was encountered within the sands at depths ranging from 17 to 19 feet bgs.

The soil boring logs/well completion diagrams with complete lithological descriptions are presented in **Appendix A**.

8.2 Laboratory Analytical Results Summary – Soil

A total of 20 soil samples (not including QA/QC samples) were collected for laboratory analysis as described in Sections 5.3 and 7.1 of this report. The sample results were compared to the current IDEM R2 Soil Published Levels, updated on March 1, 2024.

A table summarizing the results of the soil samples and the QA/QC duplicate sample obtained from the site is included in **Table 2 (Summary of Subsurface Soil Analytical Results)** and **Table 3 (Summary of Surface Soil Analytical Results)**. The soil analytical results for contaminants in soil are displayed by location in **Figure 4a (Soil Analytical Results-Surface Samples)** and **Figure 4b (Soil Analytical Results-Subsurface Samples)**. The soil analytical reports are included in **Appendix C**.

The analytical results for the duplicate sample collected for QA/QC measures were comparable to the parent sample. No analytes were detected in the equipment blank or trip blank samples.

The analytical results are summarized in the following sub-sections.

Surface, Near-Surface, & Subsurface Soil Samples

VOCs

- All VOC constituents were reported at concentrations below their most stringent established R2 Published Levels (Short-term Excavation Soil) or the laboratory reporting limits for the surface, near-surface, and subsurface soil samples.

PAHs

- All PAH constituents were reported at concentrations below their corresponding RSPLs or the laboratory reporting limits for the surface, near-surface, and subsurface soil samples.

Metals

- Arsenic was detected at a concentration above its RSPL (10 mg/kg) in surface and near-surface soil samples NW-SL-SS10 0.0-1' (17.3 mg/kg), NW-SL-SB02 0.5-2' (21.3 mg/kg), NW-SL-SB03 0.5-2' (28.9 mg/kg), NW-SL-SB04 0.5-2' (15.6 mg/kg), and NW-SL-SB05 0.5-2' (12.7 mg/kg).
- Lead was detected at a concentration above its RSPL (400 mg/kg) in near-surface soil sample NW-SL-SB03 -0.5-2' (445 mg/kg).
- All other metal constituents were reported at concentrations below their corresponding RSPLs or the laboratory reporting limits for the soil samples.

9.0 GROUNDWATER INVESTIGATION RESULTS

Five groundwater samples (not including QA/QC samples) were collected for laboratory analysis as described in Sections 5.4 and 7.3 of this report. The sample results were compared to the current IDEM R2 GWPLs, updated on March 1, 2024.

A table summarizing the results of the groundwater samples and the QA/QC duplicate sample obtained from the site is included in **Table 4 (Summary of Groundwater Analytical Results)**. The groundwater analytical report is included in **Appendix C**.

The groundwater analytical results are displayed by location in **Figure 5 (Groundwater Analytical Map)**.

The analytical results for the duplicate sample NW-GW-FD01 collected for QA/QC measures were comparable to the parent sample NW-GW-GP02. No analytes were detected in the equipment blank or trip blank sample.

VOCs

All VOC constituents were reported at concentrations below the laboratory reporting limits or their respective GWPLs for the groundwater samples.

PAHs

All PAH constituents were reported at concentrations below the laboratory reporting limits or their respective GWPLs for the groundwater samples.

Metals

- Total arsenic was reported at concentrations exceeding the R2 GWPL (10 µg/L) at groundwater all sampling locations, however, dissolved arsenic concentrations were below the R2 GWPL.
- Total lead was reported at concentrations exceeding the R2 GWPL (15 µg/L) at all groundwater sampling locations, however, dissolved lead concentration was below the R2 GWPL.

All other metal constituents were reported at concentrations below their corresponding GWPLs or the laboratory reporting limits for the groundwater samples.

10.0 EXTERIOR SOIL VAPOR INVESTIGATION RESULTS

A total of three SGe samples were collected and submitted for laboratory analysis as described in Sections 5.6 and 8.4 of this report, however, sample NW-SGe02 could not be analyzed due to low sample volume. The sample results were compared to the current IDEM R2 Residential Shallow Exterior Soil Gas Published Levels (RSGPLs) and Commercial Shallow Exterior Soil Gas Published Levels (CSGPLs), updated March 1, 2024.

A table summarizing the results of the SGe samples and QA/QC duplicate sample collected from the site are included in **Table 5 (Summary of Exterior Soil Vapor Analytical Results)**. The SGe analytical report is included in **Appendix C**.

A total of 18 separate VOCs were detected in the SGe samples. The SGE analytical results for contaminants are displayed by location in **Figure 6 (Exterior Soil Vapor Analytical Map)**.

SGe Sample Results

No contaminants were detected in any SGe samples at concentrations exceeding their respective R2 RSGPLs. Of note, tetrachloroethylene (PCE) was detected in samples NW-SGe03 and NW-SGe-FD1, however, PCE was not detected in any soil or groundwater samples collected from the site.

11.0 WELLHEAD PROTECTION

Based on the IDEM Wellhead Proximity Determinator website (<https://idemmaps.idem.in.gov/whpa2/>), the site is not located within a Wellhead Protection Area or Source Water Area.

12.0 QAPP FIELD AUDIT & DATA ASSESSMENT REPORT

In accordance with the QAPP, an IWM Project Manager conducted a field audit concurrently with the groundwater sampling activities on May 6, 2024. An IWM Consulting QA manager also prepared Data Assessment Reports (DARs) in accordance with the QAPP, which discusses the overall precision, accuracy, usability, and completeness of the data collected during the ESA activities. The data collected during the ESA activities was deemed acceptable and usable with limitations, as outlined in the DAR. A copy of the Field Audit Report and DARs are included in **Appendix E**.

13.0 SUMMARY AND RECOMMENDATIONS

Soil Summary

All VOC and PAH constituents were reported at concentrations below either their most stringent established R2 Published Levels or the laboratory reporting limits in all surface, near-surface, and subsurface soil samples collected.

Arsenic was detected at a concentration above the RSPL of 10 mg/kg, but below the CSPL of 30 mg/kg and Rec SPL (Park) of 40 mg/kg, in four near surface soil samples and one surface soil sample. All other reported



arsenic concentrations were below the RSPL.

Lead was detected at a concentration above the RSPL of 400 mg/kg, but below the CSPL and Rec SPL (Park) of 800 mg/kg, in one near-surface soil sample collected [NW-SL-SB03 (3-4.5')]. All other reported lead concentrations were below the RSPL.

Groundwater Summary

All VOCs and PAHs were reported at concentrations below the laboratory reporting limits.

Total lead and arsenic were reported above their respective R2 GWPLs, however, dissolved lead and arsenic concentrations were below their respective R2 GWPLs. This is most likely the result of turbidity in the samples and the temporary nature of the monitoring wells in being that they were undeveloped.

Exterior Soil Vapor Summary

Only two SGe samples were subject to laboratory analysis. A total of 18 separate VOCs were detected in the SGe samples, however, no contaminants were detected in any SGe samples at concentrations exceeding their respective R2 RSGPLs. Of note, PCE was detected in samples NW-SGe03 and NW-SGe-FD1, however, PCE was not detected in any soil or groundwater samples collected from the site.

Conclusions

No VOC or PAH constituents were detected in the near surface or subsurface soils or groundwater above a published level at the site.

Arsenic and lead were detected in multiple soil samples both near surface and surface above their residential published levels but below commercial or recreational published levels. The residential published level is a conservative estimate that is known to be safe where children are present and exposure is continual. It is not expected that future use of the site will involve continual soil exposure. Its current use is as a “greenspace” adjacent to a community park. Should future use involve multi-family residential use, the CSPLs would apply.

The SGe results indicate no potential for vapor intrusion into future structures at the site of both petroleum constituents and chlorinated solvents above a residential published level for indoor air. Although only two SGe samples were able to be analyzed and a data gap exists in the center of the site, IDEM will typically expect vapor intrusion investigations at occupied structures if those structures are within 100 feet of a potential soil source of vapors, or underlain by or in contact with groundwater exceeding IDEM’s published groundwater levels for VOCs. No groundwater plume is evident at the site and VOCs were not detected in the soils at the site.

Based on the results of the soil, groundwater, and soil gas samples collected, redevelopment of this property for commercial or recreational purposes appears to be unencumbered.

IWM Consulting appreciates the opportunity to provide the IBP with this Phase II ESA Report. If you have any questions or comments regarding this submittal, please contact Chris Parks at 317-347-1111 or by email at cparks@iwmconsult.com.

Sincerely,

IWM Consulting Group, LLC



Christopher D. Schoo
Senior Staff Scientist



Christopher D. Parks, LPG No. 2169
Technical Manager

cc: Ms. Ashley Green, USEPA Region 5 Brownfield Coordinator



TABLES

Table 1
Groundwater Gauging and Well Data Summary
Community Wide Assessment Grant - Lafayette
Triangle Park / Norfolk & Western Properties
Lafayette, Tippecanoe County, Indiana

Well ID	Gauge Date	Top of Casing (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Monitoring Well Depth (feet)	Monitoring Well Screen Interval (feet)
TP-GP01	5/6/2024	90.35	4.80	85.55	15.05	5.05-15.05
TP-GP02	5/6/2024	95.65	9.77	85.88	16.65	6.65-16.65
TP-GP03	5/6/2024	100.01	11.74	88.27	17.15	7.15-17.15
TP-GP04	5/6/2024	98.14	10.34	87.80	18.73	8.73-18.73
TP-GP05	5/6/2024	99.63	11.60	88.03	17.61	7.61-17.61
TP-GP06	5/6/2024	97.86	10.39	87.47	18.61	8.61-18.61
TP-GP07	5/6/2024	101.09	13.18	87.91	18.65	8.65-18.65
NW-GP01	5/6/2024	108.10	19.87	88.23	26.71	16.71-26.71
NW-GP02	5/6/2024	108.00	19.84	88.16	25.89	15.89-25.89
NW-GP03	5/6/2024	107.11	18.77	88.34	26.42	16.42-26.42
NW-GP04	5/6/2024	108.02	19.26	88.76	25.10	15.10-25.10
NW-GP05	5/6/2024	106.90	17.95	88.95	24.66	14.66-24.66

Table 2
Summary of Sub-Surface Soil Analytical Results
Norfolk & Western Railroad Property
South 5th Street & 5th Street NE
Lafayette, Tippecanoe County, Indiana
EPA ACRES ID: 259714

Sample ID	NW-SL-SB01 0.5-2'	NW-SL-SB01 6-8'	NW-SL-SB02 0.5-2'	NW-SL-SB02 8-10'	NW-SL-SB03 0.5-2'	NW-SL-SB03 3-4'	NW-SL-SB04 0.5-2'	NW-SL-SB04 5-6.5'	NW-SL-SB05 0.5-2'	NW-SL-SB05 6-7.5'	R2 Residential Soil Published Level	R2 Recreational Soil Exposure- Community Park	R2 Commercial Soil Published Levels
Sample Date	4/30/2024	4/30/2024	4/30/2024	4/30/2024	4/30/2024	4/30/2024	4/30/2024	4/30/2024	4/30/2024	4/30/2024			
Sample Depth (feet)	0.5-2'	6-8'	0.5-2'	8-10'	0.5-2'	3-4'	0.5-2'	5-6.5'	0.5-2'	6-7.5'			
PID (ppmv)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
VOCs	All VOCs Below Laboratory Reporting Limits										<u>NE</u>	NE	NE
/PAHs													
Acenaphthene	<0.0054	<0.0056	0.0096	<0.0055	<0.031	<0.0056	<0.055	<0.0055	<0.0055	<0.0055	<u>5,000</u>	30,000	50,000
Acenaphthylene	0.019	<0.0056	0.059	<0.0055	0.34	<0.0056	0.13	<0.0055	<0.0055	<0.0055	<u>NE</u>	NE	NE
Anthracene	0.025	<0.0056	0.039	<0.0055	0.25	<0.0056	0.083	<0.0055	<0.0055	<0.0055	<u>NE</u>	NE	NE
Benzo(a)anthracene	0.064	<0.0056	0.22	<0.0055	1.1	0.015	0.37	0.0093	<0.0055	<0.0055	<u>20</u>	70	200
Benzo(a)pyrene	0.084	<0.0056	0.28	<0.0055	1.9	0.014	0.49	0.0085	<0.0055	<0.0055	<u>2</u>	7	20
Benzo(b)fluoranthene	0.17	<0.0056	0.54	<0.0055	3.1	0.021	0.76	0.013	<0.0055	<0.0055	<u>20</u>	70	200
Benzo(g,h,i)perylene	0.056	<0.0056	0.18	<0.0055	1.2	0.013	0.33	0.0055	<0.0055	<0.0055	<u>NE</u>	NE	NE
Benzo(k)fluoranthene	0.041	<0.0056	0.54	<0.0055	0.97	0.0069	0.22	<0.0055	<0.0055	<0.0055	<u>200</u>	7,000	2,000
Chrysene	0.083	<0.0056	0.32	<0.0055	1.4	0.028	0.43	0.012	<0.0055	<0.0055	<u>2,000</u>	7,000	20,000
Dibenz(a,h)anthracene	0.019	<0.0056	0.054	<0.0055	0.37	<0.0056	0.092	<0.0055	<0.0055	<0.0055	<u>2</u>	7	20
Fluoranthene	0.14	<0.0056	0.49	<0.0055	1.2	0.020	0.45	0.014	<0.0055	<0.0055	<u>3,000</u>	20,000	30,000
Fluorene	0.0066	<0.0056	0.019	<0.0055	0.034	<0.0056	<0.055	<0.0055	<0.0055	<0.0055	<u>3</u>	20,000	30,000
Indeno(1,2,3-cd)pyrene	0.054	<0.0056	0.17	<0.0055	1.2	0.0099	0.30	<0.0055	<0.0055	<0.0055	<u>20</u>	70	200
1-methylnaphthalene	0.057	<0.0056	0.55	<0.0055	0.37	0.075	0.37	0.049	<0.0055	<0.0055	<u>300</u>	400	400
2-methylnaphthalene	0.058	<0.0056	0.73	<0.0055	0.47	0.081	0.42	0.049	<0.0055	<0.0055	<u>300</u>	2,000	3,000
Naphthalene	0.031	<0.0056	0.20	<0.0055	0.35	0.018	0.17	0.016	<0.0055	<0.0055	<u>30</u>	200	90
Phenanthrene	0.19	<0.0056	0.71	<0.0055	0.69	0.098	0.57	0.066	<0.0055	<0.0055	<u>NE</u>	NE	NE
Pyrene	0.13	<0.0056	0.50	<0.0055	1.5	0.025	0.55	0.019	<0.0055	<0.0055	<u>3,000</u>	10,000	20,000
Metals													
Arsenic	8.5	9.4	<u>21.3</u>	5.9	<u>28.9</u>	8.2	<u>15.6</u>	8.9	<u>12.7</u>	6.4	<u>10</u>	40	30
Barium	52.1	83.5	65.0	56.7	134	64.6	52.8	39.8	55.4	32.4	<u>20,000</u>	100,000	100,000
Cadmium	0.55	<0.55	0.60	<0.51	0.73	0.88	<0.49	<0.54	<0.54	<0.48	<u>10</u>	60	100
Chromium	11.0	13.8	44.7	14.4	10.9	10.5	9.2	11.0	17.6	14.0	<u>NE</u>	NE	NE
Lead	40.3	19.2	90.2	19.0	<u>445</u>	34.4	53.5	20.3	27.5	8.8	<u>400</u>	800	800
Mercury	<0.21	<0.23	<0.24	<0.23	0.33	<0.23	<0.23	<0.22	<0.22	<0.22	<u>3</u>	3	3

Notes:

All samples collected by IWM Consulting personnel and analyzed at Pace Analytical Services, LLC located in Indianapolis, Indiana.

Unlisted compounds do not exceed laboratory reporting limits for all samples.

All results in mg/kg (dry weight basis).

Underlined concentrations exceed Risk-Based Closure Guide (R2) Residential Soil Published Levels.

Bolded concentrations exceed R2 Recreational Soil Published Levels (Community Park).

Bolded & shaded concentrations exceed R2 Commercial Soil Published Levels.

Depth increments are feet Below Ground Surface (BGS).

NE = Not Established.

ppmv = parts per million by volume.

VOCs analyzed using SW-846 Method 8260.

PAHs analyzed using SW-846 Method 8270 SIM.

RCRA 8 Metals analyzed using SW-846 Method 6010/7471.



Table 3
Summary of Surface Soil Analytical Results
Norfolk & Western Railroad Property
South 5th Street & 5th Street NE
Lafayette, Tippecanoe County, Indiana
EPA ACRES ID: 259714

Sample ID	NW-SL-SS01 0.0-1'	NW-SL-SS02 0.0-1'	NW-SL-SS03 0.0-1'	NW-SL-FD1 (NW-SL-SS03 0.0-1')	NW-SL-SS04 0.0-1'	NW-SL-SS05 0.0-1'	NW-SL-SS06 0.0-1'	NW-SL-SS07 0.0-1'	NW-SL-SS08 0.0-1'	NW-SL-SS09 0.0-1'	NW-SL-SS10 0.0-1'	R2 Residential Soil Published Level	R2 Recreational Soil Exposure- Community Park	R2 Commercial Soil Published Levels
Sample Date	5/1/2024	5/1/2024	5/1/2024	5/1/2024	5/1/2024	5/1/2024	5/1/2024	5/1/2024	5/1/2024	5/1/2024	5/1/2024			
Sample Depth (feet)	0.0-1'	0.0-1'	0.0-1'	0.0-1'	0.0-1'	0.0-1'	0.0-1'	0.0-1'	0.0-1'	0.0-1'	0.0-1'			
PID (ppmv)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
VOCs	All VOCs Below Laboratory Reporting Limits											NE	NE	NE
PAHs														
Acenaphthene	<0.029	<0.0056	<0.028	<0.028	<0.0056	<0.0057	<0.0059	<0.0057	<0.0057	<0.0057	<0.029	<u>5,000</u>	30,000	50,000
Acenaphthylene	<0.029	<0.0056	0.073	0.16	<0.0056	<0.0057	<0.0059	<0.0057	0.090	<0.0057	0.32	NE	NE	NE
Anthracene	<0.029	<0.0056	0.069	0.13	<0.0056	<0.0057	<0.0059	<0.0057	0.057	<0.0057	0.21	NE	NE	NE
Benzo(a)anthracene	0.030	<0.0056	0.13	0.21	<0.0056	<0.0057	0.0098	0.012	0.20	0.0075	0.51	<u>20</u>	70	200
Benzo(a)pyrene	0.047	0.0063	0.21	0.35	<0.0056	<0.0057	0.013	0.018	0.28	0.011	0.84	<u>2</u>	7	20
Benzo(b)fluoranthene	0.081	0.011	0.38	0.59	<0.0056	<0.0057	0.022	0.028	0.51	0.023	1.5	<u>20</u>	70	200
Benzo(g,h,i)perylene	0.040	<0.0056	0.16	0.30	<0.0056	<0.0057	0.0099	0.012	0.19	0.0073	0.60	NE	NE	NE
Benzo(k)fluoranthene	<0.029	<0.0056	0.14	0.25	<0.0056	<0.0057	0.0060	0.012	0.16	<0.0057	0.44	<u>200</u>	7,000	2,000
Chrysene	0.037	<0.0056	0.17	0.26	<0.0056	<0.0057	0.011	0.016	0.25	0.0087	0.64	<u>2,000</u>	7,000	20,000
Dibenz(a,h)anthracene	<0.029	<0.0056	0.046	0.084	<0.0056	<0.0057	<0.0059	<0.0057	0.059	<0.0057	0.18	<u>2</u>	7	20
Fluoranthene	0.038	0.0060	0.14	0.23	<0.0056	<0.0057	0.012	0.016	0.27	0.0094	0.59	<u>3000</u>	20,000	30,000
Fluorene	<0.029	<0.0056	<0.028	<0.028	<0.0056	<0.0057	<0.0059	<0.0057	0.011	<0.0057	<0.029	<u>3</u>	20,000	30,000
Indeno(1,2,3-cd)pyrene	0.035	<0.0056	0.15	0.29	<0.0056	<0.0057	0.0088	0.012	0.19	0.0070	0.59	<u>20</u>	70	200
1-methylnaphthalene	<0.029	<0.0056	0.039	0.040	<0.0056	<0.0057	<0.0059	<0.0057	0.017	<0.0057	0.070	<u>300</u>	400	400
2-methylnaphthalene	<0.029	<0.0056	0.048	0.048	<0.0056	<0.0057	<0.0059	<0.0057	0.022	<0.0057	0.077	<u>300</u>	2,000	3,000
Naphthalene	<0.029	<0.0056	0.035	0.035	<0.0056	<0.0057	<0.0059	<0.0057	0.028	<0.0057	0.059	<u>30</u>	200	90
Phenanthrene	<0.029	<0.0056	0.072	0.098	<0.0056	<0.0057	0.0063	<0.0057	0.069	<0.0057	0.20	NE	NE	NE
Pyrene	0.044	0.0069	0.18	0.28	<0.0056	<0.0057	0.015	0.019	0.32	0.011	0.71	<u>3,000</u>	10,000	20,000
Metals														
Arsenic	7.6	6.7	9.4	9.9	3.7	3.8	7.6	8.9	7.5	8.1	<u>17.3</u>	<u>10</u>	40	30
Barium	77.4	64.5	126	69.0	56.5	58.0	100	96.5	248	94.9	209	<u>20,000</u>	100,000	100,000
Cadmium	<0.50	<0.50	<0.57	<0.54	<0.51	<0.55	<0.55	<0.60	<0.52	<0.60	<0.58	<u>10</u>	60	100
Chromium	12.7	11.3	12.9	11.8	7.0	7.8	12.8	13.9	18.4	13.7	12.6	NE	NE	NE
Lead	19.3	12.4	34.1	31.1	8.5	9.1	13.4	13.4	17.6	14.8	39.8	<u>400</u>	800	800
Mercury	<0.24	<0.25	<0.25	<0.22	<0.25	<0.23	<0.23	<0.23	<0.24	<0.24	<0.23	<u>3</u>	3	3

Notes:
All samples collected by IWM Consulting personnel and analyzed at Pace Analytical Services, LLC located in Indianapolis, Indiana.
Unlisted compounds do not exceed laboratory reporting limits for all samples.
All results in mg/kg (dry weight basis).
Underlined concentrations exceed Risk-Based Closure Guide (R2) Residential Soil Published Levels.
Bolded concentrations exceed R2 Recreational Soil Published Levels (Community Park).
Bolded & shaded concentrations exceed R2 Commercial Soil Published Levels.

Depth increments are feet Below Ground Surface (BGS).
NE = Not Established.
ppmv = parts per million by volume.
VOCs analyzed using SW-846 Method 8260.
PAHs analyzed using SW-846 Method 8270 SIM.
RCRA 8 Metals analyzed using SW-846 Method 6010/7471.



Table 4
Summary of Groundwater Analytical Results
Norfolk & Western Railroad Property
South 5th Street & 5th Street NE
Lafayette, Tippecanoe County, Indiana
EPA ACRES ID: 259714

Sample ID	NW-GW-GP01	NW-GW-GP02	NW-GW-FD01 (NW-GW-GP02)	NW-GW-GP03	NW-GW-GP04	NW-GW-GP05	R2 Groundwater Published Levels
Sample Date	5/6/2024	5/6/2024	5/6/2024	5/6/2024	5/6/2024	5/6/2024	
VOCs							
	All VOCs Below Laboratory Reporting Limits						N/A
PAHs							
	All PAHs Below Laboratory Reporting Limits						N/A
Metals							
Arsenic	34.2	45.2	35.6	252	150	125	10
Arsenic, dissolved	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	10
Barium	105	116	112	534	276	983	2,000
Barium, dissolved	65.8	63.0	62.8	39.8	63.3	85.4	2,000
Cadmium	<2.0	<2.0	<2.0	2.0	<2.0	<2.0	5
Cadmium, dissolved	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5
Chromium	20.2	30.4	27.0	130	42.4	39.8	100
Chromium, dissolved	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	100
Lead	18.2	16.1	14.4	131	48.4	98.6	15
Lead, dissolved	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	15

Notes:

All samples collected by IWM Consulting personnel and analyzed at Pace Analytical Services, LLC located in Indianapolis, Indiana.

Unlisted compounds do not exceed laboratory reporting limits for all samples.

All results in ug/L .

Bolded & shaded concentrations exceed Risk-Based Closure Guide (R2) Groundwater Published Levels.

VOCs analyzed using SW-846 Method 8260.

PAHs analyzed using SW-846 Method 8270 SIM.



Table 5
Summary of Exterior Soil Gas Analytical Results
Norfolk & Western Railroad Property
South 5th Street and 5th Street NE
Lafayette, Tippecanoe County, Indiana
EPA ACRES ID: 259714

Sample ID	NW-SGe01	NW-SGe02	NW-SGe03	NW-SGe-FD1 (NW-SGe03)	R2 Residential Shallow Exterior Soil Gas Published Level	R2 Commercial Shallow Exterior Soil Gas Published Level
Sample Date	5/2/2024	5/2/2024	5/2/2024	5/2/2024		
Sampling Depth (feet)	4.5-5	4.5-5	3.5-4	3.5-4		
Initial Canister Vacuum (inches Hg)	-30	-28	-30	-30		
Final Canister Vacuum (inches Hg)	-3.5	-26.5	-3	-6		
VOCs						
Acetone	23.8	NA	<2.97	<2.97	NE	NE
Benzene	8.56	NA	8.15	7.95	40	200
Carbon disulfide	232	NA	<1.24	<0.622	7,000	30,000
Cyclohexane	20.2	NA	24.3	38.6	60,000	300,000
Ethanol	13.3	NA	7.49	13.7	NE	NE
Ethylbenzene	1.75	NA	1.76	1.73	100	500
4-ethyl toluene	2.13	NA	2.22	<0.982	NE	NE
Trichlorofluoromethane	1.70	NA	1.17	2.33	NE	NE
Dichlorodifluoromethane	3.11	NA	<0.989	<0.989	1,000	4,000
n-Heptane	27.9	NA	32.4	32.7	4,000	20,000
n-Hexane	68.0	NA	64.2	102	7,000	30,000
2-Butanone (MEK)	3.86	NA	<3.69	<3.69	50,000	200,000
2-Propanol (Isopropanol)	3.37	NA	<3.07	3.12	2,000	9,000
Propene	301	NA	<2.15	<2.15	30,000	100,000
Tetrachloroethylene	<1.36	NA	2.53	2.55	400	2,000
Toluene	10.2	NA	14.5	14.7	50,000	200,000
1,2,4-Trimethylbenzene	1.78	NA	1.76	1.66	600	3,000
Total Xylenes	5.21	NA	4.19	4.39	1,000	4,000

Notes:

All samples collected by IWM Consulting personnel and analyzed at Pace Analytical National located in Mt. Juliet, TN.

All results in µg/m³.

Unlisted compounds below laboratory reporting limits.

NE: Not established.

NA: Not analyzed due to insufficient sample volume.

Published Levels obtained from Appendix A, Table A-6 of the Risk-Based Closure Guide (R2), dated July 8, 2022, with all applicable updates (last updated March 2024).

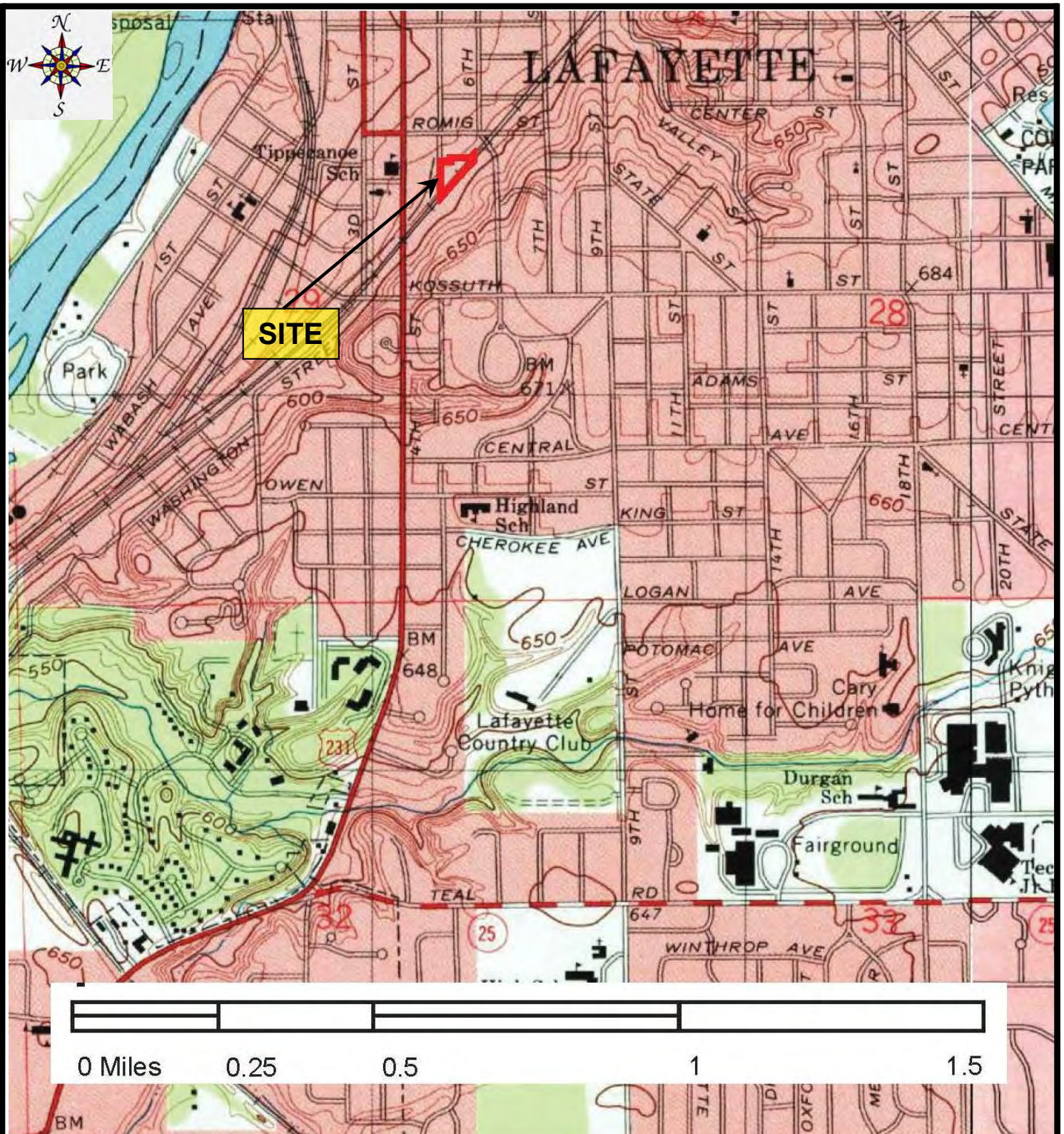
Bolded concentrations exceed R2 shallow RSGPLs.

Bolded & Shaded concentrations exceed R2 shallow CSGPLs.

Exterior soil vapor samples collected utilizing a 1-liter summa canister equipped with an 10-minute flow regulator (~100 mL/minute flow rate).



FIGURES



SOURCE: LAFAYETTE WEST, INDIANA, USGS TOPOGRAPHIC QUADRANGLE MAP, 1998



7428 Rockville Road Indianapolis Indiana 46214
(317) 347-1111 Fax: (317) 347-9326

FIGURE 1






Site Location Map
Norfolk & Western Railroad Property
S. 5th Street & 5th Street Northeast
Lafayette, Tippecanoe County, Indiana

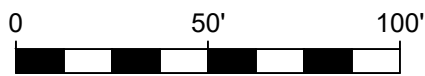
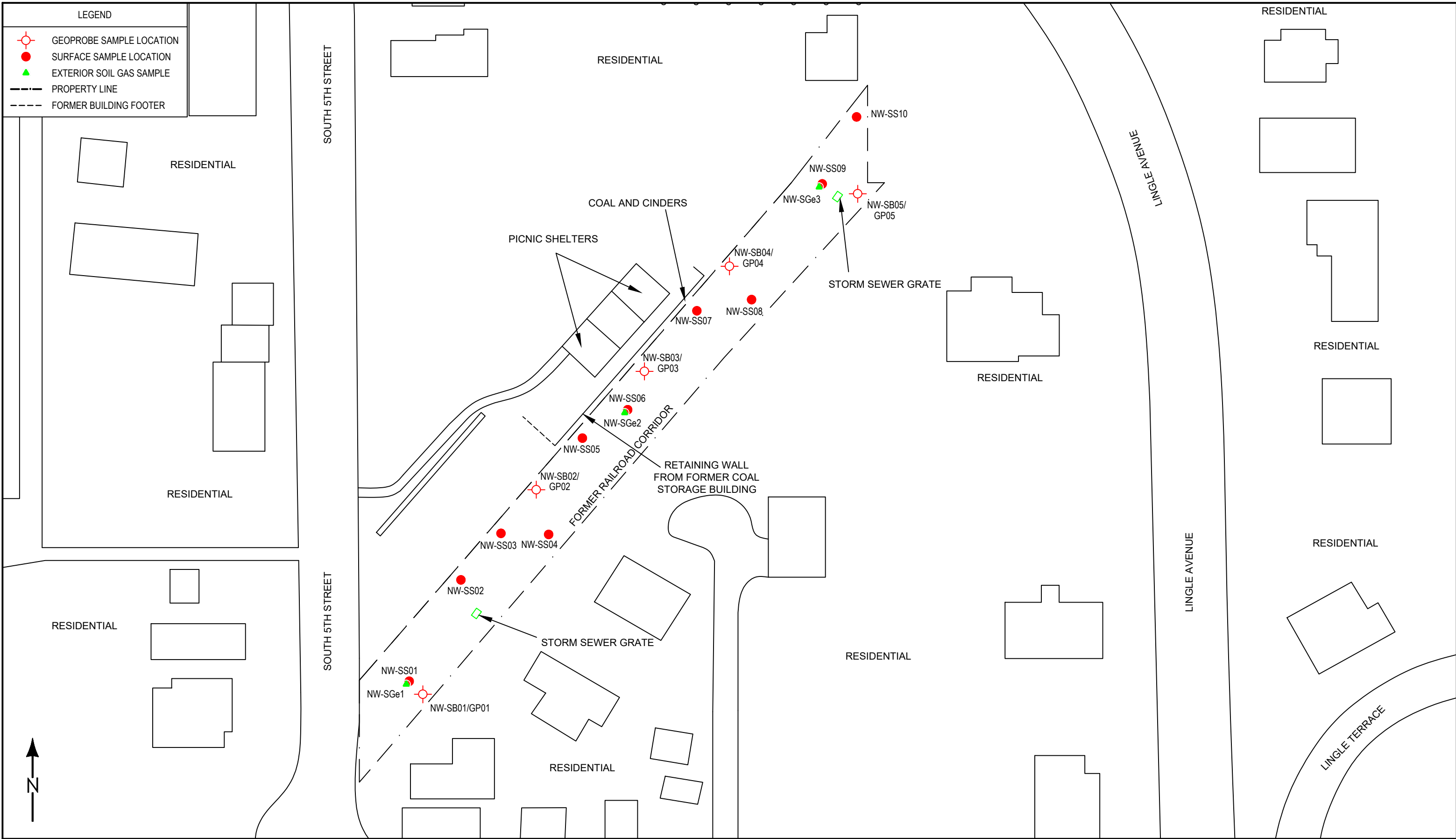
CLIENT

Indiana Finance Authority
Indiana Brownfields Program

Project	Task	Size	Date
IN23055	16	A	01/08/2024

LEGEND

-  GEOPROBE SAMPLE LOCATION
-  SURFACE SAMPLE LOCATION
-  EXTERIOR SOIL GAS SAMPLE
-  PROPERTY LINE
-  FORMER BUILDING FOOTER



**FIGURE 2
SITE MAP**

DRAWN BY: WEA
DATE: 6/6/24
REVISED:
JOB NUMBER: IN23055.16
DWG #Site Map2

NORFOLK & WESTERN RAILROAD PROPERTY
SOUTH 5TH STREET & 5TH STREET NORTHEAST
LAFAYETTE, TIPPECANOE COUNTY, INDIANA



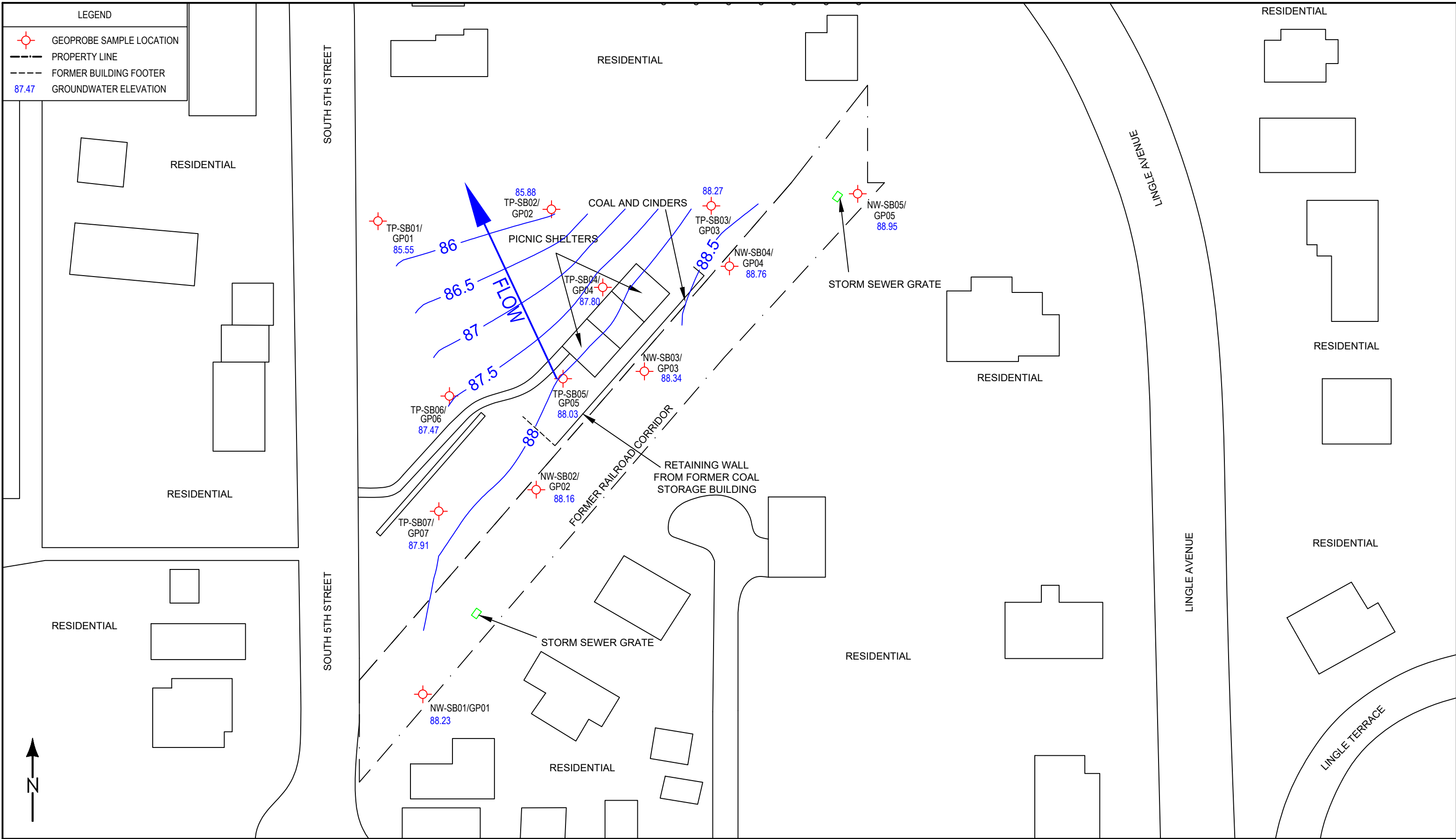
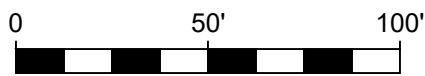


FIGURE 3
POTENTIOMETRIC MAP (5/6/24)



DRAWN BY: WEA
DATE: 6/6/24
REVISED:
JOB NUMBER: IN23055.16
DWG #Site Map2

NORFOLK & WESTERN RAILROAD PROPERTY
 SOUTH 5TH STREET & 5TH STREET NORTHEAST
 LAFAYETTE, TIPPECANOE COUNTY, INDIANA



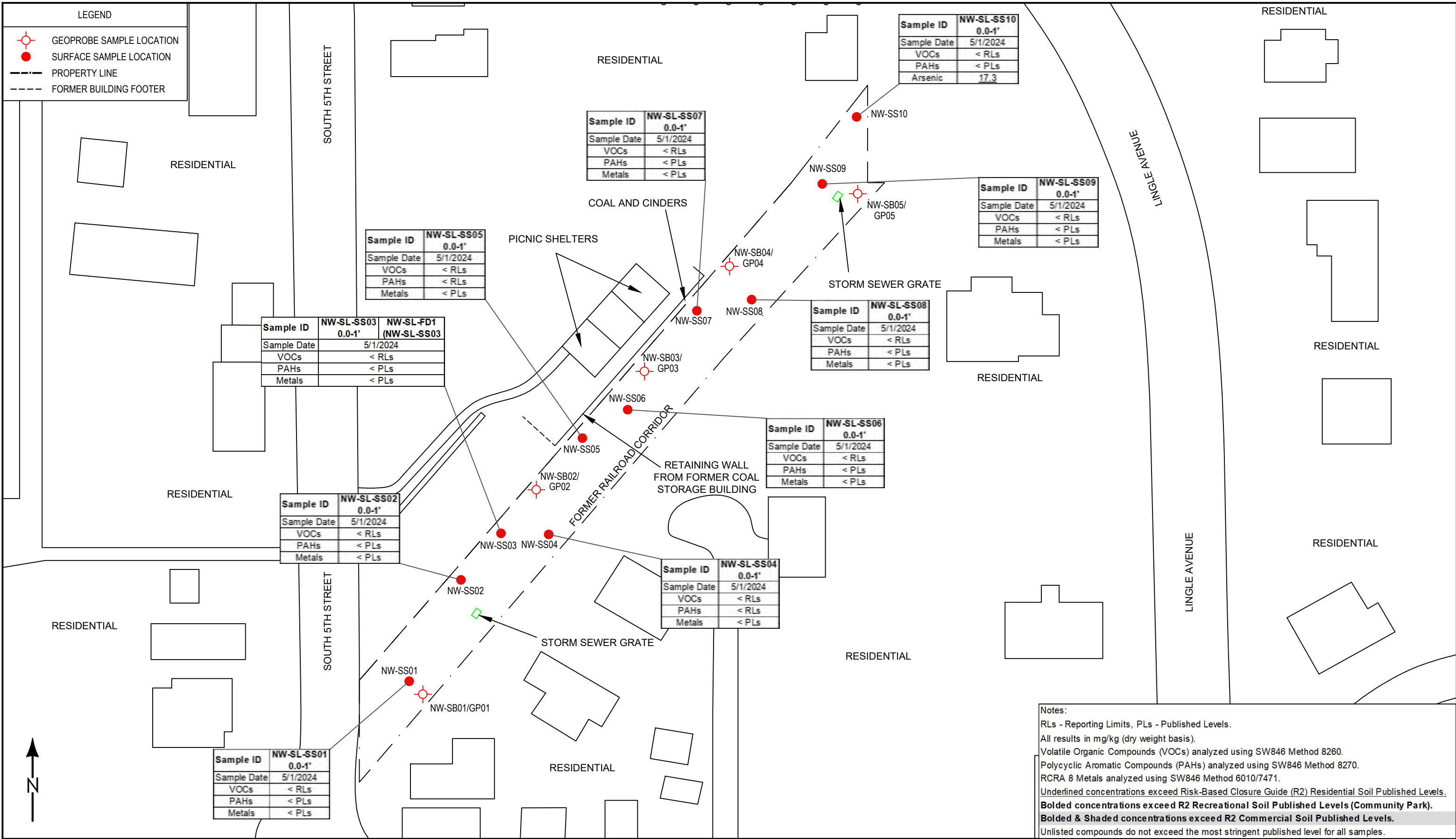
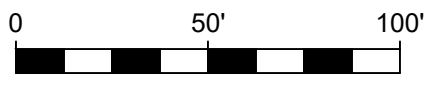


FIGURE 4a
SOIL ANALYTICAL RESULTS MAP - SURFACE SAMPLES



DRAWN BY: WEA
 DATE: 6/17/24
 REVISED: 7/1/24
 JOB NUMBER: IN23055.16
 DWG #Site Map2

NORFOLK & WESTERN RAILROAD PROPERTY
 SOUTH 5TH STREET & 5TH STREET NORTHEAST
 LAFAYETTE, TIPPECANOE COUNTY, INDIANA



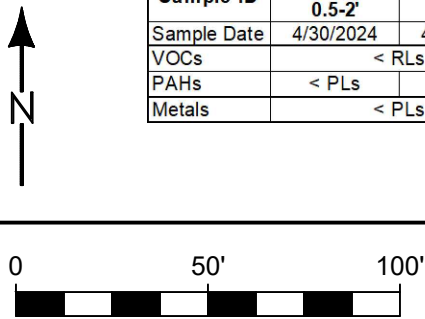
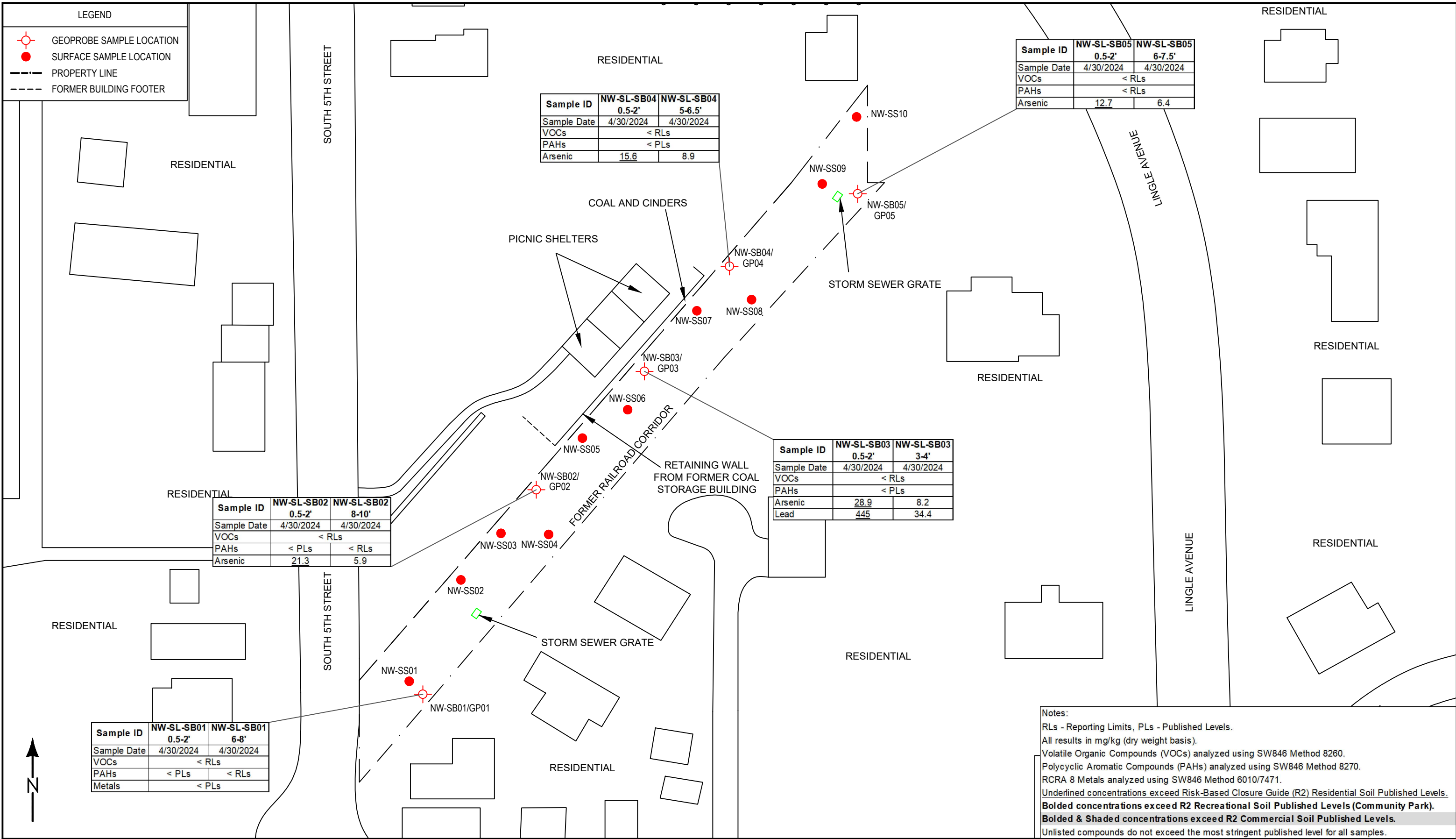


FIGURE 4b
 SOIL ANALYTICAL RESULTS MAP - SUBSURFACE SAMPLES

DRAWN BY: WEA
 DATE: 6/17/24
 REVISED: 7/1/24
 JOB NUMBER: IN23055.16
 DWG #Site Map2

NORFOLK & WESTERN RAILROAD PROPERTY
 SOUTH 5TH STREET & 5TH STREET NORTHEAST
 LAFAYETTE, TIPPECANOE COUNTY, INDIANA



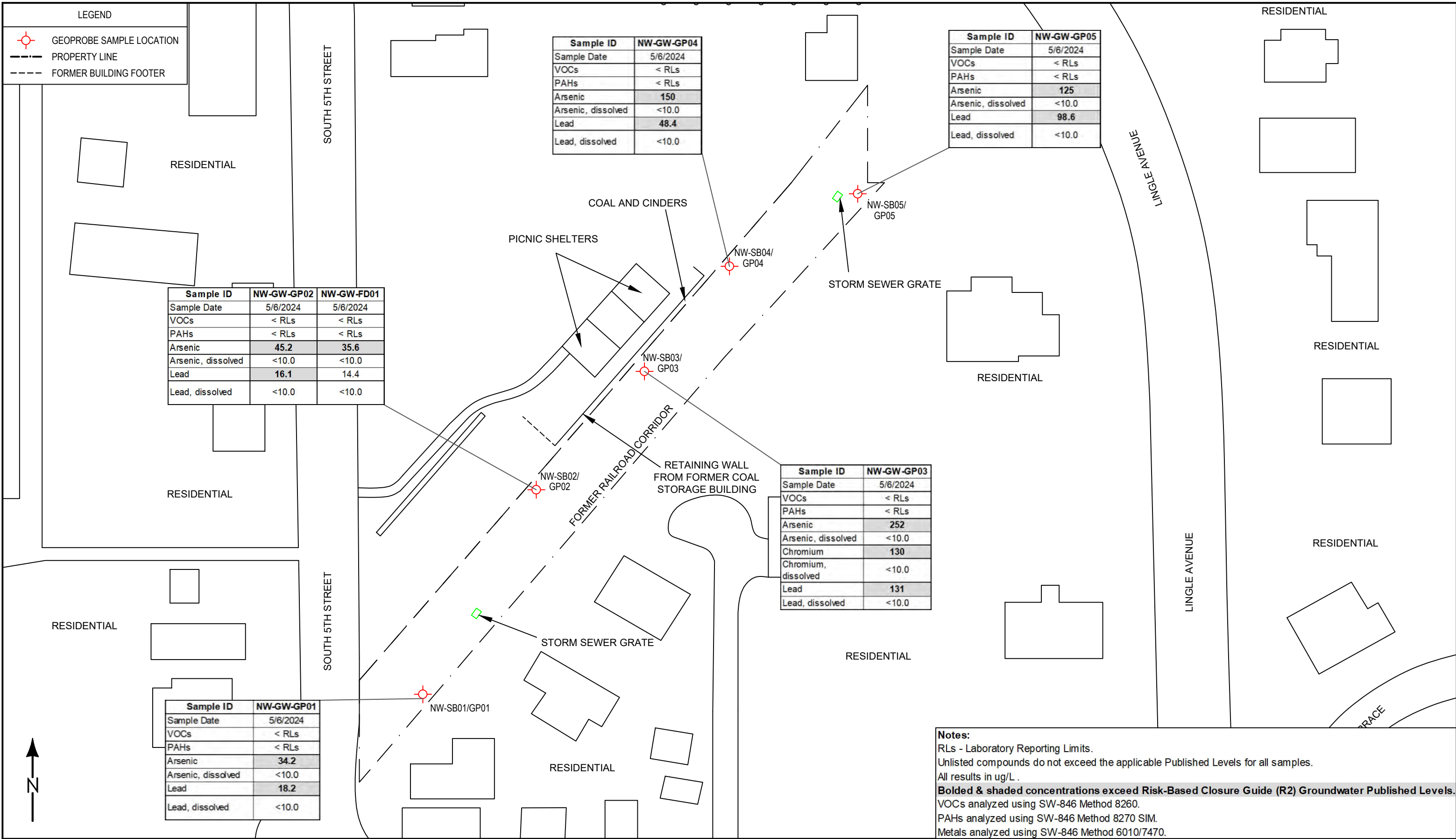
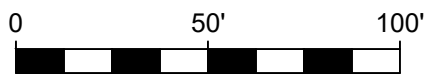


FIGURE 5
GROUNDWATER ANALYTICAL MAP



DRAWN BY: WEA
 DATE: 6/6/24
 REVISED:
 JOB NUMBER: IN23055.16
 DWG #Site Map2

NORFOLK & WESTERN RAILROAD PROPERTY
 SOUTH 5TH STREET & 5TH STREET NORTHEAST
 LAFAYETTE, TIPPECANOE COUNTY, INDIANA



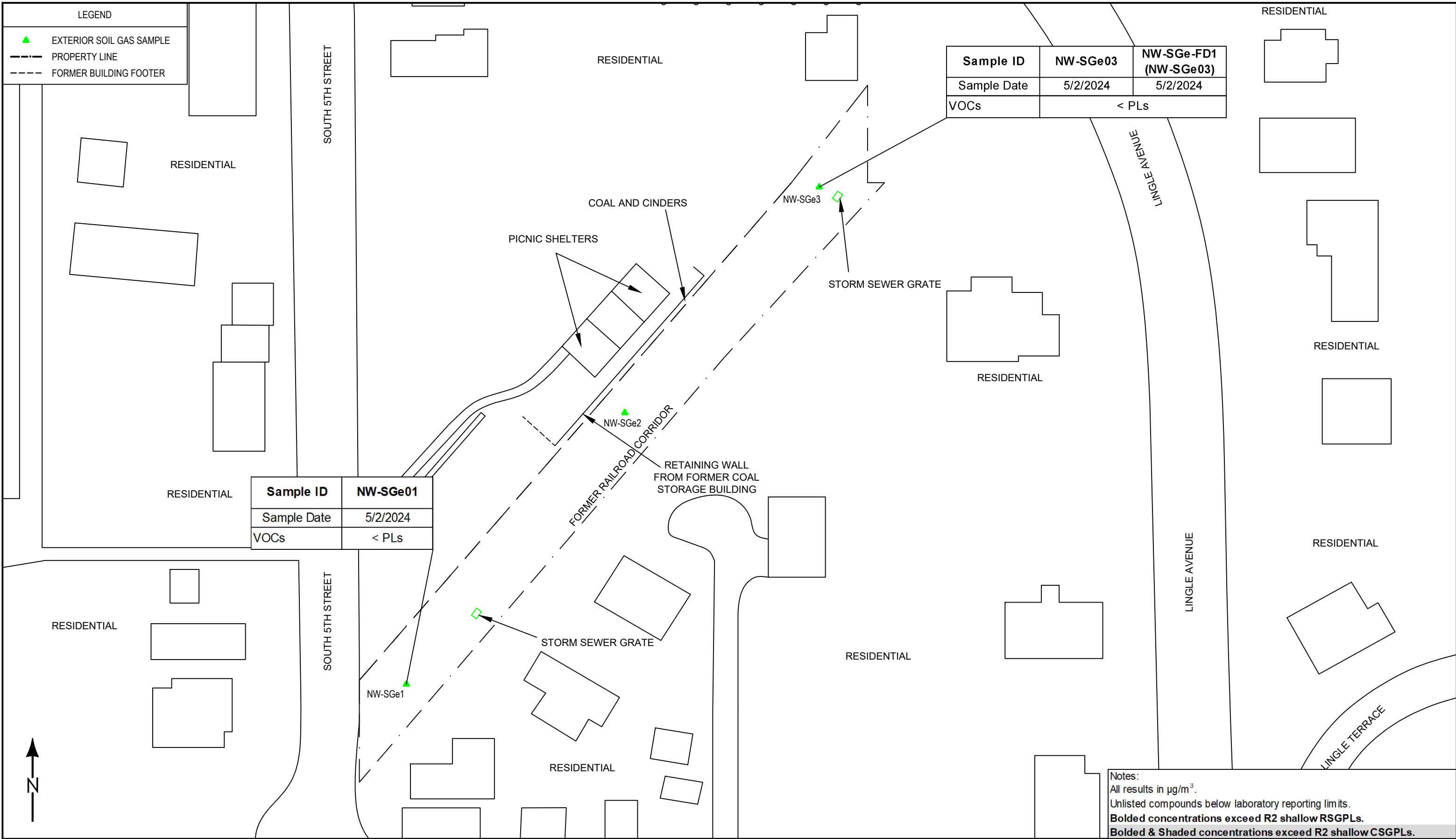
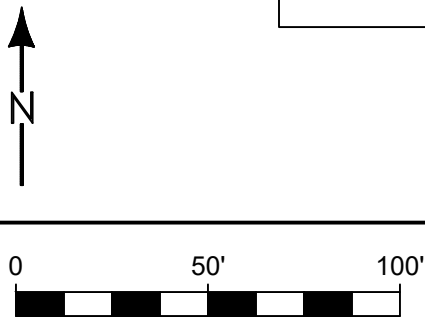


FIGURE 6
EXTERIOR SOIL GAS ANALYTICAL MAP



Notes:
 All results in $\mu\text{g}/\text{m}^3$.
 Unlisted compounds below laboratory reporting limits.
Bolded concentrations exceed R2 shallow RSGPLs.
Bolded & Shaded concentrations exceed R2 shallow CSGPLs.

DRAWN BY: WEA
 DATE: 6/17/24
 REVISED: 6/26/24
 JOB NUMBER: IN23055.16
 DWG #Site Map2

NORFOLK & WESTERN RAILROAD PROPERTY
 SOUTH 5TH STREET & 5TH STREET NORTHEAST
 LAFAYETTE, TIPPECANOE COUNTY, INDIANA



APPENDIX A

SOIL BORING LOGS, TEMPORARY WELL DIAGRAMS, & SOIL VAPOR PROBE LOGS



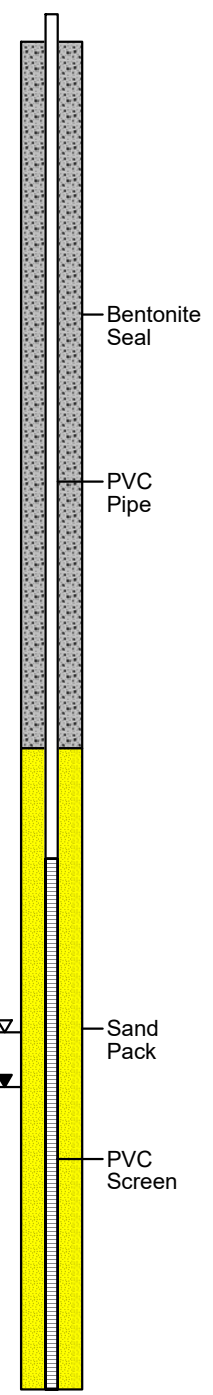
Log of Boring NW-SB01/Temp Well NW-GP01

Norfolk & Western Railroad Property
 South 5th Street & 5th Street NE
 Lafayette, Indiana
 EPA ACRES ID # 259714

Date Completed : 4/30/2024
 Drilling Method : Direct Push
 Sampling Method : Continuous Dual Tube
 Field/Office Logged : CDS/CDS
 Hole Diameter : 2.25"

Casing Size : 2"
 Initial Water Level : 19.0'
 Final Water Level : 18.01'
 Selected for Analysis : *
 Drilling Contractor : Strata Env. Contractors

Depth in feet	USCS	GRAPHIC	Water Levels		Samples	Total PID (ppm)	Total PID (ppm)	Sample Recovery (inches)	Temp Well: NW-GP01 TOC Elev.: 108.10
			▼ Initial During Drilling	▽ During Gauging Event 5/6/24					
DESCRIPTION									
0			Clay, silty, w/ fine sand and organics, brown.						
1			-Gravel, well graded, w/ coarse sand.		1		0.0*	19	
2			-Clay, silty, w/ fine sand, brown, reddish brown mottled.						
3	FL				2		0.0	19	
4									
5			Clay, silty, w/ fine sand and gravel, dark orangish brown.		3		0.0	17	
6	CL								
7					4		0.0*	17	
8									
9	SC		Sand, (m.f.), clayey, trace coarse sand, orangish brown.		5		0.0	14	
10			Sand, (m.f.), tan.						
11	SP		Sand, (m.f.), trace coarse sand, orangish brown.		6		0.0	14	
12									
13					7		0.0	15	
14	SW		Sand, (m.f.), trace coarse sand and fine limestone gravel, orangish brown.						
15			Sand, well graded trace fine gravel, brown.		8		0.0	15	
16			Sand, (m.f.), light brown.						
17					9		0.0	17	
18	SP								
19			Wet.		10		0.0	17	
20									
21	SW		Sand, well graded, w/ fine gravel, wet, orangish brown.		11		0.0	18	
22									
23	SP		Sand, (m.f.), wet, orangish brown.		12		0.0	18	
24			End of Boring at 24.0 feet BGS.						





Log of Boring NW-SB02/Temp Well NW-GP02

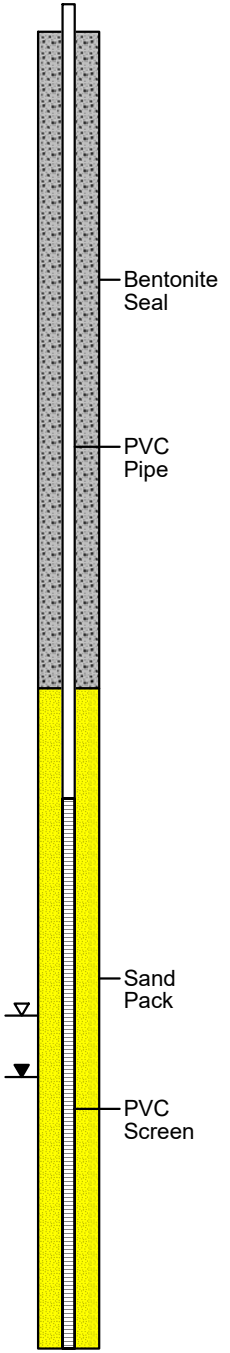
Norfolk & Western Railroad Property
 South 5th Street & 5th Street NE
 Lafayette, Indiana
 EPA ACRES ID # 259714

Date Completed : 4/30/2024
 Drilling Method : Direct Push
 Sampling Method : Continuous Dual Tube
 Field/Office Logged : CDS/CDS
 Hole Diameter : 2.25"

Casing Size : 2"
 Initial Water Level : 19.0'
 Final Water Level : 17.89'
 Selected for Analysis : *
 Drilling Contractor : Strata Env. Contractors

Depth in feet	USCS	GRAPHIC	Water Levels		Samples	Total PID (ppm)	Total PID (ppm)	Sample Recovery (inches)	Temp Well: NW-GP02 TOC Elev.: 108.00
			▼ Initial During Drilling	▽ During Gauging Event 5/6/24					
DESCRIPTION									
0	FL		Clay, silty, w/ fine sand and organics, brown.		1		0.0*	18	
1			Clay, silty, w/ fine sand and trace cinders, black.						
2			Clay, silty, w/ fine sand and gravel, orangish brown.		2		0.0	18	
3									
4									
5	CL				3		0.0	20	
6									
7			Clay, silty, w/ fine sand, moist, soft, light grey.		4		0.0	20	
8									
9									
10	SC		Sand, (m.f.), clayey, orangish brown.		5		0.0*	17	
11			Sand, (m.f.), trace silt, orangish brown.						
12	SP				6		0.0	17	
13			Sand, well graded, trace fine gravel, orangish brown.		7		0.0	18	
14	SW								
15					8		0.0	18	
16			Sand, (m.f.), light orangish brown.						
17					9		0.0	20	
18									
19			Wet.		10		0.0	20	
20	SP								
21					11		0.0	18	
22									
23									
24			Sand, (m.f.), wet, light brown.		12		0.0	18	

End of Boring at 24.0 feet BGS.



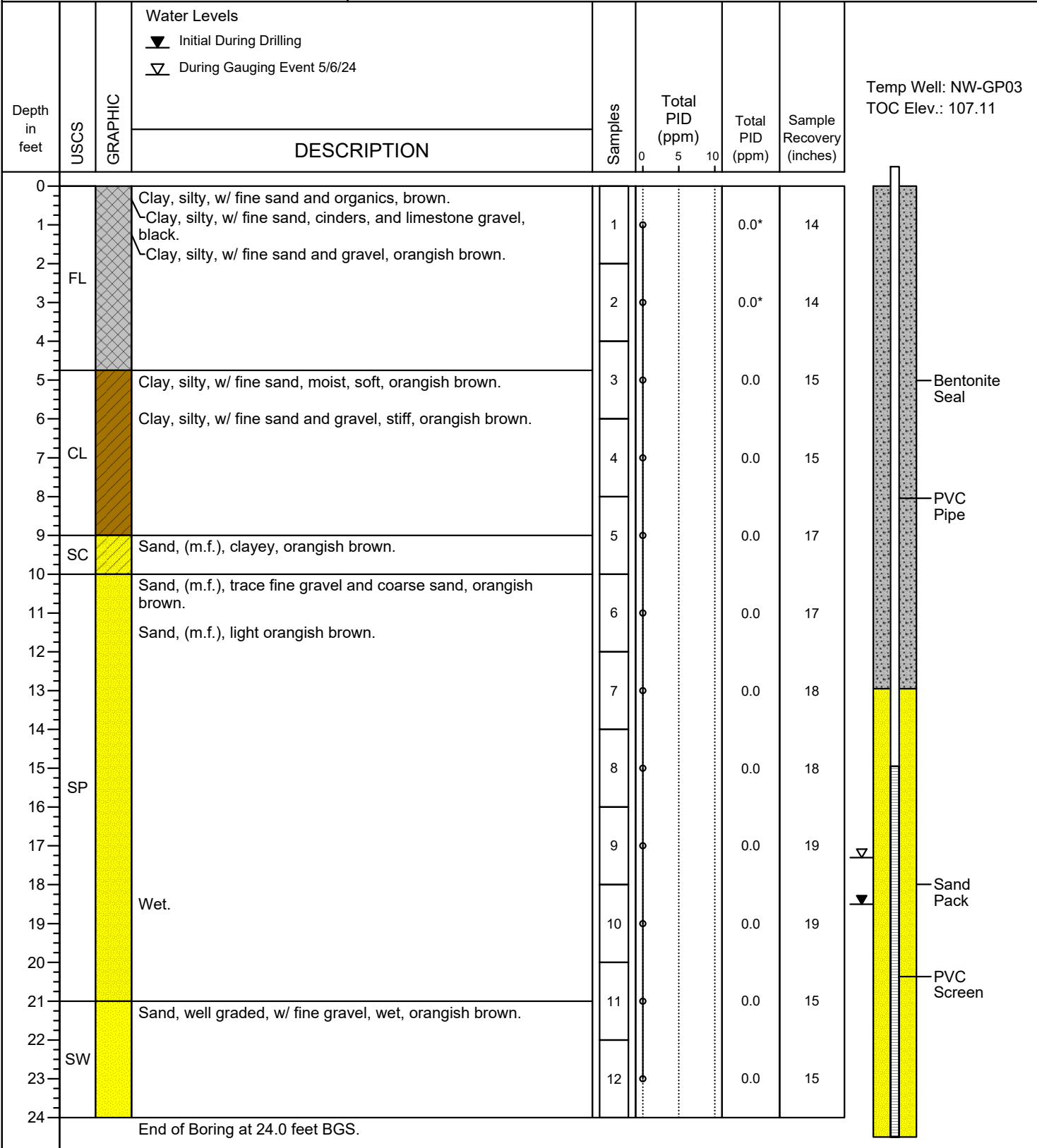


Log of Boring NW-SB03/Temp Well NW-GP03

Norfolk & Western Railroad Property
 South 5th Street & 5th Street NE
 Lafayette, Indiana
 EPA ACRES ID # 259714

Date Completed : 4/30/2024
 Drilling Method : Direct Push
 Sampling Method : Continuous Dual Tube
 Field/Office Logged : CDS/CDS
 Hole Diameter : 2.25"

Casing Size : 2"
 Initial Water Level : 18.5'
 Final Water Level : 17.30'
 Selected for Analysis : *
 Drilling Contractor : Strata Env. Contractors





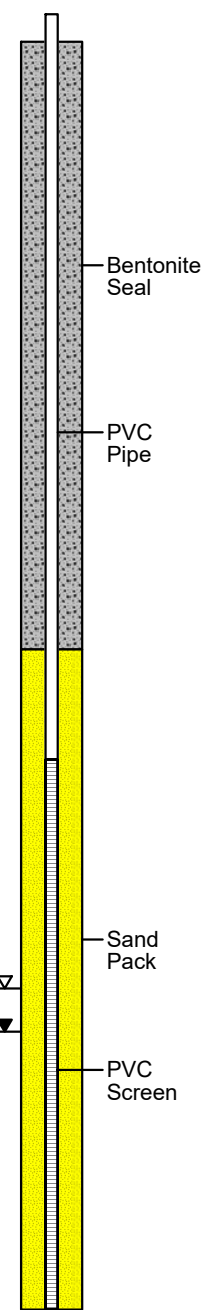
Log of Boring NW-SB04/Temp Well NW-GP04

Norfolk & Western Railroad Property
 South 5th Street & 5th Street NE
 Lafayette, Indiana
 EPA ACRES ID # 259714

Date Completed : 4/30/2024
 Drilling Method : Direct Push
 Sampling Method : Continuous Dual Tube
 Field/Office Logged : CDS/CDS
 Hole Diameter : 2.25"

Casing Size : 2"
 Initial Water Level : 18.0'
 Final Water Level : 17.21'
 Selected for Analysis : *
 Drilling Contractor : Strata Env. Contractors

Depth in feet	USCS	GRAPHIC	Water Levels		Samples	Total PID (ppm)	Total PID (ppm)	Sample Recovery (inches)	Temp Well: NW-GP04 TOC Elev.: 108.02
			▼ Initial During Drilling	▽ During Gauging Event 5/6/24					
DESCRIPTION									
0			Clay, silty, w/ fine sand and organics, brown.						
1			Clay, silty, w/ fine sand, cinders, and limestone gravel, black.		1		0.0*	15	
2			Clay, silty, w/ fine sand, brown.						
3	FL				2		0.0	15	
4									
5			Clay, silty, w/ cinders and limestone gravel, black.		3		0.0*	17	
6									
7			Clay, silty, w/ fine sand, moist, soft, orangish brown.		4		0.0	17	
8			Clay, silty, w/ fine sand and gravel, dry, grey brown.						
9	CL				5		0.0	20	
10									
11			Sand, (m.f.), trace fine gravel, orangish.		6		0.0	20	
12									
13					7		0.0	15	
14									
15	SP				8		0.0	15	
16									
17			Sand, (m.f.), brown.		9		0.0	19	
18			Wet.						
19	SW		Sand, well graded, w/ fine gravel, wet, brown.		10		0.0	19	
20			Sand, (m.f.), wet, brown.						
21	SP				11		0.0	18	
22									
23	SW		Sand, well graded, w/ fine gravel, wet, brown.		12		0.0	18	
24			End of Boring at 24.0 feet BGS.						





Log of Boring NW-SB05/Temp Well NW-GP05

Norfolk & Western Railroad Property
 South 5th Street & 5th Street NE
 Lafayette, Indiana
 EPA ACRES ID # 259714

Date Completed : 4/30/2024
 Drilling Method : Direct Push
 Sampling Method : Continuous Dual Tube
 Field/Office Logged : CDS/CDS
 Hole Diameter : 2.25"

Casing Size : 2"
 Initial Water Level : 17.0'
 Final Water Level : 17.37'
 Selected for Analysis : *
 Drilling Contractor : Strata Env. Contractors

Depth in feet	USCS	GRAPHIC	Water Levels		Samples	Total PID (ppm)	Total PID (ppm)	Sample Recovery (inches)	Temp Well: NW-GP05 TOC Elev.: 106.90
			▼ Initial During Drilling	▽ During Gauging Event 5/6/24					
DESCRIPTION									
0	FL		Clay, silty, w/ fine sand and organics, brown.		1	0.0*	0.0	16	
1			Clay, silty, w/ fine sand and gravel, very stiff, orangish brown, mottled.						
2			Clay, silty, w/ fine sand, orangish brown.		2	0.0	0.0	16	
3			Clay, silty, w/ fine sand, grey brown.						
4	CL				3	0.0	0.0	20	
5									
6					4	0.0*	0.0	20	
7									
8	SW		Sand, well graded, w/ well graded gravel, brown.		5	0.0	0.0	18	
9									
10					6	0.0	0.0	18	
11	SP		Sand, (m.f.), dry, dense, light brown.						
12					7	0.0	0.0	17	
13			Sand, well graded, trace fine gravel, light brown.						
14					8	0.0	0.0	17	
15									
16					9	0.0	0.0	15	
17	SW		Sand, well graded, w/ trace well graded gravel, wet, orangish brown.						
18					10	0.0	0.0	15	
19									
20					11	0.0	0.0	16	
21									
22					12	0.0	0.0	16	
23									
24			End of Boring at 24.0 feet BGS.						



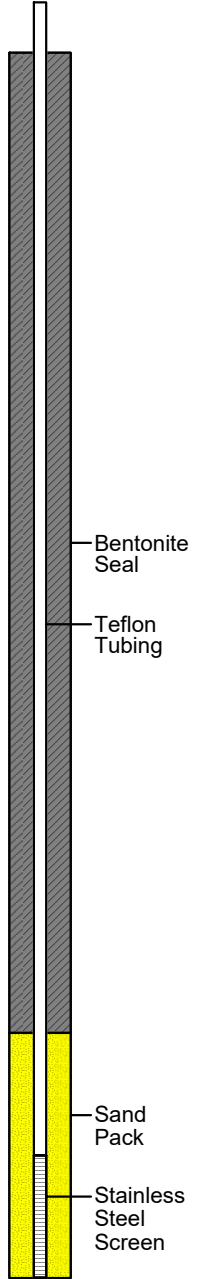
LOG OF BORING NW-SGe01

Norfolk & Western Railroad Property
 South 5th Street & 5th Street NE
 Lafayette, IN
 EPA ACRES ID # 259714

Date Completed : 5/1/2024
 Drilling Method : Direct Push
 Sampling Method : Continuous Dual Tube
 Field/Office Logged : CDS/CDS
 Hole Diameter : 2.25"

Tubing Size : 1/4"
 Initial Water Level : N/A
 Final Water Level : N/A
 Selected for Analysis : N/A
 Drilling Contractor : Strata Env. Contractors

Depth in feet	USCS	GRAPHIC	Water Levels		Samples	Total PID (ppm)			Sample Recovery (inches)	Exterior Soil Gas Point: NW-SGe01
			▼ During Drilling = NA			0	5	10		
DESCRIPTION										
0			Clay, silty, w/ fine sand and organics, brown.							
			Cinders, medium and fine sand sized, black.							
1	FL		Sand, (m.f.), brown.		1			0.0	22	
			Clay, sandy (m.f.), reddish brown.							
2			Clay, silty, w/ fine sand and gravel, orangish brown.							
3					2			0.0	22	
4	CL									
5					3			0.0	12	
Boring completed at 5.0 feet BGS.										





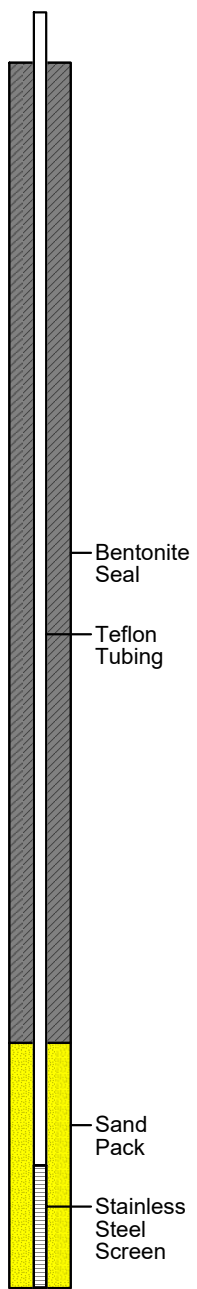
LOG OF BORING NW-SGe02

Norfolk & Western Railroad Property
 South 5th Street & 5th Street NE
 Lafayette, IN
 EPA ACRES ID # 259714

Date Completed : 5/1/2024
 Drilling Method : Direct Push
 Sampling Method : Continuous Dual Tube
 Field/Office Logged : CDS/CDS
 Hole Diameter : 2.25"

Tubing Size : 1/4"
 Initial Water Level : N/A
 Final Water Level : N/A
 Selected for Analysis : N/A
 Drilling Contractor : Strata Env. Contractors

Depth in feet	USCS	GRAPHIC	Water Levels		Samples	Total PID (ppm)			Sample Recovery (inches)	Exterior Soil Gas Point: NW-SGe02
			▼	During Drilling = NA		0	5	10		
DESCRIPTION										
0			Clay, silty, w/ fine sand and organics, brown.							
1	FL		Clay, silty, w/ concrete and well graded limestone gravel, brown.		1			0.0	22	
2			Clay, sandy (m.f.), w/ well graded gravel, reddish brown.							
3			Clay, silty, w/ fine sand, very stiff, orangish brown, grey mottled.		2			0.0	22	
4	CL									
5					3			0.0	12	
Boring completed at 5.0 feet BGS.										





LOG OF BORING NW-SGe03

Norfolk & Western Railroad Property
 South 5th Street & 5th Street NE
 Lafayette, IN
 EPA ACRES ID # 259714

Date Completed : 5/1/2024
 Drilling Method : Direct Push
 Sampling Method : Continuous Dual Tube
 Field/Office Logged : CDS/CDS
 Hole Diameter : 2.25"

Tubing Size : 1/4"
 Initial Water Level : N/A
 Final Water Level : N/A
 Selected for Analysis : N/A
 Drilling Contractor : Strata Env. Contractors

Depth in feet	USCS	GRAPHIC	Water Levels		Samples	Total PID (ppm)			Sample Recovery (inches)	Exterior Soil Gas Point: NW-SGe03
			▼	During Drilling = NA		0	5	10		
DESCRIPTION										
0			Clay, silty, w/ fine sand and organics.							
			Clay, silty, w/ fine sand and coarse limestone gravel, brown.							
1	FL				1			0.0	20	
2			Clay, silty, w/ fine sand and gravel, orangish brown.							
3	CL				2			0.0	20	
4										
	SM		Sand, (m.f.), silty, very moist, orangish.		3			0.0	6	
	CL		Clay, silty, w/ fine sand, orangish brown.							
5			Boring completed at 5.0 feet BGS.							

APPENDIX B
SAGE GROUP JOB SUMMARY



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Date: 4.15.2024

ATTN: Chris Parks
Address: 425 S. 5th Street, Lafayette, IN
Company: IWM Consulting
Job Reference: IN23055
WO Number: WO-14-0008

Dear Chris,

SAGE is pleased to provide you with the following pictures and descriptions for the site locations at 425 S. 5th Street, Lafayette, Indiana performed 4.15.2024.

SITE NOTES

General Site Information: SAGE technician Vincent Evans arrived on site to clear fifteen boring locations. Gas, sewer, and electric had been marked by public. We recommend that all utilities are located and cleared before drilling.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description:	Site map provided by IWM Consulting- NONE
Notes: Clear fifteen boring locations.	



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

PHOTOGRAPHS & DESCRIPTIONS

Description: SB-1



Notes:

Anomalies marked in pink. Border highlighted in white.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description:

SB-1



Notes:

Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-2



Notes:
Anomalies marked in pink. Border highlighted in white.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description:

SB-2



Notes:

Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-3



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description:

SB-3



Notes:

Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description:

SB-4



Notes:

Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-4



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description:

SB-5



Notes:

Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-5



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-6



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-6



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-7



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-7



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-8



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-8



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-9



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-9



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-10



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-10



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-11



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-11



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-12



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-12



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-13



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-13



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-14



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-14



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-15



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

Description: SB-15



Notes:
Anomalies marked in Pink. Border highlighted in White.



9511 Angola Court, Suite 223 | Indianapolis, IN 46268

317.868.5050 | dspaulding@sage-grp.com

EQUIPMENT

The RD7000+ RM/RF wand and XT-5 inducer are used to locate unknown buried power lines and locating known lines that can be charged. Using the RM/RF wand as a redundancy allows for the best possible result when scanning for utilities but does not guarantee that there will not be any in the ground given the known constraints of the equipment.

GSSI UtilityScan- 350 MHz GPR Antenna mounted in a stroller frame which rolls over the surface. This antenna transmits a sequence of pulses and displays the images on a tablet, which records and saves each reading. The 350 MHz antenna allows for GPR penetration from depths of 0-8' in conductive soil types. The depth achieved ranges widely depending on the types of materials being scanned. Soils such as Wet Clay may limit the readable scan depth to 3'. The size of the target that will register with the GPR system must be larger as the scan depth becomes deeper. A general rule is for every 1' of depth the size of the target must increase in size by 1" (e.g. in 3' of depth the target must be close to 3" in diameter to register on the system, but this is also subject to soil conditions). The surface must be reasonably smooth and free of obstructions in order to produce usable scans. Any obstructions such as landscaping, debris, curbing, etc. will also limit the feasibility of the GPR unit to perform a scan of the requested area.

The Utility Scan unit is also equipped with LineTrac which adds the ability to detect AC power and induced RF energy present in buried utilities. This accessory is compatible with the 350 HS antenna and designed to work with existing RD transmitters on a 20Hz to 50kHz bandwidth. LineTrac will only pick up those lines which are electrically charged with enough power to register and will not be able to locate low or unpowered lines.



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GENERAL TERMS AND CONDITIONS

1. SAGE provides utility location services in accordance with ASCE Standard 38-02, Quality Level "B" that includes Ground Penetrating Radar (GPR) Services. GPR is a good tool for utility locating; however, it is not without its limitations. In general, our maximum depth penetration with a 350 MHz antenna is 3-8' deep, however, this depth is completely dependent on the composition of soils in the area being surveyed. Customer fully understands that for every foot in depth penetration with the GPR equipment, the pipe/utility must be at least 1" in diameter to be located. For example, at 3 feet in depth, the pipe/utility must be 3" or larger to be detected. Some types of pipes are very difficult to locate, such as clay or concrete pipes, and empty pvc type pipes. Given these factors, SAGE CANNOT guarantee it will be able to locate ALL UTILITIES or BURIED OBJECTS on site.
2. Our goal is to provide you with the answers to your questions regarding what lies below the surface, and where it is located. Customer acknowledges it understands that our answers are based upon an interpretation of retrieved data and are what SAGE believes lies below the surface. The decision to proceed with cutting, coring, drilling, boring, or excavation is left entirely up to the customer.
3. SAGE does not accept liability for an inaccurate interpretation or any other reason, and Customer agrees to release and indemnify SAGE and its owners and agents from all losses and damages from all alleged negligence and/or contract claims by Customer or any third party.
4. Payment is due upon receipt of invoice. Interest charges of 1.5% per month will be incurred on any outstanding balance beyond 30 days after invoice date.

Respectfully submitted,

Derek Spaulding
Service Director

APPENDIX C

LABORATORY ANALYTICAL REPORTS – SOIL, GROUNDWATER, & SOIL VAPOR



May 15, 2024

Mr. Brad Gentry
IWM Consulting Group, LLC
7428 Rockville Road
Indianapolis, IN 46214

RE: Project: Norfolk & Western Railroad Pro
Pace Project No.: 50372019

Dear Mr. Gentry:

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

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

Sincerely,

Heather Patterson
heather.patterson@pacelabs.com
(317)228-3146
Project Manager

Enclosures

cc: Mr. Chris Parks, IWM Consulting Group



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

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

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**SAMPLE SUMMARY**

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372019001	NW-SL-SB01 0.5-2'	Solid	04/30/24 10:00	05/01/24 17:50
50372019002	NW-SL-SB01 6-8'	Solid	04/30/24 10:05	05/01/24 17:50
50372019003	NW-SL-SB02 0.5-2'	Solid	04/30/24 11:00	05/01/24 17:50
50372019004	NW-SL-SB02 8-10'	Solid	04/30/24 11:10	05/01/24 17:50
50372019005	NW-SL-SB03 0.5-2'	Solid	04/30/24 12:00	05/01/24 17:50
50372019006	NW-SL-SB03 3-4'	Solid	04/30/24 12:10	05/01/24 17:50
50372019007	NW-SL-SB04 0.5-2'	Solid	04/30/24 14:00	05/01/24 17:50
50372019008	NW-SL-SB04 5-6.5'	Solid	04/30/24 14:10	05/01/24 17:50
50372019009	NW-SL-SB05 0.5-2'	Solid	04/30/24 14:50	05/01/24 17:50
50372019010	NW-SL-SB05 6-7.5'	Solid	04/30/24 14:55	05/01/24 17:50
50372019011	NW-SL-SS01 0.0-1'	Solid	05/01/24 15:30	05/01/24 17:50
50372019012	NW-SL-SS02 0.0-1'	Solid	05/01/24 15:20	05/01/24 17:50
50372019013	NW-SL-SS03 0.0-1'	Solid	05/01/24 15:05	05/01/24 17:50
50372019014	NW-SL-SS04 0.0-1'	Solid	05/01/24 14:55	05/01/24 17:50
50372019015	NW-SL-SS05 0.0-1'	Solid	05/01/24 14:45	05/01/24 17:50
50372019016	NW-SL-SS06 0.0-1'	Solid	05/01/24 14:30	05/01/24 17:50
50372019017	NW-SL-SS07 0.0-1'	Solid	05/01/24 14:20	05/01/24 17:50
50372019018	NW-SL-SS08 0.0-1'	Solid	05/01/24 14:05	05/01/24 17:50
50372019019	NW-SL-SS09 0.0-1'	Solid	05/01/24 13:50	05/01/24 17:50
50372019020	NW-SL-SS10 0.0-1'	Solid	05/01/24 13:30	05/01/24 17:50
50372019021	NW-SL-FD1	Solid	05/01/24 08:00	05/01/24 17:50
50372019022	NW-SL-EB1	Water	05/01/24 15:10	05/01/24 17:50
50372019023	NW-SL-TB1	Solid	04/30/24 08:00	05/01/24 17:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372019001	NW-SL-SB01 0.5-2'	EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
50372019002	NW-SL-SB01 6-8'	EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
50372019003	NW-SL-SB02 0.5-2'	EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
50372019004	NW-SL-SB02 8-10'	EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
50372019005	NW-SL-SB03 0.5-2'	EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
50372019006	NW-SL-SB03 3-4'	EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
50372019007	NW-SL-SB04 0.5-2'	EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
50372019008	NW-SL-SB04 5-6.5'	EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372019009	NW-SL-SB05 0.5-2'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I
50372019010	NW-SL-SB05 6-7.5'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	ILP	1	PASI-I
50372019011	NW-SL-SS01 0.0-1'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
50372019012	NW-SL-SS02 0.0-1'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
50372019013	NW-SL-SS03 0.0-1'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
50372019014	NW-SL-SS04 0.0-1'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
50372019015	NW-SL-SS05 0.0-1'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
		SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I

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SAMPLE ANALYTE COUNT

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372019016	NW-SL-SS06 0.0-1'	SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
50372019017	NW-SL-SS07 0.0-1'	SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
50372019018	NW-SL-SS08 0.0-1'	SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
50372019019	NW-SL-SS09 0.0-1'	SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
50372019020	NW-SL-SS10 0.0-1'	SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
50372019021	NW-SL-FD1	SM 2540G	QAK	1	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7471	EAE	1	PASI-I
		EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	72	PASI-I
50372019022	NW-SL-EB1	SM 2540G	QAK	1	PASI-I
		EPA 6010	JPK	7	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 8270 by SIM 40E	GRM	20	PASI-I
		EPA 8260	TAY	72	PASI-I
50372019023	NW-SL-TB1	EPA 8260	TMW	72	PASI-I

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SAMPLE ANALYTE COUNT

Project: Norfolk & Western Railroad Pro
Pace Project No.: 50372019

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
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PASI-I = Pace Analytical Services - Indianapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372019001	NW-SL-SB01 0.5-2'					
EPA 6010	Arsenic	8.5	mg/kg	1.0	05/10/24 13:31	
EPA 6010	Barium	52.1	mg/kg	1.0	05/10/24 13:31	
EPA 6010	Cadmium	0.55	mg/kg	0.52	05/10/24 13:31	
EPA 6010	Chromium	11.0	mg/kg	1.0	05/10/24 13:31	
EPA 6010	Lead	40.3	mg/kg	1.0	05/10/24 13:31	
EPA 8270 by SIM	Acenaphthylene	0.019	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Anthracene	0.025	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Benzo(a)anthracene	0.064	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Benzo(a)pyrene	0.084	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.17	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.056	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.041	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Chrysene	0.083	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.019	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Fluoranthene	0.14	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Fluorene	0.0066	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.054	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	1-Methylnaphthalene	0.057	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	2-Methylnaphthalene	0.058	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Naphthalene	0.031	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Phenanthrene	0.19	mg/kg	0.0054	05/10/24 21:08	
EPA 8270 by SIM	Pyrene	0.13	mg/kg	0.0054	05/10/24 21:08	
SM 2540G	Percent Moisture	10.3	%	0.10	05/13/24 16:40	N2
50372019002	NW-SL-SB01 6-8'					
EPA 6010	Arsenic	9.4	mg/kg	1.1	05/10/24 13:33	
EPA 6010	Barium	83.5	mg/kg	1.1	05/10/24 13:33	
EPA 6010	Chromium	13.8	mg/kg	1.1	05/10/24 13:33	
EPA 6010	Lead	19.2	mg/kg	1.1	05/10/24 13:33	
SM 2540G	Percent Moisture	15.2	%	0.10	05/13/24 16:40	N2
50372019003	NW-SL-SB02 0.5-2'					
EPA 6010	Arsenic	21.3	mg/kg	1.2	05/10/24 13:38	
EPA 6010	Barium	65.0	mg/kg	1.2	05/10/24 13:38	
EPA 6010	Cadmium	0.60	mg/kg	0.58	05/10/24 13:38	
EPA 6010	Chromium	44.7	mg/kg	1.2	05/10/24 13:38	
EPA 6010	Lead	90.2	mg/kg	1.2	05/10/24 13:38	
EPA 8270 by SIM	Acenaphthene	0.0096	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Acenaphthylene	0.059	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Anthracene	0.039	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Benzo(a)anthracene	0.22	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Benzo(a)pyrene	0.28	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.54	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.18	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.54	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Chrysene	0.32	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.054	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Fluoranthene	0.49	mg/kg	0.0057	05/10/24 21:37	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372019003	NW-SL-SB02 0.5-2'					
EPA 8270 by SIM	Fluorene	0.019	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.17	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	1-Methylnaphthalene	0.55	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	2-Methylnaphthalene	0.73	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Naphthalene	0.20	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Phenanthrene	0.71	mg/kg	0.0057	05/10/24 21:37	
EPA 8270 by SIM	Pyrene	0.50	mg/kg	0.0057	05/10/24 21:37	
SM 2540G	Percent Moisture	17.8	%	0.10	05/13/24 16:40	N2
50372019004	NW-SL-SB02 8-10'					
EPA 6010	Arsenic	5.9	mg/kg	1.0	05/10/24 13:40	
EPA 6010	Barium	56.7	mg/kg	1.0	05/10/24 13:40	
EPA 6010	Chromium	14.4	mg/kg	1.0	05/10/24 13:40	
EPA 6010	Lead	19.0	mg/kg	1.0	05/10/24 13:40	
SM 2540G	Percent Moisture	13.1	%	0.10	05/13/24 16:40	N2
50372019005	NW-SL-SB03 0.5-2'					
EPA 6010	Arsenic	28.9	mg/kg	1.2	05/10/24 13:42	
EPA 6010	Barium	134	mg/kg	1.2	05/10/24 13:42	
EPA 6010	Cadmium	0.73	mg/kg	0.58	05/10/24 13:42	
EPA 6010	Chromium	10.9	mg/kg	1.2	05/10/24 13:42	
EPA 6010	Lead	445	mg/kg	1.2	05/10/24 13:42	
EPA 7471	Mercury	0.33	mg/kg	0.25	05/10/24 10:52	
EPA 8270 by SIM	Acenaphthylene	0.34	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Anthracene	0.25	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Benzo(a)anthracene	1.1	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Benzo(a)pyrene	1.9	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Benzo(b)fluoranthene	3.1	mg/kg	0.031	05/10/24 22:05	M1
EPA 8270 by SIM	Benzo(g,h,i)perylene	1.2	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.97	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Chrysene	1.4	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.37	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Fluoranthene	1.2	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Fluorene	0.034	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	1.2	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	1-Methylnaphthalene	0.37	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	2-Methylnaphthalene	0.47	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Naphthalene	0.35	mg/kg	0.031	05/10/24 22:05	ED
EPA 8270 by SIM	Phenanthrene	0.69	mg/kg	0.031	05/10/24 22:05	
EPA 8270 by SIM	Pyrene	1.5	mg/kg	0.031	05/10/24 22:05	
SM 2540G	Percent Moisture	20.6	%	0.10	05/13/24 16:40	N2
50372019006	NW-SL-SB03 3-4'					
EPA 6010	Arsenic	8.2	mg/kg	1.0	05/10/24 13:43	
EPA 6010	Barium	64.6	mg/kg	1.0	05/10/24 13:43	
EPA 6010	Cadmium	0.88	mg/kg	0.51	05/10/24 13:43	
EPA 6010	Chromium	10.5	mg/kg	1.0	05/10/24 13:43	
EPA 6010	Lead	34.4	mg/kg	1.0	05/10/24 13:43	
EPA 8270 by SIM	Benzo(a)anthracene	0.015	mg/kg	0.0056	05/10/24 22:48	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372019006	NW-SL-SB03 3-4'					
EPA 8270 by SIM	Benzo(a)pyrene	0.014	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.021	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.013	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.0069	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	Chrysene	0.028	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	Fluoranthene	0.020	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.0099	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	1-Methylnaphthalene	0.075	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	2-Methylnaphthalene	0.081	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	Naphthalene	0.018	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	Phenanthrene	0.098	mg/kg	0.0056	05/10/24 22:48	
EPA 8270 by SIM	Pyrene	0.025	mg/kg	0.0056	05/10/24 22:48	
SM 2540G	Percent Moisture	15.2	%	0.10	05/13/24 16:40	N2
50372019007	NW-SL-SB04 0.5-2'					
EPA 6010	Arsenic	15.6	mg/kg	0.99	05/10/24 13:45	
EPA 6010	Barium	52.8	mg/kg	0.99	05/10/24 13:45	
EPA 6010	Chromium	9.2	mg/kg	0.99	05/10/24 13:45	
EPA 6010	Lead	53.5	mg/kg	0.99	05/10/24 13:45	
EPA 8270 by SIM	Acenaphthylene	0.13	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Anthracene	0.083	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Benzo(a)anthracene	0.37	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Benzo(a)pyrene	0.49	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.76	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.33	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.22	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Chrysene	0.43	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.092	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Fluoranthene	0.45	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.30	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	1-Methylnaphthalene	0.37	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	2-Methylnaphthalene	0.42	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Naphthalene	0.17	mg/kg	0.055	05/10/24 23:31	ED
EPA 8270 by SIM	Phenanthrene	0.57	mg/kg	0.055	05/10/24 23:31	
EPA 8270 by SIM	Pyrene	0.55	mg/kg	0.055	05/10/24 23:31	
SM 2540G	Percent Moisture	13.2	%	0.10	05/13/24 16:40	N2
50372019008	NW-SL-SB04 5-6.5'					
EPA 6010	Arsenic	8.9	mg/kg	1.1	05/10/24 13:47	
EPA 6010	Barium	39.8	mg/kg	1.1	05/10/24 13:47	
EPA 6010	Chromium	11.0	mg/kg	1.1	05/10/24 13:47	
EPA 6010	Lead	20.3	mg/kg	1.1	05/10/24 13:47	
EPA 8270 by SIM	Benzo(a)anthracene	0.0093	mg/kg	0.0055	05/10/24 23:45	
EPA 8270 by SIM	Benzo(a)pyrene	0.0085	mg/kg	0.0055	05/10/24 23:45	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.013	mg/kg	0.0055	05/10/24 23:45	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.0055	mg/kg	0.0055	05/10/24 23:45	
EPA 8270 by SIM	Chrysene	0.012	mg/kg	0.0055	05/10/24 23:45	
EPA 8270 by SIM	Fluoranthene	0.014	mg/kg	0.0055	05/10/24 23:45	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372019008	NW-SL-SB04 5-6.5'					
EPA 8270 by SIM	1-Methylnaphthalene	0.049	mg/kg	0.0055	05/10/24 23:45	
EPA 8270 by SIM	2-Methylnaphthalene	0.049	mg/kg	0.0055	05/10/24 23:45	
EPA 8270 by SIM	Naphthalene	0.016	mg/kg	0.0055	05/10/24 23:45	
EPA 8270 by SIM	Phenanthrene	0.066	mg/kg	0.0055	05/10/24 23:45	
EPA 8270 by SIM	Pyrene	0.019	mg/kg	0.0055	05/10/24 23:45	
SM 2540G	Percent Moisture	11.4	%	0.10	05/13/24 16:41	N2
50372019009	NW-SL-SB05 0.5-2'					
EPA 6010	Arsenic	12.7	mg/kg	1.1	05/10/24 14:23	
EPA 6010	Barium	55.4	mg/kg	1.1	05/10/24 14:23	
EPA 6010	Chromium	17.6	mg/kg	1.1	05/10/24 14:23	
EPA 6010	Lead	27.5	mg/kg	1.1	05/10/24 14:23	
SM 2540G	Percent Moisture	13.0	%	0.10	05/13/24 16:41	N2
50372019010	NW-SL-SB05 6-7.5'					
EPA 6010	Arsenic	6.4	mg/kg	0.96	05/10/24 14:24	
EPA 6010	Barium	32.4	mg/kg	0.96	05/10/24 14:24	
EPA 6010	Chromium	14.0	mg/kg	0.96	05/10/24 14:24	
EPA 6010	Lead	8.8	mg/kg	0.96	05/10/24 14:24	
SM 2540G	Percent Moisture	10.7	%	0.10	05/13/24 16:41	N2
50372019011	NW-SL-SS01 0.0-1'					
EPA 6010	Arsenic	7.6	mg/kg	1.0	05/10/24 14:26	
EPA 6010	Barium	77.4	mg/kg	1.0	05/10/24 14:26	
EPA 6010	Chromium	12.7	mg/kg	1.0	05/10/24 14:26	
EPA 6010	Lead	19.3	mg/kg	1.0	05/10/24 14:26	
EPA 8270 by SIM	Benzo(a)anthracene	0.030	mg/kg	0.029	05/11/24 00:28	
EPA 8270 by SIM	Benzo(a)pyrene	0.047	mg/kg	0.029	05/11/24 00:28	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.081	mg/kg	0.029	05/11/24 00:28	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.040	mg/kg	0.029	05/11/24 00:28	
EPA 8270 by SIM	Chrysene	0.037	mg/kg	0.029	05/11/24 00:28	
EPA 8270 by SIM	Fluoranthene	0.038	mg/kg	0.029	05/11/24 00:28	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.035	mg/kg	0.029	05/11/24 00:28	
EPA 8270 by SIM	Pyrene	0.044	mg/kg	0.029	05/11/24 00:28	
SM 2540G	Percent Moisture	16.0	%	0.10	05/13/24 16:41	N2
50372019012	NW-SL-SS02 0.0-1'					
EPA 6010	Arsenic	6.7	mg/kg	1.0	05/10/24 14:28	
EPA 6010	Barium	64.5	mg/kg	1.0	05/10/24 14:28	
EPA 6010	Chromium	11.3	mg/kg	1.0	05/10/24 14:28	
EPA 6010	Lead	12.4	mg/kg	1.0	05/10/24 14:28	
EPA 8270 by SIM	Benzo(a)pyrene	0.0063	mg/kg	0.0056	05/11/24 00:42	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.011	mg/kg	0.0056	05/11/24 00:42	
EPA 8270 by SIM	Fluoranthene	0.0060	mg/kg	0.0056	05/11/24 00:42	
EPA 8270 by SIM	Pyrene	0.0069	mg/kg	0.0056	05/11/24 00:42	
SM 2540G	Percent Moisture	15.3	%	0.10	05/13/24 16:41	N2
50372019013	NW-SL-SS03 0.0-1'					
EPA 6010	Arsenic	9.4	mg/kg	1.1	05/10/24 14:30	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372019013	NW-SL-SS03 0.0-1'					
EPA 6010	Barium	126	mg/kg	1.1	05/10/24 14:30	
EPA 6010	Chromium	12.9	mg/kg	1.1	05/10/24 14:30	
EPA 6010	Lead	34.1	mg/kg	1.1	05/10/24 14:30	
EPA 8270 by SIM	Acenaphthylene	0.073	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Anthracene	0.069	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Benzo(a)anthracene	0.13	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Benzo(a)pyrene	0.21	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.38	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.16	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.14	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Chrysene	0.17	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.046	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Fluoranthene	0.14	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.15	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	1-Methylnaphthalene	0.039	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	2-Methylnaphthalene	0.048	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Naphthalene	0.035	mg/kg	0.028	05/11/24 00:57	ED
EPA 8270 by SIM	Phenanthrene	0.072	mg/kg	0.028	05/11/24 00:57	
EPA 8270 by SIM	Pyrene	0.18	mg/kg	0.028	05/11/24 00:57	
SM 2540G	Percent Moisture	13.5	%	0.10	05/13/24 16:41	N2
50372019014	NW-SL-SS04 0.0-1'					
EPA 6010	Arsenic	3.7	mg/kg	1.0	05/10/24 14:31	
EPA 6010	Barium	56.5	mg/kg	1.0	05/10/24 14:31	
EPA 6010	Chromium	7.0	mg/kg	1.0	05/10/24 14:31	
EPA 6010	Lead	8.5	mg/kg	1.0	05/10/24 14:31	
SM 2540G	Percent Moisture	14.1	%	0.10	05/13/24 16:41	N2
50372019015	NW-SL-SS05 0.0-1'					
EPA 6010	Arsenic	3.8	mg/kg	1.1	05/10/24 14:33	
EPA 6010	Barium	58.0	mg/kg	1.1	05/10/24 14:33	
EPA 6010	Chromium	7.8	mg/kg	1.1	05/10/24 14:33	
EPA 6010	Lead	9.1	mg/kg	1.1	05/10/24 14:33	
SM 2540G	Percent Moisture	13.9	%	0.10	05/13/24 16:41	N2
50372019016	NW-SL-SS06 0.0-1'					
EPA 6010	Arsenic	7.6	mg/kg	1.1	05/10/24 14:35	
EPA 6010	Barium	100	mg/kg	1.1	05/10/24 14:35	
EPA 6010	Chromium	12.8	mg/kg	1.1	05/10/24 14:35	
EPA 6010	Lead	13.4	mg/kg	1.1	05/10/24 14:35	
EPA 8270 by SIM	Benzo(a)anthracene	0.0098	mg/kg	0.0059	05/11/24 01:40	
EPA 8270 by SIM	Benzo(a)pyrene	0.013	mg/kg	0.0059	05/11/24 01:40	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.022	mg/kg	0.0059	05/11/24 01:40	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.0099	mg/kg	0.0059	05/11/24 01:40	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.0060	mg/kg	0.0059	05/11/24 01:40	
EPA 8270 by SIM	Chrysene	0.011	mg/kg	0.0059	05/11/24 01:40	
EPA 8270 by SIM	Fluoranthene	0.012	mg/kg	0.0059	05/11/24 01:40	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.0088	mg/kg	0.0059	05/11/24 01:40	
EPA 8270 by SIM	Phenanthrene	0.0063	mg/kg	0.0059	05/11/24 01:40	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372019016	NW-SL-SS06 0.0-1'					
EPA 8270 by SIM	Pyrene	0.015	mg/kg	0.0059	05/11/24 01:40	
SM 2540G	Percent Moisture	17.5	%	0.10	05/13/24 16:41	N2
50372019017	NW-SL-SS07 0.0-1'					
EPA 6010	Arsenic	8.9	mg/kg	1.2	05/10/24 14:40	
EPA 6010	Barium	96.5	mg/kg	1.2	05/10/24 14:40	
EPA 6010	Chromium	13.9	mg/kg	1.2	05/10/24 14:40	
EPA 6010	Lead	13.4	mg/kg	1.2	05/10/24 14:40	
EPA 8270 by SIM	Benzo(a)anthracene	0.012	mg/kg	0.0057	05/11/24 01:54	
EPA 8270 by SIM	Benzo(a)pyrene	0.018	mg/kg	0.0057	05/11/24 01:54	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.028	mg/kg	0.0057	05/11/24 01:54	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.012	mg/kg	0.0057	05/11/24 01:54	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.012	mg/kg	0.0057	05/11/24 01:54	
EPA 8270 by SIM	Chrysene	0.016	mg/kg	0.0057	05/11/24 01:54	
EPA 8270 by SIM	Fluoranthene	0.016	mg/kg	0.0057	05/11/24 01:54	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.012	mg/kg	0.0057	05/11/24 01:54	
EPA 8270 by SIM	Pyrene	0.019	mg/kg	0.0057	05/11/24 01:54	
SM 2540G	Percent Moisture	17.7	%	0.10	05/13/24 16:41	N2
50372019018	NW-SL-SS08 0.0-1'					
EPA 6010	Arsenic	7.5	mg/kg	1.0	05/10/24 14:42	
EPA 6010	Barium	248	mg/kg	1.0	05/10/24 14:42	
EPA 6010	Chromium	18.4	mg/kg	1.0	05/10/24 14:42	
EPA 6010	Lead	17.6	mg/kg	1.0	05/10/24 14:42	
EPA 8270 by SIM	Acenaphthylene	0.090	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Anthracene	0.057	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Benzo(a)anthracene	0.20	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Benzo(a)pyrene	0.28	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.51	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.19	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.16	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Chrysene	0.25	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.059	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Fluoranthene	0.27	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Fluorene	0.011	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.19	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	1-Methylnaphthalene	0.017	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	2-Methylnaphthalene	0.022	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Naphthalene	0.028	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Phenanthrene	0.069	mg/kg	0.0057	05/14/24 05:17	
EPA 8270 by SIM	Pyrene	0.32	mg/kg	0.0057	05/14/24 05:17	
SM 2540G	Percent Moisture	14.7	%	0.10	05/13/24 16:41	N2
50372019019	NW-SL-SS09 0.0-1'					
EPA 6010	Arsenic	8.1	mg/kg	1.2	05/10/24 14:44	
EPA 6010	Barium	94.9	mg/kg	1.2	05/10/24 14:44	
EPA 6010	Chromium	13.7	mg/kg	1.2	05/10/24 14:44	
EPA 6010	Lead	14.8	mg/kg	1.2	05/10/24 14:44	
EPA 8270 by SIM	Benzo(a)anthracene	0.0075	mg/kg	0.0057	05/14/24 05:32	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372019019	NW-SL-SS09 0.0-1'					
EPA 8270 by SIM	Benzo(a)pyrene	0.011	mg/kg	0.0057	05/14/24 05:32	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.023	mg/kg	0.0057	05/14/24 05:32	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.0073	mg/kg	0.0057	05/14/24 05:32	
EPA 8270 by SIM	Chrysene	0.0087	mg/kg	0.0057	05/14/24 05:32	
EPA 8270 by SIM	Fluoranthene	0.0094	mg/kg	0.0057	05/14/24 05:32	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.0070	mg/kg	0.0057	05/14/24 05:32	
EPA 8270 by SIM	Pyrene	0.011	mg/kg	0.0057	05/14/24 05:32	
SM 2540G	Percent Moisture	17.9	%	0.10	05/13/24 16:41	N2
50372019020	NW-SL-SS10 0.0-1'					
EPA 6010	Arsenic	17.3	mg/kg	1.2	05/10/24 14:52	
EPA 6010	Barium	209	mg/kg	1.2	05/10/24 14:52	
EPA 6010	Chromium	12.6	mg/kg	1.2	05/10/24 14:52	
EPA 6010	Lead	39.8	mg/kg	1.2	05/10/24 14:52	
EPA 8270 by SIM	Acenaphthylene	0.32	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Anthracene	0.21	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Benzo(a)anthracene	0.51	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Benzo(a)pyrene	0.84	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Benzo(b)fluoranthene	1.5	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.60	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.44	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Chrysene	0.64	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.18	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Fluoranthene	0.59	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.59	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	1-Methylnaphthalene	0.070	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	2-Methylnaphthalene	0.077	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Naphthalene	0.059	mg/kg	0.029	05/14/24 07:12	ED
EPA 8270 by SIM	Phenanthrene	0.20	mg/kg	0.029	05/14/24 07:12	
EPA 8270 by SIM	Pyrene	0.71	mg/kg	0.029	05/14/24 07:12	
SM 2540G	Percent Moisture	16.5	%	0.10	05/13/24 16:42	N2
50372019021	NW-SL-FD1					
EPA 6010	Arsenic	9.9	mg/kg	1.1	05/10/24 14:54	
EPA 6010	Barium	69.0	mg/kg	1.1	05/10/24 14:54	
EPA 6010	Chromium	11.8	mg/kg	1.1	05/10/24 14:54	
EPA 6010	Lead	31.1	mg/kg	1.1	05/10/24 14:54	
EPA 8270 by SIM	Acenaphthylene	0.16	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Anthracene	0.13	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Benzo(a)anthracene	0.21	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Benzo(a)pyrene	0.35	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.59	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.30	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.25	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Chrysene	0.26	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.084	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Fluoranthene	0.23	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.29	mg/kg	0.028	05/14/24 07:26	

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SUMMARY OF DETECTION

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372019021	NW-SL-FD1					
EPA 8270 by SIM	1-Methylnaphthalene	0.040	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	2-Methylnaphthalene	0.048	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Naphthalene	0.035	mg/kg	0.028	05/14/24 07:26	ED
EPA 8270 by SIM	Phenanthrene	0.098	mg/kg	0.028	05/14/24 07:26	
EPA 8270 by SIM	Pyrene	0.28	mg/kg	0.028	05/14/24 07:26	
SM 2540G	Percent Moisture	12.3	%	0.10	05/14/24 12:30	N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB01 0.5-2' Lab ID: 50372019001 Collected: 04/30/24 10:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	8.5	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:31	7440-38-2	
Barium	52.1	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:31	7440-39-3	
Cadmium	0.55	mg/kg	0.52	1	05/09/24 23:06	05/10/24 13:31	7440-43-9	
Chromium	11.0	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:31	7440-47-3	
Lead	40.3	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:31	7439-92-1	
Selenium	ND	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:31	7782-49-2	
Silver	ND	mg/kg	0.52	1	05/09/24 23:06	05/10/24 13:31	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.21	1	05/09/24 20:39	05/10/24 10:42	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	83-32-9	
Acenaphthylene	0.019	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	208-96-8	
Anthracene	0.025	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	120-12-7	
Benzo(a)anthracene	0.064	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	56-55-3	
Benzo(a)pyrene	0.084	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	50-32-8	
Benzo(b)fluoranthene	0.17	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	205-99-2	
Benzo(g,h,i)perylene	0.056	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	191-24-2	
Benzo(k)fluoranthene	0.041	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	207-08-9	
Chrysene	0.083	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	218-01-9	
Dibenz(a,h)anthracene	0.019	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	53-70-3	
Fluoranthene	0.14	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	206-44-0	
Fluorene	0.0066	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	86-73-7	
Indeno(1,2,3-cd)pyrene	0.054	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	193-39-5	
1-Methylnaphthalene	0.057	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	90-12-0	
2-Methylnaphthalene	0.058	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	91-57-6	
Naphthalene	0.031	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	91-20-3	
Phenanthrene	0.19	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	85-01-8	
Pyrene	0.13	mg/kg	0.0054	1	05/09/24 10:18	05/10/24 21:08	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	67	%.	16-93	1	05/09/24 10:18	05/10/24 21:08	321-60-8	
p-Terphenyl-d14 (S)	81	%.	19-115	1	05/09/24 10:18	05/10/24 21:08	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.088	1		05/07/24 20:26	67-64-1	
Acrolein	ND	mg/kg	0.088	1		05/07/24 20:26	107-02-8	
Acrylonitrile	ND	mg/kg	0.088	1		05/07/24 20:26	107-13-1	
Benzene	ND	mg/kg	0.0044	1		05/07/24 20:26	71-43-2	
Bromobenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	108-86-1	
Bromochloromethane	ND	mg/kg	0.0044	1		05/07/24 20:26	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0044	1		05/07/24 20:26	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB01 0.5-2' Lab ID: 50372019001 Collected: 04/30/24 10:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0044	1		05/07/24 20:26	75-25-2	
Bromomethane	ND	mg/kg	0.0044	1		05/07/24 20:26	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.022	1		05/07/24 20:26	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	98-06-6	
Carbon disulfide	ND	mg/kg	0.0088	1		05/07/24 20:26	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0044	1		05/07/24 20:26	56-23-5	
Chlorobenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	108-90-7	
Chloroethane	ND	mg/kg	0.0044	1		05/07/24 20:26	75-00-3	
Chloroform	ND	mg/kg	0.0044	1		05/07/24 20:26	67-66-3	
Chloromethane	ND	mg/kg	0.0044	1		05/07/24 20:26	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0044	1		05/07/24 20:26	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0044	1		05/07/24 20:26	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0044	1		05/07/24 20:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0044	1		05/07/24 20:26	106-93-4	
Dibromomethane	ND	mg/kg	0.0044	1		05/07/24 20:26	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.088	1		05/07/24 20:26	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0044	1		05/07/24 20:26	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0044	1		05/07/24 20:26	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0044	1		05/07/24 20:26	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0044	1		05/07/24 20:26	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0044	1		05/07/24 20:26	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0044	1		05/07/24 20:26	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0044	1		05/07/24 20:26	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0044	1		05/07/24 20:26	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0044	1		05/07/24 20:26	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0044	1		05/07/24 20:26	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0044	1		05/07/24 20:26	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0044	1		05/07/24 20:26	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.088	1		05/07/24 20:26	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0044	1		05/07/24 20:26	87-68-3	
n-Hexane	ND	mg/kg	0.0044	1		05/07/24 20:26	110-54-3	
2-Hexanone	ND	mg/kg	0.088	1		05/07/24 20:26	591-78-6	
Iodomethane	ND	mg/kg	0.088	1		05/07/24 20:26	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0044	1		05/07/24 20:26	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0044	1		05/07/24 20:26	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		05/07/24 20:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.022	1		05/07/24 20:26	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0044	1		05/07/24 20:26	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: **NW-SL-SB01 0.5-2'** Lab ID: **50372019001** Collected: 04/30/24 10:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0044	1		05/07/24 20:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0044	1		05/07/24 20:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0044	1		05/07/24 20:26	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0044	1		05/07/24 20:26	127-18-4	
Toluene	ND	mg/kg	0.0044	1		05/07/24 20:26	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0044	1		05/07/24 20:26	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0044	1		05/07/24 20:26	79-00-5	
Trichloroethene	ND	mg/kg	0.0044	1		05/07/24 20:26	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0044	1		05/07/24 20:26	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0044	1		05/07/24 20:26	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0044	1		05/07/24 20:26	108-67-8	
Vinyl acetate	ND	mg/kg	0.088	1		05/07/24 20:26	108-05-4	
Vinyl chloride	ND	mg/kg	0.0044	1		05/07/24 20:26	75-01-4	
Xylene (Total)	ND	mg/kg	0.0088	1		05/07/24 20:26	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	75-135	1		05/07/24 20:26	1868-53-7	
Toluene-d8 (S)	104	%	65-148	1		05/07/24 20:26	2037-26-5	
4-Bromofluorobenzene (S)	92	%	63-132	1		05/07/24 20:26	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	10.3	%	0.10	1		05/13/24 16:40		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB01 6-8' Lab ID: 50372019002 Collected: 04/30/24 10:05 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	9.4	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:33	7440-38-2	
Barium	83.5	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:33	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	05/09/24 23:06	05/10/24 13:33	7440-43-9	
Chromium	13.8	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:33	7440-47-3	
Lead	19.2	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:33	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:33	7782-49-2	
Silver	ND	mg/kg	0.55	1	05/09/24 23:06	05/10/24 13:33	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.23	1	05/09/24 20:39	05/10/24 10:45	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	83-32-9	
Acenaphthylene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	208-96-8	
Anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	207-08-9	
Chrysene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	53-70-3	
Fluoranthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	206-44-0	
Fluorene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	91-57-6	
Naphthalene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	91-20-3	
Phenanthrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	85-01-8	
Pyrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 21:23	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	60	%.	16-93	1	05/09/24 10:18	05/10/24 21:23	321-60-8	
p-Terphenyl-d14 (S)	76	%.	19-115	1	05/09/24 10:18	05/10/24 21:23	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.094	1		05/07/24 23:29	67-64-1	
Acrolein	ND	mg/kg	0.094	1		05/07/24 23:29	107-02-8	
Acrylonitrile	ND	mg/kg	0.094	1		05/07/24 23:29	107-13-1	
Benzene	ND	mg/kg	0.0047	1		05/07/24 23:29	71-43-2	
Bromobenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	108-86-1	
Bromochloromethane	ND	mg/kg	0.0047	1		05/07/24 23:29	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0047	1		05/07/24 23:29	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB01 6-8' Lab ID: 50372019002 Collected: 04/30/24 10:05 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0047	1		05/07/24 23:29	75-25-2	
Bromomethane	ND	mg/kg	0.0047	1		05/07/24 23:29	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.024	1		05/07/24 23:29	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	98-06-6	
Carbon disulfide	ND	mg/kg	0.0094	1		05/07/24 23:29	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0047	1		05/07/24 23:29	56-23-5	
Chlorobenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	108-90-7	
Chloroethane	ND	mg/kg	0.0047	1		05/07/24 23:29	75-00-3	
Chloroform	ND	mg/kg	0.0047	1		05/07/24 23:29	67-66-3	
Chloromethane	ND	mg/kg	0.0047	1		05/07/24 23:29	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0047	1		05/07/24 23:29	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0047	1		05/07/24 23:29	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0047	1		05/07/24 23:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0047	1		05/07/24 23:29	106-93-4	
Dibromomethane	ND	mg/kg	0.0047	1		05/07/24 23:29	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.094	1		05/07/24 23:29	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0047	1		05/07/24 23:29	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0047	1		05/07/24 23:29	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0047	1		05/07/24 23:29	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0047	1		05/07/24 23:29	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0047	1		05/07/24 23:29	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0047	1		05/07/24 23:29	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0047	1		05/07/24 23:29	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0047	1		05/07/24 23:29	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0047	1		05/07/24 23:29	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0047	1		05/07/24 23:29	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0047	1		05/07/24 23:29	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0047	1		05/07/24 23:29	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.094	1		05/07/24 23:29	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0047	1		05/07/24 23:29	87-68-3	
n-Hexane	ND	mg/kg	0.0047	1		05/07/24 23:29	110-54-3	
2-Hexanone	ND	mg/kg	0.094	1		05/07/24 23:29	591-78-6	
Iodomethane	ND	mg/kg	0.094	1		05/07/24 23:29	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0047	1		05/07/24 23:29	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0047	1		05/07/24 23:29	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	1		05/07/24 23:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.024	1		05/07/24 23:29	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0047	1		05/07/24 23:29	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: **NW-SL-SB01 6-8'** Lab ID: **50372019002** Collected: 04/30/24 10:05 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0047	1		05/07/24 23:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0047	1		05/07/24 23:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0047	1		05/07/24 23:29	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0047	1		05/07/24 23:29	127-18-4	
Toluene	ND	mg/kg	0.0047	1		05/07/24 23:29	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0047	1		05/07/24 23:29	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0047	1		05/07/24 23:29	79-00-5	
Trichloroethene	ND	mg/kg	0.0047	1		05/07/24 23:29	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0047	1		05/07/24 23:29	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0047	1		05/07/24 23:29	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0047	1		05/07/24 23:29	108-67-8	
Vinyl acetate	ND	mg/kg	0.094	1		05/07/24 23:29	108-05-4	
Vinyl chloride	ND	mg/kg	0.0047	1		05/07/24 23:29	75-01-4	
Xylene (Total)	ND	mg/kg	0.0094	1		05/07/24 23:29	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-135	1		05/07/24 23:29	1868-53-7	
Toluene-d8 (S)	111	%	65-148	1		05/07/24 23:29	2037-26-5	
4-Bromofluorobenzene (S)	87	%	63-132	1		05/07/24 23:29	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	15.2	%	0.10	1		05/13/24 16:40		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB02 0.5-2' Lab ID: 50372019003 Collected: 04/30/24 11:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	21.3	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:38	7440-38-2	
Barium	65.0	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:38	7440-39-3	
Cadmium	0.60	mg/kg	0.58	1	05/09/24 23:06	05/10/24 13:38	7440-43-9	
Chromium	44.7	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:38	7440-47-3	
Lead	90.2	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:38	7439-92-1	
Selenium	ND	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:38	7782-49-2	
Silver	ND	mg/kg	0.58	1	05/09/24 23:06	05/10/24 13:38	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.24	1	05/09/24 20:39	05/10/24 10:47	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	0.0096	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	83-32-9	
Acenaphthylene	0.059	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	208-96-8	
Anthracene	0.039	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	120-12-7	
Benzo(a)anthracene	0.22	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	56-55-3	
Benzo(a)pyrene	0.28	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	50-32-8	
Benzo(b)fluoranthene	0.54	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	205-99-2	
Benzo(g,h,i)perylene	0.18	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	191-24-2	
Benzo(k)fluoranthene	0.54	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	207-08-9	
Chrysene	0.32	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	218-01-9	
Dibenz(a,h)anthracene	0.054	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	53-70-3	
Fluoranthene	0.49	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	206-44-0	
Fluorene	0.019	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	86-73-7	
Indeno(1,2,3-cd)pyrene	0.17	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	193-39-5	
1-Methylnaphthalene	0.55	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	90-12-0	
2-Methylnaphthalene	0.73	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	91-57-6	
Naphthalene	0.20	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	91-20-3	
Phenanthrene	0.71	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	85-01-8	
Pyrene	0.50	mg/kg	0.0057	1	05/09/24 10:18	05/10/24 21:37	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	63	%.	16-93	1	05/09/24 10:18	05/10/24 21:37	321-60-8	
p-Terphenyl-d14 (S)	74	%.	19-115	1	05/09/24 10:18	05/10/24 21:37	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.17	1		05/08/24 00:00	67-64-1	
Acrolein	ND	mg/kg	0.17	1		05/08/24 00:00	107-02-8	
Acrylonitrile	ND	mg/kg	0.17	1		05/08/24 00:00	107-13-1	
Benzene	ND	mg/kg	0.0085	1		05/08/24 00:00	71-43-2	
Bromobenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	108-86-1	
Bromochloromethane	ND	mg/kg	0.0085	1		05/08/24 00:00	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0085	1		05/08/24 00:00	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB02 0.5-2' Lab ID: 50372019003 Collected: 04/30/24 11:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0085	1		05/08/24 00:00	75-25-2	
Bromomethane	ND	mg/kg	0.0085	1		05/08/24 00:00	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.043	1		05/08/24 00:00	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	98-06-6	
Carbon disulfide	ND	mg/kg	0.017	1		05/08/24 00:00	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0085	1		05/08/24 00:00	56-23-5	
Chlorobenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	108-90-7	
Chloroethane	ND	mg/kg	0.0085	1		05/08/24 00:00	75-00-3	
Chloroform	ND	mg/kg	0.0085	1		05/08/24 00:00	67-66-3	
Chloromethane	ND	mg/kg	0.0085	1		05/08/24 00:00	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0085	1		05/08/24 00:00	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0085	1		05/08/24 00:00	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0085	1		05/08/24 00:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0085	1		05/08/24 00:00	106-93-4	
Dibromomethane	ND	mg/kg	0.0085	1		05/08/24 00:00	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.17	1		05/08/24 00:00	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0085	1		05/08/24 00:00	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0085	1		05/08/24 00:00	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0085	1		05/08/24 00:00	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0085	1		05/08/24 00:00	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0085	1		05/08/24 00:00	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0085	1		05/08/24 00:00	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0085	1		05/08/24 00:00	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0085	1		05/08/24 00:00	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0085	1		05/08/24 00:00	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0085	1		05/08/24 00:00	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0085	1		05/08/24 00:00	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0085	1		05/08/24 00:00	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.17	1		05/08/24 00:00	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0085	1		05/08/24 00:00	87-68-3	
n-Hexane	ND	mg/kg	0.0085	1		05/08/24 00:00	110-54-3	
2-Hexanone	ND	mg/kg	0.17	1		05/08/24 00:00	591-78-6	
Iodomethane	ND	mg/kg	0.17	1		05/08/24 00:00	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0085	1		05/08/24 00:00	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0085	1		05/08/24 00:00	99-87-6	
Methylene Chloride	ND	mg/kg	0.034	1		05/08/24 00:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.043	1		05/08/24 00:00	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0085	1		05/08/24 00:00	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: **NW-SL-SB02 0.5-2'** Lab ID: **50372019003** Collected: 04/30/24 11:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0085	1		05/08/24 00:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0085	1		05/08/24 00:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0085	1		05/08/24 00:00	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0085	1		05/08/24 00:00	127-18-4	
Toluene	ND	mg/kg	0.0085	1		05/08/24 00:00	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0085	1		05/08/24 00:00	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0085	1		05/08/24 00:00	79-00-5	
Trichloroethene	ND	mg/kg	0.0085	1		05/08/24 00:00	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0085	1		05/08/24 00:00	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0085	1		05/08/24 00:00	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0085	1		05/08/24 00:00	108-67-8	
Vinyl acetate	ND	mg/kg	0.17	1		05/08/24 00:00	108-05-4	
Vinyl chloride	ND	mg/kg	0.0085	1		05/08/24 00:00	75-01-4	
Xylene (Total)	ND	mg/kg	0.017	1		05/08/24 00:00	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	140	%	75-135	1		05/08/24 00:00	1868-53-7	S3
Toluene-d8 (S)	152	%	65-148	1		05/08/24 00:00	2037-26-5	S3
4-Bromofluorobenzene (S)	70	%	63-132	1		05/08/24 00:00	460-00-4	
Percent Moisture		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	17.8	%	0.10	1		05/13/24 16:40		N2

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**ANALYTICAL RESULTS**

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB02 8-10' **Lab ID:** 50372019004 **Collected:** 04/30/24 11:10 **Received:** 05/01/24 17:50 **Matrix:** Solid**Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	5.9	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:40	7440-38-2	
Barium	56.7	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:40	7440-39-3	
Cadmium	ND	mg/kg	0.51	1	05/09/24 23:06	05/10/24 13:40	7440-43-9	
Chromium	14.4	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:40	7440-47-3	
Lead	19.0	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:40	7439-92-1	
Selenium	ND	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:40	7782-49-2	
Silver	ND	mg/kg	0.51	1	05/09/24 23:06	05/10/24 13:40	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.23	1	05/09/24 20:39	05/10/24 10:50	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	83-32-9	
Acenaphthylene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	208-96-8	
Anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	207-08-9	
Chrysene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	53-70-3	
Fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	206-44-0	
Fluorene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	91-57-6	
Naphthalene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	91-20-3	
Phenanthrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	85-01-8	
Pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 21:51	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	64	%.	16-93	1	05/09/24 10:18	05/10/24 21:51	321-60-8	
p-Terphenyl-d14 (S)	86	%.	19-115	1	05/09/24 10:18	05/10/24 21:51	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.087	1		05/08/24 00:30	67-64-1	
Acrolein	ND	mg/kg	0.087	1		05/08/24 00:30	107-02-8	
Acrylonitrile	ND	mg/kg	0.087	1		05/08/24 00:30	107-13-1	
Benzene	ND	mg/kg	0.0043	1		05/08/24 00:30	71-43-2	
Bromobenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	108-86-1	
Bromochloromethane	ND	mg/kg	0.0043	1		05/08/24 00:30	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0043	1		05/08/24 00:30	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB02 8-10' Lab ID: 50372019004 Collected: 04/30/24 11:10 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0043	1		05/08/24 00:30	75-25-2	
Bromomethane	ND	mg/kg	0.0043	1		05/08/24 00:30	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.022	1		05/08/24 00:30	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	98-06-6	
Carbon disulfide	ND	mg/kg	0.0087	1		05/08/24 00:30	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0043	1		05/08/24 00:30	56-23-5	
Chlorobenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	108-90-7	
Chloroethane	ND	mg/kg	0.0043	1		05/08/24 00:30	75-00-3	
Chloroform	ND	mg/kg	0.0043	1		05/08/24 00:30	67-66-3	
Chloromethane	ND	mg/kg	0.0043	1		05/08/24 00:30	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0043	1		05/08/24 00:30	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0043	1		05/08/24 00:30	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0043	1		05/08/24 00:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0043	1		05/08/24 00:30	106-93-4	
Dibromomethane	ND	mg/kg	0.0043	1		05/08/24 00:30	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.087	1		05/08/24 00:30	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0043	1		05/08/24 00:30	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0043	1		05/08/24 00:30	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0043	1		05/08/24 00:30	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0043	1		05/08/24 00:30	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0043	1		05/08/24 00:30	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0043	1		05/08/24 00:30	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0043	1		05/08/24 00:30	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0043	1		05/08/24 00:30	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0043	1		05/08/24 00:30	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0043	1		05/08/24 00:30	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0043	1		05/08/24 00:30	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0043	1		05/08/24 00:30	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.087	1		05/08/24 00:30	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0043	1		05/08/24 00:30	87-68-3	
n-Hexane	ND	mg/kg	0.0043	1		05/08/24 00:30	110-54-3	
2-Hexanone	ND	mg/kg	0.087	1		05/08/24 00:30	591-78-6	
Iodomethane	ND	mg/kg	0.087	1		05/08/24 00:30	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0043	1		05/08/24 00:30	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0043	1		05/08/24 00:30	99-87-6	
Methylene Chloride	ND	mg/kg	0.017	1		05/08/24 00:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.022	1		05/08/24 00:30	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0043	1		05/08/24 00:30	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: **NW-SL-SB02 8-10'** Lab ID: **50372019004** Collected: 04/30/24 11:10 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0043	1		05/08/24 00:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0043	1		05/08/24 00:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0043	1		05/08/24 00:30	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0043	1		05/08/24 00:30	127-18-4	
Toluene	ND	mg/kg	0.0043	1		05/08/24 00:30	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0043	1		05/08/24 00:30	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0043	1		05/08/24 00:30	79-00-5	
Trichloroethene	ND	mg/kg	0.0043	1		05/08/24 00:30	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0043	1		05/08/24 00:30	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0043	1		05/08/24 00:30	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0043	1		05/08/24 00:30	108-67-8	
Vinyl acetate	ND	mg/kg	0.087	1		05/08/24 00:30	108-05-4	
Vinyl chloride	ND	mg/kg	0.0043	1		05/08/24 00:30	75-01-4	
Xylene (Total)	ND	mg/kg	0.0087	1		05/08/24 00:30	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%	75-135	1		05/08/24 00:30	1868-53-7	
Toluene-d8 (S)	100	%	65-148	1		05/08/24 00:30	2037-26-5	
4-Bromofluorobenzene (S)	101	%	63-132	1		05/08/24 00:30	460-00-4	
Percent Moisture		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	13.1	%	0.10	1		05/13/24 16:40		N2

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB03 0.5-2' Lab ID: 50372019005 Collected: 04/30/24 12:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	28.9	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:42	7440-38-2	
Barium	134	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:42	7440-39-3	
Cadmium	0.73	mg/kg	0.58	1	05/09/24 23:06	05/10/24 13:42	7440-43-9	
Chromium	10.9	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:42	7440-47-3	
Lead	445	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:42	7439-92-1	
Selenium	ND	mg/kg	1.2	1	05/09/24 23:06	05/10/24 13:42	7782-49-2	
Silver	ND	mg/kg	0.58	1	05/09/24 23:06	05/10/24 13:42	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	0.33	mg/kg	0.25	1	05/09/24 20:39	05/10/24 10:52	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	83-32-9	
Acenaphthylene	0.34	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	208-96-8	
Anthracene	0.25	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	120-12-7	
Benzo(a)anthracene	1.1	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	56-55-3	
Benzo(a)pyrene	1.9	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	50-32-8	
Benzo(b)fluoranthene	3.1	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	205-99-2	M1
Benzo(g,h,i)perylene	1.2	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	191-24-2	
Benzo(k)fluoranthene	0.97	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	207-08-9	
Chrysene	1.4	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	218-01-9	
Dibenz(a,h)anthracene	0.37	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	53-70-3	
Fluoranthene	1.2	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	206-44-0	
Fluorene	0.034	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	86-73-7	
Indeno(1,2,3-cd)pyrene	1.2	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	193-39-5	
1-Methylnaphthalene	0.37	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	90-12-0	
2-Methylnaphthalene	0.47	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	91-57-6	
Naphthalene	0.35	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	91-20-3	ED
Phenanthrene	0.69	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	85-01-8	
Pyrene	1.5	mg/kg	0.031	5	05/09/24 10:18	05/10/24 22:05	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	57	%	16-93	5	05/09/24 10:18	05/10/24 22:05	321-60-8	
p-Terphenyl-d14 (S)	64	%	19-115	5	05/09/24 10:18	05/10/24 22:05	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.17	1		05/08/24 01:00	67-64-1	
Acrolein	ND	mg/kg	0.17	1		05/08/24 01:00	107-02-8	
Acrylonitrile	ND	mg/kg	0.17	1		05/08/24 01:00	107-13-1	
Benzene	ND	mg/kg	0.0085	1		05/08/24 01:00	71-43-2	
Bromobenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	108-86-1	
Bromochloromethane	ND	mg/kg	0.0085	1		05/08/24 01:00	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0085	1		05/08/24 01:00	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB03 0.5-2' Lab ID: 50372019005 Collected: 04/30/24 12:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0085	1		05/08/24 01:00	75-25-2	
Bromomethane	ND	mg/kg	0.0085	1		05/08/24 01:00	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.043	1		05/08/24 01:00	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	98-06-6	
Carbon disulfide	ND	mg/kg	0.017	1		05/08/24 01:00	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0085	1		05/08/24 01:00	56-23-5	
Chlorobenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	108-90-7	
Chloroethane	ND	mg/kg	0.0085	1		05/08/24 01:00	75-00-3	
Chloroform	ND	mg/kg	0.0085	1		05/08/24 01:00	67-66-3	
Chloromethane	ND	mg/kg	0.0085	1		05/08/24 01:00	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0085	1		05/08/24 01:00	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0085	1		05/08/24 01:00	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0085	1		05/08/24 01:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0085	1		05/08/24 01:00	106-93-4	
Dibromomethane	ND	mg/kg	0.0085	1		05/08/24 01:00	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.17	1		05/08/24 01:00	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0085	1		05/08/24 01:00	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0085	1		05/08/24 01:00	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0085	1		05/08/24 01:00	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0085	1		05/08/24 01:00	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0085	1		05/08/24 01:00	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0085	1		05/08/24 01:00	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0085	1		05/08/24 01:00	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0085	1		05/08/24 01:00	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0085	1		05/08/24 01:00	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0085	1		05/08/24 01:00	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0085	1		05/08/24 01:00	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0085	1		05/08/24 01:00	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.17	1		05/08/24 01:00	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0085	1		05/08/24 01:00	87-68-3	
n-Hexane	ND	mg/kg	0.0085	1		05/08/24 01:00	110-54-3	
2-Hexanone	ND	mg/kg	0.17	1		05/08/24 01:00	591-78-6	
Iodomethane	ND	mg/kg	0.17	1		05/08/24 01:00	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0085	1		05/08/24 01:00	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0085	1		05/08/24 01:00	99-87-6	
Methylene Chloride	ND	mg/kg	0.034	1		05/08/24 01:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.043	1		05/08/24 01:00	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0085	1		05/08/24 01:00	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: **NW-SL-SB03 0.5-2'** Lab ID: **50372019005** Collected: 04/30/24 12:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0085	1		05/08/24 01:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0085	1		05/08/24 01:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0085	1		05/08/24 01:00	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0085	1		05/08/24 01:00	127-18-4	
Toluene	ND	mg/kg	0.0085	1		05/08/24 01:00	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0085	1		05/08/24 01:00	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0085	1		05/08/24 01:00	79-00-5	
Trichloroethene	ND	mg/kg	0.0085	1		05/08/24 01:00	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0085	1		05/08/24 01:00	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0085	1		05/08/24 01:00	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0085	1		05/08/24 01:00	108-67-8	
Vinyl acetate	ND	mg/kg	0.17	1		05/08/24 01:00	108-05-4	
Vinyl chloride	ND	mg/kg	0.0085	1		05/08/24 01:00	75-01-4	
Xylene (Total)	ND	mg/kg	0.017	1		05/08/24 01:00	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	119	%	75-135	1		05/08/24 01:00	1868-53-7	
Toluene-d8 (S)	150	%	65-148	1		05/08/24 01:00	2037-26-5	S3
4-Bromofluorobenzene (S)	71	%	63-132	1		05/08/24 01:00	460-00-4	
Percent Moisture		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	20.6	%	0.10	1		05/13/24 16:40		N2

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**ANALYTICAL RESULTS**

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB03 3-4' **Lab ID:** 50372019006 **Collected:** 04/30/24 12:10 **Received:** 05/01/24 17:50 **Matrix:** Solid**Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	8.2	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:43	7440-38-2	
Barium	64.6	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:43	7440-39-3	
Cadmium	0.88	mg/kg	0.51	1	05/09/24 23:06	05/10/24 13:43	7440-43-9	
Chromium	10.5	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:43	7440-47-3	
Lead	34.4	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:43	7439-92-1	
Selenium	ND	mg/kg	1.0	1	05/09/24 23:06	05/10/24 13:43	7782-49-2	
Silver	ND	mg/kg	0.51	1	05/09/24 23:06	05/10/24 13:43	7440-22-4	
7471 Mercury								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.23	1	05/09/24 20:39	05/10/24 10:55	7439-97-6	
8270 PAH Soil by SIM								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	83-32-9	
Acenaphthylene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	208-96-8	
Anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	120-12-7	
Benzo(a)anthracene	0.015	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	56-55-3	
Benzo(a)pyrene	0.014	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	50-32-8	
Benzo(b)fluoranthene	0.021	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	205-99-2	
Benzo(g,h,i)perylene	0.013	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	191-24-2	
Benzo(k)fluoranthene	0.0069	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	207-08-9	
Chrysene	0.028	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	53-70-3	
Fluoranthene	0.020	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	206-44-0	
Fluorene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	86-73-7	
Indeno(1,2,3-cd)pyrene	0.0099	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	193-39-5	
1-Methylnaphthalene	0.075	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	90-12-0	
2-Methylnaphthalene	0.081	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	91-57-6	
Naphthalene	0.018	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	91-20-3	
Phenanthrene	0.098	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	85-01-8	
Pyrene	0.025	mg/kg	0.0056	1	05/09/24 10:18	05/10/24 22:48	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	62	%.	16-93	1	05/09/24 10:18	05/10/24 22:48	321-60-8	
p-Terphenyl-d14 (S)	70	%.	19-115	1	05/09/24 10:18	05/10/24 22:48	1718-51-0	
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.11	1		05/07/24 16:53	67-64-1	
Acrolein	ND	mg/kg	0.11	1		05/07/24 16:53	107-02-8	
Acrylonitrile	ND	mg/kg	0.11	1		05/07/24 16:53	107-13-1	
Benzene	ND	mg/kg	0.0054	1		05/07/24 16:53	71-43-2	
Bromobenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	108-86-1	
Bromochloromethane	ND	mg/kg	0.0054	1		05/07/24 16:53	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0054	1		05/07/24 16:53	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB03 3-4' Lab ID: 50372019006 Collected: 04/30/24 12:10 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0054	1		05/07/24 16:53	75-25-2	
Bromomethane	ND	mg/kg	0.0054	1		05/07/24 16:53	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.027	1		05/07/24 16:53	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	98-06-6	
Carbon disulfide	ND	mg/kg	0.011	1		05/07/24 16:53	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0054	1		05/07/24 16:53	56-23-5	
Chlorobenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	108-90-7	
Chloroethane	ND	mg/kg	0.0054	1		05/07/24 16:53	75-00-3	
Chloroform	ND	mg/kg	0.0054	1		05/07/24 16:53	67-66-3	
Chloromethane	ND	mg/kg	0.0054	1		05/07/24 16:53	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0054	1		05/07/24 16:53	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0054	1		05/07/24 16:53	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0054	1		05/07/24 16:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0054	1		05/07/24 16:53	106-93-4	
Dibromomethane	ND	mg/kg	0.0054	1		05/07/24 16:53	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.11	1		05/07/24 16:53	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0054	1		05/07/24 16:53	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0054	1		05/07/24 16:53	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0054	1		05/07/24 16:53	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0054	1		05/07/24 16:53	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0054	1		05/07/24 16:53	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0054	1		05/07/24 16:53	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0054	1		05/07/24 16:53	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0054	1		05/07/24 16:53	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0054	1		05/07/24 16:53	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0054	1		05/07/24 16:53	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0054	1		05/07/24 16:53	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0054	1		05/07/24 16:53	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.11	1		05/07/24 16:53	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0054	1		05/07/24 16:53	87-68-3	
n-Hexane	ND	mg/kg	0.0054	1		05/07/24 16:53	110-54-3	
2-Hexanone	ND	mg/kg	0.11	1		05/07/24 16:53	591-78-6	
Iodomethane	ND	mg/kg	0.11	1		05/07/24 16:53	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0054	1		05/07/24 16:53	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0054	1		05/07/24 16:53	99-87-6	
Methylene Chloride	ND	mg/kg	0.022	1		05/07/24 16:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.027	1		05/07/24 16:53	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0054	1		05/07/24 16:53	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB03 3-4' Lab ID: 50372019006 Collected: 04/30/24 12:10 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0054	1		05/07/24 16:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0054	1		05/07/24 16:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0054	1		05/07/24 16:53	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0054	1		05/07/24 16:53	127-18-4	
Toluene	ND	mg/kg	0.0054	1		05/07/24 16:53	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0054	1		05/07/24 16:53	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0054	1		05/07/24 16:53	79-00-5	
Trichloroethene	ND	mg/kg	0.0054	1		05/07/24 16:53	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0054	1		05/07/24 16:53	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0054	1		05/07/24 16:53	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0054	1		05/07/24 16:53	108-67-8	
Vinyl acetate	ND	mg/kg	0.11	1		05/07/24 16:53	108-05-4	
Vinyl chloride	ND	mg/kg	0.0054	1		05/07/24 16:53	75-01-4	
Xylene (Total)	ND	mg/kg	0.011	1		05/07/24 16:53	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	103	%	75-135	1		05/07/24 16:53	1868-53-7	
Toluene-d8 (S)	118	%	65-148	1		05/07/24 16:53	2037-26-5	
4-Bromofluorobenzene (S)	80	%	63-132	1		05/07/24 16:53	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	15.2	%	0.10	1		05/13/24 16:40		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB04 0.5-2' Lab ID: 50372019007 Collected: 04/30/24 14:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	15.6	mg/kg	0.99	1	05/09/24 23:06	05/10/24 13:45	7440-38-2	
Barium	52.8	mg/kg	0.99	1	05/09/24 23:06	05/10/24 13:45	7440-39-3	
Cadmium	ND	mg/kg	0.49	1	05/09/24 23:06	05/10/24 13:45	7440-43-9	
Chromium	9.2	mg/kg	0.99	1	05/09/24 23:06	05/10/24 13:45	7440-47-3	
Lead	53.5	mg/kg	0.99	1	05/09/24 23:06	05/10/24 13:45	7439-92-1	
Selenium	ND	mg/kg	0.99	1	05/09/24 23:06	05/10/24 13:45	7782-49-2	
Silver	ND	mg/kg	0.49	1	05/09/24 23:06	05/10/24 13:45	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.23	1	05/09/24 20:39	05/10/24 10:57	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	83-32-9	
Acenaphthylene	0.13	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	208-96-8	
Anthracene	0.083	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	120-12-7	
Benzo(a)anthracene	0.37	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	56-55-3	
Benzo(a)pyrene	0.49	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	50-32-8	
Benzo(b)fluoranthene	0.76	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	205-99-2	
Benzo(g,h,i)perylene	0.33	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	191-24-2	
Benzo(k)fluoranthene	0.22	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	207-08-9	
Chrysene	0.43	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	218-01-9	
Dibenz(a,h)anthracene	0.092	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	53-70-3	
Fluoranthene	0.45	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	206-44-0	
Fluorene	ND	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	86-73-7	
Indeno(1,2,3-cd)pyrene	0.30	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	193-39-5	
1-Methylnaphthalene	0.37	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	90-12-0	
2-Methylnaphthalene	0.42	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	91-57-6	
Naphthalene	0.17	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	91-20-3	ED
Phenanthrene	0.57	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	85-01-8	
Pyrene	0.55	mg/kg	0.055	10	05/09/24 10:18	05/10/24 23:31	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	58	%	16-93	10	05/09/24 10:18	05/10/24 23:31	321-60-8	
p-Terphenyl-d14 (S)	68	%	19-115	10	05/09/24 10:18	05/10/24 23:31	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.16	1		05/07/24 17:24	67-64-1	
Acrolein	ND	mg/kg	0.16	1		05/07/24 17:24	107-02-8	
Acrylonitrile	ND	mg/kg	0.16	1		05/07/24 17:24	107-13-1	
Benzene	ND	mg/kg	0.0078	1		05/07/24 17:24	71-43-2	
Bromobenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	108-86-1	
Bromochloromethane	ND	mg/kg	0.0078	1		05/07/24 17:24	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0078	1		05/07/24 17:24	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB04 0.5-2' Lab ID: 50372019007 Collected: 04/30/24 14:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0078	1		05/07/24 17:24	75-25-2	
Bromomethane	ND	mg/kg	0.0078	1		05/07/24 17:24	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.039	1		05/07/24 17:24	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	98-06-6	
Carbon disulfide	ND	mg/kg	0.016	1		05/07/24 17:24	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0078	1		05/07/24 17:24	56-23-5	
Chlorobenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	108-90-7	
Chloroethane	ND	mg/kg	0.0078	1		05/07/24 17:24	75-00-3	
Chloroform	ND	mg/kg	0.0078	1		05/07/24 17:24	67-66-3	
Chloromethane	ND	mg/kg	0.0078	1		05/07/24 17:24	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0078	1		05/07/24 17:24	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0078	1		05/07/24 17:24	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0078	1		05/07/24 17:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0078	1		05/07/24 17:24	106-93-4	
Dibromomethane	ND	mg/kg	0.0078	1		05/07/24 17:24	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.16	1		05/07/24 17:24	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0078	1		05/07/24 17:24	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0078	1		05/07/24 17:24	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0078	1		05/07/24 17:24	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0078	1		05/07/24 17:24	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0078	1		05/07/24 17:24	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0078	1		05/07/24 17:24	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0078	1		05/07/24 17:24	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0078	1		05/07/24 17:24	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0078	1		05/07/24 17:24	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0078	1		05/07/24 17:24	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0078	1		05/07/24 17:24	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0078	1		05/07/24 17:24	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.16	1		05/07/24 17:24	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0078	1		05/07/24 17:24	87-68-3	
n-Hexane	ND	mg/kg	0.0078	1		05/07/24 17:24	110-54-3	
2-Hexanone	ND	mg/kg	0.16	1		05/07/24 17:24	591-78-6	
Iodomethane	ND	mg/kg	0.16	1		05/07/24 17:24	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0078	1		05/07/24 17:24	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0078	1		05/07/24 17:24	99-87-6	
Methylene Chloride	ND	mg/kg	0.031	1		05/07/24 17:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.039	1		05/07/24 17:24	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0078	1		05/07/24 17:24	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB04 0.5-2' Lab ID: 50372019007 Collected: 04/30/24 14:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0078	1		05/07/24 17:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0078	1		05/07/24 17:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0078	1		05/07/24 17:24	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0078	1		05/07/24 17:24	127-18-4	
Toluene	ND	mg/kg	0.0078	1		05/07/24 17:24	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0078	1		05/07/24 17:24	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0078	1		05/07/24 17:24	79-00-5	
Trichloroethene	ND	mg/kg	0.0078	1		05/07/24 17:24	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0078	1		05/07/24 17:24	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0078	1		05/07/24 17:24	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0078	1		05/07/24 17:24	108-67-8	
Vinyl acetate	ND	mg/kg	0.16	1		05/07/24 17:24	108-05-4	
Vinyl chloride	ND	mg/kg	0.0078	1		05/07/24 17:24	75-01-4	
Xylene (Total)	ND	mg/kg	0.016	1		05/07/24 17:24	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	111	%	75-135	1		05/07/24 17:24	1868-53-7	
Toluene-d8 (S)	141	%	65-148	1		05/07/24 17:24	2037-26-5	
4-Bromofluorobenzene (S)	71	%	63-132	1		05/07/24 17:24	460-00-4	
Percent Moisture		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	13.2	%	0.10	1		05/13/24 16:40		N2

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB04 5-6.5' Lab ID: 50372019008 Collected: 04/30/24 14:10 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	8.9	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:47	7440-38-2	
Barium	39.8	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:47	7440-39-3	
Cadmium	ND	mg/kg	0.54	1	05/09/24 23:06	05/10/24 13:47	7440-43-9	
Chromium	11.0	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:47	7440-47-3	
Lead	20.3	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:47	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/09/24 23:06	05/10/24 13:47	7782-49-2	
Silver	ND	mg/kg	0.54	1	05/09/24 23:06	05/10/24 13:47	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.22	1	05/09/24 20:39	05/10/24 11:00	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	83-32-9	
Acenaphthylene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	208-96-8	
Anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	120-12-7	
Benzo(a)anthracene	0.0093	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	56-55-3	
Benzo(a)pyrene	0.0085	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	50-32-8	
Benzo(b)fluoranthene	0.013	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	205-99-2	
Benzo(g,h,i)perylene	0.0055	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	207-08-9	
Chrysene	0.012	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	53-70-3	
Fluoranthene	0.014	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	206-44-0	
Fluorene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	193-39-5	
1-Methylnaphthalene	0.049	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	90-12-0	
2-Methylnaphthalene	0.049	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	91-57-6	
Naphthalene	0.016	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	91-20-3	
Phenanthrene	0.066	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	85-01-8	
Pyrene	0.019	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:45	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	62	%	16-93	1	05/09/24 10:18	05/10/24 23:45	321-60-8	
p-Terphenyl-d14 (S)	74	%	19-115	1	05/09/24 10:18	05/10/24 23:45	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.14	1		05/07/24 17:54	67-64-1	
Acrolein	ND	mg/kg	0.14	1		05/07/24 17:54	107-02-8	
Acrylonitrile	ND	mg/kg	0.14	1		05/07/24 17:54	107-13-1	
Benzene	ND	mg/kg	0.0069	1		05/07/24 17:54	71-43-2	
Bromobenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	108-86-1	
Bromochloromethane	ND	mg/kg	0.0069	1		05/07/24 17:54	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0069	1		05/07/24 17:54	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB04 5-6.5' Lab ID: 50372019008 Collected: 04/30/24 14:10 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0069	1		05/07/24 17:54	75-25-2	
Bromomethane	ND	mg/kg	0.0069	1		05/07/24 17:54	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.035	1		05/07/24 17:54	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	98-06-6	
Carbon disulfide	ND	mg/kg	0.014	1		05/07/24 17:54	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0069	1		05/07/24 17:54	56-23-5	
Chlorobenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	108-90-7	
Chloroethane	ND	mg/kg	0.0069	1		05/07/24 17:54	75-00-3	
Chloroform	ND	mg/kg	0.0069	1		05/07/24 17:54	67-66-3	
Chloromethane	ND	mg/kg	0.0069	1		05/07/24 17:54	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0069	1		05/07/24 17:54	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0069	1		05/07/24 17:54	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0069	1		05/07/24 17:54	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0069	1		05/07/24 17:54	106-93-4	
Dibromomethane	ND	mg/kg	0.0069	1		05/07/24 17:54	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.14	1		05/07/24 17:54	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0069	1		05/07/24 17:54	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0069	1		05/07/24 17:54	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0069	1		05/07/24 17:54	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0069	1		05/07/24 17:54	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0069	1		05/07/24 17:54	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0069	1		05/07/24 17:54	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0069	1		05/07/24 17:54	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0069	1		05/07/24 17:54	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0069	1		05/07/24 17:54	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0069	1		05/07/24 17:54	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0069	1		05/07/24 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0069	1		05/07/24 17:54	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.14	1		05/07/24 17:54	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0069	1		05/07/24 17:54	87-68-3	
n-Hexane	ND	mg/kg	0.0069	1		05/07/24 17:54	110-54-3	
2-Hexanone	ND	mg/kg	0.14	1		05/07/24 17:54	591-78-6	
Iodomethane	ND	mg/kg	0.14	1		05/07/24 17:54	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0069	1		05/07/24 17:54	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0069	1		05/07/24 17:54	99-87-6	
Methylene Chloride	ND	mg/kg	0.028	1		05/07/24 17:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.035	1		05/07/24 17:54	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0069	1		05/07/24 17:54	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB04 5-6.5' Lab ID: 50372019008 Collected: 04/30/24 14:10 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0069	1		05/07/24 17:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0069	1		05/07/24 17:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0069	1		05/07/24 17:54	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0069	1		05/07/24 17:54	127-18-4	
Toluene	ND	mg/kg	0.0069	1		05/07/24 17:54	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0069	1		05/07/24 17:54	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0069	1		05/07/24 17:54	79-00-5	
Trichloroethene	ND	mg/kg	0.0069	1		05/07/24 17:54	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0069	1		05/07/24 17:54	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0069	1		05/07/24 17:54	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0069	1		05/07/24 17:54	108-67-8	
Vinyl acetate	ND	mg/kg	0.14	1		05/07/24 17:54	108-05-4	
Vinyl chloride	ND	mg/kg	0.0069	1		05/07/24 17:54	75-01-4	
Xylene (Total)	ND	mg/kg	0.014	1		05/07/24 17:54	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	111	%	75-135	1		05/07/24 17:54	1868-53-7	
Toluene-d8 (S)	125	%	65-148	1		05/07/24 17:54	2037-26-5	
4-Bromofluorobenzene (S)	79	%	63-132	1		05/07/24 17:54	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	11.4	%	0.10	1		05/13/24 16:41		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB05 0.5-2' Lab ID: 50372019009 Collected: 04/30/24 14:50 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	12.7	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:23	7440-38-2	
Barium	55.4	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:23	7440-39-3	
Cadmium	ND	mg/kg	0.54	1	05/09/24 23:06	05/10/24 14:23	7440-43-9	
Chromium	17.6	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:23	7440-47-3	
Lead	27.5	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:23	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:23	7782-49-2	
Silver	ND	mg/kg	0.54	1	05/09/24 23:06	05/10/24 14:23	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.22	1	05/09/24 20:39	05/10/24 11:09	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	83-32-9	
Acenaphthylene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	208-96-8	
Anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	207-08-9	
Chrysene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	53-70-3	
Fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	206-44-0	
Fluorene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	91-57-6	
Naphthalene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	91-20-3	
Phenanthrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	85-01-8	
Pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/10/24 23:59	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	67	%.	16-93	1	05/09/24 10:18	05/10/24 23:59	321-60-8	
p-Terphenyl-d14 (S)	81	%.	19-115	1	05/09/24 10:18	05/10/24 23:59	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.13	1		05/07/24 18:25	67-64-1	
Acrolein	ND	mg/kg	0.13	1		05/07/24 18:25	107-02-8	
Acrylonitrile	ND	mg/kg	0.13	1		05/07/24 18:25	107-13-1	
Benzene	ND	mg/kg	0.0067	1		05/07/24 18:25	71-43-2	
Bromobenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	108-86-1	
Bromochloromethane	ND	mg/kg	0.0067	1		05/07/24 18:25	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0067	1		05/07/24 18:25	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB05 0.5-2' Lab ID: 50372019009 Collected: 04/30/24 14:50 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0067	1		05/07/24 18:25	75-25-2	
Bromomethane	ND	mg/kg	0.0067	1		05/07/24 18:25	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.033	1		05/07/24 18:25	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	98-06-6	
Carbon disulfide	ND	mg/kg	0.013	1		05/07/24 18:25	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0067	1		05/07/24 18:25	56-23-5	
Chlorobenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	108-90-7	
Chloroethane	ND	mg/kg	0.0067	1		05/07/24 18:25	75-00-3	
Chloroform	ND	mg/kg	0.0067	1		05/07/24 18:25	67-66-3	
Chloromethane	ND	mg/kg	0.0067	1		05/07/24 18:25	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0067	1		05/07/24 18:25	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0067	1		05/07/24 18:25	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0067	1		05/07/24 18:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0067	1		05/07/24 18:25	106-93-4	
Dibromomethane	ND	mg/kg	0.0067	1		05/07/24 18:25	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.13	1		05/07/24 18:25	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0067	1		05/07/24 18:25	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0067	1		05/07/24 18:25	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0067	1		05/07/24 18:25	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0067	1		05/07/24 18:25	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0067	1		05/07/24 18:25	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0067	1		05/07/24 18:25	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0067	1		05/07/24 18:25	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0067	1		05/07/24 18:25	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0067	1		05/07/24 18:25	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0067	1		05/07/24 18:25	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0067	1		05/07/24 18:25	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0067	1		05/07/24 18:25	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.13	1		05/07/24 18:25	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0067	1		05/07/24 18:25	87-68-3	
n-Hexane	ND	mg/kg	0.0067	1		05/07/24 18:25	110-54-3	
2-Hexanone	ND	mg/kg	0.13	1		05/07/24 18:25	591-78-6	
Iodomethane	ND	mg/kg	0.13	1		05/07/24 18:25	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0067	1		05/07/24 18:25	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0067	1		05/07/24 18:25	99-87-6	
Methylene Chloride	ND	mg/kg	0.027	1		05/07/24 18:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.033	1		05/07/24 18:25	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0067	1		05/07/24 18:25	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB05 0.5-2' Lab ID: 50372019009 Collected: 04/30/24 14:50 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0067	1		05/07/24 18:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0067	1		05/07/24 18:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0067	1		05/07/24 18:25	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0067	1		05/07/24 18:25	127-18-4	
Toluene	ND	mg/kg	0.0067	1		05/07/24 18:25	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0067	1		05/07/24 18:25	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0067	1		05/07/24 18:25	79-00-5	
Trichloroethene	ND	mg/kg	0.0067	1		05/07/24 18:25	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0067	1		05/07/24 18:25	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0067	1		05/07/24 18:25	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0067	1		05/07/24 18:25	108-67-8	
Vinyl acetate	ND	mg/kg	0.13	1		05/07/24 18:25	108-05-4	
Vinyl chloride	ND	mg/kg	0.0067	1		05/07/24 18:25	75-01-4	
Xylene (Total)	ND	mg/kg	0.013	1		05/07/24 18:25	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	105	%	75-135	1		05/07/24 18:25	1868-53-7	
Toluene-d8 (S)	106	%	65-148	1		05/07/24 18:25	2037-26-5	
4-Bromofluorobenzene (S)	98	%	63-132	1		05/07/24 18:25	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	13.0	%	0.10	1		05/13/24 16:41		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB05 6-7.5' Lab ID: 50372019010 Collected: 04/30/24 14:55 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	6.4	mg/kg	0.96	1	05/09/24 23:06	05/10/24 14:24	7440-38-2	
Barium	32.4	mg/kg	0.96	1	05/09/24 23:06	05/10/24 14:24	7440-39-3	
Cadmium	ND	mg/kg	0.48	1	05/09/24 23:06	05/10/24 14:24	7440-43-9	
Chromium	14.0	mg/kg	0.96	1	05/09/24 23:06	05/10/24 14:24	7440-47-3	
Lead	8.8	mg/kg	0.96	1	05/09/24 23:06	05/10/24 14:24	7439-92-1	
Selenium	ND	mg/kg	0.96	1	05/09/24 23:06	05/10/24 14:24	7782-49-2	
Silver	ND	mg/kg	0.48	1	05/09/24 23:06	05/10/24 14:24	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.22	1	05/09/24 20:39	05/10/24 11:12	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	83-32-9	
Acenaphthylene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	208-96-8	
Anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	207-08-9	
Chrysene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	53-70-3	
Fluoranthene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	206-44-0	
Fluorene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	91-57-6	
Naphthalene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	91-20-3	
Phenanthrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	85-01-8	
Pyrene	ND	mg/kg	0.0055	1	05/09/24 10:18	05/11/24 00:14	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	60	%.	16-93	1	05/09/24 10:18	05/11/24 00:14	321-60-8	
p-Terphenyl-d14 (S)	76	%.	19-115	1	05/09/24 10:18	05/11/24 00:14	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.083	1		05/07/24 18:55	67-64-1	
Acrolein	ND	mg/kg	0.083	1		05/07/24 18:55	107-02-8	
Acrylonitrile	ND	mg/kg	0.083	1		05/07/24 18:55	107-13-1	
Benzene	ND	mg/kg	0.0042	1		05/07/24 18:55	71-43-2	
Bromobenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	108-86-1	
Bromochloromethane	ND	mg/kg	0.0042	1		05/07/24 18:55	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0042	1		05/07/24 18:55	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SB05 6-7.5' Lab ID: 50372019010 Collected: 04/30/24 14:55 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0042	1		05/07/24 18:55	75-25-2	
Bromomethane	ND	mg/kg	0.0042	1		05/07/24 18:55	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.021	1		05/07/24 18:55	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	98-06-6	
Carbon disulfide	ND	mg/kg	0.0083	1		05/07/24 18:55	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0042	1		05/07/24 18:55	56-23-5	
Chlorobenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	108-90-7	
Chloroethane	ND	mg/kg	0.0042	1		05/07/24 18:55	75-00-3	
Chloroform	ND	mg/kg	0.0042	1		05/07/24 18:55	67-66-3	
Chloromethane	ND	mg/kg	0.0042	1		05/07/24 18:55	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0042	1		05/07/24 18:55	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0042	1		05/07/24 18:55	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0042	1		05/07/24 18:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0042	1		05/07/24 18:55	106-93-4	
Dibromomethane	ND	mg/kg	0.0042	1		05/07/24 18:55	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.083	1		05/07/24 18:55	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0042	1		05/07/24 18:55	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0042	1		05/07/24 18:55	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0042	1		05/07/24 18:55	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0042	1		05/07/24 18:55	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0042	1		05/07/24 18:55	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0042	1		05/07/24 18:55	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0042	1		05/07/24 18:55	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0042	1		05/07/24 18:55	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0042	1		05/07/24 18:55	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0042	1		05/07/24 18:55	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0042	1		05/07/24 18:55	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0042	1		05/07/24 18:55	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.083	1		05/07/24 18:55	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0042	1		05/07/24 18:55	87-68-3	
n-Hexane	ND	mg/kg	0.0042	1		05/07/24 18:55	110-54-3	
2-Hexanone	ND	mg/kg	0.083	1		05/07/24 18:55	591-78-6	
Iodomethane	ND	mg/kg	0.083	1		05/07/24 18:55	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0042	1		05/07/24 18:55	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0042	1		05/07/24 18:55	99-87-6	
Methylene Chloride	ND	mg/kg	0.017	1		05/07/24 18:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.021	1		05/07/24 18:55	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0042	1		05/07/24 18:55	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: **NW-SL-SB05 6-7.5'** Lab ID: **50372019010** Collected: 04/30/24 14:55 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0042	1		05/07/24 18:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0042	1		05/07/24 18:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0042	1		05/07/24 18:55	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0042	1		05/07/24 18:55	127-18-4	
Toluene	ND	mg/kg	0.0042	1		05/07/24 18:55	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0042	1		05/07/24 18:55	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0042	1		05/07/24 18:55	79-00-5	
Trichloroethene	ND	mg/kg	0.0042	1		05/07/24 18:55	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0042	1		05/07/24 18:55	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0042	1		05/07/24 18:55	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0042	1		05/07/24 18:55	108-67-8	
Vinyl acetate	ND	mg/kg	0.083	1		05/07/24 18:55	108-05-4	
Vinyl chloride	ND	mg/kg	0.0042	1		05/07/24 18:55	75-01-4	
Xylene (Total)	ND	mg/kg	0.0083	1		05/07/24 18:55	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	75-135	1		05/07/24 18:55	1868-53-7	
Toluene-d8 (S)	101	%	65-148	1		05/07/24 18:55	2037-26-5	
4-Bromofluorobenzene (S)	94	%	63-132	1		05/07/24 18:55	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	10.7	%	0.10	1		05/13/24 16:41		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS01 0.0-1' Lab ID: 50372019011 Collected: 05/01/24 15:30 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.6	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:26	7440-38-2	
Barium	77.4	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:26	7440-39-3	
Cadmium	ND	mg/kg	0.50	1	05/09/24 23:06	05/10/24 14:26	7440-43-9	
Chromium	12.7	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:26	7440-47-3	
Lead	19.3	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:26	7439-92-1	
Selenium	ND	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:26	7782-49-2	
Silver	ND	mg/kg	0.50	1	05/09/24 23:06	05/10/24 14:26	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.24	1	05/13/24 10:34	05/13/24 16:48	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	83-32-9	
Acenaphthylene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	208-96-8	
Anthracene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	120-12-7	
Benzo(a)anthracene	0.030	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	56-55-3	
Benzo(a)pyrene	0.047	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	50-32-8	
Benzo(b)fluoranthene	0.081	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	205-99-2	
Benzo(g,h,i)perylene	0.040	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	207-08-9	
Chrysene	0.037	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	53-70-3	
Fluoranthene	0.038	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	206-44-0	
Fluorene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	86-73-7	
Indeno(1,2,3-cd)pyrene	0.035	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	91-57-6	
Naphthalene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	91-20-3	ED
Phenanthrene	ND	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	85-01-8	
Pyrene	0.044	mg/kg	0.029	5	05/09/24 10:18	05/11/24 00:28	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	59	%	16-93	5	05/09/24 10:18	05/11/24 00:28	321-60-8	
p-Terphenyl-d14 (S)	66	%	19-115	5	05/09/24 10:18	05/11/24 00:28	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.097	1		05/07/24 19:26	67-64-1	
Acrolein	ND	mg/kg	0.097	1		05/07/24 19:26	107-02-8	
Acrylonitrile	ND	mg/kg	0.097	1		05/07/24 19:26	107-13-1	
Benzene	ND	mg/kg	0.0048	1		05/07/24 19:26	71-43-2	
Bromobenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	108-86-1	
Bromochloromethane	ND	mg/kg	0.0048	1		05/07/24 19:26	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0048	1		05/07/24 19:26	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS01 0.0-1' Lab ID: 50372019011 Collected: 05/01/24 15:30 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0048	1		05/07/24 19:26	75-25-2	
Bromomethane	ND	mg/kg	0.0048	1		05/07/24 19:26	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.024	1		05/07/24 19:26	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	98-06-6	
Carbon disulfide	ND	mg/kg	0.0097	1		05/07/24 19:26	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0048	1		05/07/24 19:26	56-23-5	
Chlorobenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	108-90-7	
Chloroethane	ND	mg/kg	0.0048	1		05/07/24 19:26	75-00-3	
Chloroform	ND	mg/kg	0.0048	1		05/07/24 19:26	67-66-3	
Chloromethane	ND	mg/kg	0.0048	1		05/07/24 19:26	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0048	1		05/07/24 19:26	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0048	1		05/07/24 19:26	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0048	1		05/07/24 19:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0048	1		05/07/24 19:26	106-93-4	
Dibromomethane	ND	mg/kg	0.0048	1		05/07/24 19:26	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.097	1		05/07/24 19:26	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0048	1		05/07/24 19:26	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0048	1		05/07/24 19:26	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0048	1		05/07/24 19:26	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0048	1		05/07/24 19:26	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0048	1		05/07/24 19:26	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0048	1		05/07/24 19:26	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0048	1		05/07/24 19:26	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0048	1		05/07/24 19:26	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0048	1		05/07/24 19:26	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0048	1		05/07/24 19:26	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0048	1		05/07/24 19:26	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0048	1		05/07/24 19:26	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.097	1		05/07/24 19:26	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0048	1		05/07/24 19:26	87-68-3	
n-Hexane	ND	mg/kg	0.0048	1		05/07/24 19:26	110-54-3	
2-Hexanone	ND	mg/kg	0.097	1		05/07/24 19:26	591-78-6	
Iodomethane	ND	mg/kg	0.097	1		05/07/24 19:26	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0048	1		05/07/24 19:26	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0048	1		05/07/24 19:26	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	1		05/07/24 19:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.024	1		05/07/24 19:26	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0048	1		05/07/24 19:26	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS01 0.0-1' Lab ID: 50372019011 Collected: 05/01/24 15:30 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0048	1		05/07/24 19:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0048	1		05/07/24 19:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0048	1		05/07/24 19:26	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0048	1		05/07/24 19:26	127-18-4	
Toluene	ND	mg/kg	0.0048	1		05/07/24 19:26	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0048	1		05/07/24 19:26	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0048	1		05/07/24 19:26	79-00-5	
Trichloroethene	ND	mg/kg	0.0048	1		05/07/24 19:26	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0048	1		05/07/24 19:26	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0048	1		05/07/24 19:26	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0048	1		05/07/24 19:26	108-67-8	
Vinyl acetate	ND	mg/kg	0.097	1		05/07/24 19:26	108-05-4	
Vinyl chloride	ND	mg/kg	0.0048	1		05/07/24 19:26	75-01-4	
Xylene (Total)	ND	mg/kg	0.0097	1		05/07/24 19:26	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	104	%	75-135	1		05/07/24 19:26	1868-53-7	
Toluene-d8 (S)	106	%	65-148	1		05/07/24 19:26	2037-26-5	
4-Bromofluorobenzene (S)	89	%	63-132	1		05/07/24 19:26	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	16.0	%	0.10	1		05/13/24 16:41		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS02 0.0-1' Lab ID: 50372019012 Collected: 05/01/24 15:20 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	6.7	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:28	7440-38-2	
Barium	64.5	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:28	7440-39-3	
Cadmium	ND	mg/kg	0.50	1	05/09/24 23:06	05/10/24 14:28	7440-43-9	
Chromium	11.3	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:28	7440-47-3	
Lead	12.4	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:28	7439-92-1	
Selenium	ND	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:28	7782-49-2	
Silver	ND	mg/kg	0.50	1	05/09/24 23:06	05/10/24 14:28	7440-22-4	
7471 Mercury								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.25	1	05/13/24 10:34	05/13/24 16:50	7439-97-6	
8270 PAH Soil by SIM								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	83-32-9	
Acenaphthylene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	208-96-8	
Anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	56-55-3	
Benzo(a)pyrene	0.0063	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	50-32-8	
Benzo(b)fluoranthene	0.011	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	207-08-9	
Chrysene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	53-70-3	
Fluoranthene	0.0060	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	206-44-0	
Fluorene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	91-57-6	
Naphthalene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	91-20-3	
Phenanthrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	85-01-8	
Pyrene	0.0069	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 00:42	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	59	%.	16-93	1	05/09/24 10:18	05/11/24 00:42	321-60-8	
p-Terphenyl-d14 (S)	73	%.	19-115	1	05/09/24 10:18	05/11/24 00:42	1718-51-0	
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.088	1		05/07/24 19:56	67-64-1	
Acrolein	ND	mg/kg	0.088	1		05/07/24 19:56	107-02-8	
Acrylonitrile	ND	mg/kg	0.088	1		05/07/24 19:56	107-13-1	
Benzene	ND	mg/kg	0.0044	1		05/07/24 19:56	71-43-2	
Bromobenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	108-86-1	
Bromochloromethane	ND	mg/kg	0.0044	1		05/07/24 19:56	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0044	1		05/07/24 19:56	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS02 0.0-1' Lab ID: 50372019012 Collected: 05/01/24 15:20 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0044	1		05/07/24 19:56	75-25-2	
Bromomethane	ND	mg/kg	0.0044	1		05/07/24 19:56	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.022	1		05/07/24 19:56	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	98-06-6	
Carbon disulfide	ND	mg/kg	0.0088	1		05/07/24 19:56	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0044	1		05/07/24 19:56	56-23-5	
Chlorobenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	108-90-7	
Chloroethane	ND	mg/kg	0.0044	1		05/07/24 19:56	75-00-3	
Chloroform	ND	mg/kg	0.0044	1		05/07/24 19:56	67-66-3	
Chloromethane	ND	mg/kg	0.0044	1		05/07/24 19:56	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0044	1		05/07/24 19:56	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0044	1		05/07/24 19:56	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0044	1		05/07/24 19:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0044	1		05/07/24 19:56	106-93-4	
Dibromomethane	ND	mg/kg	0.0044	1		05/07/24 19:56	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.088	1		05/07/24 19:56	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0044	1		05/07/24 19:56	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0044	1		05/07/24 19:56	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0044	1		05/07/24 19:56	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0044	1		05/07/24 19:56	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0044	1		05/07/24 19:56	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0044	1		05/07/24 19:56	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0044	1		05/07/24 19:56	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0044	1		05/07/24 19:56	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0044	1		05/07/24 19:56	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0044	1		05/07/24 19:56	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0044	1		05/07/24 19:56	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0044	1		05/07/24 19:56	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.088	1		05/07/24 19:56	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0044	1		05/07/24 19:56	87-68-3	
n-Hexane	ND	mg/kg	0.0044	1		05/07/24 19:56	110-54-3	
2-Hexanone	ND	mg/kg	0.088	1		05/07/24 19:56	591-78-6	
Iodomethane	ND	mg/kg	0.088	1		05/07/24 19:56	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0044	1		05/07/24 19:56	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0044	1		05/07/24 19:56	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		05/07/24 19:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.022	1		05/07/24 19:56	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0044	1		05/07/24 19:56	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS02 0.0-1' Lab ID: 50372019012 Collected: 05/01/24 15:20 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0044	1		05/07/24 19:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0044	1		05/07/24 19:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0044	1		05/07/24 19:56	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0044	1		05/07/24 19:56	127-18-4	
Toluene	ND	mg/kg	0.0044	1		05/07/24 19:56	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0044	1		05/07/24 19:56	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0044	1		05/07/24 19:56	79-00-5	
Trichloroethene	ND	mg/kg	0.0044	1		05/07/24 19:56	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0044	1		05/07/24 19:56	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0044	1		05/07/24 19:56	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0044	1		05/07/24 19:56	108-67-8	
Vinyl acetate	ND	mg/kg	0.088	1		05/07/24 19:56	108-05-4	
Vinyl chloride	ND	mg/kg	0.0044	1		05/07/24 19:56	75-01-4	
Xylene (Total)	ND	mg/kg	0.0088	1		05/07/24 19:56	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	75-135	1		05/07/24 19:56	1868-53-7	
Toluene-d8 (S)	103	%	65-148	1		05/07/24 19:56	2037-26-5	
4-Bromofluorobenzene (S)	90	%	63-132	1		05/07/24 19:56	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	15.3	%	0.10	1		05/13/24 16:41		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS03 0.0-1' Lab ID: 50372019013 Collected: 05/01/24 15:05 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	9.4	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:30	7440-38-2	
Barium	126	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:30	7440-39-3	
Cadmium	ND	mg/kg	0.57	1	05/09/24 23:06	05/10/24 14:30	7440-43-9	
Chromium	12.9	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:30	7440-47-3	
Lead	34.1	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:30	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:30	7782-49-2	
Silver	ND	mg/kg	0.57	1	05/09/24 23:06	05/10/24 14:30	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.25	1	05/13/24 10:34	05/13/24 16:53	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	83-32-9	
Acenaphthylene	0.073	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	208-96-8	
Anthracene	0.069	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	120-12-7	
Benzo(a)anthracene	0.13	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	56-55-3	
Benzo(a)pyrene	0.21	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	50-32-8	
Benzo(b)fluoranthene	0.38	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	205-99-2	
Benzo(g,h,i)perylene	0.16	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	191-24-2	
Benzo(k)fluoranthene	0.14	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	207-08-9	
Chrysene	0.17	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	218-01-9	
Dibenz(a,h)anthracene	0.046	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	53-70-3	
Fluoranthene	0.14	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	206-44-0	
Fluorene	ND	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	86-73-7	
Indeno(1,2,3-cd)pyrene	0.15	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	193-39-5	
1-Methylnaphthalene	0.039	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	90-12-0	
2-Methylnaphthalene	0.048	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	91-57-6	
Naphthalene	0.035	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	91-20-3	ED
Phenanthrene	0.072	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	85-01-8	
Pyrene	0.18	mg/kg	0.028	5	05/09/24 10:18	05/11/24 00:57	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	62	%.	16-93	5	05/09/24 10:18	05/11/24 00:57	321-60-8	
p-Terphenyl-d14 (S)	68	%.	19-115	5	05/09/24 10:18	05/11/24 00:57	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.12	1		05/08/24 01:31	67-64-1	
Acrolein	ND	mg/kg	0.12	1		05/08/24 01:31	107-02-8	
Acrylonitrile	ND	mg/kg	0.12	1		05/08/24 01:31	107-13-1	
Benzene	ND	mg/kg	0.0059	1		05/08/24 01:31	71-43-2	
Bromobenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	108-86-1	
Bromochloromethane	ND	mg/kg	0.0059	1		05/08/24 01:31	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0059	1		05/08/24 01:31	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS03 0.0-1' Lab ID: 50372019013 Collected: 05/01/24 15:05 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0059	1		05/08/24 01:31	75-25-2	
Bromomethane	ND	mg/kg	0.0059	1		05/08/24 01:31	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.030	1		05/08/24 01:31	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	98-06-6	
Carbon disulfide	ND	mg/kg	0.012	1		05/08/24 01:31	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0059	1		05/08/24 01:31	56-23-5	
Chlorobenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	108-90-7	
Chloroethane	ND	mg/kg	0.0059	1		05/08/24 01:31	75-00-3	
Chloroform	ND	mg/kg	0.0059	1		05/08/24 01:31	67-66-3	
Chloromethane	ND	mg/kg	0.0059	1		05/08/24 01:31	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0059	1		05/08/24 01:31	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0059	1		05/08/24 01:31	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0059	1		05/08/24 01:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0059	1		05/08/24 01:31	106-93-4	
Dibromomethane	ND	mg/kg	0.0059	1		05/08/24 01:31	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.12	1		05/08/24 01:31	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0059	1		05/08/24 01:31	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0059	1		05/08/24 01:31	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0059	1		05/08/24 01:31	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0059	1		05/08/24 01:31	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0059	1		05/08/24 01:31	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0059	1		05/08/24 01:31	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0059	1		05/08/24 01:31	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0059	1		05/08/24 01:31	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0059	1		05/08/24 01:31	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0059	1		05/08/24 01:31	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0059	1		05/08/24 01:31	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0059	1		05/08/24 01:31	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.12	1		05/08/24 01:31	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0059	1		05/08/24 01:31	87-68-3	
n-Hexane	ND	mg/kg	0.0059	1		05/08/24 01:31	110-54-3	
2-Hexanone	ND	mg/kg	0.12	1		05/08/24 01:31	591-78-6	
Iodomethane	ND	mg/kg	0.12	1		05/08/24 01:31	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0059	1		05/08/24 01:31	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0059	1		05/08/24 01:31	99-87-6	
Methylene Chloride	ND	mg/kg	0.024	1		05/08/24 01:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.030	1		05/08/24 01:31	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0059	1		05/08/24 01:31	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS03 0.0-1' Lab ID: 50372019013 Collected: 05/01/24 15:05 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0059	1		05/08/24 01:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0059	1		05/08/24 01:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0059	1		05/08/24 01:31	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0059	1		05/08/24 01:31	127-18-4	
Toluene	ND	mg/kg	0.0059	1		05/08/24 01:31	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0059	1		05/08/24 01:31	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0059	1		05/08/24 01:31	79-00-5	
Trichloroethene	ND	mg/kg	0.0059	1		05/08/24 01:31	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0059	1		05/08/24 01:31	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0059	1		05/08/24 01:31	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0059	1		05/08/24 01:31	108-67-8	
Vinyl acetate	ND	mg/kg	0.12	1		05/08/24 01:31	108-05-4	
Vinyl chloride	ND	mg/kg	0.0059	1		05/08/24 01:31	75-01-4	
Xylene (Total)	ND	mg/kg	0.012	1		05/08/24 01:31	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%	75-135	1		05/08/24 01:31	1868-53-7	
Toluene-d8 (S)	109	%	65-148	1		05/08/24 01:31	2037-26-5	
4-Bromofluorobenzene (S)	90	%	63-132	1		05/08/24 01:31	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	13.5	%	0.10	1		05/13/24 16:41		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS04 0.0-1' Lab ID: 50372019014 Collected: 05/01/24 14:55 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	3.7	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:31	7440-38-2	
Barium	56.5	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:31	7440-39-3	
Cadmium	ND	mg/kg	0.51	1	05/09/24 23:06	05/10/24 14:31	7440-43-9	
Chromium	7.0	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:31	7440-47-3	
Lead	8.5	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:31	7439-92-1	
Selenium	ND	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:31	7782-49-2	
Silver	ND	mg/kg	0.51	1	05/09/24 23:06	05/10/24 14:31	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.25	1	05/13/24 10:34	05/13/24 16:55	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	83-32-9	
Acenaphthylene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	208-96-8	
Anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	207-08-9	
Chrysene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	53-70-3	
Fluoranthene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	206-44-0	
Fluorene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	91-57-6	
Naphthalene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	91-20-3	
Phenanthrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	85-01-8	
Pyrene	ND	mg/kg	0.0056	1	05/09/24 10:18	05/11/24 01:11	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	62	%.	16-93	1	05/09/24 10:18	05/11/24 01:11	321-60-8	
p-Terphenyl-d14 (S)	65	%.	19-115	1	05/09/24 10:18	05/11/24 01:11	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.10	1		05/08/24 02:01	67-64-1	
Acrolein	ND	mg/kg	0.10	1		05/08/24 02:01	107-02-8	
Acrylonitrile	ND	mg/kg	0.10	1		05/08/24 02:01	107-13-1	
Benzene	ND	mg/kg	0.0050	1		05/08/24 02:01	71-43-2	
Bromobenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	108-86-1	
Bromochloromethane	ND	mg/kg	0.0050	1		05/08/24 02:01	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0050	1		05/08/24 02:01	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS04 0.0-1' Lab ID: 50372019014 Collected: 05/01/24 14:55 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0050	1		05/08/24 02:01	75-25-2	
Bromomethane	ND	mg/kg	0.0050	1		05/08/24 02:01	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.025	1		05/08/24 02:01	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	98-06-6	
Carbon disulfide	ND	mg/kg	0.010	1		05/08/24 02:01	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0050	1		05/08/24 02:01	56-23-5	
Chlorobenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	108-90-7	
Chloroethane	ND	mg/kg	0.0050	1		05/08/24 02:01	75-00-3	
Chloroform	ND	mg/kg	0.0050	1		05/08/24 02:01	67-66-3	
Chloromethane	ND	mg/kg	0.0050	1		05/08/24 02:01	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0050	1		05/08/24 02:01	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0050	1		05/08/24 02:01	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0050	1		05/08/24 02:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0050	1		05/08/24 02:01	106-93-4	
Dibromomethane	ND	mg/kg	0.0050	1		05/08/24 02:01	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.10	1		05/08/24 02:01	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0050	1		05/08/24 02:01	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0050	1		05/08/24 02:01	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0050	1		05/08/24 02:01	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0050	1		05/08/24 02:01	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0050	1		05/08/24 02:01	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0050	1		05/08/24 02:01	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0050	1		05/08/24 02:01	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0050	1		05/08/24 02:01	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0050	1		05/08/24 02:01	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0050	1		05/08/24 02:01	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0050	1		05/08/24 02:01	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0050	1		05/08/24 02:01	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.10	1		05/08/24 02:01	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0050	1		05/08/24 02:01	87-68-3	
n-Hexane	ND	mg/kg	0.0050	1		05/08/24 02:01	110-54-3	
2-Hexanone	ND	mg/kg	0.10	1		05/08/24 02:01	591-78-6	
Iodomethane	ND	mg/kg	0.10	1		05/08/24 02:01	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0050	1		05/08/24 02:01	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0050	1		05/08/24 02:01	99-87-6	
Methylene Chloride	ND	mg/kg	0.020	1		05/08/24 02:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.025	1		05/08/24 02:01	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0050	1		05/08/24 02:01	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS04 0.0-1' Lab ID: 50372019014 Collected: 05/01/24 14:55 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0050	1		05/08/24 02:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0050	1		05/08/24 02:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0050	1		05/08/24 02:01	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0050	1		05/08/24 02:01	127-18-4	
Toluene	ND	mg/kg	0.0050	1		05/08/24 02:01	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0050	1		05/08/24 02:01	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0050	1		05/08/24 02:01	79-00-5	
Trichloroethene	ND	mg/kg	0.0050	1		05/08/24 02:01	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0050	1		05/08/24 02:01	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0050	1		05/08/24 02:01	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	1		05/08/24 02:01	108-67-8	
Vinyl acetate	ND	mg/kg	0.10	1		05/08/24 02:01	108-05-4	
Vinyl chloride	ND	mg/kg	0.0050	1		05/08/24 02:01	75-01-4	
Xylene (Total)	ND	mg/kg	0.010	1		05/08/24 02:01	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%	75-135	1		05/08/24 02:01	1868-53-7	
Toluene-d8 (S)	102	%	65-148	1		05/08/24 02:01	2037-26-5	
4-Bromofluorobenzene (S)	97	%	63-132	1		05/08/24 02:01	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	14.1	%	0.10	1		05/13/24 16:41		N2
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**ANALYTICAL RESULTS**

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS05 0.0-1' **Lab ID:** 50372019015 **Collected:** 05/01/24 14:45 **Received:** 05/01/24 17:50 **Matrix:** Solid**Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	3.8	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:33	7440-38-2	
Barium	58.0	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:33	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	05/09/24 23:06	05/10/24 14:33	7440-43-9	
Chromium	7.8	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:33	7440-47-3	
Lead	9.1	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:33	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:33	7782-49-2	
Silver	ND	mg/kg	0.55	1	05/09/24 23:06	05/10/24 14:33	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.23	1	05/13/24 10:34	05/13/24 16:57	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	83-32-9	
Acenaphthylene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	208-96-8	
Anthracene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	207-08-9	
Chrysene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	53-70-3	
Fluoranthene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	206-44-0	
Fluorene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	91-57-6	
Naphthalene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	91-20-3	
Phenanthrene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	85-01-8	
Pyrene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:25	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	53	%.	16-93	1	05/09/24 10:18	05/11/24 01:25	321-60-8	
p-Terphenyl-d14 (S)	59	%.	19-115	1	05/09/24 10:18	05/11/24 01:25	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.097	1		05/08/24 02:31	67-64-1	
Acrolein	ND	mg/kg	0.097	1		05/08/24 02:31	107-02-8	
Acrylonitrile	ND	mg/kg	0.097	1		05/08/24 02:31	107-13-1	
Benzene	ND	mg/kg	0.0049	1		05/08/24 02:31	71-43-2	
Bromobenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	108-86-1	
Bromochloromethane	ND	mg/kg	0.0049	1		05/08/24 02:31	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0049	1		05/08/24 02:31	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS05 0.0-1' Lab ID: 50372019015 Collected: 05/01/24 14:45 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0049	1		05/08/24 02:31	75-25-2	
Bromomethane	ND	mg/kg	0.0049	1		05/08/24 02:31	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.024	1		05/08/24 02:31	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	98-06-6	
Carbon disulfide	ND	mg/kg	0.0097	1		05/08/24 02:31	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0049	1		05/08/24 02:31	56-23-5	
Chlorobenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	108-90-7	
Chloroethane	ND	mg/kg	0.0049	1		05/08/24 02:31	75-00-3	
Chloroform	ND	mg/kg	0.0049	1		05/08/24 02:31	67-66-3	
Chloromethane	ND	mg/kg	0.0049	1		05/08/24 02:31	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0049	1		05/08/24 02:31	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0049	1		05/08/24 02:31	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0049	1		05/08/24 02:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0049	1		05/08/24 02:31	106-93-4	
Dibromomethane	ND	mg/kg	0.0049	1		05/08/24 02:31	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.097	1		05/08/24 02:31	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0049	1		05/08/24 02:31	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0049	1		05/08/24 02:31	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0049	1		05/08/24 02:31	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0049	1		05/08/24 02:31	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0049	1		05/08/24 02:31	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0049	1		05/08/24 02:31	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0049	1		05/08/24 02:31	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0049	1		05/08/24 02:31	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0049	1		05/08/24 02:31	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0049	1		05/08/24 02:31	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0049	1		05/08/24 02:31	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0049	1		05/08/24 02:31	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.097	1		05/08/24 02:31	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0049	1		05/08/24 02:31	87-68-3	
n-Hexane	ND	mg/kg	0.0049	1		05/08/24 02:31	110-54-3	
2-Hexanone	ND	mg/kg	0.097	1		05/08/24 02:31	591-78-6	
Iodomethane	ND	mg/kg	0.097	1		05/08/24 02:31	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0049	1		05/08/24 02:31	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0049	1		05/08/24 02:31	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	1		05/08/24 02:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.024	1		05/08/24 02:31	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0049	1		05/08/24 02:31	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS05 0.0-1' Lab ID: 50372019015 Collected: 05/01/24 14:45 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0049	1		05/08/24 02:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0049	1		05/08/24 02:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0049	1		05/08/24 02:31	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0049	1		05/08/24 02:31	127-18-4	
Toluene	ND	mg/kg	0.0049	1		05/08/24 02:31	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0049	1		05/08/24 02:31	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0049	1		05/08/24 02:31	79-00-5	
Trichloroethene	ND	mg/kg	0.0049	1		05/08/24 02:31	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0049	1		05/08/24 02:31	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0049	1		05/08/24 02:31	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0049	1		05/08/24 02:31	108-67-8	
Vinyl acetate	ND	mg/kg	0.097	1		05/08/24 02:31	108-05-4	
Vinyl chloride	ND	mg/kg	0.0049	1		05/08/24 02:31	75-01-4	
Xylene (Total)	ND	mg/kg	0.0097	1		05/08/24 02:31	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%	75-135	1		05/08/24 02:31	1868-53-7	
Toluene-d8 (S)	102	%	65-148	1		05/08/24 02:31	2037-26-5	
4-Bromofluorobenzene (S)	93	%	63-132	1		05/08/24 02:31	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	13.9	%	0.10	1		05/13/24 16:41		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS06 0.0-1' Lab ID: 50372019016 Collected: 05/01/24 14:30 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.6	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:35	7440-38-2	
Barium	100	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:35	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	05/09/24 23:06	05/10/24 14:35	7440-43-9	
Chromium	12.8	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:35	7440-47-3	
Lead	13.4	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:35	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:35	7782-49-2	
Silver	ND	mg/kg	0.55	1	05/09/24 23:06	05/10/24 14:35	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.23	1	05/13/24 10:34	05/13/24 17:00	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	83-32-9	
Acenaphthylene	ND	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	208-96-8	
Anthracene	ND	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	120-12-7	
Benzo(a)anthracene	0.0098	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	56-55-3	
Benzo(a)pyrene	0.013	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	50-32-8	
Benzo(b)fluoranthene	0.022	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	205-99-2	
Benzo(g,h,i)perylene	0.0099	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	191-24-2	
Benzo(k)fluoranthene	0.0060	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	207-08-9	
Chrysene	0.011	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	53-70-3	
Fluoranthene	0.012	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	206-44-0	
Fluorene	ND	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	86-73-7	
Indeno(1,2,3-cd)pyrene	0.0088	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	91-57-6	
Naphthalene	ND	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	91-20-3	
Phenanthrene	0.0063	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	85-01-8	
Pyrene	0.015	mg/kg	0.0059	1	05/09/24 10:18	05/11/24 01:40	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	55	%	16-93	1	05/09/24 10:18	05/11/24 01:40	321-60-8	
p-Terphenyl-d14 (S)	68	%	19-115	1	05/09/24 10:18	05/11/24 01:40	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.089	1		05/08/24 03:02	67-64-1	
Acrolein	ND	mg/kg	0.089	1		05/08/24 03:02	107-02-8	
Acrylonitrile	ND	mg/kg	0.089	1		05/08/24 03:02	107-13-1	
Benzene	ND	mg/kg	0.0045	1		05/08/24 03:02	71-43-2	
Bromobenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	108-86-1	
Bromochloromethane	ND	mg/kg	0.0045	1		05/08/24 03:02	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0045	1		05/08/24 03:02	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS06 0.0-1' Lab ID: 50372019016 Collected: 05/01/24 14:30 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0045	1		05/08/24 03:02	75-25-2	
Bromomethane	ND	mg/kg	0.0045	1		05/08/24 03:02	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.022	1		05/08/24 03:02	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	98-06-6	
Carbon disulfide	ND	mg/kg	0.0089	1		05/08/24 03:02	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0045	1		05/08/24 03:02	56-23-5	
Chlorobenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	108-90-7	
Chloroethane	ND	mg/kg	0.0045	1		05/08/24 03:02	75-00-3	
Chloroform	ND	mg/kg	0.0045	1		05/08/24 03:02	67-66-3	
Chloromethane	ND	mg/kg	0.0045	1		05/08/24 03:02	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0045	1		05/08/24 03:02	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0045	1		05/08/24 03:02	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0045	1		05/08/24 03:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0045	1		05/08/24 03:02	106-93-4	
Dibromomethane	ND	mg/kg	0.0045	1		05/08/24 03:02	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.089	1		05/08/24 03:02	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0045	1		05/08/24 03:02	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0045	1		05/08/24 03:02	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0045	1		05/08/24 03:02	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0045	1		05/08/24 03:02	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0045	1		05/08/24 03:02	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0045	1		05/08/24 03:02	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0045	1		05/08/24 03:02	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0045	1		05/08/24 03:02	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0045	1		05/08/24 03:02	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0045	1		05/08/24 03:02	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0045	1		05/08/24 03:02	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0045	1		05/08/24 03:02	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.089	1		05/08/24 03:02	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0045	1		05/08/24 03:02	87-68-3	
n-Hexane	ND	mg/kg	0.0045	1		05/08/24 03:02	110-54-3	
2-Hexanone	ND	mg/kg	0.089	1		05/08/24 03:02	591-78-6	
Iodomethane	ND	mg/kg	0.089	1		05/08/24 03:02	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0045	1		05/08/24 03:02	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0045	1		05/08/24 03:02	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		05/08/24 03:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.022	1		05/08/24 03:02	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0045	1		05/08/24 03:02	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS06 0.0-1' Lab ID: 50372019016 Collected: 05/01/24 14:30 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0045	1		05/08/24 03:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0045	1		05/08/24 03:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0045	1		05/08/24 03:02	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0045	1		05/08/24 03:02	127-18-4	
Toluene	ND	mg/kg	0.0045	1		05/08/24 03:02	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0045	1		05/08/24 03:02	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0045	1		05/08/24 03:02	79-00-5	
Trichloroethene	ND	mg/kg	0.0045	1		05/08/24 03:02	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0045	1		05/08/24 03:02	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0045	1		05/08/24 03:02	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0045	1		05/08/24 03:02	108-67-8	
Vinyl acetate	ND	mg/kg	0.089	1		05/08/24 03:02	108-05-4	
Vinyl chloride	ND	mg/kg	0.0045	1		05/08/24 03:02	75-01-4	
Xylene (Total)	ND	mg/kg	0.0089	1		05/08/24 03:02	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	75-135	1		05/08/24 03:02	1868-53-7	
Toluene-d8 (S)	101	%	65-148	1		05/08/24 03:02	2037-26-5	
4-Bromofluorobenzene (S)	95	%	63-132	1		05/08/24 03:02	460-00-4	
Percent Moisture		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	17.5	%	0.10	1		05/13/24 16:41		N2

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS07 0.0-1' Lab ID: 50372019017 Collected: 05/01/24 14:20 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	8.9	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:40	7440-38-2	
Barium	96.5	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:40	7440-39-3	
Cadmium	ND	mg/kg	0.60	1	05/09/24 23:06	05/10/24 14:40	7440-43-9	
Chromium	13.9	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:40	7440-47-3	
Lead	13.4	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:40	7439-92-1	
Selenium	ND	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:40	7782-49-2	
Silver	ND	mg/kg	0.60	1	05/09/24 23:06	05/10/24 14:40	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.23	1	05/13/24 10:34	05/13/24 17:02	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	83-32-9	
Acenaphthylene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	208-96-8	
Anthracene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	120-12-7	
Benzo(a)anthracene	0.012	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	56-55-3	
Benzo(a)pyrene	0.018	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	50-32-8	
Benzo(b)fluoranthene	0.028	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	205-99-2	
Benzo(g,h,i)perylene	0.012	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	191-24-2	
Benzo(k)fluoranthene	0.012	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	207-08-9	
Chrysene	0.016	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	53-70-3	
Fluoranthene	0.016	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	206-44-0	
Fluorene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	86-73-7	
Indeno(1,2,3-cd)pyrene	0.012	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	91-57-6	
Naphthalene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	91-20-3	
Phenanthrene	ND	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	85-01-8	
Pyrene	0.019	mg/kg	0.0057	1	05/09/24 10:18	05/11/24 01:54	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	61	%.	16-93	1	05/09/24 10:18	05/11/24 01:54	321-60-8	
p-Terphenyl-d14 (S)	73	%.	19-115	1	05/09/24 10:18	05/11/24 01:54	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.11	1		05/08/24 03:32	67-64-1	
Acrolein	ND	mg/kg	0.11	1		05/08/24 03:32	107-02-8	
Acrylonitrile	ND	mg/kg	0.11	1		05/08/24 03:32	107-13-1	
Benzene	ND	mg/kg	0.0053	1		05/08/24 03:32	71-43-2	
Bromobenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	108-86-1	
Bromochloromethane	ND	mg/kg	0.0053	1		05/08/24 03:32	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0053	1		05/08/24 03:32	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS07 0.0-1' Lab ID: 50372019017 Collected: 05/01/24 14:20 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0053	1		05/08/24 03:32	75-25-2	
Bromomethane	ND	mg/kg	0.0053	1		05/08/24 03:32	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.027	1		05/08/24 03:32	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	98-06-6	
Carbon disulfide	ND	mg/kg	0.011	1		05/08/24 03:32	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0053	1		05/08/24 03:32	56-23-5	
Chlorobenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	108-90-7	
Chloroethane	ND	mg/kg	0.0053	1		05/08/24 03:32	75-00-3	
Chloroform	ND	mg/kg	0.0053	1		05/08/24 03:32	67-66-3	
Chloromethane	ND	mg/kg	0.0053	1		05/08/24 03:32	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0053	1		05/08/24 03:32	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0053	1		05/08/24 03:32	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0053	1		05/08/24 03:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0053	1		05/08/24 03:32	106-93-4	
Dibromomethane	ND	mg/kg	0.0053	1		05/08/24 03:32	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.11	1		05/08/24 03:32	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0053	1		05/08/24 03:32	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0053	1		05/08/24 03:32	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0053	1		05/08/24 03:32	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0053	1		05/08/24 03:32	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0053	1		05/08/24 03:32	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0053	1		05/08/24 03:32	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0053	1		05/08/24 03:32	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0053	1		05/08/24 03:32	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0053	1		05/08/24 03:32	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0053	1		05/08/24 03:32	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0053	1		05/08/24 03:32	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0053	1		05/08/24 03:32	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.11	1		05/08/24 03:32	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0053	1		05/08/24 03:32	87-68-3	
n-Hexane	ND	mg/kg	0.0053	1		05/08/24 03:32	110-54-3	
2-Hexanone	ND	mg/kg	0.11	1		05/08/24 03:32	591-78-6	
Iodomethane	ND	mg/kg	0.11	1		05/08/24 03:32	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0053	1		05/08/24 03:32	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0053	1		05/08/24 03:32	99-87-6	
Methylene Chloride	ND	mg/kg	0.021	1		05/08/24 03:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.027	1		05/08/24 03:32	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0053	1		05/08/24 03:32	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro
 Pace Project No.: 50372019

Sample: NW-SL-SS07 0.0-1' Lab ID: 50372019017 Collected: 05/01/24 14:20 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0053	1		05/08/24 03:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0053	1		05/08/24 03:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0053	1		05/08/24 03:32	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0053	1		05/08/24 03:32	127-18-4	
Toluene	ND	mg/kg	0.0053	1		05/08/24 03:32	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0053	1		05/08/24 03:32	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0053	1		05/08/24 03:32	79-00-5	
Trichloroethene	ND	mg/kg	0.0053	1		05/08/24 03:32	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0053	1		05/08/24 03:32	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0053	1		05/08/24 03:32	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0053	1		05/08/24 03:32	108-67-8	
Vinyl acetate	ND	mg/kg	0.11	1		05/08/24 03:32	108-05-4	
Vinyl chloride	ND	mg/kg	0.0053	1		05/08/24 03:32	75-01-4	
Xylene (Total)	ND	mg/kg	0.011	1		05/08/24 03:32	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102	%	75-135	1		05/08/24 03:32	1868-53-7	
Toluene-d8 (S)	102	%	65-148	1		05/08/24 03:32	2037-26-5	
4-Bromofluorobenzene (S)	95	%	63-132	1		05/08/24 03:32	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
 Pace Analytical Services - Indianapolis

Percent Moisture	17.7	%	0.10	1		05/13/24 16:41		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS08 0.0-1' Lab ID: 50372019018 Collected: 05/01/24 14:05 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.5	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:42	7440-38-2	
Barium	248	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:42	7440-39-3	
Cadmium	ND	mg/kg	0.52	1	05/09/24 23:06	05/10/24 14:42	7440-43-9	
Chromium	18.4	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:42	7440-47-3	
Lead	17.6	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:42	7439-92-1	
Selenium	ND	mg/kg	1.0	1	05/09/24 23:06	05/10/24 14:42	7782-49-2	
Silver	ND	mg/kg	0.52	1	05/09/24 23:06	05/10/24 14:42	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.24	1	05/13/24 10:34	05/13/24 17:05	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	83-32-9	
Acenaphthylene	0.090	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	208-96-8	
Anthracene	0.057	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	120-12-7	
Benzo(a)anthracene	0.20	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	56-55-3	
Benzo(a)pyrene	0.28	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	50-32-8	
Benzo(b)fluoranthene	0.51	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	205-99-2	
Benzo(g,h,i)perylene	0.19	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	191-24-2	
Benzo(k)fluoranthene	0.16	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	207-08-9	
Chrysene	0.25	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	218-01-9	
Dibenz(a,h)anthracene	0.059	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	53-70-3	
Fluoranthene	0.27	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	206-44-0	
Fluorene	0.011	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	86-73-7	
Indeno(1,2,3-cd)pyrene	0.19	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	193-39-5	
1-Methylnaphthalene	0.017	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	90-12-0	
2-Methylnaphthalene	0.022	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	91-57-6	
Naphthalene	0.028	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	91-20-3	
Phenanthrene	0.069	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	85-01-8	
Pyrene	0.32	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:17	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	63	%.	16-93	1	05/10/24 11:40	05/14/24 05:17	321-60-8	
p-Terphenyl-d14 (S)	80	%.	19-115	1	05/10/24 11:40	05/14/24 05:17	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.090	1		05/08/24 04:03	67-64-1	
Acrolein	ND	mg/kg	0.090	1		05/08/24 04:03	107-02-8	
Acrylonitrile	ND	mg/kg	0.090	1		05/08/24 04:03	107-13-1	
Benzene	ND	mg/kg	0.0045	1		05/08/24 04:03	71-43-2	
Bromobenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	108-86-1	
Bromochloromethane	ND	mg/kg	0.0045	1		05/08/24 04:03	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0045	1		05/08/24 04:03	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS08 0.0-1' Lab ID: 50372019018 Collected: 05/01/24 14:05 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0045	1		05/08/24 04:03	75-25-2	
Bromomethane	ND	mg/kg	0.0045	1		05/08/24 04:03	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		05/08/24 04:03	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	98-06-6	
Carbon disulfide	ND	mg/kg	0.0090	1		05/08/24 04:03	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0045	1		05/08/24 04:03	56-23-5	
Chlorobenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	108-90-7	
Chloroethane	ND	mg/kg	0.0045	1		05/08/24 04:03	75-00-3	
Chloroform	ND	mg/kg	0.0045	1		05/08/24 04:03	67-66-3	
Chloromethane	ND	mg/kg	0.0045	1		05/08/24 04:03	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0045	1		05/08/24 04:03	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0045	1		05/08/24 04:03	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0045	1		05/08/24 04:03	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0045	1		05/08/24 04:03	106-93-4	
Dibromomethane	ND	mg/kg	0.0045	1		05/08/24 04:03	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.090	1		05/08/24 04:03	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0045	1		05/08/24 04:03	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0045	1		05/08/24 04:03	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0045	1		05/08/24 04:03	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0045	1		05/08/24 04:03	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0045	1		05/08/24 04:03	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0045	1		05/08/24 04:03	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0045	1		05/08/24 04:03	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0045	1		05/08/24 04:03	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0045	1		05/08/24 04:03	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0045	1		05/08/24 04:03	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0045	1		05/08/24 04:03	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0045	1		05/08/24 04:03	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.090	1		05/08/24 04:03	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0045	1		05/08/24 04:03	87-68-3	
n-Hexane	ND	mg/kg	0.0045	1		05/08/24 04:03	110-54-3	
2-Hexanone	ND	mg/kg	0.090	1		05/08/24 04:03	591-78-6	
Iodomethane	ND	mg/kg	0.090	1		05/08/24 04:03	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0045	1		05/08/24 04:03	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0045	1		05/08/24 04:03	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		05/08/24 04:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		05/08/24 04:03	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0045	1		05/08/24 04:03	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS08 0.0-1' Lab ID: 50372019018 Collected: 05/01/24 14:05 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0045	1		05/08/24 04:03	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0045	1		05/08/24 04:03	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0045	1		05/08/24 04:03	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0045	1		05/08/24 04:03	127-18-4	
Toluene	ND	mg/kg	0.0045	1		05/08/24 04:03	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0045	1		05/08/24 04:03	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0045	1		05/08/24 04:03	79-00-5	
Trichloroethene	ND	mg/kg	0.0045	1		05/08/24 04:03	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0045	1		05/08/24 04:03	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0045	1		05/08/24 04:03	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0045	1		05/08/24 04:03	108-67-8	
Vinyl acetate	ND	mg/kg	0.090	1		05/08/24 04:03	108-05-4	
Vinyl chloride	ND	mg/kg	0.0045	1		05/08/24 04:03	75-01-4	
Xylene (Total)	ND	mg/kg	0.0090	1		05/08/24 04:03	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%	75-135	1		05/08/24 04:03	1868-53-7	
Toluene-d8 (S)	109	%	65-148	1		05/08/24 04:03	2037-26-5	
4-Bromofluorobenzene (S)	84	%	63-132	1		05/08/24 04:03	460-00-4	
Percent Moisture		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	14.7	%	0.10	1		05/13/24 16:41		N2

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS09 0.0-1' Lab ID: 50372019019 Collected: 05/01/24 13:50 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	8.1	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:44	7440-38-2	
Barium	94.9	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:44	7440-39-3	
Cadmium	ND	mg/kg	0.60	1	05/09/24 23:06	05/10/24 14:44	7440-43-9	
Chromium	13.7	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:44	7440-47-3	
Lead	14.8	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:44	7439-92-1	
Selenium	ND	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:44	7782-49-2	
Silver	ND	mg/kg	0.60	1	05/09/24 23:06	05/10/24 14:44	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.24	1	05/13/24 10:34	05/13/24 19:54	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	83-32-9	
Acenaphthylene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	208-96-8	
Anthracene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	120-12-7	
Benzo(a)anthracene	0.0075	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	56-55-3	
Benzo(a)pyrene	0.011	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	50-32-8	
Benzo(b)fluoranthene	0.023	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	205-99-2	
Benzo(g,h,i)perylene	0.0073	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	207-08-9	
Chrysene	0.0087	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	53-70-3	
Fluoranthene	0.0094	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	206-44-0	
Fluorene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	86-73-7	
Indeno(1,2,3-cd)pyrene	0.0070	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	91-57-6	
Naphthalene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	91-20-3	
Phenanthrene	ND	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	85-01-8	
Pyrene	0.011	mg/kg	0.0057	1	05/10/24 11:40	05/14/24 05:32	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	58	%	16-93	1	05/10/24 11:40	05/14/24 05:32	321-60-8	
p-Terphenyl-d14 (S)	66	%	19-115	1	05/10/24 11:40	05/14/24 05:32	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.098	1		05/08/24 04:33	67-64-1	
Acrolein	ND	mg/kg	0.098	1		05/08/24 04:33	107-02-8	M1
Acrylonitrile	ND	mg/kg	0.098	1		05/08/24 04:33	107-13-1	
Benzene	ND	mg/kg	0.0049	1		05/08/24 04:33	71-43-2	
Bromobenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	108-86-1	
Bromochloromethane	ND	mg/kg	0.0049	1		05/08/24 04:33	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0049	1		05/08/24 04:33	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS09 0.0-1' Lab ID: 50372019019 Collected: 05/01/24 13:50 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0049	1		05/08/24 04:33	75-25-2	
Bromomethane	ND	mg/kg	0.0049	1		05/08/24 04:33	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.025	1		05/08/24 04:33	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	98-06-6	
Carbon disulfide	ND	mg/kg	0.0098	1		05/08/24 04:33	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0049	1		05/08/24 04:33	56-23-5	
Chlorobenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	108-90-7	
Chloroethane	ND	mg/kg	0.0049	1		05/08/24 04:33	75-00-3	
Chloroform	ND	mg/kg	0.0049	1		05/08/24 04:33	67-66-3	
Chloromethane	ND	mg/kg	0.0049	1		05/08/24 04:33	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0049	1		05/08/24 04:33	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0049	1		05/08/24 04:33	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0049	1		05/08/24 04:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0049	1		05/08/24 04:33	106-93-4	
Dibromomethane	ND	mg/kg	0.0049	1		05/08/24 04:33	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.098	1		05/08/24 04:33	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0049	1		05/08/24 04:33	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0049	1		05/08/24 04:33	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0049	1		05/08/24 04:33	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0049	1		05/08/24 04:33	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0049	1		05/08/24 04:33	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0049	1		05/08/24 04:33	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0049	1		05/08/24 04:33	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0049	1		05/08/24 04:33	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0049	1		05/08/24 04:33	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0049	1		05/08/24 04:33	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0049	1		05/08/24 04:33	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0049	1		05/08/24 04:33	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.098	1		05/08/24 04:33	97-63-2	M1
Hexachloro-1,3-butadiene	ND	mg/kg	0.0049	1		05/08/24 04:33	87-68-3	
n-Hexane	ND	mg/kg	0.0049	1		05/08/24 04:33	110-54-3	
2-Hexanone	ND	mg/kg	0.098	1		05/08/24 04:33	591-78-6	
Iodomethane	ND	mg/kg	0.098	1		05/08/24 04:33	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0049	1		05/08/24 04:33	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0049	1		05/08/24 04:33	99-87-6	
Methylene Chloride	ND	mg/kg	0.020	1		05/08/24 04:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.025	1		05/08/24 04:33	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0049	1		05/08/24 04:33	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS09 0.0-1' Lab ID: 50372019019 Collected: 05/01/24 13:50 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0049	1		05/08/24 04:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0049	1		05/08/24 04:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0049	1		05/08/24 04:33	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0049	1		05/08/24 04:33	127-18-4	
Toluene	ND	mg/kg	0.0049	1		05/08/24 04:33	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0049	1		05/08/24 04:33	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0049	1		05/08/24 04:33	79-00-5	
Trichloroethene	ND	mg/kg	0.0049	1		05/08/24 04:33	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0049	1		05/08/24 04:33	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0049	1		05/08/24 04:33	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0049	1		05/08/24 04:33	108-67-8	
Vinyl acetate	ND	mg/kg	0.098	1		05/08/24 04:33	108-05-4	
Vinyl chloride	ND	mg/kg	0.0049	1		05/08/24 04:33	75-01-4	
Xylene (Total)	ND	mg/kg	0.0098	1		05/08/24 04:33	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	75-135	1		05/08/24 04:33	1868-53-7	
Toluene-d8 (S)	102	%	65-148	1		05/08/24 04:33	2037-26-5	
4-Bromofluorobenzene (S)	95	%	63-132	1		05/08/24 04:33	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	17.9	%	0.10	1		05/13/24 16:41		N2
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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS10 0.0-1' Lab ID: 50372019020 Collected: 05/01/24 13:30 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	17.3	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:52	7440-38-2	
Barium	209	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:52	7440-39-3	
Cadmium	ND	mg/kg	0.58	1	05/09/24 23:06	05/10/24 14:52	7440-43-9	
Chromium	12.6	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:52	7440-47-3	
Lead	39.8	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:52	7439-92-1	
Selenium	ND	mg/kg	1.2	1	05/09/24 23:06	05/10/24 14:52	7782-49-2	
Silver	ND	mg/kg	0.58	1	05/09/24 23:06	05/10/24 14:52	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.23	1	05/13/24 10:34	05/13/24 20:01	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	83-32-9	
Acenaphthylene	0.32	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	208-96-8	
Anthracene	0.21	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	120-12-7	
Benzo(a)anthracene	0.51	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	56-55-3	
Benzo(a)pyrene	0.84	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	50-32-8	
Benzo(b)fluoranthene	1.5	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	205-99-2	
Benzo(g,h,i)perylene	0.60	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	191-24-2	
Benzo(k)fluoranthene	0.44	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	207-08-9	
Chrysene	0.64	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	218-01-9	
Dibenz(a,h)anthracene	0.18	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	53-70-3	
Fluoranthene	0.59	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	206-44-0	
Fluorene	ND	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	86-73-7	
Indeno(1,2,3-cd)pyrene	0.59	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	193-39-5	
1-Methylnaphthalene	0.070	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	90-12-0	
2-Methylnaphthalene	0.077	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	91-57-6	
Naphthalene	0.059	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	91-20-3	ED
Phenanthrene	0.20	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	85-01-8	
Pyrene	0.71	mg/kg	0.029	5	05/13/24 10:35	05/14/24 07:12	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	67	%	16-93	5	05/13/24 10:35	05/14/24 07:12	321-60-8	
p-Terphenyl-d14 (S)	79	%	19-115	5	05/13/24 10:35	05/14/24 07:12	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.12	1		05/08/24 06:04	67-64-1	
Acrolein	ND	mg/kg	0.12	1		05/08/24 06:04	107-02-8	
Acrylonitrile	ND	mg/kg	0.12	1		05/08/24 06:04	107-13-1	
Benzene	ND	mg/kg	0.0058	1		05/08/24 06:04	71-43-2	
Bromobenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	108-86-1	
Bromochloromethane	ND	mg/kg	0.0058	1		05/08/24 06:04	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0058	1		05/08/24 06:04	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS10 0.0-1' Lab ID: 50372019020 Collected: 05/01/24 13:30 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0058	1		05/08/24 06:04	75-25-2	
Bromomethane	ND	mg/kg	0.0058	1		05/08/24 06:04	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.029	1		05/08/24 06:04	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	98-06-6	
Carbon disulfide	ND	mg/kg	0.012	1		05/08/24 06:04	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0058	1		05/08/24 06:04	56-23-5	
Chlorobenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	108-90-7	
Chloroethane	ND	mg/kg	0.0058	1		05/08/24 06:04	75-00-3	
Chloroform	ND	mg/kg	0.0058	1		05/08/24 06:04	67-66-3	
Chloromethane	ND	mg/kg	0.0058	1		05/08/24 06:04	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0058	1		05/08/24 06:04	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0058	1		05/08/24 06:04	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0058	1		05/08/24 06:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0058	1		05/08/24 06:04	106-93-4	
Dibromomethane	ND	mg/kg	0.0058	1		05/08/24 06:04	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.12	1		05/08/24 06:04	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0058	1		05/08/24 06:04	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0058	1		05/08/24 06:04	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0058	1		05/08/24 06:04	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0058	1		05/08/24 06:04	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0058	1		05/08/24 06:04	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0058	1		05/08/24 06:04	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0058	1		05/08/24 06:04	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0058	1		05/08/24 06:04	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0058	1		05/08/24 06:04	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0058	1		05/08/24 06:04	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0058	1		05/08/24 06:04	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0058	1		05/08/24 06:04	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.12	1		05/08/24 06:04	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0058	1		05/08/24 06:04	87-68-3	
n-Hexane	ND	mg/kg	0.0058	1		05/08/24 06:04	110-54-3	
2-Hexanone	ND	mg/kg	0.12	1		05/08/24 06:04	591-78-6	
Iodomethane	ND	mg/kg	0.12	1		05/08/24 06:04	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0058	1		05/08/24 06:04	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0058	1		05/08/24 06:04	99-87-6	
Methylene Chloride	ND	mg/kg	0.023	1		05/08/24 06:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.029	1		05/08/24 06:04	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0058	1		05/08/24 06:04	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-SS10 0.0-1' Lab ID: 50372019020 Collected: 05/01/24 13:30 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0058	1		05/08/24 06:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0058	1		05/08/24 06:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0058	1		05/08/24 06:04	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0058	1		05/08/24 06:04	127-18-4	
Toluene	ND	mg/kg	0.0058	1		05/08/24 06:04	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0058	1		05/08/24 06:04	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0058	1		05/08/24 06:04	79-00-5	
Trichloroethene	ND	mg/kg	0.0058	1		05/08/24 06:04	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0058	1		05/08/24 06:04	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0058	1		05/08/24 06:04	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0058	1		05/08/24 06:04	108-67-8	
Vinyl acetate	ND	mg/kg	0.12	1		05/08/24 06:04	108-05-4	
Vinyl chloride	ND	mg/kg	0.0058	1		05/08/24 06:04	75-01-4	
Xylene (Total)	ND	mg/kg	0.012	1		05/08/24 06:04	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	101	%	75-135	1		05/08/24 06:04	1868-53-7	
Toluene-d8 (S)	115	%	65-148	1		05/08/24 06:04	2037-26-5	
4-Bromofluorobenzene (S)	87	%	63-132	1		05/08/24 06:04	460-00-4	
Percent Moisture		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	16.5	%	0.10	1		05/13/24 16:42		N2

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-FD1 Lab ID: 50372019021 Collected: 05/01/24 08:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	9.9	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:54	7440-38-2	
Barium	69.0	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:54	7440-39-3	
Cadmium	ND	mg/kg	0.54	1	05/09/24 23:06	05/10/24 14:54	7440-43-9	
Chromium	11.8	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:54	7440-47-3	
Lead	31.1	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:54	7439-92-1	
Selenium	ND	mg/kg	1.1	1	05/09/24 23:06	05/10/24 14:54	7782-49-2	
Silver	ND	mg/kg	0.54	1	05/09/24 23:06	05/10/24 14:54	7440-22-4	
7471 Mercury		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.22	1	05/13/24 10:34	05/13/24 20:04	7439-97-6	
8270 PAH Soil by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	83-32-9	
Acenaphthylene	0.16	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	208-96-8	
Anthracene	0.13	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	120-12-7	
Benzo(a)anthracene	0.21	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	56-55-3	
Benzo(a)pyrene	0.35	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	50-32-8	
Benzo(b)fluoranthene	0.59	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	205-99-2	
Benzo(g,h,i)perylene	0.30	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	191-24-2	
Benzo(k)fluoranthene	0.25	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	207-08-9	
Chrysene	0.26	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	218-01-9	
Dibenz(a,h)anthracene	0.084	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	53-70-3	
Fluoranthene	0.23	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	206-44-0	
Fluorene	ND	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	86-73-7	
Indeno(1,2,3-cd)pyrene	0.29	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	193-39-5	
1-Methylnaphthalene	0.040	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	90-12-0	
2-Methylnaphthalene	0.048	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	91-57-6	
Naphthalene	0.035	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	91-20-3	ED
Phenanthrene	0.098	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	85-01-8	
Pyrene	0.28	mg/kg	0.028	5	05/13/24 10:35	05/14/24 07:26	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	68	%	16-93	5	05/13/24 10:35	05/14/24 07:26	321-60-8	
p-Terphenyl-d14 (S)	84	%	19-115	5	05/13/24 10:35	05/14/24 07:26	1718-51-0	
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.092	1		05/08/24 06:35	67-64-1	
Acrolein	ND	mg/kg	0.092	1		05/08/24 06:35	107-02-8	
Acrylonitrile	ND	mg/kg	0.092	1		05/08/24 06:35	107-13-1	
Benzene	ND	mg/kg	0.0046	1		05/08/24 06:35	71-43-2	
Bromobenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	108-86-1	
Bromochloromethane	ND	mg/kg	0.0046	1		05/08/24 06:35	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0046	1		05/08/24 06:35	75-27-4	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-FD1 Lab ID: 50372019021 Collected: 05/01/24 08:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0046	1		05/08/24 06:35	75-25-2	
Bromomethane	ND	mg/kg	0.0046	1		05/08/24 06:35	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		05/08/24 06:35	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	98-06-6	
Carbon disulfide	ND	mg/kg	0.0092	1		05/08/24 06:35	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0046	1		05/08/24 06:35	56-23-5	
Chlorobenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	108-90-7	
Chloroethane	ND	mg/kg	0.0046	1		05/08/24 06:35	75-00-3	
Chloroform	ND	mg/kg	0.0046	1		05/08/24 06:35	67-66-3	
Chloromethane	ND	mg/kg	0.0046	1		05/08/24 06:35	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0046	1		05/08/24 06:35	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0046	1		05/08/24 06:35	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0046	1		05/08/24 06:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0046	1		05/08/24 06:35	106-93-4	
Dibromomethane	ND	mg/kg	0.0046	1		05/08/24 06:35	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.092	1		05/08/24 06:35	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0046	1		05/08/24 06:35	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0046	1		05/08/24 06:35	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0046	1		05/08/24 06:35	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0046	1		05/08/24 06:35	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0046	1		05/08/24 06:35	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0046	1		05/08/24 06:35	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0046	1		05/08/24 06:35	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0046	1		05/08/24 06:35	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0046	1		05/08/24 06:35	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0046	1		05/08/24 06:35	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0046	1		05/08/24 06:35	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0046	1		05/08/24 06:35	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.092	1		05/08/24 06:35	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0046	1		05/08/24 06:35	87-68-3	
n-Hexane	ND	mg/kg	0.0046	1		05/08/24 06:35	110-54-3	
2-Hexanone	ND	mg/kg	0.092	1		05/08/24 06:35	591-78-6	
Iodomethane	ND	mg/kg	0.092	1		05/08/24 06:35	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0046	1		05/08/24 06:35	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0046	1		05/08/24 06:35	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		05/08/24 06:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		05/08/24 06:35	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0046	1		05/08/24 06:35	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	103-65-1	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-FD1 Lab ID: 50372019021 Collected: 05/01/24 08:00 Received: 05/01/24 17:50 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Styrene	ND	mg/kg	0.0046	1		05/08/24 06:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0046	1		05/08/24 06:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0046	1		05/08/24 06:35	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0046	1		05/08/24 06:35	127-18-4	
Toluene	ND	mg/kg	0.0046	1		05/08/24 06:35	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0046	1		05/08/24 06:35	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0046	1		05/08/24 06:35	79-00-5	
Trichloroethene	ND	mg/kg	0.0046	1		05/08/24 06:35	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0046	1		05/08/24 06:35	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0046	1		05/08/24 06:35	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0046	1		05/08/24 06:35	108-67-8	
Vinyl acetate	ND	mg/kg	0.092	1		05/08/24 06:35	108-05-4	
Vinyl chloride	ND	mg/kg	0.0046	1		05/08/24 06:35	75-01-4	
Xylene (Total)	ND	mg/kg	0.0092	1		05/08/24 06:35	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	75-135	1		05/08/24 06:35	1868-53-7	
Toluene-d8 (S)	113	%	65-148	1		05/08/24 06:35	2037-26-5	
4-Bromofluorobenzene (S)	87	%	63-132	1		05/08/24 06:35	460-00-4	

Percent Moisture

Analytical Method: SM 2540G
Pace Analytical Services - Indianapolis

Percent Moisture	12.3	%	0.10	1		05/14/24 12:30		N2
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**ANALYTICAL RESULTS**

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-EB1	Lab ID: 50372019022	Collected: 05/01/24 15:10	Received: 05/01/24 17:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	10.0	1	05/05/24 20:38	05/07/24 23:59	7440-38-2	
Barium	ND	ug/L	10.0	1	05/05/24 20:38	05/07/24 23:59	7440-39-3	
Cadmium	ND	ug/L	2.0	1	05/05/24 20:38	05/07/24 23:59	7440-43-9	
Chromium	ND	ug/L	10.0	1	05/05/24 20:38	05/07/24 23:59	7440-47-3	
Lead	ND	ug/L	10.0	1	05/05/24 20:38	05/07/24 23:59	7439-92-1	
Selenium	ND	ug/L	10.0	1	05/05/24 20:38	05/07/24 23:59	7782-49-2	
Silver	ND	ug/L	10.0	1	05/05/24 20:38	05/07/24 23:59	7440-22-4	
7470 Mercury								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	05/08/24 18:45	05/09/24 08:40	7439-97-6	
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	ug/L	1.0	1	05/02/24 17:29	05/03/24 18:58	83-32-9	
Acenaphthylene	ND	ug/L	1.0	1	05/02/24 17:29	05/03/24 18:58	208-96-8	
Anthracene	ND	ug/L	0.10	1	05/02/24 17:29	05/03/24 18:58	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.10	1	05/02/24 17:29	05/03/24 18:58	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.10	1	05/02/24 17:29	05/03/24 18:58	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	1	05/02/24 17:29	05/03/24 18:58	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.10	1	05/02/24 17:29	05/03/24 18:58	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.10	1	05/02/24 17:29	05/03/24 18:58	207-08-9	
Chrysene	ND	ug/L	0.50	1	05/02/24 17:29	05/03/24 18:58	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.10	1	05/02/24 17:29	05/03/24 18:58	53-70-3	
Fluoranthene	ND	ug/L	1.0	1	05/02/24 17:29	05/03/24 18:58	206-44-0	
Fluorene	ND	ug/L	1.0	1	05/02/24 17:29	05/03/24 18:58	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1	05/02/24 17:29	05/03/24 18:58	193-39-5	
1-Methylnaphthalene	ND	ug/L	1.0	1	05/02/24 17:29	05/03/24 18:58	90-12-0	
2-Methylnaphthalene	ND	ug/L	1.0	1	05/02/24 17:29	05/03/24 18:58	91-57-6	
Naphthalene	ND	ug/L	1.0	1	05/02/24 17:29	05/03/24 18:58	91-20-3	
Phenanthrene	ND	ug/L	1.0	1	05/02/24 17:29	05/03/24 18:58	85-01-8	
Pyrene	ND	ug/L	1.0	1	05/02/24 17:29	05/03/24 18:58	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	93	%	43-129	1	05/02/24 17:29	05/03/24 18:58	321-60-8	
p-Terphenyl-d14 (S)	117	%	64-162	1	05/02/24 17:29	05/03/24 18:58	1718-51-0	
8260/5030 MSV								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		05/03/24 14:40	67-64-1	
Acrolein	ND	ug/L	50.0	1		05/03/24 14:40	107-02-8	
Acrylonitrile	ND	ug/L	100	1		05/03/24 14:40	107-13-1	
Benzene	ND	ug/L	5.0	1		05/03/24 14:40	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		05/03/24 14:40	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		05/03/24 14:40	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		05/03/24 14:40	75-27-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-EB1	Lab ID: 50372019022	Collected: 05/01/24 15:10	Received: 05/01/24 17:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis							
Bromoform	ND	ug/L	5.0	1		05/03/24 14:40	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/03/24 14:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		05/03/24 14:40	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		05/03/24 14:40	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		05/03/24 14:40	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		05/03/24 14:40	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		05/03/24 14:40	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/03/24 14:40	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/03/24 14:40	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/03/24 14:40	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/03/24 14:40	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/03/24 14:40	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		05/03/24 14:40	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		05/03/24 14:40	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		05/03/24 14:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		05/03/24 14:40	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		05/03/24 14:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/03/24 14:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/03/24 14:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/03/24 14:40	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		05/03/24 14:40	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		05/03/24 14:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/03/24 14:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/03/24 14:40	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/03/24 14:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/03/24 14:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/03/24 14:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/03/24 14:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		05/03/24 14:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		05/03/24 14:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		05/03/24 14:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/03/24 14:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/03/24 14:40	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/03/24 14:40	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		05/03/24 14:40	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		05/03/24 14:40	87-68-3	
n-Hexane	ND	ug/L	5.0	1		05/03/24 14:40	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		05/03/24 14:40	591-78-6	
Iodomethane	ND	ug/L	10.0	1		05/03/24 14:40	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/03/24 14:40	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		05/03/24 14:40	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/03/24 14:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		05/03/24 14:40	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		05/03/24 14:40	1634-04-4	
n-Propylbenzene	ND	ug/L	5.0	1		05/03/24 14:40	103-65-1	
Styrene	ND	ug/L	5.0	1		05/03/24 14:40	100-42-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-EB1	Lab ID: 50372019022	Collected: 05/01/24 15:10	Received: 05/01/24 17:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		05/03/24 14:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/03/24 14:40	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/03/24 14:40	127-18-4	
Toluene	ND	ug/L	5.0	1		05/03/24 14:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		05/03/24 14:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		05/03/24 14:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/03/24 14:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/03/24 14:40	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/03/24 14:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/03/24 14:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		05/03/24 14:40	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/03/24 14:40	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/03/24 14:40	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		05/03/24 14:40	108-05-4	L1
Vinyl chloride	ND	ug/L	2.0	1		05/03/24 14:40	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		05/03/24 14:40	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%	82-128	1		05/03/24 14:40	1868-53-7	
4-Bromofluorobenzene (S)	102	%	79-124	1		05/03/24 14:40	460-00-4	
Toluene-d8 (S)	101	%	73-122	1		05/03/24 14:40	2037-26-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-TB1 Lab ID: 50372019023 Collected: 04/30/24 08:00 Received: 05/01/24 17:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.10	1		05/08/24 07:05	67-64-1	
Acrolein	ND	mg/kg	0.10	1		05/08/24 07:05	107-02-8	
Acrylonitrile	ND	mg/kg	0.10	1		05/08/24 07:05	107-13-1	
Benzene	ND	mg/kg	0.0050	1		05/08/24 07:05	71-43-2	
Bromobenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	108-86-1	
Bromochloromethane	ND	mg/kg	0.0050	1		05/08/24 07:05	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0050	1		05/08/24 07:05	75-27-4	
Bromoform	ND	mg/kg	0.0050	1		05/08/24 07:05	75-25-2	
Bromomethane	ND	mg/kg	0.0050	1		05/08/24 07:05	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.025	1		05/08/24 07:05	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	98-06-6	
Carbon disulfide	ND	mg/kg	0.010	1		05/08/24 07:05	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0050	1		05/08/24 07:05	56-23-5	
Chlorobenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	108-90-7	
Chloroethane	ND	mg/kg	0.0050	1		05/08/24 07:05	75-00-3	
Chloroform	ND	mg/kg	0.0050	1		05/08/24 07:05	67-66-3	
Chloromethane	ND	mg/kg	0.0050	1		05/08/24 07:05	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0050	1		05/08/24 07:05	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0050	1		05/08/24 07:05	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0050	1		05/08/24 07:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0050	1		05/08/24 07:05	106-93-4	
Dibromomethane	ND	mg/kg	0.0050	1		05/08/24 07:05	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.10	1		05/08/24 07:05	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0050	1		05/08/24 07:05	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0050	1		05/08/24 07:05	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0050	1		05/08/24 07:05	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0050	1		05/08/24 07:05	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0050	1		05/08/24 07:05	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0050	1		05/08/24 07:05	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0050	1		05/08/24 07:05	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0050	1		05/08/24 07:05	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0050	1		05/08/24 07:05	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0050	1		05/08/24 07:05	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0050	1		05/08/24 07:05	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0050	1		05/08/24 07:05	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.10	1		05/08/24 07:05	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0050	1		05/08/24 07:05	87-68-3	
n-Hexane	ND	mg/kg	0.0050	1		05/08/24 07:05	110-54-3	
2-Hexanone	ND	mg/kg	0.10	1		05/08/24 07:05	591-78-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Sample: NW-SL-TB1 Lab ID: 50372019023 Collected: 04/30/24 08:00 Received: 05/01/24 17:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Iodomethane	ND	mg/kg	0.10	1		05/08/24 07:05	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0050	1		05/08/24 07:05	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0050	1		05/08/24 07:05	99-87-6	
Methylene Chloride	ND	mg/kg	0.020	1		05/08/24 07:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.025	1		05/08/24 07:05	108-10-1	
Methyl-tert-butyl ether	ND	mg/kg	0.0050	1		05/08/24 07:05	1634-04-4	
n-Propylbenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	103-65-1	
Styrene	ND	mg/kg	0.0050	1		05/08/24 07:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0050	1		05/08/24 07:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0050	1		05/08/24 07:05	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0050	1		05/08/24 07:05	127-18-4	
Toluene	ND	mg/kg	0.0050	1		05/08/24 07:05	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0050	1		05/08/24 07:05	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0050	1		05/08/24 07:05	79-00-5	
Trichloroethene	ND	mg/kg	0.0050	1		05/08/24 07:05	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0050	1		05/08/24 07:05	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0050	1		05/08/24 07:05	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	1		05/08/24 07:05	108-67-8	
Vinyl acetate	ND	mg/kg	0.10	1		05/08/24 07:05	108-05-4	
Vinyl chloride	ND	mg/kg	0.0050	1		05/08/24 07:05	75-01-4	
Xylene (Total)	ND	mg/kg	0.010	1		05/08/24 07:05	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	100	%.	75-135	1		05/08/24 07:05	1868-53-7	
Toluene-d8 (S)	94	%.	65-148	1		05/08/24 07:05	2037-26-5	
4-Bromofluorobenzene (S)	105	%.	63-132	1		05/08/24 07:05	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch: 788693

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019022

METHOD BLANK: 3607925

Matrix: Water

Associated Lab Samples: 50372019022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	2.0	05/09/24 08:22	

LABORATORY CONTROL SAMPLE: 3607926

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: 3607927 3607928

Parameter	Units	50372103005		3607927		3607928		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	<0.20	5	5	5	5.0	4.8	101	97	75-125	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607929 3607930

Parameter	Units	50372105001		3607929		3607930		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	5	5.1	4.8	102	96	75-125	7	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch:	788962	Analysis Method:	EPA 7471
QC Batch Method:	EPA 7471	Analysis Description:	7471 Mercury
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019001, 50372019002, 50372019003, 50372019004, 50372019005, 50372019006, 50372019007, 50372019008, 50372019009, 50372019010

METHOD BLANK: 3609302 Matrix: Solid

Associated Lab Samples: 50372019001, 50372019002, 50372019003, 50372019004, 50372019005, 50372019006, 50372019007, 50372019008, 50372019009, 50372019010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	05/10/24 10:13	

LABORATORY CONTROL SAMPLE: 3609303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.5	0.52	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609304 3609305

Parameter	Units	50371897027		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.									
Mercury	mg/kg	ND	0.57	0.58	0.61	0.62	101	101	75-125	2	20		

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro
 Pace Project No.: 50372019

QC Batch: 789270 Analysis Method: EPA 7471
 QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
 Laboratory: Pace Analytical Services - Indianapolis
 Associated Lab Samples: 50372019011, 50372019012, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017, 50372019018, 50372019019, 50372019020, 50372019021

METHOD BLANK: 3610994 Matrix: Solid
 Associated Lab Samples: 50372019011, 50372019012, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017, 50372019018, 50372019019, 50372019020, 50372019021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	05/13/24 16:43	

LABORATORY CONTROL SAMPLE: 3610995

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.5	0.46	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610996 3610997

Parameter	Units	50372019019 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	0.6	0.62	0.54	0.66	86	101	75-125	20	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch:	788216	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Indianapolis
Associated Lab Samples:	50372019001, 50372019002, 50372019003, 50372019004, 50372019005, 50372019006, 50372019007, 50372019008		

METHOD BLANK: 3606083 Matrix: Solid
 Associated Lab Samples: 50372019001, 50372019002, 50372019003, 50372019004, 50372019005, 50372019006, 50372019007, 50372019008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	05/10/24 12:57	
Barium	mg/kg	ND	1.0	05/10/24 12:57	
Cadmium	mg/kg	ND	0.50	05/10/24 12:57	
Chromium	mg/kg	ND	1.0	05/10/24 12:57	
Lead	mg/kg	ND	1.0	05/10/24 12:57	
Selenium	mg/kg	ND	1.0	05/10/24 12:57	
Silver	mg/kg	ND	0.50	05/10/24 12:57	

LABORATORY CONTROL SAMPLE: 3606084

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	46.6	93	80-120	
Barium	mg/kg	50	45.9	92	80-120	
Cadmium	mg/kg	50	43.9	88	80-120	
Chromium	mg/kg	50	46.5	93	80-120	
Lead	mg/kg	50	43.7	87	80-120	
Selenium	mg/kg	50	44.1	88	80-120	
Silver	mg/kg	25	23.4	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606085 3606086

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		Spike Conc.	Result	Spike Conc.	Result							
Arsenic	mg/kg	8.0	54.9	52.7	54.6	52.9	85	85	75-125	3	20	
Barium	mg/kg	165	54.9	52.7	184	183	33	34	75-125	0	20	M3
Cadmium	mg/kg	ND	54.9	52.7	45.4	44.0	82	83	75-125	3	20	
Chromium	mg/kg	8.9	54.9	52.7	56.0	53.8	86	85	75-125	4	20	
Lead	mg/kg	95.8	54.9	52.7	135	120	71	45	75-125	12	20	M3
Selenium	mg/kg	1.2	54.9	52.7	45.6	44.6	81	82	75-125	2	20	
Silver	mg/kg	ND	27.5	26.4	24.3	23.3	88	88	75-125	4	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch:	788217	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Indianapolis
Associated Lab Samples:	50372019009, 50372019010, 50372019011, 50372019012, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017, 50372019018, 50372019019, 50372019020, 50372019021		

METHOD BLANK:	3606087	Matrix:	Solid
Associated Lab Samples:	50372019009, 50372019010, 50372019011, 50372019012, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017, 50372019018, 50372019019, 50372019020, 50372019021		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	05/10/24 14:19	
Barium	mg/kg	ND	1.0	05/10/24 14:19	
Cadmium	mg/kg	ND	0.50	05/10/24 14:19	
Chromium	mg/kg	ND	1.0	05/10/24 14:19	
Lead	mg/kg	ND	1.0	05/10/24 14:19	
Selenium	mg/kg	ND	1.0	05/10/24 14:19	
Silver	mg/kg	ND	0.50	05/10/24 14:19	

LABORATORY CONTROL SAMPLE: 3606088

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	46.6	93	80-120	
Barium	mg/kg	50	46.9	94	80-120	
Cadmium	mg/kg	50	44.7	89	80-120	
Chromium	mg/kg	50	46.9	94	80-120	
Lead	mg/kg	50	44.3	89	80-120	
Selenium	mg/kg	50	44.2	88	80-120	
Silver	mg/kg	25	23.8	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606089 3606090

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result								
Arsenic	mg/kg	8.1	59.9	54.8	56.6	52.7	81	81	75-125	7	20		
Barium	mg/kg	94.9	59.9	54.8	168	167	122	132	75-125	0	20	M0	
Cadmium	mg/kg	ND	59.9	54.8	48.5	44.0	81	80	75-125	10	20		
Chromium	mg/kg	13.7	59.9	54.8	66.8	61.3	89	87	75-125	9	20		
Lead	mg/kg	14.8	59.9	54.8	59.5	56.6	75	76	75-125	5	20		
Selenium	mg/kg	ND	59.9	54.8	46.9	42.0	78	77	75-125	11	20		
Silver	mg/kg	ND	30	27.4	25.6	23.3	86	85	75-125	10	20		

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

		3606091			3606092							
Parameter	Units	50372224005	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual	
		Result	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD		
Arsenic	mg/kg	11.2	53.8	56.4	54.5	57.0	81	81	75-125	4	20	
Barium	mg/kg	99.1	53.8	56.4	157	137	108	68	75-125	13	20 M0	
Cadmium	mg/kg	ND	53.8	56.4	43.9	47.5	81	84	75-125	8	20	
Chromium	mg/kg	18.4	53.8	56.4	66.7	66.2	90	85	75-125	1	20	
Lead	mg/kg	15.4	53.8	56.4	53.7	60.1	71	79	75-125	11	20 M0	
Selenium	mg/kg	ND	53.8	56.4	40.8	45.3	76	80	75-125	10	20	
Silver	mg/kg	ND	26.9	28.2	23.2	25.2	86	89	75-125	8	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch: 787944

Analysis Method: EPA 6010

QC Batch Method: EPA 3010

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019022

METHOD BLANK: 3604648

Matrix: Water

Associated Lab Samples: 50372019022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	05/07/24 23:56	
Barium	ug/L	ND	10.0	05/07/24 23:56	
Cadmium	ug/L	ND	2.0	05/07/24 23:56	
Chromium	ug/L	ND	10.0	05/07/24 23:56	
Lead	ug/L	ND	10.0	05/07/24 23:56	
Selenium	ug/L	ND	10.0	05/07/24 23:56	
Silver	ug/L	ND	10.0	05/07/24 23:56	

LABORATORY CONTROL SAMPLE: 3604649

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	936	94	80-120	
Barium	ug/L	1000	951	95	80-120	
Cadmium	ug/L	1000	897	90	80-120	
Chromium	ug/L	1000	916	92	80-120	
Lead	ug/L	1000	879	88	80-120	
Selenium	ug/L	1000	906	91	80-120	
Silver	ug/L	500	479	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3604650 3604651

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50372079004 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	ug/L	4.7J	1000	1000	935	944	93	94	75-125	1	20
Barium	ug/L	203	1000	1000	1130	1120	92	91	75-125	1	20
Cadmium	ug/L	<0.60	1000	1000	879	885	88	89	75-125	1	20
Chromium	ug/L	3.8J	1000	1000	892	900	89	90	75-125	1	20
Lead	ug/L	5.0J	1000	1000	844	848	84	84	75-125	1	20
Selenium	ug/L	<5.0	1000	1000	892	893	89	89	75-125	0	20
Silver	ug/L	<2.9	500	500	465	469	93	94	75-125	1	20

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch: 788061

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019022

METHOD BLANK: 3605156

Matrix: Water

Associated Lab Samples: 50372019022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	05/03/24 12:10	
1,1,1-Trichloroethane	ug/L	ND	5.0	05/03/24 12:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	5.0	05/03/24 12:10	
1,1,2-Trichloroethane	ug/L	ND	5.0	05/03/24 12:10	
1,1-Dichloroethane	ug/L	ND	5.0	05/03/24 12:10	
1,1-Dichloroethene	ug/L	ND	5.0	05/03/24 12:10	
1,1-Dichloropropene	ug/L	ND	5.0	05/03/24 12:10	
1,2,3-Trichlorobenzene	ug/L	ND	5.0	05/03/24 12:10	
1,2,3-Trichloropropane	ug/L	ND	5.0	05/03/24 12:10	
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/03/24 12:10	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	05/03/24 12:10	
1,2-Dibromoethane (EDB)	ug/L	ND	5.0	05/03/24 12:10	
1,2-Dichlorobenzene	ug/L	ND	5.0	05/03/24 12:10	
1,2-Dichloroethane	ug/L	ND	5.0	05/03/24 12:10	
1,2-Dichloropropane	ug/L	ND	5.0	05/03/24 12:10	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	05/03/24 12:10	
1,3-Dichlorobenzene	ug/L	ND	5.0	05/03/24 12:10	
1,3-Dichloropropane	ug/L	ND	5.0	05/03/24 12:10	
1,4-Dichlorobenzene	ug/L	ND	5.0	05/03/24 12:10	
2,2-Dichloropropane	ug/L	ND	5.0	05/03/24 12:10	
2-Butanone (MEK)	ug/L	ND	25.0	05/03/24 12:10	
2-Chlorotoluene	ug/L	ND	5.0	05/03/24 12:10	
2-Hexanone	ug/L	ND	25.0	05/03/24 12:10	
4-Chlorotoluene	ug/L	ND	5.0	05/03/24 12:10	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25.0	05/03/24 12:10	
Acetone	ug/L	ND	100	05/03/24 12:10	
Acrolein	ug/L	ND	50.0	05/03/24 12:10	
Acrylonitrile	ug/L	ND	100	05/03/24 12:10	
Benzene	ug/L	ND	5.0	05/03/24 12:10	
Bromobenzene	ug/L	ND	5.0	05/03/24 12:10	
Bromochloromethane	ug/L	ND	5.0	05/03/24 12:10	
Bromodichloromethane	ug/L	ND	5.0	05/03/24 12:10	
Bromoform	ug/L	ND	5.0	05/03/24 12:10	
Bromomethane	ug/L	ND	5.0	05/03/24 12:10	
Carbon disulfide	ug/L	ND	10.0	05/03/24 12:10	
Carbon tetrachloride	ug/L	ND	5.0	05/03/24 12:10	
Chlorobenzene	ug/L	ND	5.0	05/03/24 12:10	
Chloroethane	ug/L	ND	5.0	05/03/24 12:10	
Chloroform	ug/L	ND	5.0	05/03/24 12:10	
Chloromethane	ug/L	ND	5.0	05/03/24 12:10	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

METHOD BLANK: 3605156

Matrix: Water

Associated Lab Samples: 50372019022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	5.0	05/03/24 12:10	
cis-1,3-Dichloropropene	ug/L	ND	5.0	05/03/24 12:10	
Dibromochloromethane	ug/L	ND	5.0	05/03/24 12:10	
Dibromomethane	ug/L	ND	5.0	05/03/24 12:10	
Dichlorodifluoromethane	ug/L	ND	5.0	05/03/24 12:10	
Ethyl methacrylate	ug/L	ND	100	05/03/24 12:10	
Ethylbenzene	ug/L	ND	5.0	05/03/24 12:10	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/03/24 12:10	
Iodomethane	ug/L	ND	10.0	05/03/24 12:10	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	05/03/24 12:10	
Methyl-tert-butyl ether	ug/L	ND	4.0	05/03/24 12:10	
Methylene Chloride	ug/L	ND	5.0	05/03/24 12:10	
n-Butylbenzene	ug/L	ND	5.0	05/03/24 12:10	
n-Hexane	ug/L	ND	5.0	05/03/24 12:10	
n-Propylbenzene	ug/L	ND	5.0	05/03/24 12:10	
p-Isopropyltoluene	ug/L	ND	5.0	05/03/24 12:10	
sec-Butylbenzene	ug/L	ND	5.0	05/03/24 12:10	
Styrene	ug/L	ND	5.0	05/03/24 12:10	
tert-Butylbenzene	ug/L	ND	5.0	05/03/24 12:10	
Tetrachloroethene	ug/L	ND	5.0	05/03/24 12:10	
Toluene	ug/L	ND	5.0	05/03/24 12:10	
trans-1,2-Dichloroethene	ug/L	ND	5.0	05/03/24 12:10	
trans-1,3-Dichloropropene	ug/L	ND	5.0	05/03/24 12:10	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	05/03/24 12:10	
Trichloroethene	ug/L	ND	5.0	05/03/24 12:10	
Trichlorofluoromethane	ug/L	ND	5.0	05/03/24 12:10	
Vinyl acetate	ug/L	ND	50.0	05/03/24 12:10	
Vinyl chloride	ug/L	ND	2.0	05/03/24 12:10	
Xylene (Total)	ug/L	ND	10.0	05/03/24 12:10	
4-Bromofluorobenzene (S)	%	103	79-124	05/03/24 12:10	
Dibromofluoromethane (S)	%	99	82-128	05/03/24 12:10	
Toluene-d8 (S)	%	101	73-122	05/03/24 12:10	

LABORATORY CONTROL SAMPLE: 3605157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	57.7	115	81-130	
1,1,1-Trichloroethane	ug/L	50	56.3	113	71-126	
1,1,2,2-Tetrachloroethane	ug/L	50	56.0	112	70-126	
1,1,2-Trichloroethane	ug/L	50	54.8	110	79-125	
1,1-Dichloroethane	ug/L	50	54.0	108	79-120	
1,1-Dichloroethene	ug/L	50	55.5	111	71-130	
1,1-Dichloropropene	ug/L	50	57.4	115	78-144	
1,2,3-Trichlorobenzene	ug/L	50	52.7	105	57-146	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

LABORATORY CONTROL SAMPLE: 3605157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,3-Trichloropropane	ug/L	50	54.9	110	74-127	
1,2,4-Trichlorobenzene	ug/L	50	53.7	107	62-136	
1,2,4-Trimethylbenzene	ug/L	50	56.4	113	69-120	
1,2-Dibromoethane (EDB)	ug/L	50	54.4	109	80-120	
1,2-Dichlorobenzene	ug/L	50	52.5	105	79-123	
1,2-Dichloroethane	ug/L	50	51.2	102	72-123	
1,2-Dichloropropane	ug/L	50	55.3	111	76-125	
1,3,5-Trimethylbenzene	ug/L	50	55.6	111	71-120	
1,3-Dichlorobenzene	ug/L	50	53.1	106	78-117	
1,3-Dichloropropane	ug/L	50	54.0	108	77-126	
1,4-Dichlorobenzene	ug/L	50	51.5	103	79-116	
2,2-Dichloropropane	ug/L	50	58.9	118	48-138	
2-Butanone (MEK)	ug/L	250	279	112	67-135	
2-Chlorotoluene	ug/L	50	53.7	107	75-122	
2-Hexanone	ug/L	250	280	112	65-135	
4-Chlorotoluene	ug/L	50	53.1	106	77-120	
4-Methyl-2-pentanone (MIBK)	ug/L	250	288	115	69-136	
Acetone	ug/L	250	267	107	34-156	
Acrolein	ug/L	1000	1060	106	59-191	
Acrylonitrile	ug/L	250	272	109	67-146	
Benzene	ug/L	50	54.2	108	76-122	
Bromobenzene	ug/L	50	54.0	108	75-121	
Bromochloromethane	ug/L	50	52.9	106	73-119	
Bromodichloromethane	ug/L	50	55.0	110	80-126	
Bromoform	ug/L	50	59.4	119	77-124	
Bromomethane	ug/L	50	61.1	122	10-175	
Carbon disulfide	ug/L	50	53.9	108	69-121	
Carbon tetrachloride	ug/L	50	60.2	120	73-127	
Chlorobenzene	ug/L	50	52.3	105	76-118	
Chloroethane	ug/L	50	56.9	114	36-162	
Chloroform	ug/L	50	52.2	104	78-121	
Chloromethane	ug/L	50	52.3	105	37-143	
cis-1,2-Dichloroethene	ug/L	50	52.2	104	77-123	
cis-1,3-Dichloropropene	ug/L	50	58.6	117	76-132	
Dibromochloromethane	ug/L	50	57.5	115	79-130	
Dibromomethane	ug/L	50	52.2	104	79-124	
Dichlorodifluoromethane	ug/L	50	41.9	84	29-126	
Ethyl methacrylate	ug/L	50	59J	118	78-137	
Ethylbenzene	ug/L	50	54.9	110	76-120	
Hexachloro-1,3-butadiene	ug/L	50	52.2	104	60-131	
Iodomethane	ug/L	50	49.9	100	10-148	
Isopropylbenzene (Cumene)	ug/L	50	57.0	114	71-124	
Methyl-tert-butyl ether	ug/L	50	54.6	109	71-121	
Methylene Chloride	ug/L	50	54.6	109	71-121	
n-Butylbenzene	ug/L	50	57.9	116	68-131	
n-Hexane	ug/L	50	56.6	113	51-126	
n-Propylbenzene	ug/L	50	54.8	110	67-127	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

LABORATORY CONTROL SAMPLE: 3605157

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
p-Isopropyltoluene	ug/L	50	56.0	112	72-124	
sec-Butylbenzene	ug/L	50	57.5	115	71-126	
Styrene	ug/L	50	54.9	110	80-121	
tert-Butylbenzene	ug/L	50	56.5	113	71-128	
Tetrachloroethene	ug/L	50	56.1	112	71-122	
Toluene	ug/L	50	54.4	109	74-118	
trans-1,2-Dichloroethene	ug/L	50	54.3	109	75-122	
trans-1,3-Dichloropropene	ug/L	50	60.5	121	77-126	
trans-1,4-Dichloro-2-butene	ug/L	50	59J	118	53-136	
Trichloroethene	ug/L	50	53.7	107	74-125	
Trichlorofluoromethane	ug/L	50	52.9	106	64-138	
Vinyl acetate	ug/L	200	332	166	74-154 L1	
Vinyl chloride	ug/L	50	54.7	109	55-139	
Xylene (Total)	ug/L	100	108	108	73-119	
4-Bromofluorobenzene (S)	%			103	79-124	
Dibromofluoromethane (S)	%			99	82-128	
Toluene-d8 (S)	%			100	73-122	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605158 3605159

Parameter	Units	50372013013		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	55.5	55.4	111	111	47-139	0	20		
1,1,1-Trichloroethane	ug/L	ND	50	50	57.2	56.9	114	114	47-145	1	20		
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	55.2	54.2	110	108	49-133	2	20		
1,1,2-Trichloroethane	ug/L	ND	50	50	52.9	53.7	106	107	52-136	2	20		
1,1-Dichloroethane	ug/L	ND	50	50	55.3	54.3	111	109	52-137	2	20		
1,1-Dichloroethene	ug/L	ND	50	50	58.6	57.7	117	115	53-144	2	20		
1,1-Dichloropropene	ug/L	ND	50	50	58.7	57.8	117	116	49-150	2	20		
1,2,3-Trichlorobenzene	ug/L	ND	50	50	48.9	50.1	98	100	20-153	2	20		
1,2,3-Trichloropropane	ug/L	ND	50	50	54.7	53.7	109	107	47-134	2	20		
1,2,4-Trichlorobenzene	ug/L	ND	50	50	49.5	50.4	99	101	23-141	2	20		
1,2,4-Trimethylbenzene	ug/L	ND	50	50	55.7	55.9	111	112	41-131	0	20		
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	52.2	51.3	104	103	55-133	2	20		
1,2-Dichlorobenzene	ug/L	ND	50	50	50.8	50.8	102	102	43-133	0	20		
1,2-Dichloroethane	ug/L	ND	50	50	50.2	49.8	100	100	50-138	1	20		
1,2-Dichloropropane	ug/L	ND	50	50	55.1	54.5	110	109	54-139	1	20		
1,3,5-Trimethylbenzene	ug/L	ND	50	50	55.1	55.3	110	111	39-133	0	20		
1,3-Dichlorobenzene	ug/L	ND	50	50	51.8	51.8	104	104	41-131	0	20		
1,3-Dichloropropane	ug/L	ND	50	50	52.2	51.6	104	103	50-136	1	20		
1,4-Dichlorobenzene	ug/L	ND	50	50	50.1	50.0	100	100	41-131	0	20		
2,2-Dichloropropane	ug/L	ND	50	50	55.0	54.9	110	110	17-141	0	20		
2-Butanone (MEK)	ug/L	ND	250	250	273	270	109	108	45-138	1	20		
2-Chlorotoluene	ug/L	ND	50	50	53.4	53.4	107	107	36-141	0	20		
2-Hexanone	ug/L	ND	250	250	264	257	106	103	45-135	2	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		3605158			3605159							
Parameter	Units	50372013013 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual	
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		RPD
4-Chlorotoluene	ug/L	ND	50	50	52.7	52.4	105	105	38-134	1	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	277	271	111	108	46-138	2	20	
Acetone	ug/L	ND	250	250	263	255	105	101	25-151	3	20	
Acrolein	ug/L	ND	1000	1000	991	976	99	98	36-168	2	20	
Acrylonitrile	ug/L	ND	250	250	264	257	106	103	47-147	2	20	
Benzene	ug/L	ND	50	50	55.2	54.4	110	109	53-138	1	20	
Bromobenzene	ug/L	ND	50	50	52.3	51.7	105	103	47-130	1	20	
Bromochloromethane	ug/L	ND	50	50	53.0	52.3	106	105	52-130	1	20	
Bromodichloromethane	ug/L	ND	50	50	53.1	53.5	106	107	50-146	1	20	
Bromoform	ug/L	ND	50	50	56.1	56.4	112	113	45-132	1	20	
Bromomethane	ug/L	ND	50	50	60.5	64.0	121	128	10-173	6	20	
Carbon disulfide	ug/L	ND	50	50	55.6	54.9	111	110	47-133	1	20	
Carbon tetrachloride	ug/L	ND	50	50	59.9	60.7	120	121	43-148	1	20	
Chlorobenzene	ug/L	ND	50	50	52.6	51.5	105	103	52-131	2	20	
Chloroethane	ug/L	ND	50	50	60.0	58.5	120	117	25-169	2	20	
Chloroform	ug/L	ND	50	50	52.9	52.2	106	104	54-138	1	20	
Chloromethane	ug/L	ND	50	50	53.2	52.7	106	105	33-137	1	20	
cis-1,2-Dichloroethene	ug/L	ND	50	50	52.3	51.6	105	103	50-141	1	20	
cis-1,3-Dichloropropene	ug/L	ND	50	50	55.8	55.3	112	111	47-135	1	20	
Dibromochloromethane	ug/L	ND	50	50	54.0	54.0	108	108	48-139	0	20	
Dibromomethane	ug/L	ND	50	50	50.1	50.1	100	100	51-141	0	20	
Dichlorodifluoromethane	ug/L	ND	50	50	40.0	38.7	80	77	15-130	3	20	
Ethyl methacrylate	ug/L	ND	50	50	55.7J	54.9J	111	110	51-142		20	
Ethylbenzene	ug/L	ND	50	50	54.4	54.0	109	108	50-136	1	20	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	48.5	50.1	97	100	15-141	3	20	
Iodomethane	ug/L	ND	50	50	44.7	50.2	89	100	10-145	12	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	55.5	55.4	111	111	46-137	0	20	
Methyl-tert-butyl ether	ug/L	ND	50	50	53.5	52.6	107	105	47-135	2	20	
Methylene Chloride	ug/L	ND	50	50	53.0	51.7	106	103	48-131	2	20	
n-Butylbenzene	ug/L	ND	50	50	54.2	56.0	108	112	30-138	3	20	
n-Hexane	ug/L	ND	50	50	51.6	52.3	103	105	35-137	1	20	
n-Propylbenzene	ug/L	ND	50	50	53.9	53.7	108	107	37-135	0	20	
p-Isopropyltoluene	ug/L	ND	50	50	54.0	55.1	108	110	35-136	2	20	
sec-Butylbenzene	ug/L	ND	50	50	55.5	57.3	111	115	36-137	3	20	
Styrene	ug/L	ND	50	50	52.7	52.2	105	104	46-136	1	20	
tert-Butylbenzene	ug/L	ND	50	50	55.9	56.5	112	113	40-137	1	20	
Tetrachloroethene	ug/L	ND	50	50	55.2	55.0	110	110	44-138	0	20	
Toluene	ug/L	ND	50	50	55.3	54.4	111	109	52-132	2	20	
trans-1,2-Dichloroethene	ug/L	ND	50	50	56.0	55.3	112	111	50-137	1	20	
trans-1,3-Dichloropropene	ug/L	ND	50	50	54.9	54.4	110	109	46-130	1	20	
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	54.1J	52.6J	108	105	24-134		20	
Trichloroethene	ug/L	ND	50	50	54.7	54.1	109	108	49-140	1	20	
Trichlorofluoromethane	ug/L	ND	50	50	55.5	54.2	111	108	44-153	2	20	
Vinyl acetate	ug/L	ND	200	200	295	298	148	149	32-142	1	20 M0	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Parameter	Units	3605158		3605159		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50372013013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Vinyl chloride	ug/L	ND	50	50	57.6	56.0	115	112	41-147	3	20		
Xylene (Total)	ug/L	ND	100	100	105	104	105	104	44-138	1	20		
4-Bromofluorobenzene (S)	%						100	100	79-124				
Dibromofluoromethane (S)	%						98	98	82-128				
Toluene-d8 (S)	%						101	101	73-122				

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch: 788554

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019001, 50372019006, 50372019007, 50372019008, 50372019009, 50372019010, 50372019011, 50372019012

METHOD BLANK: 3607166

Matrix: Solid

Associated Lab Samples: 50372019001, 50372019006, 50372019007, 50372019008, 50372019009, 50372019010, 50372019011, 50372019012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	05/07/24 10:48	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	05/07/24 10:48	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	05/07/24 10:48	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	05/07/24 10:48	
1,1-Dichloroethane	mg/kg	ND	0.0050	05/07/24 10:48	
1,1-Dichloroethene	mg/kg	ND	0.0050	05/07/24 10:48	
1,1-Dichloropropene	mg/kg	ND	0.0050	05/07/24 10:48	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	05/07/24 10:48	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	05/07/24 10:48	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	05/07/24 10:48	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	05/07/24 10:48	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	05/07/24 10:48	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	05/07/24 10:48	
1,2-Dichloroethane	mg/kg	ND	0.0050	05/07/24 10:48	
1,2-Dichloropropane	mg/kg	ND	0.0050	05/07/24 10:48	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	05/07/24 10:48	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	05/07/24 10:48	
1,3-Dichloropropane	mg/kg	ND	0.0050	05/07/24 10:48	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	05/07/24 10:48	
2,2-Dichloropropane	mg/kg	ND	0.0050	05/07/24 10:48	
2-Butanone (MEK)	mg/kg	ND	0.025	05/07/24 10:48	
2-Chlorotoluene	mg/kg	ND	0.0050	05/07/24 10:48	
2-Hexanone	mg/kg	ND	0.10	05/07/24 10:48	
4-Chlorotoluene	mg/kg	ND	0.0050	05/07/24 10:48	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	05/07/24 10:48	
Acetone	mg/kg	ND	0.10	05/07/24 10:48	
Acrolein	mg/kg	ND	0.10	05/07/24 10:48	
Acrylonitrile	mg/kg	ND	0.10	05/07/24 10:48	
Benzene	mg/kg	ND	0.0050	05/07/24 10:48	
Bromobenzene	mg/kg	ND	0.0050	05/07/24 10:48	
Bromochloromethane	mg/kg	ND	0.0050	05/07/24 10:48	
Bromodichloromethane	mg/kg	ND	0.0050	05/07/24 10:48	
Bromoform	mg/kg	ND	0.0050	05/07/24 10:48	
Bromomethane	mg/kg	ND	0.0050	05/07/24 10:48	
Carbon disulfide	mg/kg	ND	0.010	05/07/24 10:48	
Carbon tetrachloride	mg/kg	ND	0.0050	05/07/24 10:48	
Chlorobenzene	mg/kg	ND	0.0050	05/07/24 10:48	
Chloroethane	mg/kg	ND	0.0050	05/07/24 10:48	
Chloroform	mg/kg	ND	0.0050	05/07/24 10:48	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

METHOD BLANK: 3607166

Matrix: Solid

Associated Lab Samples: 50372019001, 50372019006, 50372019007, 50372019008, 50372019009, 50372019010, 50372019011, 50372019012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	mg/kg	ND	0.0050	05/07/24 10:48	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	05/07/24 10:48	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	05/07/24 10:48	
Dibromochloromethane	mg/kg	ND	0.0050	05/07/24 10:48	
Dibromomethane	mg/kg	ND	0.0050	05/07/24 10:48	
Dichlorodifluoromethane	mg/kg	ND	0.0050	05/07/24 10:48	
Ethyl methacrylate	mg/kg	ND	0.10	05/07/24 10:48	
Ethylbenzene	mg/kg	ND	0.0050	05/07/24 10:48	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	05/07/24 10:48	
Iodomethane	mg/kg	ND	0.10	05/07/24 10:48	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	05/07/24 10:48	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	05/07/24 10:48	
Methylene Chloride	mg/kg	ND	0.020	05/07/24 10:48	
n-Butylbenzene	mg/kg	ND	0.0050	05/07/24 10:48	
n-Hexane	mg/kg	ND	0.0050	05/07/24 10:48	
n-Propylbenzene	mg/kg	ND	0.0050	05/07/24 10:48	
p-Isopropyltoluene	mg/kg	ND	0.0050	05/07/24 10:48	
sec-Butylbenzene	mg/kg	ND	0.0050	05/07/24 10:48	
Styrene	mg/kg	ND	0.0050	05/07/24 10:48	
tert-Butylbenzene	mg/kg	ND	0.0050	05/07/24 10:48	
Tetrachloroethene	mg/kg	ND	0.0050	05/07/24 10:48	
Toluene	mg/kg	ND	0.0050	05/07/24 10:48	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	05/07/24 10:48	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	05/07/24 10:48	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	05/07/24 10:48	
Trichloroethene	mg/kg	ND	0.0050	05/07/24 10:48	
Trichlorofluoromethane	mg/kg	ND	0.0050	05/07/24 10:48	
Vinyl acetate	mg/kg	ND	0.10	05/07/24 10:48	
Vinyl chloride	mg/kg	ND	0.0050	05/07/24 10:48	
Xylene (Total)	mg/kg	ND	0.010	05/07/24 10:48	
4-Bromofluorobenzene (S)	%	100	63-132	05/07/24 10:48	
Dibromofluoromethane (S)	%	99	75-135	05/07/24 10:48	1d
Toluene-d8 (S)	%	98	65-148	05/07/24 10:48	

LABORATORY CONTROL SAMPLE: 3607167

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	0.05	0.047	95	67-134	
1,1,2,2-Tetrachloroethane	mg/kg	0.05	0.045	91	67-122	
1,1-Dichloroethene	mg/kg	0.05	0.047	93	57-140	
1,2,4-Trimethylbenzene	mg/kg	0.05	0.049	97	60-122	
1,2-Dibromoethane (EDB)	mg/kg	0.05	0.054	108	71-126	
1,2-Dichloroethane	mg/kg	0.05	0.053	105	67-129	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

LABORATORY CONTROL SAMPLE: 3607167

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloropropane	mg/kg	0.05	0.050	100	71-123	
Benzene	mg/kg	0.05	0.050	100	69-125	
Chlorobenzene	mg/kg	0.05	0.048	95	68-122	
Chloroform	mg/kg	0.05	0.049	98	71-124	
cis-1,2-Dichloroethene	mg/kg	0.05	0.051	102	70-123	
Ethylbenzene	mg/kg	0.05	0.048	97	65-124	
Isopropylbenzene (Cumene)	mg/kg	0.05	0.049	98	65-126	
Methyl-tert-butyl ether	mg/kg	0.05	0.052	104	69-128	
n-Hexane	mg/kg	0.05	0.045	90	55-123	
Tetrachloroethene	mg/kg	0.05	0.047	93	62-128	
Toluene	mg/kg	0.05	0.049	99	60-122	
trans-1,2-Dichloroethene	mg/kg	0.05	0.046	93	67-124	
Trichloroethene	mg/kg	0.05	0.049	98	68-128	
Vinyl chloride	mg/kg	0.05	0.048	97	52-142	
Xylene (Total)	mg/kg	0.1	0.094	94	62-122	
4-Bromofluorobenzene (S)	%			103	63-132	
Dibromofluoromethane (S)	%			96	75-135	
Toluene-d8 (S)	%			100	65-148	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch:	788555	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019002, 50372019003, 50372019004, 50372019005, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017, 50372019018, 50372019019, 50372019020, 50372019021, 50372019023

METHOD BLANK: 3607168 Matrix: Solid

Associated Lab Samples: 50372019002, 50372019003, 50372019004, 50372019005, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017, 50372019018, 50372019019, 50372019020, 50372019021, 50372019023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	05/07/24 22:59	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	05/07/24 22:59	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	05/07/24 22:59	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	05/07/24 22:59	
1,1-Dichloroethane	mg/kg	ND	0.0050	05/07/24 22:59	
1,1-Dichloroethene	mg/kg	ND	0.0050	05/07/24 22:59	
1,1-Dichloropropene	mg/kg	ND	0.0050	05/07/24 22:59	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	05/07/24 22:59	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	05/07/24 22:59	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	05/07/24 22:59	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	05/07/24 22:59	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	05/07/24 22:59	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	05/07/24 22:59	
1,2-Dichloroethane	mg/kg	ND	0.0050	05/07/24 22:59	
1,2-Dichloropropane	mg/kg	ND	0.0050	05/07/24 22:59	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	05/07/24 22:59	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	05/07/24 22:59	
1,3-Dichloropropane	mg/kg	ND	0.0050	05/07/24 22:59	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	05/07/24 22:59	
2,2-Dichloropropane	mg/kg	ND	0.0050	05/07/24 22:59	
2-Butanone (MEK)	mg/kg	ND	0.025	05/07/24 22:59	
2-Chlorotoluene	mg/kg	ND	0.0050	05/07/24 22:59	
2-Hexanone	mg/kg	ND	0.10	05/07/24 22:59	
4-Chlorotoluene	mg/kg	ND	0.0050	05/07/24 22:59	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	05/07/24 22:59	
Acetone	mg/kg	ND	0.10	05/07/24 22:59	
Acrolein	mg/kg	ND	0.10	05/07/24 22:59	
Acrylonitrile	mg/kg	ND	0.10	05/07/24 22:59	
Benzene	mg/kg	ND	0.0050	05/07/24 22:59	
Bromobenzene	mg/kg	ND	0.0050	05/07/24 22:59	
Bromochloromethane	mg/kg	ND	0.0050	05/07/24 22:59	
Bromodichloromethane	mg/kg	ND	0.0050	05/07/24 22:59	
Bromoform	mg/kg	ND	0.0050	05/07/24 22:59	
Bromomethane	mg/kg	ND	0.0050	05/07/24 22:59	
Carbon disulfide	mg/kg	ND	0.010	05/07/24 22:59	
Carbon tetrachloride	mg/kg	ND	0.0050	05/07/24 22:59	
Chlorobenzene	mg/kg	ND	0.0050	05/07/24 22:59	
Chloroethane	mg/kg	ND	0.0050	05/07/24 22:59	
Chloroform	mg/kg	ND	0.0050	05/07/24 22:59	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

METHOD BLANK: 3607168

Matrix: Solid

Associated Lab Samples: 50372019002, 50372019003, 50372019004, 50372019005, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017, 50372019018, 50372019019, 50372019020, 50372019021, 50372019023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	mg/kg	ND	0.0050	05/07/24 22:59	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	05/07/24 22:59	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	05/07/24 22:59	
Dibromochloromethane	mg/kg	ND	0.0050	05/07/24 22:59	
Dibromomethane	mg/kg	ND	0.0050	05/07/24 22:59	
Dichlorodifluoromethane	mg/kg	ND	0.0050	05/07/24 22:59	
Ethyl methacrylate	mg/kg	ND	0.10	05/07/24 22:59	
Ethylbenzene	mg/kg	ND	0.0050	05/07/24 22:59	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	05/07/24 22:59	
Iodomethane	mg/kg	ND	0.10	05/07/24 22:59	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	05/07/24 22:59	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	05/07/24 22:59	
Methylene Chloride	mg/kg	ND	0.020	05/07/24 22:59	
n-Butylbenzene	mg/kg	ND	0.0050	05/07/24 22:59	
n-Hexane	mg/kg	ND	0.0050	05/07/24 22:59	
n-Propylbenzene	mg/kg	ND	0.0050	05/07/24 22:59	
p-Isopropyltoluene	mg/kg	ND	0.0050	05/07/24 22:59	
sec-Butylbenzene	mg/kg	ND	0.0050	05/07/24 22:59	
Styrene	mg/kg	ND	0.0050	05/07/24 22:59	
tert-Butylbenzene	mg/kg	ND	0.0050	05/07/24 22:59	
Tetrachloroethene	mg/kg	ND	0.0050	05/07/24 22:59	
Toluene	mg/kg	ND	0.0050	05/07/24 22:59	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	05/07/24 22:59	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	05/07/24 22:59	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	05/07/24 22:59	
Trichloroethene	mg/kg	ND	0.0050	05/07/24 22:59	
Trichlorofluoromethane	mg/kg	ND	0.0050	05/07/24 22:59	
Vinyl acetate	mg/kg	ND	0.10	05/07/24 22:59	
Vinyl chloride	mg/kg	ND	0.0050	05/07/24 22:59	
Xylene (Total)	mg/kg	ND	0.010	05/07/24 22:59	
4-Bromofluorobenzene (S)	%	102	63-132	05/07/24 22:59	
Dibromofluoromethane (S)	%	100	75-135	05/07/24 22:59	
Toluene-d8 (S)	%	99	65-148	05/07/24 22:59	

LABORATORY CONTROL SAMPLE: 3607169

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	0.05	0.047	93	70-129	
1,1,1-Trichloroethane	mg/kg	0.05	0.045	90	67-134	
1,1,2,2-Tetrachloroethane	mg/kg	0.05	0.045	90	67-122	
1,1,2-Trichloroethane	mg/kg	0.05	0.048	96	72-127	
1,1-Dichloroethane	mg/kg	0.05	0.047	95	72-121	
1,1-Dichloroethene	mg/kg	0.05	0.043	86	57-140	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

LABORATORY CONTROL SAMPLE: 3607169

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloropropene	mg/kg	0.05	0.043	86	76-133	
1,2,3-Trichlorobenzene	mg/kg	0.05	0.040	80	53-139	
1,2,3-Trichloropropane	mg/kg	0.05	0.046	92	70-124	
1,2,4-Trichlorobenzene	mg/kg	0.05	0.038	76	49-136	
1,2,4-Trimethylbenzene	mg/kg	0.05	0.041	82	60-122	
1,2-Dibromoethane (EDB)	mg/kg	0.05	0.053	105	71-126	
1,2-Dichlorobenzene	mg/kg	0.05	0.041	83	68-120	
1,2-Dichloroethane	mg/kg	0.05	0.052	103	67-129	
1,2-Dichloropropane	mg/kg	0.05	0.050	100	71-123	
1,3,5-Trimethylbenzene	mg/kg	0.05	0.040	80	62-118	
1,3-Dichlorobenzene	mg/kg	0.05	0.041	81	65-121	
1,3-Dichloropropane	mg/kg	0.05	0.046	92	73-127	
1,4-Dichlorobenzene	mg/kg	0.05	0.039	79	66-122	
2,2-Dichloropropane	mg/kg	0.05	0.042	84	63-137	
2-Butanone (MEK)	mg/kg	0.25	0.21	84	59-136	
2-Chlorotoluene	mg/kg	0.05	0.040	79	67-121	
2-Hexanone	mg/kg	0.25	0.21	85	62-127	
4-Chlorotoluene	mg/kg	0.05	0.040	81	66-122	
4-Methyl-2-pentanone (MIBK)	mg/kg	0.25	0.23	93	67-131	
Acetone	mg/kg	0.25	0.19	78	45-127	
Acrolein	mg/kg	1	0.82	82	42-158	
Acrylonitrile	mg/kg	0.25	0.23	90	69-127	
Benzene	mg/kg	0.05	0.047	94	69-125	
Bromobenzene	mg/kg	0.05	0.043	86	69-121	
Bromochloromethane	mg/kg	0.05	0.049	97	70-125	
Bromodichloromethane	mg/kg	0.05	0.050	101	77-130	
Bromoform	mg/kg	0.05	0.047	94	67-128	
Bromomethane	mg/kg	0.05	0.054	109	60-156	
Carbon disulfide	mg/kg	0.05	0.040	80	47-137	
Carbon tetrachloride	mg/kg	0.05	0.046	92	68-132	
Chlorobenzene	mg/kg	0.05	0.042	84	68-122	
Chloroethane	mg/kg	0.05	0.050	100	61-137	
Chloroform	mg/kg	0.05	0.049	98	71-124	
Chloromethane	mg/kg	0.05	0.043	85	56-131	
cis-1,2-Dichloroethene	mg/kg	0.05	0.049	97	70-123	
cis-1,3-Dichloropropene	mg/kg	0.05	0.048	95	72-136	
Dibromochloromethane	mg/kg	0.05	0.048	97	73-130	
Dibromomethane	mg/kg	0.05	0.051	102	74-123	
Dichlorodifluoromethane	mg/kg	0.05	0.020	40	23-127	
Ethyl methacrylate	mg/kg	0.05	.049J	98	70-131	
Ethylbenzene	mg/kg	0.05	0.042	84	65-124	
Hexachloro-1,3-butadiene	mg/kg	0.05	0.040	79	52-133	
Iodomethane	mg/kg	0.05	.052J	104	50-137	
Isopropylbenzene (Cumene)	mg/kg	0.05	0.042	84	65-126	
Methyl-tert-butyl ether	mg/kg	0.05	0.054	108	69-128	
Methylene Chloride	mg/kg	0.05	0.049	98	61-128	
n-Butylbenzene	mg/kg	0.05	0.037	74	62-127	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro
 Pace Project No.: 50372019

LABORATORY CONTROL SAMPLE: 3607169

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
n-Hexane	mg/kg	0.05	0.035	69	55-123	
n-Propylbenzene	mg/kg	0.05	0.040	80	67-124	
p-Isopropyltoluene	mg/kg	0.05	0.039	77	64-124	
sec-Butylbenzene	mg/kg	0.05	0.040	79	68-124	
Styrene	mg/kg	0.05	0.043	87	68-124	
tert-Butylbenzene	mg/kg	0.05	0.043	85	69-122	
Tetrachloroethene	mg/kg	0.05	0.040	81	62-128	
Toluene	mg/kg	0.05	0.044	87	60-122	
trans-1,2-Dichloroethene	mg/kg	0.05	0.045	90	67-124	
trans-1,3-Dichloropropene	mg/kg	0.05	0.050	101	68-136	
trans-1,4-Dichloro-2-butene	mg/kg	0.05	.042J	84	64-134	
Trichloroethene	mg/kg	0.05	0.045	90	68-128	
Trichlorofluoromethane	mg/kg	0.05	0.041	82	57-146	
Vinyl acetate	mg/kg	0.2	0.20	98	56-181	
Vinyl chloride	mg/kg	0.05	0.042	85	52-142	
Xylene (Total)	mg/kg	0.1	0.084	84	62-122	
4-Bromofluorobenzene (S)	%			99	63-132	
Dibromofluoromethane (S)	%			98	75-135	
Toluene-d8 (S)	%			97	65-148	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607170 3607171

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50372019019 Result	Spike Conc.	Spike Conc.	Result							Result
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.051	0.048	0.050	0.046	97	99	22-160	7	20	
1,1,1-Trichloroethane	mg/kg	ND	0.051	0.048	0.047	0.047	92	101	52-148	0	20	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.051	0.048	0.052	0.049	102	105	24-166	6	20	
1,1,2-Trichloroethane	mg/kg	ND	0.051	0.048	0.051	0.049	99	103	30-162	4	20	
1,1-Dichloroethane	mg/kg	ND	0.051	0.048	0.049	0.046	95	99	49-138	5	20	
1,1-Dichloroethene	mg/kg	ND	0.051	0.048	0.045	0.046	88	98	39-162	2	20	
1,1-Dichloropropene	mg/kg	ND	0.051	0.048	0.046	0.045	90	96	47-149	3	20	
1,2,3-Trichlorobenzene	mg/kg	ND	0.051	0.048	0.025	0.024	49	51	10-123	4	20	
1,2,3-Trichloropropane	mg/kg	ND	0.051	0.048	0.053	0.051	103	108	17-177	4	20	
1,2,4-Trichlorobenzene	mg/kg	ND	0.051	0.048	0.027	0.026	53	55	10-119	5	20	
1,2,4-Trimethylbenzene	mg/kg	ND	0.051	0.048	0.048	0.046	94	97	12-157	5	20	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.051	0.048	0.053	0.051	103	109	36-141	3	20	
1,2-Dichlorobenzene	mg/kg	ND	0.051	0.048	0.041	0.040	80	85	10-136	3	20	
1,2-Dichloroethane	mg/kg	ND	0.051	0.048	0.053	0.049	103	105	48-138	7	20	
1,2-Dichloropropane	mg/kg	ND	0.051	0.048	0.051	0.049	100	104	45-140	5	20	
1,3,5-Trimethylbenzene	mg/kg	ND	0.051	0.048	0.050	0.047	97	101	11-170	5	20	
1,3-Dichlorobenzene	mg/kg	ND	0.051	0.048	0.042	0.039	81	83	10-135	7	20	
1,3-Dichloropropane	mg/kg	ND	0.051	0.048	0.051	0.048	99	101	33-153	7	20	
1,4-Dichlorobenzene	mg/kg	ND	0.051	0.048	0.039	0.037	76	79	10-136	5	20	
2,2-Dichloropropane	mg/kg	ND	0.051	0.048	0.044	0.043	87	92	41-151	2	20	
2-Butanone (MEK)	mg/kg	ND	0.26	0.23	0.22	0.21	85	90	33-160	3	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		3607170			3607171							
Parameter	Units	50372019019 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual	
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		RPD
2-Chlorotoluene	mg/kg	ND	0.051	0.048	0.048	0.045	93	95	10-174	7	20	
2-Hexanone	mg/kg	ND	0.26	0.23	0.16	0.15	62	65	18-155	3	20	
4-Chlorotoluene	mg/kg	ND	0.051	0.048	0.045	0.044	88	94	12-150	3	20	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.26	0.23	0.24	0.22	93	95	27-175	7	20	
Acetone	mg/kg	ND	0.26	0.23	0.23	0.20	89	84	18-159	14	20	
Acrolein	mg/kg	ND	1	0.94	.062J	.058J	6	6	10-155		20 M1	
Acrylonitrile	mg/kg	ND	0.26	0.23	.087J	.07J	34	30	24-157		20	
Benzene	mg/kg	ND	0.051	0.048	0.048	0.047	94	101	48-137	2	20	
Bromobenzene	mg/kg	ND	0.051	0.048	0.042	0.040	81	86	10-136	3	20	
Bromochloromethane	mg/kg	ND	0.051	0.048	0.056	0.051	108	108	48-134	9	20	
Bromodichloromethane	mg/kg	ND	0.051	0.048	0.045	0.042	87	90	32-152	6	20	
Bromoform	mg/kg	ND	0.051	0.048	0.042	0.039	82	84	10-178	7	20	
Bromomethane	mg/kg	ND	0.051	0.048	0.035	0.040	68	86	31-164	14	20	
Carbon disulfide	mg/kg	ND	0.051	0.048	0.035	0.033	67	69	23-145	6	20	
Carbon tetrachloride	mg/kg	ND	0.051	0.048	0.047	0.047	91	100	43-148	0	20	
Chlorobenzene	mg/kg	ND	0.051	0.048	0.044	0.042	86	90	28-136	4	20	
Chloroethane	mg/kg	ND	0.051	0.048	0.050	0.053	98	113	34-160	5	20	
Chloroform	mg/kg	ND	0.051	0.048	0.051	0.049	99	103	54-136	5	20	
Chloromethane	mg/kg	ND	0.051	0.048	0.041	0.041	80	87	36-145	0	20	
cis-1,2-Dichloroethene	mg/kg	ND	0.051	0.048	0.050	0.048	97	103	52-132	3	20	
cis-1,3-Dichloropropene	mg/kg	ND	0.051	0.048	0.043	0.038	83	82	22-163	10	20	
Dibromochloromethane	mg/kg	ND	0.051	0.048	0.043	0.041	84	86	18-161	6	20	
Dibromomethane	mg/kg	ND	0.051	0.048	0.058	0.053	113	114	32-147	8	20	
Dichlorodifluoromethane	mg/kg	ND	0.051	0.048	0.022	0.023	43	48	10-138	1	20	
Ethyl methacrylate	mg/kg	ND	0.051	0.048	ND	ND	1	5	10-167		20 M1	
Ethylbenzene	mg/kg	ND	0.051	0.048	0.047	0.045	92	96	24-150	4	20	
Hexachloro-1,3-butadiene	mg/kg	ND	0.051	0.048	0.042	0.038	81	81	10-154	9	20	
Iodomethane	mg/kg	ND	0.051	0.048	.028J	.026J	54	55	23-142		20	
Isopropylbenzene (Cumene)	mg/kg	ND	0.051	0.048	0.047	0.045	91	96	30-144	4	20	
Methyl-tert-butyl ether	mg/kg	ND	0.051	0.048	0.055	0.050	107	106	57-141	10	20	
Methylene Chloride	mg/kg	ND	0.051	0.048	0.046	0.046	86	93	40-140	1	20	
n-Butylbenzene	mg/kg	ND	0.051	0.048	0.043	0.042	85	89	10-156	4	20	
n-Hexane	mg/kg	ND	0.051	0.048	0.039	0.039	74	81	22-150	1	20	
n-Propylbenzene	mg/kg	ND	0.051	0.048	0.049	0.048	96	102	10-181	3	20	
p-Isopropyltoluene	mg/kg	ND	0.051	0.048	0.047	0.044	91	93	10-171	6	20	
sec-Butylbenzene	mg/kg	ND	0.051	0.048	0.051	0.048	99	103	10-178	5	20	
Styrene	mg/kg	ND	0.051	0.048	0.042	0.040	82	85	12-138	5	20	
tert-Butylbenzene	mg/kg	ND	0.051	0.048	0.053	0.051	103	108	10-182	4	20	
Tetrachloroethene	mg/kg	ND	0.051	0.048	0.047	0.044	91	94	26-159	5	20	
Toluene	mg/kg	ND	0.051	0.048	0.049	0.046	95	97	28-150	7	20	
trans-1,2-Dichloroethene	mg/kg	ND	0.051	0.048	0.043	0.042	84	88	50-134	4	20	
trans-1,3-Dichloropropene	mg/kg	ND	0.051	0.048	0.044	0.043	86	90	17-153	4	20	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.051	0.048	.024J	.022J	46	47	10-146		20	
Trichloroethene	mg/kg	ND	0.051	0.048	0.046	0.045	90	96	33-155	2	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3607170 3607171														
Parameter	Units	50372019019		MS	MSD	3607171		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	MS Result	MSD Result							
Trichlorofluoromethane	mg/kg	ND	0.051	0.048	0.045	0.043	88	92	37-163	4	20			
Vinyl acetate	mg/kg	ND	0.21	0.18	.044J	.041J	21	22	10-183		20			
Vinyl chloride	mg/kg	ND	0.051	0.048	0.043	0.042	85	90	37-161	2	20			
Xylene (Total)	mg/kg	ND	0.1	0.094	0.090	0.086	87	92	25-142	4	20			
4-Bromofluorobenzene (S)	%						95	93	63-132					
Dibromofluoromethane (S)	%						101	100	75-135					
Toluene-d8 (S)	%						104	100	65-148					

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch:	787902	Analysis Method:	EPA 8270 by SIM 40E
QC Batch Method:	EPA 3511	Analysis Description:	8270 Water PAH 40 by SIM MSSV
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019022

METHOD BLANK: 3604209 Matrix: Water
 Associated Lab Samples: 50372019022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	ND	1.0	05/03/24 16:28	
2-Methylnaphthalene	ug/L	ND	1.0	05/03/24 16:28	
Acenaphthene	ug/L	ND	1.0	05/03/24 16:28	
Acenaphthylene	ug/L	ND	1.0	05/03/24 16:28	
Anthracene	ug/L	ND	0.10	05/03/24 16:28	
Benzo(a)anthracene	ug/L	ND	0.10	05/03/24 16:28	
Benzo(a)pyrene	ug/L	ND	0.10	05/03/24 16:28	
Benzo(b)fluoranthene	ug/L	ND	0.10	05/03/24 16:28	
Benzo(g,h,i)perylene	ug/L	ND	0.10	05/03/24 16:28	
Benzo(k)fluoranthene	ug/L	ND	0.10	05/03/24 16:28	
Chrysene	ug/L	ND	0.50	05/03/24 16:28	
Dibenz(a,h)anthracene	ug/L	ND	0.10	05/03/24 16:28	
Fluoranthene	ug/L	ND	1.0	05/03/24 16:28	
Fluorene	ug/L	ND	1.0	05/03/24 16:28	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.10	05/03/24 16:28	
Naphthalene	ug/L	ND	1.0	05/03/24 16:28	
Phenanthrene	ug/L	ND	1.0	05/03/24 16:28	
Pyrene	ug/L	ND	1.0	05/03/24 16:28	
2-Fluorobiphenyl (S)	%	132	43-129	05/03/24 16:28	1d,S3
p-Terphenyl-d14 (S)	%	174	64-162	05/03/24 16:28	S3

LABORATORY CONTROL SAMPLE: 3604210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	25	22.4	90	55-123	
2-Methylnaphthalene	ug/L	25	20.7	83	49-116	
Acenaphthene	ug/L	25	23.6	94	65-121	
Acenaphthylene	ug/L	25	24.8	99	57-131	
Anthracene	ug/L	25	18.3	73	45-133	
Benzo(a)anthracene	ug/L	25	25.1	100	74-147	
Benzo(a)pyrene	ug/L	25	28.5	114	79-132	
Benzo(b)fluoranthene	ug/L	25	29.8	119	80-157	
Benzo(g,h,i)perylene	ug/L	25	31.1	124	70-131	
Benzo(k)fluoranthene	ug/L	25	29.5	118	71-158	
Chrysene	ug/L	25	28.4	114	65-135	
Dibenz(a,h)anthracene	ug/L	25	30.6	122	75-141	
Fluoranthene	ug/L	25	27.7	111	85-139	
Fluorene	ug/L	25	25.5	102	74-129	
Indeno(1,2,3-cd)pyrene	ug/L	25	29.7	119	65-133	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

LABORATORY CONTROL SAMPLE: 3604210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	25	21.3	85	60-114	
Phenanthrene	ug/L	25	27.1	109	82-128	
Pyrene	ug/L	25	26.5	106	70-145	
2-Fluorobiphenyl (S)	%			122	43-129	
p-Terphenyl-d14 (S)	%			150	64-162	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch: 788748 Analysis Method: EPA 8270 by SIM
 QC Batch Method: EPA 3546 Analysis Description: 8270 Soil PAH by SIM
 Laboratory: Pace Analytical Services - Indianapolis
 Associated Lab Samples: 50372019001, 50372019002, 50372019003, 50372019004, 50372019005, 50372019006, 50372019007, 50372019008, 50372019009, 50372019010, 50372019011, 50372019012, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017

METHOD BLANK: 3608183 Matrix: Solid
 Associated Lab Samples: 50372019001, 50372019002, 50372019003, 50372019004, 50372019005, 50372019006, 50372019007, 50372019008, 50372019009, 50372019010, 50372019011, 50372019012, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0050	05/10/24 19:57	
2-Methylnaphthalene	mg/kg	ND	0.0050	05/10/24 19:57	
Acenaphthene	mg/kg	ND	0.0050	05/10/24 19:57	
Acenaphthylene	mg/kg	ND	0.0050	05/10/24 19:57	
Anthracene	mg/kg	ND	0.0050	05/10/24 19:57	
Benzo(a)anthracene	mg/kg	ND	0.0050	05/10/24 19:57	
Benzo(a)pyrene	mg/kg	ND	0.0050	05/10/24 19:57	
Benzo(b)fluoranthene	mg/kg	ND	0.0050	05/10/24 19:57	
Benzo(g,h,i)perylene	mg/kg	ND	0.0050	05/10/24 19:57	
Benzo(k)fluoranthene	mg/kg	ND	0.0050	05/10/24 19:57	
Chrysene	mg/kg	ND	0.0050	05/10/24 19:57	
Dibenz(a,h)anthracene	mg/kg	ND	0.0050	05/10/24 19:57	
Fluoranthene	mg/kg	ND	0.0050	05/10/24 19:57	
Fluorene	mg/kg	ND	0.0050	05/10/24 19:57	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0050	05/10/24 19:57	
Naphthalene	mg/kg	ND	0.0050	05/10/24 19:57	
Phenanthrene	mg/kg	ND	0.0050	05/10/24 19:57	
Pyrene	mg/kg	ND	0.0050	05/10/24 19:57	
2-Fluorobiphenyl (S)	%	70	16-93	05/10/24 19:57	
p-Terphenyl-d14 (S)	%	97	19-115	05/10/24 19:57	

LABORATORY CONTROL SAMPLE: 3608184

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.67	0.49	73	49-116	
2-Methylnaphthalene	mg/kg	0.67	0.43	65	48-116	
Acenaphthene	mg/kg	0.67	0.45	68	48-118	
Acenaphthylene	mg/kg	0.67	0.52	79	50-123	
Anthracene	mg/kg	0.67	0.48	72	45-123	
Benzo(a)anthracene	mg/kg	0.67	0.47	71	52-131	
Benzo(a)pyrene	mg/kg	0.67	0.52	79	56-135	
Benzo(b)fluoranthene	mg/kg	0.67	0.47	71	52-139	
Benzo(g,h,i)perylene	mg/kg	0.67	0.45	67	49-132	
Benzo(k)fluoranthene	mg/kg	0.67	0.55	82	55-134	
Chrysene	mg/kg	0.67	0.46	69	52-127	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

LABORATORY CONTROL SAMPLE: 3608184

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibenz(a,h)anthracene	mg/kg	0.67	0.48	73	51-137	
Fluoranthene	mg/kg	0.67	0.48	72	53-136	
Fluorene	mg/kg	0.67	0.48	72	52-124	
Indeno(1,2,3-cd)pyrene	mg/kg	0.67	0.47	71	49-139	
Naphthalene	mg/kg	0.67	0.46	69	45-110	
Phenanthrene	mg/kg	0.67	0.47	71	52-124	
Pyrene	mg/kg	0.67	0.54	81	53-129	
2-Fluorobiphenyl (S)	%			71	16-93	
p-Terphenyl-d14 (S)	%			90	19-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608235 3608236

Parameter	Units	MS 3608235		MSD 3608236		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50372019005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
1-Methylnaphthalene	mg/kg	0.37	0.79	0.81	1.0	1.0	83	81	20-133	0	20	
2-Methylnaphthalene	mg/kg	0.47	0.79	0.81	1.1	1.1	81	80	16-136	0	20	
Acenaphthene	mg/kg	ND	0.79	0.81	0.49	0.47	62	58	30-119	5	20	
Acenaphthylene	mg/kg	0.34	0.79	0.81	0.91	0.82	71	59	34-117	10	20	
Anthracene	mg/kg	0.25	0.79	0.81	0.77	0.66	65	50	16-129	16	20	
Benzo(a)anthracene	mg/kg	1.1	0.79	0.81	1.9	1.6	100	64	20-136	16	20	
Benzo(a)pyrene	mg/kg	1.9	0.79	0.81	2.9	2.5	125	80	20-142	13	20	
Benzo(b)fluoranthene	mg/kg	3.1	0.79	0.81	4.5	4.0	169	108	17-141	11	20	M1
Benzo(g,h,i)perylene	mg/kg	1.2	0.79	0.81	1.8	1.6	72	46	14-130	12	20	
Benzo(k)fluoranthene	mg/kg	0.97	0.79	0.81	1.7	1.4	90	57	19-142	16	20	
Chrysene	mg/kg	1.4	0.79	0.81	2.3	2.0	109	79	22-131	11	20	
Dibenz(a,h)anthracene	mg/kg	0.37	0.79	0.81	0.90	0.83	67	57	27-124	8	20	
Fluoranthene	mg/kg	1.2	0.79	0.81	1.9	1.7	94	66	12-155	11	20	
Fluorene	mg/kg	0.034	0.79	0.81	0.53	0.51	63	59	25-135	5	20	
Indeno(1,2,3-cd)pyrene	mg/kg	1.2	0.79	0.81	1.8	1.5	78	49	18-133	13	20	
Naphthalene	mg/kg	0.35	0.79	0.81	0.99	0.96	81	75	11-130	4	20	ED
Phenanthrene	mg/kg	0.69	0.79	0.81	1.4	1.5	93	96	11-147	2	20	
Pyrene	mg/kg	1.5	0.79	0.81	2.4	2.0	120	70	11-154	17	20	
2-Fluorobiphenyl (S)	%						63	59	16-93			
p-Terphenyl-d14 (S)	%						71	65	19-115			

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro
 Pace Project No.: 50372019

QC Batch: 788858 Analysis Method: EPA 8270 by SIM
 QC Batch Method: EPA 3546 Analysis Description: 8270 Soil PAH by SIM
 Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019018, 50372019019

METHOD BLANK: 3608872 Matrix: Solid

Associated Lab Samples: 50372019018, 50372019019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0050	05/13/24 18:50	
2-Methylnaphthalene	mg/kg	ND	0.0050	05/13/24 18:50	
Acenaphthene	mg/kg	ND	0.0050	05/13/24 18:50	
Acenaphthylene	mg/kg	ND	0.0050	05/13/24 18:50	
Anthracene	mg/kg	ND	0.0050	05/13/24 18:50	
Benzo(a)anthracene	mg/kg	ND	0.0050	05/13/24 18:50	
Benzo(a)pyrene	mg/kg	ND	0.0050	05/13/24 18:50	
Benzo(b)fluoranthene	mg/kg	ND	0.0050	05/13/24 18:50	
Benzo(g,h,i)perylene	mg/kg	ND	0.0050	05/13/24 18:50	
Benzo(k)fluoranthene	mg/kg	ND	0.0050	05/13/24 18:50	
Chrysene	mg/kg	ND	0.0050	05/13/24 18:50	
Dibenz(a,h)anthracene	mg/kg	ND	0.0050	05/13/24 18:50	
Fluoranthene	mg/kg	ND	0.0050	05/13/24 18:50	
Fluorene	mg/kg	ND	0.0050	05/13/24 18:50	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0050	05/13/24 18:50	
Naphthalene	mg/kg	ND	0.0050	05/13/24 18:50	
Phenanthrene	mg/kg	ND	0.0050	05/13/24 18:50	
Pyrene	mg/kg	ND	0.0050	05/13/24 18:50	
2-Fluorobiphenyl (S)	%	74	16-93	05/13/24 18:50	
p-Terphenyl-d14 (S)	%	88	19-115	05/13/24 18:50	

LABORATORY CONTROL SAMPLE: 3608873

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.67	0.49	73	49-116	
2-Methylnaphthalene	mg/kg	0.67	0.43	65	48-116	
Acenaphthene	mg/kg	0.67	0.46	69	48-118	
Acenaphthylene	mg/kg	0.67	0.53	79	50-123	
Anthracene	mg/kg	0.67	0.49	73	45-123	
Benzo(a)anthracene	mg/kg	0.67	0.48	72	52-131	
Benzo(a)pyrene	mg/kg	0.67	0.56	84	56-135	
Benzo(b)fluoranthene	mg/kg	0.67	0.51	77	52-139	
Benzo(g,h,i)perylene	mg/kg	0.67	0.47	70	49-132	
Benzo(k)fluoranthene	mg/kg	0.67	0.56	85	55-134	
Chrysene	mg/kg	0.67	0.47	71	52-127	
Dibenz(a,h)anthracene	mg/kg	0.67	0.51	76	51-137	
Fluoranthene	mg/kg	0.67	0.51	77	53-136	
Fluorene	mg/kg	0.67	0.50	75	52-124	
Indeno(1,2,3-cd)pyrene	mg/kg	0.67	0.49	74	49-139	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

LABORATORY CONTROL SAMPLE: 3608873

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	mg/kg	0.67	0.47	70	45-110	
Phenanthrene	mg/kg	0.67	0.48	72	52-124	
Pyrene	mg/kg	0.67	0.54	81	53-129	
2-Fluorobiphenyl (S)	%			69	16-93	
p-Terphenyl-d14 (S)	%			85	19-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3608874 3608875

Parameter	Units	MS 50372224013		MSD 3608875		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		Result	Spike Conc.	Spike Conc.	Result							
1-Methylnaphthalene	mg/kg	ND	0.72	0.73	0.51	0.56	70	77	20-133	10	20	
2-Methylnaphthalene	mg/kg	ND	0.72	0.73	0.45	0.50	62	69	16-136	11	20	
Acenaphthene	mg/kg	ND	0.72	0.73	0.47	0.52	65	72	30-119	11	20	
Acenaphthylene	mg/kg	ND	0.72	0.73	0.55	0.62	77	84	34-117	11	20	
Anthracene	mg/kg	ND	0.72	0.73	0.47	0.52	65	72	16-129	12	20	
Benzo(a)anthracene	mg/kg	ND	0.72	0.73	0.42	0.48	58	65	20-136	14	20	
Benzo(a)pyrene	mg/kg	ND	0.72	0.73	0.45	0.53	62	73	20-142	16	20	
Benzo(b)fluoranthene	mg/kg	ND	0.72	0.73	0.42	0.48	58	66	17-141	15	20	
Benzo(g,h,i)perylene	mg/kg	ND	0.72	0.73	0.36	0.43	49	59	14-130	19	20	
Benzo(k)fluoranthene	mg/kg	ND	0.72	0.73	0.46	0.54	64	75	19-142	16	20	
Chrysene	mg/kg	ND	0.72	0.73	0.43	0.50	60	68	22-131	14	20	
Dibenz(a,h)anthracene	mg/kg	ND	0.72	0.73	0.41	0.49	57	67	27-124	18	20	
Fluoranthene	mg/kg	ND	0.72	0.73	0.48	0.53	66	73	12-155	11	20	
Fluorene	mg/kg	ND	0.72	0.73	0.50	0.56	69	77	25-135	11	20	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.72	0.73	0.39	0.46	54	63	18-133	18	20	
Naphthalene	mg/kg	ND	0.72	0.73	0.50	0.55	69	76	11-130	11	20	
Phenanthrene	mg/kg	ND	0.72	0.73	0.47	0.52	65	71	11-147	10	20	
Pyrene	mg/kg	ND	0.72	0.73	0.48	0.55	67	75	11-154	13	20	
2-Fluorobiphenyl (S)	%						65	67	16-93			
p-Terphenyl-d14 (S)	%						70	75	19-115			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610726 3610727

Parameter	Units	MS 50371897027		MSD 3610727		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		Result	Spike Conc.	Spike Conc.	Result							
1-Methylnaphthalene	mg/kg	0.0075	0.79	0.76	0.55	0.51	69	66	20-133	7	20	
2-Methylnaphthalene	mg/kg	0.0097	0.79	0.76	0.49	0.45	61	58	16-136	8	20	
Acenaphthene	mg/kg	ND	0.79	0.76	0.50	0.47	64	61	30-119	7	20	
Acenaphthylene	mg/kg	ND	0.79	0.76	0.58	0.55	74	72	34-117	6	20	
Anthracene	mg/kg	ND	0.79	0.76	0.51	0.47	65	61	16-129	8	20	
Benzo(a)anthracene	mg/kg	0.0097	0.79	0.76	0.48	0.44	61	56	20-136	10	20	
Benzo(a)pyrene	mg/kg	0.012	0.79	0.76	0.53	0.48	66	61	20-142	10	20	
Benzo(b)fluoranthene	mg/kg	0.015	0.79	0.76	0.50	0.47	62	59	17-141	7	20	
Benzo(g,h,i)perylene	mg/kg	0.0074	0.79	0.76	0.41	0.38	52	49	14-130	7	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610726 3610727												
Parameter	Units	50371897027		MS	MSD	3610727		% Rec	% Rec	% Rec	Max	Qual
		Result	Conc.	Spike	Spike	MS	MSD					
Benzo(k)fluoranthene	mg/kg	ND	0.79	0.76	0.50	0.47	64	61	19-142	7	20	
Chrysene	mg/kg	0.011	0.79	0.76	0.50	0.45	62	58	22-131	9	20	
Dibenz(a,h)anthracene	mg/kg	ND	0.79	0.76	0.47	0.44	60	58	27-124	6	20	
Fluoranthene	mg/kg	0.012	0.79	0.76	0.52	0.47	65	60	12-155	9	20	
Fluorene	mg/kg	ND	0.79	0.76	0.53	0.50	68	66	25-135	6	20	
Indeno(1,2,3-cd)pyrene	mg/kg	0.0060	0.79	0.76	0.44	0.41	56	53	18-133	7	20	
Naphthalene	mg/kg	ND	0.79	0.76	0.52	0.48	66	62	11-130	8	20	
Phenanthrene	mg/kg	0.012	0.79	0.76	0.53	0.48	66	61	11-147	9	20	
Pyrene	mg/kg	0.017	0.79	0.76	0.58	0.53	72	67	11-154	9	20	
2-Fluorobiphenyl (S)	%						61	57	16-93			
p-Terphenyl-d14 (S)	%						72	68	19-115			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3610728 3610729												
Parameter	Units	50372019019		MS	MSD	3610729		% Rec	% Rec	% Rec	Max	Qual
		Result	Conc.	Spike	Spike	MS	MSD					
1-Methylnaphthalene	mg/kg	ND	0.78	0.78	0.51	0.57	66	74	20-133	11	20	
2-Methylnaphthalene	mg/kg	ND	0.78	0.78	0.45	0.51	58	65	16-136	12	20	
Acenaphthene	mg/kg	ND	0.78	0.78	0.47	0.53	61	68	30-119	12	20	
Acenaphthylene	mg/kg	ND	0.78	0.78	0.55	0.62	70	79	34-117	12	20	
Anthracene	mg/kg	ND	0.78	0.78	0.49	0.56	63	71	16-129	12	20	
Benzo(a)anthracene	mg/kg	0.0075	0.78	0.78	0.48	0.55	60	69	20-136	15	20	
Benzo(a)pyrene	mg/kg	0.011	0.78	0.78	0.53	0.61	66	77	20-142	15	20	
Benzo(b)fluoranthene	mg/kg	0.023	0.78	0.78	0.52	0.60	64	74	17-141	14	20	
Benzo(g,h,i)perylene	mg/kg	0.0073	0.78	0.78	0.44	0.52	55	65	14-130	17	20	
Benzo(k)fluoranthene	mg/kg	ND	0.78	0.78	0.51	0.60	65	77	19-142	17	20	
Chrysene	mg/kg	0.0087	0.78	0.78	0.46	0.54	59	68	22-131	14	20	
Dibenz(a,h)anthracene	mg/kg	ND	0.78	0.78	0.48	0.56	62	71	27-124	15	20	
Fluoranthene	mg/kg	0.0094	0.78	0.78	0.49	0.56	62	71	12-155	13	20	
Fluorene	mg/kg	ND	0.78	0.78	0.50	0.57	65	73	25-135	13	20	
Indeno(1,2,3-cd)pyrene	mg/kg	0.0070	0.78	0.78	0.47	0.55	60	69	18-133	15	20	
Naphthalene	mg/kg	ND	0.78	0.78	0.48	0.54	62	69	11-130	11	20	
Phenanthrene	mg/kg	ND	0.78	0.78	0.50	0.55	64	70	11-147	10	20	
Pyrene	mg/kg	0.011	0.78	0.78	0.55	0.63	69	79	11-154	13	20	
2-Fluorobiphenyl (S)	%						56	67	16-93			
p-Terphenyl-d14 (S)	%						67	83	19-115			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch: 789511

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3546

Analysis Description: 8270 Soil PAH by SIM

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019020, 50372019021

METHOD BLANK: 3612614

Matrix: Solid

Associated Lab Samples: 50372019020, 50372019021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0050	05/14/24 06:43	
2-Methylnaphthalene	mg/kg	ND	0.0050	05/14/24 06:43	
Acenaphthene	mg/kg	ND	0.0050	05/14/24 06:43	
Acenaphthylene	mg/kg	ND	0.0050	05/14/24 06:43	
Anthracene	mg/kg	ND	0.0050	05/14/24 06:43	
Benzo(a)anthracene	mg/kg	ND	0.0050	05/14/24 06:43	
Benzo(a)pyrene	mg/kg	ND	0.0050	05/14/24 06:43	
Benzo(b)fluoranthene	mg/kg	ND	0.0050	05/14/24 06:43	
Benzo(g,h,i)perylene	mg/kg	ND	0.0050	05/14/24 06:43	
Benzo(k)fluoranthene	mg/kg	ND	0.0050	05/14/24 06:43	
Chrysene	mg/kg	ND	0.0050	05/14/24 06:43	
Dibenz(a,h)anthracene	mg/kg	ND	0.0050	05/14/24 06:43	
Fluoranthene	mg/kg	ND	0.0050	05/14/24 06:43	
Fluorene	mg/kg	ND	0.0050	05/14/24 06:43	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0050	05/14/24 06:43	
Naphthalene	mg/kg	ND	0.0050	05/14/24 06:43	
Phenanthrene	mg/kg	ND	0.0050	05/14/24 06:43	
Pyrene	mg/kg	ND	0.0050	05/14/24 06:43	
2-Fluorobiphenyl (S)	%	70	16-93	05/14/24 06:43	
p-Terphenyl-d14 (S)	%	92	19-115	05/14/24 06:43	

LABORATORY CONTROL SAMPLE: 3612615

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.67	0.45	67	49-116	
2-Methylnaphthalene	mg/kg	0.67	0.40	60	48-116	
Acenaphthene	mg/kg	0.67	0.43	64	48-118	
Acenaphthylene	mg/kg	0.67	0.49	74	50-123	
Anthracene	mg/kg	0.67	0.48	72	45-123	
Benzo(a)anthracene	mg/kg	0.67	0.47	71	52-131	
Benzo(a)pyrene	mg/kg	0.67	0.53	79	56-135	
Benzo(b)fluoranthene	mg/kg	0.67	0.52	78	52-139	
Benzo(g,h,i)perylene	mg/kg	0.67	0.45	67	49-132	
Benzo(k)fluoranthene	mg/kg	0.67	0.51	77	55-134	
Chrysene	mg/kg	0.67	0.46	70	52-127	
Dibenz(a,h)anthracene	mg/kg	0.67	0.49	73	51-137	
Fluoranthene	mg/kg	0.67	0.49	74	53-136	
Fluorene	mg/kg	0.67	0.47	71	52-124	
Indeno(1,2,3-cd)pyrene	mg/kg	0.67	0.48	72	49-139	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

LABORATORY CONTROL SAMPLE: 3612615

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	mg/kg	0.67	0.42	64	45-110	
Phenanthrene	mg/kg	0.67	0.48	71	52-124	
Pyrene	mg/kg	0.67	0.54	80	53-129	
2-Fluorobiphenyl (S)	%			60	16-93	
p-Terphenyl-d14 (S)	%			79	19-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3612616 3612617

Parameter	Units	MS 50372019021		MSD 3612617		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1-Methylnaphthalene	mg/kg	0.040	0.72	0.74	0.56	0.58	73	73	20-133	2	20	
2-Methylnaphthalene	mg/kg	0.048	0.72	0.74	0.51	0.53	64	65	16-136	3	20	
Acenaphthene	mg/kg	ND	0.72	0.74	0.51	0.51	70	69	30-119	1	20	
Acenaphthylene	mg/kg	0.16	0.72	0.74	0.71	0.75	77	81	34-117	5	20	
Anthracene	mg/kg	0.13	0.72	0.74	0.60	0.66	66	73	16-129	10	20	
Benzo(a)anthracene	mg/kg	0.21	0.72	0.74	0.67	0.69	65	66	20-136	3	20	
Benzo(a)pyrene	mg/kg	0.35	0.72	0.74	0.88	0.92	73	77	20-142	5	20	
Benzo(b)fluoranthene	mg/kg	0.59	0.72	0.74	1.1	1.2	74	81	17-141	5	20	
Benzo(g,h,i)perylene	mg/kg	0.30	0.72	0.74	0.71	0.74	57	60	14-130	5	20	
Benzo(k)fluoranthene	mg/kg	0.25	0.72	0.74	0.74	0.76	68	69	19-142	2	20	
Chrysene	mg/kg	0.26	0.72	0.74	0.75	0.78	68	70	22-131	4	20	
Dibenz(a,h)anthracene	mg/kg	0.084	0.72	0.74	0.57	0.58	67	68	27-124	3	20	
Fluoranthene	mg/kg	0.23	0.72	0.74	0.74	0.74	71	69	12-155	0	20	
Fluorene	mg/kg	ND	0.72	0.74	0.54	0.55	75	74	25-135	2	20	
Indeno(1,2,3-cd)pyrene	mg/kg	0.29	0.72	0.74	0.74	0.77	63	66	18-133	5	20	
Naphthalene	mg/kg	0.035	0.72	0.74	0.53	0.54	69	69	11-130	2	20	ED
Phenanthrene	mg/kg	0.098	0.72	0.74	0.62	0.63	72	72	11-147	2	20	
Pyrene	mg/kg	0.28	0.72	0.74	0.85	0.86	80	78	11-154	1	20	
2-Fluorobiphenyl (S)	%						66	65	16-93			
p-Terphenyl-d14 (S)	%						80	79	19-115			

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch:	789540	Analysis Method:	SM 2540G
QC Batch Method:	SM 2540G	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019001, 50372019002, 50372019003, 50372019004, 50372019005, 50372019006, 50372019007, 50372019008, 50372019009, 50372019010, 50372019011, 50372019012, 50372019013, 50372019014, 50372019015, 50372019016, 50372019017, 50372019018, 50372019019, 50372019020

SAMPLE DUPLICATE: 3612739

Parameter	Units	50372019019 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.9	17.2	4	10	N2

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

QC Batch: 789761

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372019021

SAMPLE DUPLICATE: 3613553

Parameter	Units	50372114019 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.5	8.2	40	10	N2,R1

SAMPLE DUPLICATE: 3613554

Parameter	Units	50372114020 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.2	15.4	8	10	N2

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QUALIFIERS

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

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

1d Neither matrix spike nor matrix precision data could be provided for this analytical batch due to insufficient sample volume.

ED Due to the extract's physical characteristics, the analysis was performed at dilution.

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

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

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

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

R1 RPD value was outside control limits.

S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372019001	NW-SL-SB01 0.5-2'	EPA 3050	788216	EPA 6010	789261
50372019002	NW-SL-SB01 6-8'	EPA 3050	788216	EPA 6010	789261
50372019003	NW-SL-SB02 0.5-2'	EPA 3050	788216	EPA 6010	789261
50372019004	NW-SL-SB02 8-10'	EPA 3050	788216	EPA 6010	789261
50372019005	NW-SL-SB03 0.5-2'	EPA 3050	788216	EPA 6010	789261
50372019006	NW-SL-SB03 3-4'	EPA 3050	788216	EPA 6010	789261
50372019007	NW-SL-SB04 0.5-2'	EPA 3050	788216	EPA 6010	789261
50372019008	NW-SL-SB04 5-6.5'	EPA 3050	788216	EPA 6010	789261
50372019009	NW-SL-SB05 0.5-2'	EPA 3050	788217	EPA 6010	789299
50372019010	NW-SL-SB05 6-7.5'	EPA 3050	788217	EPA 6010	789299
50372019011	NW-SL-SS01 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019012	NW-SL-SS02 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019013	NW-SL-SS03 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019014	NW-SL-SS04 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019015	NW-SL-SS05 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019016	NW-SL-SS06 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019017	NW-SL-SS07 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019018	NW-SL-SS08 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019019	NW-SL-SS09 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019020	NW-SL-SS10 0.0-1'	EPA 3050	788217	EPA 6010	789299
50372019021	NW-SL-FD1	EPA 3050	788217	EPA 6010	789299
50372019022	NW-SL-EB1	EPA 3010	787944	EPA 6010	788636
50372019022	NW-SL-EB1	EPA 7470	788693	EPA 7470	788906
50372019001	NW-SL-SB01 0.5-2'	EPA 7471	788962	EPA 7471	789163
50372019002	NW-SL-SB01 6-8'	EPA 7471	788962	EPA 7471	789163
50372019003	NW-SL-SB02 0.5-2'	EPA 7471	788962	EPA 7471	789163
50372019004	NW-SL-SB02 8-10'	EPA 7471	788962	EPA 7471	789163
50372019005	NW-SL-SB03 0.5-2'	EPA 7471	788962	EPA 7471	789163
50372019006	NW-SL-SB03 3-4'	EPA 7471	788962	EPA 7471	789163
50372019007	NW-SL-SB04 0.5-2'	EPA 7471	788962	EPA 7471	789163
50372019008	NW-SL-SB04 5-6.5'	EPA 7471	788962	EPA 7471	789163
50372019009	NW-SL-SB05 0.5-2'	EPA 7471	788962	EPA 7471	789163
50372019010	NW-SL-SB05 6-7.5'	EPA 7471	788962	EPA 7471	789163
50372019011	NW-SL-SS01 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019012	NW-SL-SS02 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019013	NW-SL-SS03 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019014	NW-SL-SS04 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019015	NW-SL-SS05 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019016	NW-SL-SS06 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019017	NW-SL-SS07 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019018	NW-SL-SS08 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019019	NW-SL-SS09 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019020	NW-SL-SS10 0.0-1'	EPA 7471	789270	EPA 7471	789638
50372019021	NW-SL-FD1	EPA 7471	789270	EPA 7471	789638
50372019022	NW-SL-EB1	EPA 3511	787902	EPA 8270 by SIM 40E	788118

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372019001	NW-SL-SB01 0.5-2'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019002	NW-SL-SB01 6-8'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019003	NW-SL-SB02 0.5-2'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019004	NW-SL-SB02 8-10'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019005	NW-SL-SB03 0.5-2'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019006	NW-SL-SB03 3-4'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019007	NW-SL-SB04 0.5-2'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019008	NW-SL-SB04 5-6.5'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019009	NW-SL-SB05 0.5-2'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019010	NW-SL-SB05 6-7.5'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019011	NW-SL-SS01 0.0-1'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019012	NW-SL-SS02 0.0-1'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019013	NW-SL-SS03 0.0-1'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019014	NW-SL-SS04 0.0-1'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019015	NW-SL-SS05 0.0-1'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019016	NW-SL-SS06 0.0-1'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019017	NW-SL-SS07 0.0-1'	EPA 3546	788748	EPA 8270 by SIM	789595
50372019018	NW-SL-SS08 0.0-1'	EPA 3546	788858	EPA 8270 by SIM	789795
50372019019	NW-SL-SS09 0.0-1'	EPA 3546	788858	EPA 8270 by SIM	789795
50372019020	NW-SL-SS10 0.0-1'	EPA 3546	789511	EPA 8270 by SIM	789798
50372019021	NW-SL-FD1	EPA 3546	789511	EPA 8270 by SIM	789798
50372019022	NW-SL-EB1	EPA 8260	788061		
50372019001	NW-SL-SB01 0.5-2'	EPA 8260	788554		
50372019002	NW-SL-SB01 6-8'	EPA 8260	788555		
50372019003	NW-SL-SB02 0.5-2'	EPA 8260	788555		
50372019004	NW-SL-SB02 8-10'	EPA 8260	788555		
50372019005	NW-SL-SB03 0.5-2'	EPA 8260	788555		
50372019006	NW-SL-SB03 3-4'	EPA 8260	788554		
50372019007	NW-SL-SB04 0.5-2'	EPA 8260	788554		
50372019008	NW-SL-SB04 5-6.5'	EPA 8260	788554		
50372019009	NW-SL-SB05 0.5-2'	EPA 8260	788554		
50372019010	NW-SL-SB05 6-7.5'	EPA 8260	788554		
50372019011	NW-SL-SS01 0.0-1'	EPA 8260	788554		
50372019012	NW-SL-SS02 0.0-1'	EPA 8260	788554		
50372019013	NW-SL-SS03 0.0-1'	EPA 8260	788555		
50372019014	NW-SL-SS04 0.0-1'	EPA 8260	788555		
50372019015	NW-SL-SS05 0.0-1'	EPA 8260	788555		
50372019016	NW-SL-SS06 0.0-1'	EPA 8260	788555		
50372019017	NW-SL-SS07 0.0-1'	EPA 8260	788555		
50372019018	NW-SL-SS08 0.0-1'	EPA 8260	788555		
50372019019	NW-SL-SS09 0.0-1'	EPA 8260	788555		
50372019020	NW-SL-SS10 0.0-1'	EPA 8260	788555		
50372019021	NW-SL-FD1	EPA 8260	788555		
50372019023	NW-SL-TB1	EPA 8260	788555		
50372019001	NW-SL-SB01 0.5-2'	SM 2540G	789540		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Norfolk & Western Railroad Pro

Pace Project No.: 50372019

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372019002	NW-SL-SB01 6-8'	SM 2540G	789540		
50372019003	NW-SL-SB02 0.5-2'	SM 2540G	789540		
50372019004	NW-SL-SB02 8-10'	SM 2540G	789540		
50372019005	NW-SL-SB03 0.5-2'	SM 2540G	789540		
50372019006	NW-SL-SB03 3-4'	SM 2540G	789540		
50372019007	NW-SL-SB04 0.5-2'	SM 2540G	789540		
50372019008	NW-SL-SB04 5-6.5'	SM 2540G	789540		
50372019009	NW-SL-SB05 0.5-2'	SM 2540G	789540		
50372019010	NW-SL-SB05 6-7.5'	SM 2540G	789540		
50372019011	NW-SL-SS01 0.0-1'	SM 2540G	789540		
50372019012	NW-SL-SS02 0.0-1'	SM 2540G	789540		
50372019013	NW-SL-SS03 0.0-1'	SM 2540G	789540		
50372019014	NW-SL-SS04 0.0-1'	SM 2540G	789540		
50372019015	NW-SL-SS05 0.0-1'	SM 2540G	789540		
50372019016	NW-SL-SS06 0.0-1'	SM 2540G	789540		
50372019017	NW-SL-SS07 0.0-1'	SM 2540G	789540		
50372019018	NW-SL-SS08 0.0-1'	SM 2540G	789540		
50372019019	NW-SL-SS09 0.0-1'	SM 2540G	789540		
50372019020	NW-SL-SS10 0.0-1'	SM 2540G	789540		
50372019021	NW-SL-FD1	SM 2540G	789761		

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WO# : 50372019



Company Name: IWM Consulting
Street Address: 7428 Rockville Road, Indianapolis, IN 46214
Customer Project #: CWAG Lafayette
Project Name: Norfolk & Western Railroad Property IFA/IBP-SL
Site Collection Info/Facility ID (as applicable):

Contact/Report To: Brad Gentry
Phone #: (317)347-1111
E-Mail: bgentry@iwconsult.com
Cc E-Mail:
Invoice To: Amber George
Invoice E-Mail: officemanager@iwconsult.com
Purchase Order # (if applicable):
Quote #: 00150754
County / State origin of sample(s): Indiana

Specify Container Size **
8 3 3
Identify Container Preservative Type***
1, 2 1 2
Analysis Requested

Container Size: (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

Time Zone Collected: [] AK [] PT [] MT [] CT [X] ET
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 _____
Date Results Requested: **STD 10 Day TAT**
Field Filtered (if applicable): [] Yes [] No
Analysis:

VOC by 8260	PAH by 8270SIM	RCRA 8 Metals by 60107471
-------------	----------------	---------------------------

Proj. Mgr:
Heather Patterson
AcctNum / Client ID:
Table #:
Profile / Template:
9958 - 6 (SL), 7 (WT)
Prelag / Bottle Ord. ID:
EZ 3098083
Sample Comment

* 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		Collected or Composite End		# Cont.	Res. Chlorine	
			Date	Time	Date	Time		Results	Units
NW-SL-5B01 0.5-2'	SL	G			4/30/24	1000	4		
NW-SL-5B01 6-8'						1005	1		
NW-SL-5B02 0.5-2'						1100			
NW-SL-5B02 8-10'						1110			
NW-SL-5B03 0.5-2'						1200			
NW-SL-5B03 3-4'						1210			
NW-SL-5B04 0.5-2'						1400			
NW-SL-5B04 5-6.5'						1410			
NW-SL-5B05 0.5-2'						1450			
NW-SL-5B05 6-7.5'						1455			

Additional Instructions from Pace*:
Terracore vials must be frozen at the lab within 48 hours of collection

Collected By: (Printed Name) **Chris Schoo**
Signature: *[Signature]*

Customer Remarks / Special Conditions / Possible Hazards:
NW-SL-5B09 is m/s/m/s
Coolers: 1 Thermometer ID: A Correction Factor (°C): 0.0 Obs. Temp. (°C): 0.7 Corrected Temp. (°C): 0.7 On Ice: Y

Relinquished by/Company: (Signature) *[Signature]* IWM
Date/Time: 5/11/24 1750

Received by/Company: (Signature) *[Signature]*
Date/Time:

Relinquished by/Company: (Signature)
Date/Time:

Relinquished by/Company: (Signature)
Date/Time:

Tracking Number:
Delivered by: [] In-Person [] Courier
[] FedEx [] UPS [] Other
Page: 1 of 3

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



Scan QR Code for instructions

Company Name: IWM Consulting
 Street Address: 7428 Rockville Road, Indianapolis, IN 46214
 Customer Project #: CWAG Lafayette
 Project Name: Norfolk & Western Railroad Property IFA/IBP-SL
 Site Collection Info/Facility ID (as applicable):

Contact/Report To: Brad Gentry
 Phone #: (317)347-1111
 E-Mail: bgentry@iwmsconsult.com
 Cc E-Mail:
 Invoice To: Amber George
 Invoice E-Mail: officemanager@iwmsconsult.com
 Purchase Order # (if applicable):
 Quote #: 00150754
 County / State origin of sample(s): Indiana

Specify Container Size **
 Identify Container Preservative Type***
 Analysis Requested

**Container Size: (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

Time Zone Collected: [] AK [] PT [] MT [] CT [x] ET
 Data Deliverables:
 [x] Level II [] Level III [] Level IV
 [] EQUIS
 [] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [] Yes [x] No
 Rush (Pre-approval required):
 [] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other
 Date Results Requested: STD 10 Day TAT
 Field Filtered (if applicable): [] Yes [x] 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		Collected or Composite End		# Cont.	Res. Chlorine	
			Date	Time	Date	Time		Results	Units
NW-SL-5501 0.0-1'	SL	6			5/11/24	1530	4		
NW-SL-5502 0.0-1'						1520	1		
NW-SL-5503 0.0-1'						1505			
NW-SL-5504 0.0-1'						1455			
NW-SL-5505 0.0-1'						1445			
NW-SL-5506 0.0-1'						1430			
NW-SL-5507 0.0-1'						1420			
NW-SL-5508 0.0-1'						1405			
NW-SL-5509 0.0-1'						1350	11		
NW-SL-5510 0.0-1'						1330	4		

VOC by 8260	PAH by 8270SIM	RCRA 8 Metals by 60107471
-------------	----------------	---------------------------

Proj. Mgr:
Heather Patterson
 AcctNum / Client ID:
 Table #:
 Profile / Template:
9958 - 6 (SL), 7 (WT)
 Prelog / Bottle Ord. ID:
EZ 3098083
 Sample Comment

Additional Instructions from Pace®:
Terracore vials must be frozen at the lab within 48 hours of collection

Collected By:
 (Printed Name) **Chris Schoo**
 Signature: *[Signature]*

Customer Remarks / Special Conditions / Possible Hazards:
 # Coolers: 1 Thermometer ID: A Correction Factor (°C): 0.0 Obs. Temp. (°C): 0.7 Corrected Temp. (°C): 0.7 Dst In: Y

Relinquished by/Company: (Signature) *[Signature]* IWM
 Date/Time: 5/11/24 1750

Received by/Company: (Signature) *[Signature]*
 Date/Time:

Relinquished by/Company: (Signature)
 Date/Time:

Relinquished by/Company: (Signature)
 Date/Time:

Tracking Number:
 Delivered by: [] In-Person [] Courier
 [] FedEx [] UPS [] Other
 Page: 2 of 3



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



Scan QR Code for instructions

Company Name: IWM Consulting
Street Address: 7428 Rockville Road, Indianapolis, IN 46214
Customer Project #: CWAG Lafayette
Project Name: Norfolk & Western Railroad Property IFA/IBP-SL
Site Collection Info/Facility ID (as applicable):

Contact/Report To: Brad Gentry
Phone #: (317)347-1111
E-Mail: bgentry@iwmsconsult.com
Cc E-Mail:
Invoice To: Amber George
Invoice E-Mail: officemanager@iwmsconsult.com
Purchase Order # (if applicable):
Quote #: 00150754
County / State origin of sample(s): Indiana

Specify Container Size **
8, 6, 3, 6, 3
Identify Container Preservative Type***
4, 10, 1, 2
Analysis Requested

**Container Size: (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

Time Zone Collected: [] AK [] PT [] MT [] CT [x] ET
Data Deliverables:
[x] Level II [] Level III [] Level IV
[] EQUIS
[] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [] Yes [x] No
Rush (Pre-approval required):
[] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other
Date Results Requested: STD 10 Day TAT
Field Filtered (if applicable): [] Yes [x] No
Analysis:

Proj. Mgr:
Heather Patterson
AcctNum / Client ID:
Table #:
Profile / Template:
9958 - 6 (SL), 7 (WT)
Prelog / Bottle Ord. ID:
EZ 3098083
Sample Comment

* 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		Collected or Composite End		# Cont.	Res. Chlorine		VOC by 8260	PAH by 8270SIM	RCRA 8 Metals by 60107471	Preservation non-conformance identified for sample.
			Date	Time	Date	Time		Results	Units				
NW-SL-FD1	SL	6			5/1/24	-	4			✓	✓	✓	
NW-SL-EB1	DW	1			5/1/24	1510	7			✓	✓	✓	
NW-SL-TB1	OT	2			4/28/24	-	3			✓			

Additional Instructions from Pace®:
Terracore vials must be frozen at the lab within 48 hours of collection

Collected By: (Printed Name) **Chris Schoo**
Signature: *[Signature]*

Customer Remarks / Special Conditions / Possible Hazards:
Coolers: 1 Thermometer ID: A Correction Factor (°C): 0.0 Obs. Temp. (°C): 0.7 Corrected Temp. (°C): 0.7 On Ice: Y

Relinquished by/Company: (Signature) *[Signature]* IWM
Date/Time: 5/1/24 1756

Received by/Company: (Signature) *[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: 3 of 3



SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 5/1/24 18:14 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): 0.7/0.7
 (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. 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)		<input checked="" type="checkbox"/>	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:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			
Time 5035A TC placed in Freezer or Short Holds To Lab		Time: <u>18:35</u>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)	<u>Present</u>	<u>Absent</u>	<u>N/A</u>
Rush TAT Requested (4 days or less):		<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	<u>Present</u>	<u>Absent</u>	<u>No VOA Vials Sent</u>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?		<input checked="" type="checkbox"/>	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			<input checked="" type="checkbox"/>

COMMENTS:

Sample Container Count

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

COC Line Item	WGUFU	WGKU	BG1U	MeOH (only)	DG9H	VOA VIAL HS >6mm	VG9U	DG9N	VG9T	AMBER GLASS							PLASTIC							OTHER			Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9	
				SBS		AG0U				AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F						Syringe Kit
				DI		AG2U				AG2S	AG2N	AG2SF	AG2B	BP2N	BP2F	BP2S	BP2B	BP2Z	CG3N	CG3S	CG3B	CG3Z	CG3F	CG3S	CG3B	CG3Z						
				Red		Yellow				Green	Black																					
1	1		3																								SL					
2					3		3																				WT	✓				
3			3																								SL					
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
WGUFU	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



May 22, 2024

Mr. Brad Gentry
IWM Consulting Group, LLC
7428 Rockville Road
Indianapolis, IN 46214

RE: Project: Norfolk & Western Railroad IFA
Pace Project No.: 50372470

Dear Mr. Gentry:

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

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

Sincerely,

Heather Patterson
heather.patterson@pacelabs.com
(317)228-3146
Project Manager

Enclosures

cc: Mr. Chris Parks, IWM Consulting Group



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

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

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SAMPLE SUMMARY

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372470001	NW-GW-GP01	Water	05/06/24 10:30	05/08/24 09:30
50372470002	NW-GW-GP02	Water	05/06/24 11:52	05/08/24 09:30
50372470003	NW-GW-GP03	Water	05/06/24 13:01	05/08/24 09:30
50372470004	NW-GW-GP04	Water	05/06/24 14:10	05/08/24 09:30
50372470005	NW-GW-GP05	Water	05/06/24 15:10	05/08/24 09:30
50372470006	NW-GW-FD01	Water	05/06/24 08:00	05/08/24 09:30
50372470007	NW-GW-EB01	Water	05/06/24 13:16	05/08/24 09:30
50372470008	NW-GW-TB01	Water	05/06/24 09:58	05/08/24 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372470001	NW-GW-GP01	EPA 6010	ABH	7	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 8270 by SIM 40E	GRM	20	PASI-I
		EPA 8260	TAY	72	PASI-I
50372470002	NW-GW-GP02	EPA 6010	ABH	7	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 8270 by SIM 40E	GRM	20	PASI-I
		EPA 8260	TAY	72	PASI-I
50372470003	NW-GW-GP03	EPA 6010	ABH	7	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 8270 by SIM 40E	GRM	20	PASI-I
		EPA 8260	TAY	72	PASI-I
50372470004	NW-GW-GP04	EPA 6010	ABH	7	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 8270 by SIM 40E	GRM	20	PASI-I
		EPA 8260	TAY	72	PASI-I
50372470005	NW-GW-GP05	EPA 6010	ABH	7	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 8270 by SIM 40E	GRM	20	PASI-I
		EPA 8260	TAY	72	PASI-I
50372470006	NW-GW-FD01	EPA 6010	ABH	7	PASI-I
		EPA 6010	ELK	7	PASI-I
		EPA 7470	ILP	1	PASI-I
		EPA 7470	EAE	1	PASI-I
		EPA 8270 by SIM 40E	GRM	20	PASI-I
		EPA 8260	TAY	72	PASI-I
50372470007	NW-GW-EB01	EPA 6010	ABH	7	PASI-I

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Norfolk & Western Railroad IFA
 Pace Project No.: 50372470

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	ILP	1	PASI-I
		EPA 8270 by SIM 40E	GRM	20	PASI-I
		EPA 8260	TAY	72	PASI-I
50372470008	NW-GW-TB01	EPA 8260	TAY	72	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50372470001	NW-GW-GP01					
EPA 6010	Arsenic	34.2	ug/L	10.0	05/12/24 22:00	
EPA 6010	Barium	105	ug/L	10.0	05/12/24 22:00	
EPA 6010	Chromium	20.2	ug/L	10.0	05/12/24 22:00	
EPA 6010	Lead	18.2	ug/L	10.0	05/12/24 22:00	
EPA 6010	Barium, Dissolved	65.8	ug/L	10.0	05/17/24 12:28	
50372470002	NW-GW-GP02					
EPA 6010	Arsenic	45.2	ug/L	10.0	05/12/24 22:12	
EPA 6010	Barium	116	ug/L	10.0	05/12/24 22:12	
EPA 6010	Chromium	30.4	ug/L	10.0	05/12/24 22:12	
EPA 6010	Lead	16.1	ug/L	10.0	05/12/24 22:12	
EPA 6010	Barium, Dissolved	63.0	ug/L	10.0	05/17/24 12:40	
50372470003	NW-GW-GP03					
EPA 6010	Arsenic	252	ug/L	10.0	05/12/24 22:14	
EPA 6010	Barium	534	ug/L	10.0	05/12/24 22:14	
EPA 6010	Cadmium	2.0	ug/L	2.0	05/12/24 22:14	
EPA 6010	Chromium	130	ug/L	10.0	05/12/24 22:14	
EPA 6010	Lead	131	ug/L	10.0	05/12/24 22:14	
EPA 6010	Barium, Dissolved	39.8	ug/L	10.0	05/17/24 12:42	
50372470004	NW-GW-GP04					
EPA 6010	Arsenic	150	ug/L	10.0	05/12/24 22:16	
EPA 6010	Barium	276	ug/L	10.0	05/12/24 22:16	
EPA 6010	Chromium	42.4	ug/L	10.0	05/12/24 22:16	
EPA 6010	Lead	48.4	ug/L	10.0	05/12/24 22:16	
EPA 6010	Barium, Dissolved	63.3	ug/L	10.0	05/17/24 12:43	
50372470005	NW-GW-GP05					
EPA 6010	Arsenic	125	ug/L	10.0	05/12/24 22:18	
EPA 6010	Barium	983	ug/L	10.0	05/12/24 22:18	
EPA 6010	Chromium	39.8	ug/L	10.0	05/12/24 22:18	
EPA 6010	Lead	98.6	ug/L	10.0	05/12/24 22:18	
EPA 6010	Barium, Dissolved	85.4	ug/L	10.0	05/17/24 12:45	
50372470006	NW-GW-FD01					
EPA 6010	Arsenic	35.6	ug/L	10.0	05/12/24 22:19	
EPA 6010	Barium	112	ug/L	10.0	05/12/24 22:19	
EPA 6010	Chromium	27.0	ug/L	10.0	05/12/24 22:19	
EPA 6010	Lead	14.4	ug/L	10.0	05/12/24 22:19	
EPA 6010	Barium, Dissolved	62.8	ug/L	10.0	05/17/24 12:47	

REPORT OF LABORATORY ANALYSIS

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**ANALYTICAL RESULTS**

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP01	Lab ID: 50372470001	Collected: 05/06/24 10:30	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	34.2	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:00	7440-38-2	
Barium	105	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:00	7440-39-3	
Cadmium	ND	ug/L	2.0	1	05/09/24 21:49	05/12/24 22:00	7440-43-9	
Chromium	20.2	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:00	7440-47-3	
Lead	18.2	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:00	7439-92-1	
Selenium	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:00	7782-49-2	
Silver	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:00	7440-22-4	
6010 MET ICP, Lab Filtered								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:28	7440-38-2	
Barium, Dissolved	65.8	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:28	7440-39-3	
Cadmium, Dissolved	ND	ug/L	2.0	1	05/16/24 07:45	05/17/24 12:28	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:28	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:28	7439-92-1	
Selenium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:28	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:28	7440-22-4	
7470 Mercury								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	05/15/24 19:26	05/16/24 09:43	7439-97-6	
7470 Mercury, Lab Filtered								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury, Dissolved	ND	ug/L	2.0	1	05/17/24 10:04	05/19/24 19:08	7439-97-6	
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 17:28	83-32-9	
Acenaphthylene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 17:28	208-96-8	
Anthracene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 17:28	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 17:28	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 17:28	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 17:28	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 17:28	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 17:28	207-08-9	
Chrysene	ND	ug/L	0.49	1	05/11/24 12:31	05/13/24 17:28	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 17:28	53-70-3	
Fluoranthene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 17:28	206-44-0	
Fluorene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 17:28	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 17:28	193-39-5	
1-Methylnaphthalene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 17:28	90-12-0	
2-Methylnaphthalene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 17:28	91-57-6	
Naphthalene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 17:28	91-20-3	
Phenanthrene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 17:28	85-01-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP01	Lab ID: 50372470001	Collected: 05/06/24 10:30	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Pyrene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 17:28	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	91	%	43-129	1	05/11/24 12:31	05/13/24 17:28	321-60-8	
p-Terphenyl-d14 (S)	114	%	64-162	1	05/11/24 12:31	05/13/24 17:28	1718-51-0	
8260/5030 MSV								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		05/10/24 06:37	67-64-1	
Acrolein	ND	ug/L	50.0	1		05/10/24 06:37	107-02-8	
Acrylonitrile	ND	ug/L	100	1		05/10/24 06:37	107-13-1	
Benzene	ND	ug/L	5.0	1		05/10/24 06:37	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		05/10/24 06:37	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		05/10/24 06:37	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		05/10/24 06:37	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/10/24 06:37	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/10/24 06:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		05/10/24 06:37	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		05/10/24 06:37	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		05/10/24 06:37	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		05/10/24 06:37	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		05/10/24 06:37	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/10/24 06:37	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/10/24 06:37	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/10/24 06:37	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/10/24 06:37	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/10/24 06:37	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 06:37	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 06:37	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		05/10/24 06:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		05/10/24 06:37	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		05/10/24 06:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 06:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 06:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 06:37	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		05/10/24 06:37	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		05/10/24 06:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/10/24 06:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/10/24 06:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/10/24 06:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 06:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 06:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 06:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		05/10/24 06:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 06:37	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		05/10/24 06:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 06:37	10061-01-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP01	Lab ID: 50372470001	Collected: 05/06/24 10:30	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - Indianapolis							
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 06:37	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/10/24 06:37	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		05/10/24 06:37	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		05/10/24 06:37	87-68-3	
n-Hexane	ND	ug/L	5.0	1		05/10/24 06:37	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		05/10/24 06:37	591-78-6	
Iodomethane	ND	ug/L	10.0	1		05/10/24 06:37	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/10/24 06:37	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		05/10/24 06:37	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/10/24 06:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		05/10/24 06:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		05/10/24 06:37	1634-04-4	
n-Propylbenzene	ND	ug/L	5.0	1		05/10/24 06:37	103-65-1	
Styrene	ND	ug/L	5.0	1		05/10/24 06:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 06:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 06:37	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/10/24 06:37	127-18-4	
Toluene	ND	ug/L	5.0	1		05/10/24 06:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 06:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 06:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/10/24 06:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/10/24 06:37	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/10/24 06:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/10/24 06:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		05/10/24 06:37	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 06:37	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 06:37	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		05/10/24 06:37	108-05-4	L1
Vinyl chloride	ND	ug/L	2.0	1		05/10/24 06:37	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		05/10/24 06:37	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	82-128	1		05/10/24 06:37	1868-53-7	
4-Bromofluorobenzene (S)	103	%.	79-124	1		05/10/24 06:37	460-00-4	
Toluene-d8 (S)	100	%.	73-122	1		05/10/24 06:37	2037-26-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP02	Lab ID: 50372470002	Collected: 05/06/24 11:52	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	45.2	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:12	7440-38-2	
Barium	116	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:12	7440-39-3	
Cadmium	ND	ug/L	2.0	1	05/09/24 21:49	05/12/24 22:12	7440-43-9	
Chromium	30.4	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:12	7440-47-3	
Lead	16.1	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:12	7439-92-1	
Selenium	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:12	7782-49-2	
Silver	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:12	7440-22-4	
6010 MET ICP, Lab Filtered								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:40	7440-38-2	
Barium, Dissolved	63.0	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:40	7440-39-3	
Cadmium, Dissolved	ND	ug/L	2.0	1	05/16/24 07:45	05/17/24 12:40	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:40	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:40	7439-92-1	
Selenium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:40	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:40	7440-22-4	
7470 Mercury								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	05/15/24 19:26	05/16/24 09:58	7439-97-6	
7470 Mercury, Lab Filtered								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury, Dissolved	ND	ug/L	2.0	1	05/17/24 10:04	05/19/24 19:26	7439-97-6	
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	ug/L	0.98	1	05/11/24 12:31	05/13/24 18:01	83-32-9	
Acenaphthylene	ND	ug/L	0.98	1	05/11/24 12:31	05/13/24 18:01	208-96-8	
Anthracene	ND	ug/L	0.098	1	05/11/24 12:31	05/13/24 18:01	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.098	1	05/11/24 12:31	05/13/24 18:01	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.098	1	05/11/24 12:31	05/13/24 18:01	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.098	1	05/11/24 12:31	05/13/24 18:01	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.098	1	05/11/24 12:31	05/13/24 18:01	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.098	1	05/11/24 12:31	05/13/24 18:01	207-08-9	
Chrysene	ND	ug/L	0.49	1	05/11/24 12:31	05/13/24 18:01	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.098	1	05/11/24 12:31	05/13/24 18:01	53-70-3	
Fluoranthene	ND	ug/L	0.98	1	05/11/24 12:31	05/13/24 18:01	206-44-0	
Fluorene	ND	ug/L	0.98	1	05/11/24 12:31	05/13/24 18:01	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.098	1	05/11/24 12:31	05/13/24 18:01	193-39-5	
1-Methylnaphthalene	ND	ug/L	0.98	1	05/11/24 12:31	05/13/24 18:01	90-12-0	
2-Methylnaphthalene	ND	ug/L	0.98	1	05/11/24 12:31	05/13/24 18:01	91-57-6	
Naphthalene	ND	ug/L	0.98	1	05/11/24 12:31	05/13/24 18:01	91-20-3	
Phenanthrene	ND	ug/L	0.98	1	05/11/24 12:31	05/13/24 18:01	85-01-8	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP02	Lab ID: 50372470002	Collected: 05/06/24 11:52	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Pyrene	ND	ug/L	0.98	1	05/11/24 12:31	05/13/24 18:01	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	97	%	43-129	1	05/11/24 12:31	05/13/24 18:01	321-60-8	
p-Terphenyl-d14 (S)	134	%	64-162	1	05/11/24 12:31	05/13/24 18:01	1718-51-0	
8260/5030 MSV								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		05/09/24 23:44	67-64-1	
Acrolein	ND	ug/L	50.0	1		05/09/24 23:44	107-02-8	
Acrylonitrile	ND	ug/L	100	1		05/09/24 23:44	107-13-1	
Benzene	ND	ug/L	5.0	1		05/09/24 23:44	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		05/09/24 23:44	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		05/09/24 23:44	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		05/09/24 23:44	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/09/24 23:44	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/09/24 23:44	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		05/09/24 23:44	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		05/09/24 23:44	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		05/09/24 23:44	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		05/09/24 23:44	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		05/09/24 23:44	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/09/24 23:44	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/09/24 23:44	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/09/24 23:44	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/09/24 23:44	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/09/24 23:44	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		05/09/24 23:44	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		05/09/24 23:44	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		05/09/24 23:44	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		05/09/24 23:44	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		05/09/24 23:44	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/09/24 23:44	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/09/24 23:44	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/09/24 23:44	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		05/09/24 23:44	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		05/09/24 23:44	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/09/24 23:44	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/09/24 23:44	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/09/24 23:44	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/09/24 23:44	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/09/24 23:44	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/09/24 23:44	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		05/09/24 23:44	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		05/09/24 23:44	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		05/09/24 23:44	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/09/24 23:44	10061-01-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP02	Lab ID: 50372470002	Collected: 05/06/24 11:52	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - Indianapolis							
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/09/24 23:44	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/09/24 23:44	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		05/09/24 23:44	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		05/09/24 23:44	87-68-3	
n-Hexane	ND	ug/L	5.0	1		05/09/24 23:44	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		05/09/24 23:44	591-78-6	
Iodomethane	ND	ug/L	10.0	1		05/09/24 23:44	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/09/24 23:44	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		05/09/24 23:44	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/09/24 23:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		05/09/24 23:44	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		05/09/24 23:44	1634-04-4	
n-Propylbenzene	ND	ug/L	5.0	1		05/09/24 23:44	103-65-1	
Styrene	ND	ug/L	5.0	1		05/09/24 23:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		05/09/24 23:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/09/24 23:44	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/09/24 23:44	127-18-4	
Toluene	ND	ug/L	5.0	1		05/09/24 23:44	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		05/09/24 23:44	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		05/09/24 23:44	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/09/24 23:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/09/24 23:44	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/09/24 23:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/09/24 23:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		05/09/24 23:44	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/09/24 23:44	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/09/24 23:44	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		05/09/24 23:44	108-05-4	L1
Vinyl chloride	ND	ug/L	2.0	1		05/09/24 23:44	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		05/09/24 23:44	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	82-128	1		05/09/24 23:44	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	79-124	1		05/09/24 23:44	460-00-4	
Toluene-d8 (S)	100	%.	73-122	1		05/09/24 23:44	2037-26-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP03	Lab ID: 50372470003	Collected: 05/06/24 13:01	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	252	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:14	7440-38-2	
Barium	534	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:14	7440-39-3	
Cadmium	2.0	ug/L	2.0	1	05/09/24 21:49	05/12/24 22:14	7440-43-9	
Chromium	130	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:14	7440-47-3	
Lead	131	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:14	7439-92-1	
Selenium	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:14	7782-49-2	
Silver	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:14	7440-22-4	
6010 MET ICP, Lab Filtered								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:42	7440-38-2	
Barium, Dissolved	39.8	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:42	7440-39-3	
Cadmium, Dissolved	ND	ug/L	2.0	1	05/16/24 07:45	05/17/24 12:42	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:42	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:42	7439-92-1	
Selenium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:42	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:42	7440-22-4	
7470 Mercury								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	05/15/24 19:26	05/16/24 10:01	7439-97-6	
7470 Mercury, Lab Filtered								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury, Dissolved	ND	ug/L	2.0	1	05/17/24 10:04	05/19/24 19:29	7439-97-6	
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:11	83-32-9	
Acenaphthylene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:11	208-96-8	
Anthracene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:11	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:11	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:11	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:11	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:11	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:11	207-08-9	
Chrysene	ND	ug/L	0.50	1	05/11/24 12:31	05/13/24 18:11	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:11	53-70-3	
Fluoranthene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:11	206-44-0	
Fluorene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:11	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:11	193-39-5	
1-Methylnaphthalene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:11	90-12-0	
2-Methylnaphthalene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:11	91-57-6	
Naphthalene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:11	91-20-3	
Phenanthrene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:11	85-01-8	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP03	Lab ID: 50372470003	Collected: 05/06/24 13:01	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Pyrene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:11	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	90	%.	43-129	1	05/11/24 12:31	05/13/24 18:11	321-60-8	
p-Terphenyl-d14 (S)	116	%.	64-162	1	05/11/24 12:31	05/13/24 18:11	1718-51-0	
8260/5030 MSV								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		05/10/24 00:07	67-64-1	
Acrolein	ND	ug/L	50.0	1		05/10/24 00:07	107-02-8	
Acrylonitrile	ND	ug/L	100	1		05/10/24 00:07	107-13-1	
Benzene	ND	ug/L	5.0	1		05/10/24 00:07	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		05/10/24 00:07	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		05/10/24 00:07	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		05/10/24 00:07	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/10/24 00:07	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/10/24 00:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		05/10/24 00:07	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		05/10/24 00:07	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		05/10/24 00:07	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		05/10/24 00:07	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		05/10/24 00:07	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/10/24 00:07	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/10/24 00:07	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/10/24 00:07	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/10/24 00:07	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/10/24 00:07	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 00:07	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 00:07	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		05/10/24 00:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		05/10/24 00:07	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		05/10/24 00:07	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:07	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		05/10/24 00:07	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		05/10/24 00:07	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/10/24 00:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/10/24 00:07	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/10/24 00:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 00:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 00:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 00:07	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		05/10/24 00:07	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 00:07	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		05/10/24 00:07	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 00:07	10061-01-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP03	Lab ID: 50372470003	Collected: 05/06/24 13:01	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - Indianapolis							
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 00:07	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/10/24 00:07	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		05/10/24 00:07	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		05/10/24 00:07	87-68-3	
n-Hexane	ND	ug/L	5.0	1		05/10/24 00:07	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		05/10/24 00:07	591-78-6	
Iodomethane	ND	ug/L	10.0	1		05/10/24 00:07	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/10/24 00:07	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		05/10/24 00:07	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/10/24 00:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		05/10/24 00:07	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		05/10/24 00:07	1634-04-4	
n-Propylbenzene	ND	ug/L	5.0	1		05/10/24 00:07	103-65-1	
Styrene	ND	ug/L	5.0	1		05/10/24 00:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 00:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 00:07	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/10/24 00:07	127-18-4	
Toluene	ND	ug/L	5.0	1		05/10/24 00:07	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:07	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:07	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/10/24 00:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/10/24 00:07	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/10/24 00:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/10/24 00:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		05/10/24 00:07	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 00:07	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 00:07	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		05/10/24 00:07	108-05-4	L1
Vinyl chloride	ND	ug/L	2.0	1		05/10/24 00:07	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		05/10/24 00:07	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	99	%.	82-128	1		05/10/24 00:07	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	79-124	1		05/10/24 00:07	460-00-4	
Toluene-d8 (S)	99	%.	73-122	1		05/10/24 00:07	2037-26-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP04	Lab ID: 50372470004	Collected: 05/06/24 14:10	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	150	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:16	7440-38-2	
Barium	276	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:16	7440-39-3	
Cadmium	ND	ug/L	2.0	1	05/09/24 21:49	05/12/24 22:16	7440-43-9	
Chromium	42.4	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:16	7440-47-3	
Lead	48.4	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:16	7439-92-1	
Selenium	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:16	7782-49-2	
Silver	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:16	7440-22-4	
6010 MET ICP, Lab Filtered								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:43	7440-38-2	
Barium, Dissolved	63.3	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:43	7440-39-3	
Cadmium, Dissolved	ND	ug/L	2.0	1	05/16/24 07:45	05/17/24 12:43	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:43	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:43	7439-92-1	
Selenium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:43	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:43	7440-22-4	
7470 Mercury								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	05/15/24 19:26	05/16/24 10:03	7439-97-6	
7470 Mercury, Lab Filtered								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury, Dissolved	ND	ug/L	2.0	1	05/17/24 10:04	05/19/24 19:31	7439-97-6	
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:22	83-32-9	
Acenaphthylene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:22	208-96-8	
Anthracene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:22	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:22	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:22	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:22	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:22	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:22	207-08-9	
Chrysene	ND	ug/L	0.50	1	05/11/24 12:31	05/13/24 18:22	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:22	53-70-3	
Fluoranthene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:22	206-44-0	
Fluorene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:22	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:22	193-39-5	
1-Methylnaphthalene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:22	90-12-0	
2-Methylnaphthalene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:22	91-57-6	
Naphthalene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:22	91-20-3	
Phenanthrene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:22	85-01-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP04	Lab ID: 50372470004	Collected: 05/06/24 14:10	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Pyrene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:22	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	91	%.	43-129	1	05/11/24 12:31	05/13/24 18:22	321-60-8	
p-Terphenyl-d14 (S)	121	%.	64-162	1	05/11/24 12:31	05/13/24 18:22	1718-51-0	
8260/5030 MSV								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		05/10/24 00:30	67-64-1	
Acrolein	ND	ug/L	50.0	1		05/10/24 00:30	107-02-8	
Acrylonitrile	ND	ug/L	100	1		05/10/24 00:30	107-13-1	
Benzene	ND	ug/L	5.0	1		05/10/24 00:30	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		05/10/24 00:30	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		05/10/24 00:30	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		05/10/24 00:30	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/10/24 00:30	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/10/24 00:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		05/10/24 00:30	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		05/10/24 00:30	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		05/10/24 00:30	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		05/10/24 00:30	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		05/10/24 00:30	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/10/24 00:30	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/10/24 00:30	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/10/24 00:30	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/10/24 00:30	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/10/24 00:30	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 00:30	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 00:30	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		05/10/24 00:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		05/10/24 00:30	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		05/10/24 00:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:30	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		05/10/24 00:30	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		05/10/24 00:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/10/24 00:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/10/24 00:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/10/24 00:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 00:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 00:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 00:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		05/10/24 00:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 00:30	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		05/10/24 00:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 00:30	10061-01-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP04	Lab ID: 50372470004	Collected: 05/06/24 14:10	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV		Analytical Method: EPA 8260						
		Pace Analytical Services - Indianapolis						
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 00:30	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/10/24 00:30	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		05/10/24 00:30	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		05/10/24 00:30	87-68-3	
n-Hexane	ND	ug/L	5.0	1		05/10/24 00:30	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		05/10/24 00:30	591-78-6	
Iodomethane	ND	ug/L	10.0	1		05/10/24 00:30	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/10/24 00:30	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		05/10/24 00:30	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/10/24 00:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		05/10/24 00:30	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		05/10/24 00:30	1634-04-4	
n-Propylbenzene	ND	ug/L	5.0	1		05/10/24 00:30	103-65-1	
Styrene	ND	ug/L	5.0	1		05/10/24 00:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 00:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 00:30	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/10/24 00:30	127-18-4	
Toluene	ND	ug/L	5.0	1		05/10/24 00:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/10/24 00:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/10/24 00:30	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/10/24 00:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/10/24 00:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		05/10/24 00:30	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 00:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 00:30	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		05/10/24 00:30	108-05-4	L1
Vinyl chloride	ND	ug/L	2.0	1		05/10/24 00:30	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		05/10/24 00:30	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	82-128	1		05/10/24 00:30	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	79-124	1		05/10/24 00:30	460-00-4	
Toluene-d8 (S)	101	%.	73-122	1		05/10/24 00:30	2037-26-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP05	Lab ID: 50372470005	Collected: 05/06/24 15:10	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	125	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:18	7440-38-2	
Barium	983	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:18	7440-39-3	
Cadmium	ND	ug/L	2.0	1	05/09/24 21:49	05/12/24 22:18	7440-43-9	
Chromium	39.8	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:18	7440-47-3	
Lead	98.6	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:18	7439-92-1	
Selenium	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:18	7782-49-2	
Silver	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:18	7440-22-4	
6010 MET ICP, Lab Filtered								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:45	7440-38-2	
Barium, Dissolved	85.4	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:45	7440-39-3	
Cadmium, Dissolved	ND	ug/L	2.0	1	05/16/24 07:45	05/17/24 12:45	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:45	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:45	7439-92-1	
Selenium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:45	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:45	7440-22-4	
7470 Mercury								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	05/15/24 19:26	05/16/24 10:06	7439-97-6	
7470 Mercury, Lab Filtered								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury, Dissolved	ND	ug/L	2.0	1	05/17/24 10:04	05/19/24 19:33	7439-97-6	
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:33	83-32-9	
Acenaphthylene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:33	208-96-8	
Anthracene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:33	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:33	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:33	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:33	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:33	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:33	207-08-9	
Chrysene	ND	ug/L	0.50	1	05/11/24 12:31	05/13/24 18:33	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:33	53-70-3	
Fluoranthene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:33	206-44-0	
Fluorene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:33	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:33	193-39-5	
1-Methylnaphthalene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:33	90-12-0	
2-Methylnaphthalene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:33	91-57-6	
Naphthalene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:33	91-20-3	
Phenanthrene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:33	85-01-8	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-GP05	Lab ID: 50372470005	Collected: 05/06/24 15:10	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Pyrene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:33	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	97	%	43-129	1	05/11/24 12:31	05/13/24 18:33	321-60-8	
p-Terphenyl-d14 (S)	124	%	64-162	1	05/11/24 12:31	05/13/24 18:33	1718-51-0	
8260/5030 MSV								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		05/10/24 00:53	67-64-1	
Acrolein	ND	ug/L	50.0	1		05/10/24 00:53	107-02-8	
Acrylonitrile	ND	ug/L	100	1		05/10/24 00:53	107-13-1	
Benzene	ND	ug/L	5.0	1		05/10/24 00:53	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		05/10/24 00:53	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		05/10/24 00:53	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		05/10/24 00:53	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/10/24 00:53	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/10/24 00:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		05/10/24 00:53	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		05/10/24 00:53	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		05/10/24 00:53	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		05/10/24 00:53	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		05/10/24 00:53	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/10/24 00:53	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/10/24 00:53	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/10/24 00:53	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/10/24 00:53	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/10/24 00:53	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 00:53	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 00:53	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		05/10/24 00:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		05/10/24 00:53	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		05/10/24 00:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		05/10/24 00:53	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		05/10/24 00:53	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/10/24 00:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/10/24 00:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/10/24 00:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 00:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 00:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 00:53	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		05/10/24 00:53	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 00:53	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		05/10/24 00:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 00:53	10061-01-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA
 Pace Project No.: 50372470

Sample: NW-GW-GP05	Lab ID: 50372470005	Collected: 05/06/24 15:10	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 00:53	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/10/24 00:53	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		05/10/24 00:53	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		05/10/24 00:53	87-68-3	
n-Hexane	ND	ug/L	5.0	1		05/10/24 00:53	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		05/10/24 00:53	591-78-6	
Iodomethane	ND	ug/L	10.0	1		05/10/24 00:53	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/10/24 00:53	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		05/10/24 00:53	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/10/24 00:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		05/10/24 00:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		05/10/24 00:53	1634-04-4	
n-Propylbenzene	ND	ug/L	5.0	1		05/10/24 00:53	103-65-1	
Styrene	ND	ug/L	5.0	1		05/10/24 00:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 00:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 00:53	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/10/24 00:53	127-18-4	
Toluene	ND	ug/L	5.0	1		05/10/24 00:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 00:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/10/24 00:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/10/24 00:53	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/10/24 00:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/10/24 00:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		05/10/24 00:53	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 00:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 00:53	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		05/10/24 00:53	108-05-4	L1
Vinyl chloride	ND	ug/L	2.0	1		05/10/24 00:53	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		05/10/24 00:53	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	82-128	1		05/10/24 00:53	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	79-124	1		05/10/24 00:53	460-00-4	
Toluene-d8 (S)	101	%.	73-122	1		05/10/24 00:53	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-FD01	Lab ID: 50372470006	Collected: 05/06/24 08:00	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	35.6	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:19	7440-38-2	
Barium	112	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:19	7440-39-3	
Cadmium	ND	ug/L	2.0	1	05/09/24 21:49	05/12/24 22:19	7440-43-9	
Chromium	27.0	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:19	7440-47-3	
Lead	14.4	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:19	7439-92-1	
Selenium	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:19	7782-49-2	
Silver	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:19	7440-22-4	
6010 MET ICP, Lab Filtered								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:47	7440-38-2	
Barium, Dissolved	62.8	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:47	7440-39-3	
Cadmium, Dissolved	ND	ug/L	2.0	1	05/16/24 07:45	05/17/24 12:47	7440-43-9	
Chromium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:47	7440-47-3	
Lead, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:47	7439-92-1	
Selenium, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:47	7782-49-2	
Silver, Dissolved	ND	ug/L	10.0	1	05/16/24 07:45	05/17/24 12:47	7440-22-4	
7470 Mercury								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	05/15/24 19:26	05/16/24 10:08	7439-97-6	
7470 Mercury, Lab Filtered								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury, Dissolved	ND	ug/L	2.0	1	05/17/24 10:04	05/19/24 19:36	7439-97-6	
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:44	83-32-9	
Acenaphthylene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:44	208-96-8	
Anthracene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:44	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:44	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:44	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:44	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:44	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:44	207-08-9	
Chrysene	ND	ug/L	0.50	1	05/11/24 12:31	05/13/24 18:44	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:44	53-70-3	
Fluoranthene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:44	206-44-0	
Fluorene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:44	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.099	1	05/11/24 12:31	05/13/24 18:44	193-39-5	
1-Methylnaphthalene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:44	90-12-0	
2-Methylnaphthalene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:44	91-57-6	
Naphthalene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:44	91-20-3	
Phenanthrene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:44	85-01-8	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-FD01	Lab ID: 50372470006	Collected: 05/06/24 08:00	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Pyrene	ND	ug/L	0.99	1	05/11/24 12:31	05/13/24 18:44	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	101	%.	43-129	1	05/11/24 12:31	05/13/24 18:44	321-60-8	
p-Terphenyl-d14 (S)	121	%.	64-162	1	05/11/24 12:31	05/13/24 18:44	1718-51-0	
8260/5030 MSV								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		05/10/24 01:16	67-64-1	
Acrolein	ND	ug/L	50.0	1		05/10/24 01:16	107-02-8	
Acrylonitrile	ND	ug/L	100	1		05/10/24 01:16	107-13-1	
Benzene	ND	ug/L	5.0	1		05/10/24 01:16	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		05/10/24 01:16	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		05/10/24 01:16	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		05/10/24 01:16	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/10/24 01:16	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/10/24 01:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		05/10/24 01:16	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		05/10/24 01:16	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		05/10/24 01:16	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		05/10/24 01:16	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		05/10/24 01:16	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/10/24 01:16	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/10/24 01:16	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/10/24 01:16	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/10/24 01:16	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/10/24 01:16	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 01:16	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 01:16	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		05/10/24 01:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		05/10/24 01:16	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		05/10/24 01:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:16	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		05/10/24 01:16	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		05/10/24 01:16	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/10/24 01:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/10/24 01:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/10/24 01:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 01:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 01:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 01:16	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		05/10/24 01:16	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 01:16	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		05/10/24 01:16	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 01:16	10061-01-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-FD01	Lab ID: 50372470006	Collected: 05/06/24 08:00	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV	Analytical Method: EPA 8260							
	Pace Analytical Services - Indianapolis							
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 01:16	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/10/24 01:16	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		05/10/24 01:16	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		05/10/24 01:16	87-68-3	
n-Hexane	ND	ug/L	5.0	1		05/10/24 01:16	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		05/10/24 01:16	591-78-6	
Iodomethane	ND	ug/L	10.0	1		05/10/24 01:16	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/10/24 01:16	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		05/10/24 01:16	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/10/24 01:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		05/10/24 01:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		05/10/24 01:16	1634-04-4	
n-Propylbenzene	ND	ug/L	5.0	1		05/10/24 01:16	103-65-1	
Styrene	ND	ug/L	5.0	1		05/10/24 01:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 01:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 01:16	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/10/24 01:16	127-18-4	
Toluene	ND	ug/L	5.0	1		05/10/24 01:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/10/24 01:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/10/24 01:16	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/10/24 01:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/10/24 01:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		05/10/24 01:16	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 01:16	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 01:16	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		05/10/24 01:16	108-05-4	L1
Vinyl chloride	ND	ug/L	2.0	1		05/10/24 01:16	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		05/10/24 01:16	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	82-128	1		05/10/24 01:16	1868-53-7	
4-Bromofluorobenzene (S)	102	%.	79-124	1		05/10/24 01:16	460-00-4	
Toluene-d8 (S)	100	%.	73-122	1		05/10/24 01:16	2037-26-5	

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**ANALYTICAL RESULTS**

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-EB01	Lab ID: 50372470007	Collected: 05/06/24 13:16	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Pace Analytical Services - Indianapolis								
Arsenic	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:21	7440-38-2	
Barium	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:21	7440-39-3	
Cadmium	ND	ug/L	2.0	1	05/09/24 21:49	05/12/24 22:21	7440-43-9	
Chromium	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:21	7440-47-3	
Lead	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:21	7439-92-1	
Selenium	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:21	7782-49-2	
Silver	ND	ug/L	10.0	1	05/09/24 21:49	05/12/24 22:21	7440-22-4	
7470 Mercury								
Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Pace Analytical Services - Indianapolis								
Mercury	ND	ug/L	2.0	1	05/15/24 19:26	05/16/24 10:10	7439-97-6	
8270 PAH by 3511								
Analytical Method: EPA 8270 by SIM 40E Preparation Method: EPA 3511								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:54	83-32-9	
Acenaphthylene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:54	208-96-8	
Anthracene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:54	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:54	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:54	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:54	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:54	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:54	207-08-9	
Chrysene	ND	ug/L	0.50	1	05/11/24 12:31	05/13/24 18:54	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:54	53-70-3	
Fluoranthene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:54	206-44-0	
Fluorene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:54	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.10	1	05/11/24 12:31	05/13/24 18:54	193-39-5	
1-Methylnaphthalene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:54	90-12-0	
2-Methylnaphthalene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:54	91-57-6	
Naphthalene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:54	91-20-3	
Phenanthrene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:54	85-01-8	
Pyrene	ND	ug/L	1.0	1	05/11/24 12:31	05/13/24 18:54	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	95	%	43-129	1	05/11/24 12:31	05/13/24 18:54	321-60-8	
p-Terphenyl-d14 (S)	137	%	64-162	1	05/11/24 12:31	05/13/24 18:54	1718-51-0	
8260/5030 MSV								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	100	1		05/10/24 01:38	67-64-1	
Acrolein	ND	ug/L	50.0	1		05/10/24 01:38	107-02-8	
Acrylonitrile	ND	ug/L	100	1		05/10/24 01:38	107-13-1	
Benzene	ND	ug/L	5.0	1		05/10/24 01:38	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		05/10/24 01:38	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		05/10/24 01:38	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		05/10/24 01:38	75-27-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-EB01	Lab ID: 50372470007	Collected: 05/06/24 13:16	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV		Analytical Method: EPA 8260						
		Pace Analytical Services - Indianapolis						
Bromoform	ND	ug/L	5.0	1		05/10/24 01:38	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/10/24 01:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		05/10/24 01:38	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		05/10/24 01:38	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		05/10/24 01:38	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		05/10/24 01:38	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		05/10/24 01:38	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/10/24 01:38	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/10/24 01:38	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/10/24 01:38	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/10/24 01:38	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/10/24 01:38	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 01:38	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		05/10/24 01:38	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		05/10/24 01:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		05/10/24 01:38	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		05/10/24 01:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:38	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		05/10/24 01:38	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		05/10/24 01:38	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/10/24 01:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/10/24 01:38	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/10/24 01:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 01:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/10/24 01:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 01:38	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		05/10/24 01:38	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		05/10/24 01:38	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		05/10/24 01:38	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 01:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/10/24 01:38	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/10/24 01:38	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		05/10/24 01:38	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		05/10/24 01:38	87-68-3	
n-Hexane	ND	ug/L	5.0	1		05/10/24 01:38	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		05/10/24 01:38	591-78-6	
Iodomethane	ND	ug/L	10.0	1		05/10/24 01:38	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/10/24 01:38	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		05/10/24 01:38	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/10/24 01:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		05/10/24 01:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		05/10/24 01:38	1634-04-4	
n-Propylbenzene	ND	ug/L	5.0	1		05/10/24 01:38	103-65-1	
Styrene	ND	ug/L	5.0	1		05/10/24 01:38	100-42-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-EB01	Lab ID: 50372470007	Collected: 05/06/24 13:16	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 01:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/10/24 01:38	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/10/24 01:38	127-18-4	
Toluene	ND	ug/L	5.0	1		05/10/24 01:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		05/10/24 01:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/10/24 01:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/10/24 01:38	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/10/24 01:38	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/10/24 01:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		05/10/24 01:38	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 01:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/10/24 01:38	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		05/10/24 01:38	108-05-4	L1
Vinyl chloride	ND	ug/L	2.0	1		05/10/24 01:38	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		05/10/24 01:38	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%	82-128	1		05/10/24 01:38	1868-53-7	
4-Bromofluorobenzene (S)	102	%	79-124	1		05/10/24 01:38	460-00-4	
Toluene-d8 (S)	100	%	73-122	1		05/10/24 01:38	2037-26-5	

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-TB01	Lab ID: 50372470008	Collected: 05/06/24 09:58	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	ug/L	100	1		05/09/24 22:58	67-64-1	
Acrolein	ND	ug/L	50.0	1		05/09/24 22:58	107-02-8	
Acrylonitrile	ND	ug/L	100	1		05/09/24 22:58	107-13-1	
Benzene	ND	ug/L	5.0	1		05/09/24 22:58	71-43-2	
Bromobenzene	ND	ug/L	5.0	1		05/09/24 22:58	108-86-1	
Bromochloromethane	ND	ug/L	5.0	1		05/09/24 22:58	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1		05/09/24 22:58	75-27-4	
Bromoform	ND	ug/L	5.0	1		05/09/24 22:58	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/09/24 22:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	1		05/09/24 22:58	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	1		05/09/24 22:58	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	1		05/09/24 22:58	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	1		05/09/24 22:58	98-06-6	
Carbon disulfide	ND	ug/L	10.0	1		05/09/24 22:58	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	1		05/09/24 22:58	56-23-5	
Chlorobenzene	ND	ug/L	5.0	1		05/09/24 22:58	108-90-7	
Chloroethane	ND	ug/L	5.0	1		05/09/24 22:58	75-00-3	
Chloroform	ND	ug/L	5.0	1		05/09/24 22:58	67-66-3	
Chloromethane	ND	ug/L	5.0	1		05/09/24 22:58	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	1		05/09/24 22:58	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	1		05/09/24 22:58	106-43-4	
Dibromochloromethane	ND	ug/L	5.0	1		05/09/24 22:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	1		05/09/24 22:58	106-93-4	
Dibromomethane	ND	ug/L	5.0	1		05/09/24 22:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	1		05/09/24 22:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	1		05/09/24 22:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	1		05/09/24 22:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	1		05/09/24 22:58	110-57-6	
Dichlorodifluoromethane	ND	ug/L	5.0	1		05/09/24 22:58	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	1		05/09/24 22:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	1		05/09/24 22:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1		05/09/24 22:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	1		05/09/24 22:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1		05/09/24 22:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	1		05/09/24 22:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	1		05/09/24 22:58	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	1		05/09/24 22:58	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	1		05/09/24 22:58	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	1		05/09/24 22:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	1		05/09/24 22:58	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	1		05/09/24 22:58	100-41-4	
Ethyl methacrylate	ND	ug/L	100	1		05/09/24 22:58	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1		05/09/24 22:58	87-68-3	
n-Hexane	ND	ug/L	5.0	1		05/09/24 22:58	110-54-3	
2-Hexanone	ND	ug/L	25.0	1		05/09/24 22:58	591-78-6	
Iodomethane	ND	ug/L	10.0	1		05/09/24 22:58	74-88-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Sample: NW-GW-TB01	Lab ID: 50372470008	Collected: 05/06/24 09:58	Received: 05/08/24 09:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/09/24 22:58	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	1		05/09/24 22:58	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1		05/09/24 22:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	1		05/09/24 22:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	1		05/09/24 22:58	1634-04-4	
n-Propylbenzene	ND	ug/L	5.0	1		05/09/24 22:58	103-65-1	
Styrene	ND	ug/L	5.0	1		05/09/24 22:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	1		05/09/24 22:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	1		05/09/24 22:58	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	1		05/09/24 22:58	127-18-4	
Toluene	ND	ug/L	5.0	1		05/09/24 22:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	1		05/09/24 22:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1		05/09/24 22:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1		05/09/24 22:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	1		05/09/24 22:58	79-00-5	
Trichloroethene	ND	ug/L	5.0	1		05/09/24 22:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1		05/09/24 22:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	1		05/09/24 22:58	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/09/24 22:58	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/09/24 22:58	108-67-8	
Vinyl acetate	ND	ug/L	50.0	1		05/09/24 22:58	108-05-4	L1
Vinyl chloride	ND	ug/L	2.0	1		05/09/24 22:58	75-01-4	
Xylene (Total)	ND	ug/L	10.0	1		05/09/24 22:58	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	82-128	1		05/09/24 22:58	1868-53-7	
4-Bromofluorobenzene (S)	103	%.	79-124	1		05/09/24 22:58	460-00-4	
Toluene-d8 (S)	101	%.	73-122	1		05/09/24 22:58	2037-26-5	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

QC Batch:	790071	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Indianapolis
Associated Lab Samples:	50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006, 50372470007		

METHOD BLANK: 3614868 Matrix: Water
 Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006, 50372470007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	2.0	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	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

QC Batch:	790070	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury Dissolved
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006

METHOD BLANK: 3614864 Matrix: Water
 Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	2.0	05/19/24 18:31	

LABORATORY CONTROL SAMPLE: 3614865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.7	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614866 3614867

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, Dissolved	ug/L	ND	5	5	4.7	5.0	93	99	75-125	6	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

QC Batch:	788885	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006, 50372470007

METHOD BLANK:	3609062	Matrix:	Water
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Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006, 50372470007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	05/12/24 21:30	
Barium	ug/L	ND	10.0	05/12/24 21:30	
Cadmium	ug/L	ND	2.0	05/12/24 21:30	
Chromium	ug/L	ND	10.0	05/12/24 21:30	
Lead	ug/L	ND	10.0	05/12/24 21:30	
Selenium	ug/L	ND	10.0	05/12/24 21:30	
Silver	ug/L	ND	10.0	05/12/24 21:30	

LABORATORY CONTROL SAMPLE: 3609063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1000	1020	102	80-120	
Barium	ug/L	1000	991	99	80-120	
Cadmium	ug/L	1000	957	96	80-120	
Chromium	ug/L	1000	1020	102	80-120	
Lead	ug/L	1000	934	93	80-120	
Selenium	ug/L	1000	958	96	80-120	
Silver	ug/L	500	498	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609064 3609065

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50372470001 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic	ug/L	34.2	1000	1000	1070	110	104	108	75-125	3	20
Barium	ug/L	105	1000	1000	1090	110	98	101	75-125	2	20
Cadmium	ug/L	ND	1000	1000	962	990	96	99	75-125	3	20
Chromium	ug/L	20.2	1000	1000	1020	1060	100	104	75-125	3	20
Lead	ug/L	18.2	1000	1000	913	941	89	92	75-125	3	20
Selenium	ug/L	ND	1000	1000	960	988	96	99	75-125	3	20
Silver	ug/L	ND	500	500	502	516	100	103	75-125	3	20

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

QC Batch:	789961	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET Dissolved
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006

METHOD BLANK: 3614505 Matrix: Water

Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	ND	10.0	05/17/24 12:17	
Barium, Dissolved	ug/L	ND	10.0	05/17/24 12:17	
Cadmium, Dissolved	ug/L	ND	2.0	05/17/24 12:17	
Chromium, Dissolved	ug/L	ND	10.0	05/17/24 12:17	
Lead, Dissolved	ug/L	ND	10.0	05/17/24 12:17	
Selenium, Dissolved	ug/L	ND	10.0	05/17/24 12:17	
Silver, Dissolved	ug/L	ND	10.0	05/17/24 12:17	

LABORATORY CONTROL SAMPLE: 3614506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	1000	1000	100	80-120	
Barium, Dissolved	ug/L	1000	955	96	80-120	
Cadmium, Dissolved	ug/L	1000	965	96	80-120	
Chromium, Dissolved	ug/L	1000	996	100	80-120	
Lead, Dissolved	ug/L	1000	955	95	80-120	
Selenium, Dissolved	ug/L	1000	982	98	80-120	
Silver, Dissolved	ug/L	500	485	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614507 3614508

Parameter	Units	50372470001		3614507		3614508		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MSD Result	MSD Spike Conc.					MSD % Rec
Arsenic, Dissolved	ug/L	ND	1000	1040	1000	1060	104	106	75-125	2	20	
Barium, Dissolved	ug/L	65.8	1000	1030	1000	1050	96	98	75-125	2	20	
Cadmium, Dissolved	ug/L	ND	1000	994	1000	1000	99	100	75-125	1	20	
Chromium, Dissolved	ug/L	ND	1000	1000	1000	1020	100	102	75-125	1	20	
Lead, Dissolved	ug/L	ND	1000	950	1000	965	95	96	75-125	2	20	
Selenium, Dissolved	ug/L	ND	1000	1010	1000	1020	101	101	75-125	1	20	
Silver, Dissolved	ug/L	ND	500	498	500	504	99	101	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614509 3614510

Parameter	Units	50372487001		3614509		3614510		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MSD Result	MSD Spike Conc.					MSD % Rec
Arsenic, Dissolved	ug/L	ND	1000	1050	1000	1070	105	107	75-125	2	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Parameter	Units	3614509		3614510		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50372487001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium, Dissolved	ug/L	68.3	1000	1000	1030	1040	96	98	75-125	1	20		
Cadmium, Dissolved	ug/L	ND	1000	1000	996	1010	100	101	75-125	1	20		
Chromium, Dissolved	ug/L	ND	1000	1000	1010	1020	101	102	75-125	1	20		
Lead, Dissolved	ug/L	ND	1000	1000	950	963	95	96	75-125	1	20		
Selenium, Dissolved	ug/L	ND	1000	1000	1020	1030	101	102	75-125	1	20		
Silver, Dissolved	ug/L	ND	500	500	499	505	100	101	75-125	1	20		

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

QC Batch: 789008 Analysis Method: EPA 8260

QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006, 50372470007, 50372470008

METHOD BLANK: 3609511 Matrix: Water

Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006, 50372470007, 50372470008

Table with 6 columns: Parameter, Units, Blank Result, Reporting Limit, Analyzed, Qualifiers. Lists various chemical compounds and their detection results.

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

METHOD BLANK: 3609511

Matrix: Water

Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006, 50372470007, 50372470008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloromethane	ug/L	ND	5.0	05/09/24 22:35	
cis-1,2-Dichloroethene	ug/L	ND	5.0	05/09/24 22:35	
cis-1,3-Dichloropropene	ug/L	ND	5.0	05/09/24 22:35	
Dibromochloromethane	ug/L	ND	5.0	05/09/24 22:35	
Dibromomethane	ug/L	ND	5.0	05/09/24 22:35	
Dichlorodifluoromethane	ug/L	ND	5.0	05/09/24 22:35	
Ethyl methacrylate	ug/L	ND	100	05/09/24 22:35	
Ethylbenzene	ug/L	ND	5.0	05/09/24 22:35	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/09/24 22:35	
Iodomethane	ug/L	ND	10.0	05/09/24 22:35	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	05/09/24 22:35	
Methyl-tert-butyl ether	ug/L	ND	4.0	05/09/24 22:35	
Methylene Chloride	ug/L	ND	5.0	05/09/24 22:35	
n-Butylbenzene	ug/L	ND	5.0	05/09/24 22:35	
n-Hexane	ug/L	ND	5.0	05/09/24 22:35	
n-Propylbenzene	ug/L	ND	5.0	05/09/24 22:35	
p-Isopropyltoluene	ug/L	ND	5.0	05/09/24 22:35	
sec-Butylbenzene	ug/L	ND	5.0	05/09/24 22:35	
Styrene	ug/L	ND	5.0	05/09/24 22:35	
tert-Butylbenzene	ug/L	ND	5.0	05/09/24 22:35	
Tetrachloroethene	ug/L	ND	5.0	05/09/24 22:35	
Toluene	ug/L	ND	5.0	05/09/24 22:35	
trans-1,2-Dichloroethene	ug/L	ND	5.0	05/09/24 22:35	
trans-1,3-Dichloropropene	ug/L	ND	5.0	05/09/24 22:35	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	05/09/24 22:35	
Trichloroethene	ug/L	ND	5.0	05/09/24 22:35	
Trichlorofluoromethane	ug/L	ND	5.0	05/09/24 22:35	
Vinyl acetate	ug/L	ND	50.0	05/09/24 22:35	
Vinyl chloride	ug/L	ND	2.0	05/09/24 22:35	
Xylene (Total)	ug/L	ND	10.0	05/09/24 22:35	
4-Bromofluorobenzene (S)	%	103	79-124	05/09/24 22:35	
Dibromofluoromethane (S)	%	98	82-128	05/09/24 22:35	
Toluene-d8 (S)	%	101	73-122	05/09/24 22:35	

LABORATORY CONTROL SAMPLE: 3609512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	55.5	111	81-130	
1,1,1-Trichloroethane	ug/L	50	53.2	106	71-126	
1,1,2,2-Tetrachloroethane	ug/L	50	53.6	107	70-126	
1,1,2-Trichloroethane	ug/L	50	54.0	108	79-125	
1,1-Dichloroethane	ug/L	50	51.9	104	79-120	
1,1-Dichloroethene	ug/L	50	50.7	101	71-130	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

LABORATORY CONTROL SAMPLE: 3609512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloropropene	ug/L	50	53.7	107	78-144	
1,2,3-Trichlorobenzene	ug/L	50	51.4	103	57-146	
1,2,3-Trichloropropane	ug/L	50	54.0	108	74-127	
1,2,4-Trichlorobenzene	ug/L	50	51.4	103	62-136	
1,2,4-Trimethylbenzene	ug/L	50	53.6	107	69-120	
1,2-Dibromoethane (EDB)	ug/L	50	52.4	105	80-120	
1,2-Dichlorobenzene	ug/L	50	50.1	100	79-123	
1,2-Dichloroethane	ug/L	50	49.3	99	72-123	
1,2-Dichloropropane	ug/L	50	53.8	108	76-125	
1,3,5-Trimethylbenzene	ug/L	50	52.5	105	71-120	
1,3-Dichlorobenzene	ug/L	50	50.6	101	78-117	
1,3-Dichloropropane	ug/L	50	51.5	103	77-126	
1,4-Dichlorobenzene	ug/L	50	48.8	98	79-116	
2,2-Dichloropropane	ug/L	50	49.7	99	48-138	
2-Butanone (MEK)	ug/L	250	272	109	67-135	
2-Chlorotoluene	ug/L	50	51.0	102	75-122	
2-Hexanone	ug/L	250	258	103	65-135	
4-Chlorotoluene	ug/L	50	51.1	102	77-120	
4-Methyl-2-pentanone (MIBK)	ug/L	250	271	108	69-136	
Acetone	ug/L	250	255	102	34-156	
Acrolein	ug/L	1000	905	91	59-191	
Acrylonitrile	ug/L	250	263	105	67-146	
Benzene	ug/L	50	52.5	105	76-122	
Bromobenzene	ug/L	50	51.2	102	75-121	
Bromochloromethane	ug/L	50	51.8	104	73-119	
Bromodichloromethane	ug/L	50	53.5	107	80-126	
Bromoform	ug/L	50	57.3	115	77-124	
Bromomethane	ug/L	50	38.5	77	10-175	
Carbon disulfide	ug/L	50	47.4	95	69-121	
Carbon tetrachloride	ug/L	50	55.0	110	73-127	
Chlorobenzene	ug/L	50	50.7	101	76-118	
Chloroethane	ug/L	50	52.4	105	36-162	
Chloroform	ug/L	50	51.6	103	78-121	
Chloromethane	ug/L	50	46.3	93	37-143	
cis-1,2-Dichloroethene	ug/L	50	50.1	100	77-123	
cis-1,3-Dichloropropene	ug/L	50	55.0	110	76-132	
Dibromochloromethane	ug/L	50	55.1	110	79-130	
Dibromomethane	ug/L	50	51.0	102	79-124	
Dichlorodifluoromethane	ug/L	50	20.2	40	29-126	
Ethyl methacrylate	ug/L	50	55.7J	111	78-137	
Ethylbenzene	ug/L	50	52.3	105	76-120	
Hexachloro-1,3-butadiene	ug/L	50	47.3	95	60-131	
Iodomethane	ug/L	50	39.3	79	10-148	
Isopropylbenzene (Cumene)	ug/L	50	52.6	105	71-124	
Methyl-tert-butyl ether	ug/L	50	53.5	107	71-121	
Methylene Chloride	ug/L	50	52.7	105	71-121	
n-Butylbenzene	ug/L	50	51.6	103	68-131	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

LABORATORY CONTROL SAMPLE: 3609512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
n-Hexane	ug/L	50	41.9	84	51-126	
n-Propylbenzene	ug/L	50	51.7	103	67-127	
p-Isopropyltoluene	ug/L	50	51.6	103	72-124	
sec-Butylbenzene	ug/L	50	52.6	105	71-126	
Styrene	ug/L	50	51.6	103	80-121	
tert-Butylbenzene	ug/L	50	52.5	105	71-128	
Tetrachloroethene	ug/L	50	52.6	105	71-122	
Toluene	ug/L	50	52.1	104	74-118	
trans-1,2-Dichloroethene	ug/L	50	51.5	103	75-122	
trans-1,3-Dichloropropene	ug/L	50	55.2	110	77-126	
trans-1,4-Dichloro-2-butene	ug/L	50	53.2J	106	53-136	
Trichloroethene	ug/L	50	51.7	103	74-125	
Trichlorofluoromethane	ug/L	50	44.8	90	64-138	
Vinyl acetate	ug/L	200	327	164	74-154 L1	
Vinyl chloride	ug/L	50	44.0	88	55-139	
Xylene (Total)	ug/L	100	101	101	73-119	
4-Bromofluorobenzene (S)	%			100	79-124	
Dibromofluoromethane (S)	%			99	82-128	
Toluene-d8 (S)	%			99	73-122	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609513 3609514

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50372470001	Spike Conc.	Spike Conc.	Result							Result
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	55.4	55.0	111	110	47-139	1	20	
1,1,1-Trichloroethane	ug/L	ND	50	50	57.3	54.7	115	109	47-145	5	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	54.9	51.4	110	103	49-133	7	20	
1,1,2-Trichloroethane	ug/L	ND	50	50	54.5	50.8	109	102	52-136	7	20	
1,1-Dichloroethane	ug/L	ND	50	50	54.8	52.0	110	104	52-137	5	20	
1,1-Dichloroethene	ug/L	ND	50	50	54.6	51.1	109	102	53-144	7	20	
1,1-Dichloropropene	ug/L	ND	50	50	56.9	54.6	114	109	49-150	4	20	
1,2,3-Trichlorobenzene	ug/L	ND	50	50	46.2	44.6	91	88	20-153	3	20	
1,2,3-Trichloropropane	ug/L	ND	50	50	55.2	50.4	110	101	47-134	9	20	
1,2,4-Trichlorobenzene	ug/L	ND	50	50	45.9	44.7	91	88	23-141	3	20	
1,2,4-Trimethylbenzene	ug/L	ND	50	50	53.3	50.4	106	101	41-131	6	20	
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	52.7	50.9	105	102	55-133	3	20	
1,2-Dichlorobenzene	ug/L	ND	50	50	49.6	47.0	99	94	43-133	5	20	
1,2-Dichloroethane	ug/L	ND	50	50	50.4	48.4	101	97	50-138	4	20	
1,2-Dichloropropane	ug/L	ND	50	50	55.4	52.6	111	105	54-139	5	20	
1,3,5-Trimethylbenzene	ug/L	ND	50	50	52.5	49.9	105	100	39-133	5	20	
1,3-Dichlorobenzene	ug/L	ND	50	50	49.6	47.5	99	95	41-131	4	20	
1,3-Dichloropropane	ug/L	ND	50	50	52.0	50.7	104	101	50-136	3	20	
1,4-Dichlorobenzene	ug/L	ND	50	50	47.9	45.8	96	92	41-131	4	20	
2,2-Dichloropropane	ug/L	ND	50	50	41.8	39.8	84	80	17-141	5	20	
2-Butanone (MEK)	ug/L	ND	250	250	273	251	109	101	45-138	8	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		3609513			3609514							
Parameter	Units	50372470001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual	
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		RPD
2-Chlorotoluene	ug/L	ND	50	50	51.9	48.7	104	97	36-141	6	20	
2-Hexanone	ug/L	ND	250	250	262	249	105	100	45-135	5	20	
4-Chlorotoluene	ug/L	ND	50	50	50.9	48.3	102	97	38-134	5	20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	275	261	110	105	46-138	5	20	
Acetone	ug/L	ND	250	250	264	244	105	97	25-151	8	20	
Acrolein	ug/L	ND	1000	1000	879	825	88	82	36-168	6	20	
Acrylonitrile	ug/L	ND	250	250	267	247	107	99	47-147	7	20	
Benzene	ug/L	ND	50	50	54.7	52.6	109	105	53-138	4	20	
Bromobenzene	ug/L	ND	50	50	50.6	49.7	101	99	47-130	2	20	
Bromochloromethane	ug/L	ND	50	50	52.6	50.2	105	100	52-130	5	20	
Bromodichloromethane	ug/L	ND	50	50	54.3	52.7	109	105	50-146	3	20	
Bromoform	ug/L	ND	50	50	57.2	53.7	114	107	45-132	6	20	
Bromomethane	ug/L	ND	50	50	43.4	43.1	87	86	10-173	1	20	
Carbon disulfide	ug/L	ND	50	50	48.6	46.6	97	93	47-133	4	20	
Carbon tetrachloride	ug/L	ND	50	50	59.2	57.0	118	114	43-148	4	20	
Chlorobenzene	ug/L	ND	50	50	51.3	49.8	103	100	52-131	3	20	
Chloroethane	ug/L	ND	50	50	55.3	51.7	111	103	25-169	7	20	
Chloroform	ug/L	ND	50	50	53.5	51.2	107	102	54-138	4	20	
Chloromethane	ug/L	ND	50	50	49.1	46.2	98	92	33-137	6	20	
cis-1,2-Dichloroethene	ug/L	ND	50	50	51.5	49.6	103	99	50-141	4	20	
cis-1,3-Dichloropropene	ug/L	ND	50	50	53.3	51.9	107	104	47-135	3	20	
Dibromochloromethane	ug/L	ND	50	50	54.2	53.2	108	106	48-139	2	20	
Dibromomethane	ug/L	ND	50	50	50.9	49.4	102	99	51-141	3	20	
Dichlorodifluoromethane	ug/L	ND	50	50	19.4	18.3	39	37	15-130	6	20	
Ethyl methacrylate	ug/L	ND	50	50	55.8J	53.5J	112	107	51-142		20	
Ethylbenzene	ug/L	ND	50	50	52.8	51.5	106	103	50-136	2	20	
Hexachloro-1,3-butadiene	ug/L	ND	50	50	40.7	40.0	80	78	15-141	2	20	
Iodomethane	ug/L	ND	50	50	34.8	35.6	70	71	10-145	2	20	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	53.2	52.2	106	104	46-137	2	20	
Methyl-tert-butyl ether	ug/L	ND	50	50	54.4	51.7	109	103	47-135	5	20	
Methylene Chloride	ug/L	ND	50	50	51.7	49.3	103	99	48-131	5	20	
n-Butylbenzene	ug/L	ND	50	50	47.0	46.3	93	92	30-138	1	20	
n-Hexane	ug/L	ND	50	50	36.8	35.2	74	70	35-137	4	20	
n-Propylbenzene	ug/L	ND	50	50	51.9	49.0	104	98	37-135	6	20	
p-Isopropyltoluene	ug/L	ND	50	50	49.6	48.2	99	96	35-136	3	20	
sec-Butylbenzene	ug/L	ND	50	50	51.5	49.9	102	99	36-137	3	20	
Styrene	ug/L	ND	50	50	51.5	50.2	103	100	46-136	2	20	
tert-Butylbenzene	ug/L	ND	50	50	53.2	50.9	106	101	40-137	4	20	
Tetrachloroethene	ug/L	ND	50	50	53.0	51.5	106	103	44-138	3	20	
Toluene	ug/L	ND	50	50	54.2	52.4	108	104	52-132	3	20	
trans-1,2-Dichloroethene	ug/L	ND	50	50	53.7	50.8	107	102	50-137	5	20	
trans-1,3-Dichloropropene	ug/L	ND	50	50	52.5	52.2	105	104	46-130	0	20	
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	51.8J	50J	104	100	24-134		20	
Trichloroethene	ug/L	ND	50	50	54.0	51.7	108	103	49-140	4	20	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA
 Pace Project No.: 50372470

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609513 3609514												
Parameter	Units	50372470001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	
		Result	Conc.	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Trichlorofluoromethane	ug/L	ND	50	50	50	48.8	45.8	98	92	44-153	6	20
Vinyl acetate	ug/L	ND	200	200	200	259	249	129	124	32-142	4	20
Vinyl chloride	ug/L	ND	50	50	50	47.0	44.5	94	89	41-147	6	20
Xylene (Total)	ug/L	ND	100	100	100	102	99.7	102	100	44-138	2	20
4-Bromofluorobenzene (S)	%							99	101	79-124		
Dibromofluoromethane (S)	%							100	98	82-128		
Toluene-d8 (S)	%							100	100	73-122		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3609515 3609516												
Parameter	Units	50372487001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	
		Result	Conc.	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD	RPD
1,1,1,2-Tetrachloroethane	ug/L	ND	50	50	50	53.0	55.1	106	110	47-139	4	20
1,1,1-Trichloroethane	ug/L	ND	50	50	50	54.8	56.4	110	113	47-145	3	20
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	50	51.9	52.6	104	105	49-133	1	20
1,1,2-Trichloroethane	ug/L	ND	50	50	50	52.5	53.4	105	107	52-136	2	20
1,1-Dichloroethane	ug/L	ND	50	50	50	53.1	53.7	106	107	52-137	1	20
1,1-Dichloroethene	ug/L	ND	50	50	50	53.5	53.2	107	106	53-144	1	20
1,1-Dichloropropene	ug/L	ND	50	50	50	55.8	56.3	112	113	49-150	1	20
1,2,3-Trichlorobenzene	ug/L	ND	50	50	50	45.5	48.0	91	96	20-153	5	20
1,2,3-Trichloropropane	ug/L	ND	50	50	50	52.8	52.5	106	105	47-134	1	20
1,2,4-Trichlorobenzene	ug/L	ND	50	50	50	46.3	48.1	93	96	23-141	4	20
1,2,4-Trimethylbenzene	ug/L	ND	50	50	50	53.4	53.8	107	108	41-131	1	20
1,2-Dibromoethane (EDB)	ug/L	ND	50	50	50	50.4	51.2	101	102	55-133	2	20
1,2-Dichlorobenzene	ug/L	ND	50	50	50	48.9	49.3	98	99	43-133	1	20
1,2-Dichloroethane	ug/L	ND	50	50	50	48.4	49.4	97	99	50-138	2	20
1,2-Dichloropropane	ug/L	ND	50	50	50	53.6	54.4	107	109	54-139	2	20
1,3,5-Trimethylbenzene	ug/L	ND	50	50	50	52.4	53.1	105	106	39-133	1	20
1,3-Dichlorobenzene	ug/L	ND	50	50	50	49.8	50.0	100	100	41-131	0	20
1,3-Dichloropropane	ug/L	ND	50	50	50	50.5	51.3	101	103	50-136	2	20
1,4-Dichlorobenzene	ug/L	ND	50	50	50	47.8	48.1	96	96	41-131	1	20
2,2-Dichloropropane	ug/L	ND	50	50	50	40.8	42.4	82	85	17-141	4	20
2-Butanone (MEK)	ug/L	ND	250	250	250	254	257	102	103	45-138	1	20
2-Chlorotoluene	ug/L	ND	50	50	50	51.4	51.8	103	104	36-141	1	20
2-Hexanone	ug/L	ND	250	250	250	248	248	99	99	45-135	0	20
4-Chlorotoluene	ug/L	ND	50	50	50	50.4	51.1	101	102	38-134	1	20
4-Methyl-2-pentanone (MIBK)	ug/L	ND	250	250	250	261	262	104	105	46-138	0	20
Acetone	ug/L	ND	250	250	250	248	247	99	98	25-151	0	20
Acrolein	ug/L	ND	1000	1000	1000	846	846	85	85	36-168	0	20
Acrylonitrile	ug/L	ND	250	250	250	251	252	100	101	47-147	0	20
Benzene	ug/L	ND	50	50	50	53.1	53.9	106	108	53-138	2	20
Bromobenzene	ug/L	ND	50	50	50	50.5	50.8	101	102	47-130	1	20
Bromochloromethane	ug/L	ND	50	50	50	50.9	52.0	102	104	52-130	2	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Parameter	Units	3609515		3609516		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		50372487001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Bromodichloromethane	ug/L	ND	50	50	50.9	53.2	102	106	50-146	4	20		
Bromoform	ug/L	ND	50	50	51.6	54.2	103	108	45-132	5	20		
Bromomethane	ug/L	ND	50	50	37.6	42.7	75	85	10-173	13	20		
Carbon disulfide	ug/L	ND	50	50	48.5	48.4	97	97	47-133	0	20		
Carbon tetrachloride	ug/L	ND	50	50	55.6	57.9	111	116	43-148	4	20		
Chlorobenzene	ug/L	ND	50	50	50.6	51.1	101	102	52-131	1	20		
Chloroethane	ug/L	ND	50	50	53.9	54.0	108	108	25-169	0	20		
Chloroform	ug/L	ND	50	50	51.6	52.5	103	105	54-138	2	20		
Chloromethane	ug/L	ND	50	50	47.7	47.9	95	96	33-137	1	20		
cis-1,2-Dichloroethene	ug/L	ND	50	50	50.5	50.6	101	101	50-141	0	20		
cis-1,3-Dichloropropene	ug/L	ND	50	50	51.2	52.5	102	105	47-135	3	20		
Dibromochloromethane	ug/L	ND	50	50	50.9	52.9	102	106	48-139	4	20		
Dibromomethane	ug/L	ND	50	50	48.8	50.2	98	100	51-141	3	20		
Dichlorodifluoromethane	ug/L	ND	50	50	20.5	19.9	41	40	15-130	3	20		
Ethyl methacrylate	ug/L	ND	50	50	52.9J	53.8J	106	108	51-142		20		
Ethylbenzene	ug/L	ND	50	50	52.5	53.1	105	106	50-136	1	20		
Hexachloro-1,3-butadiene	ug/L	ND	50	50	41.7	43.5	83	87	15-141	4	20		
Iodomethane	ug/L	ND	50	50	28.6	36.8	57	74	10-145	25	20	R1	
Isopropylbenzene (Cumene)	ug/L	ND	50	50	53.2	54.1	106	108	46-137	2	20		
Methyl-tert-butyl ether	ug/L	ND	50	50	51.6	52.3	103	105	47-135	1	20		
Methylene Chloride	ug/L	ND	50	50	50.1	50.8	100	102	48-131	2	20		
n-Butylbenzene	ug/L	ND	50	50	49.1	49.9	97	99	30-138	2	20		
n-Hexane	ug/L	ND	50	50	38.9	39.3	78	79	35-137	1	20		
n-Propylbenzene	ug/L	ND	50	50	51.4	51.7	103	103	37-135	1	20		
p-Isopropyltoluene	ug/L	ND	50	50	50.3	51.9	101	104	35-136	3	20		
sec-Butylbenzene	ug/L	ND	50	50	51.8	53.6	103	107	36-137	3	20		
Styrene	ug/L	ND	50	50	50.6	51.1	101	102	46-136	1	20		
tert-Butylbenzene	ug/L	ND	50	50	53.1	54.3	106	109	40-137	2	20		
Tetrachloroethene	ug/L	ND	50	50	53.8	53.8	108	108	44-138	0	20		
Toluene	ug/L	ND	50	50	53.2	53.7	106	107	52-132	1	20		
trans-1,2-Dichloroethene	ug/L	ND	50	50	52.3	53.0	105	106	50-137	1	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	50.7	51.8	101	104	46-130	2	20		
trans-1,4-Dichloro-2-butene	ug/L	ND	50	50	47.6J	49.9J	95	100	24-134		20		
Trichloroethene	ug/L	ND	50	50	52.9	53.0	106	106	49-140	0	20		
Trichlorofluoromethane	ug/L	ND	50	50	48.1	47.6	96	95	44-153	1	20		
Vinyl acetate	ug/L	ND	200	200	254	255	127	127	32-142	0	20		
Vinyl chloride	ug/L	ND	50	50	47.1	46.4	94	93	41-147	1	20		
Xylene (Total)	ug/L	ND	100	100	101	102	101	102	44-138	1	20		
4-Bromofluorobenzene (S)	%						99	100	79-124				
Dibromofluoromethane (S)	%						98	99	82-128				
Toluene-d8 (S)	%						100	100	73-122				

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

QC Batch: 789396 Analysis Method: EPA 8270 by SIM 40E
 QC Batch Method: EPA 3511 Analysis Description: 8270 Water PAH 40 by SIM MSSV
 Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006, 50372470007

METHOD BLANK: 3611818 Matrix: Water

Associated Lab Samples: 50372470001, 50372470002, 50372470003, 50372470004, 50372470005, 50372470006, 50372470007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	ND	0.98	05/13/24 17:07	
2-Methylnaphthalene	ug/L	ND	0.98	05/13/24 17:07	
Acenaphthene	ug/L	ND	0.98	05/13/24 17:07	
Acenaphthylene	ug/L	ND	0.98	05/13/24 17:07	
Anthracene	ug/L	ND	0.098	05/13/24 17:07	
Benzo(a)anthracene	ug/L	ND	0.098	05/13/24 17:07	
Benzo(a)pyrene	ug/L	ND	0.098	05/13/24 17:07	
Benzo(b)fluoranthene	ug/L	ND	0.098	05/13/24 17:07	
Benzo(g,h,i)perylene	ug/L	ND	0.098	05/13/24 17:07	
Benzo(k)fluoranthene	ug/L	ND	0.098	05/13/24 17:07	
Chrysene	ug/L	ND	0.49	05/13/24 17:07	
Dibenz(a,h)anthracene	ug/L	ND	0.098	05/13/24 17:07	
Fluoranthene	ug/L	ND	0.98	05/13/24 17:07	
Fluorene	ug/L	ND	0.98	05/13/24 17:07	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.098	05/13/24 17:07	
Naphthalene	ug/L	ND	0.98	05/13/24 17:07	
Phenanthrene	ug/L	ND	0.98	05/13/24 17:07	
Pyrene	ug/L	ND	0.98	05/13/24 17:07	
2-Fluorobiphenyl (S)	%	96	43-129	05/13/24 17:07	
p-Terphenyl-d14 (S)	%	123	64-162	05/13/24 17:07	

LABORATORY CONTROL SAMPLE: 3611819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	24.9	22.0	88	55-123	
2-Methylnaphthalene	ug/L	24.9	18.0	72	49-116	
Acenaphthene	ug/L	24.9	22.8	92	65-121	
Acenaphthylene	ug/L	24.9	26.1	105	57-131	
Anthracene	ug/L	24.9	26.1	105	45-133	
Benzo(a)anthracene	ug/L	24.9	24.7	99	74-147	
Benzo(a)pyrene	ug/L	24.9	28.3	114	79-132	
Benzo(b)fluoranthene	ug/L	24.9	28.7	116	80-157	
Benzo(g,h,i)perylene	ug/L	24.9	28.8	116	70-131	
Benzo(k)fluoranthene	ug/L	24.9	30.4	122	71-158	
Chrysene	ug/L	24.9	27.9	112	65-135	
Dibenz(a,h)anthracene	ug/L	24.9	31.3	126	75-141	
Fluoranthene	ug/L	24.9	31.6	127	85-139	
Fluorene	ug/L	24.9	26.1	105	74-129	
Indeno(1,2,3-cd)pyrene	ug/L	24.9	27.3	110	65-133	

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

LABORATORY CONTROL SAMPLE: 3611819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	24.9	21.4	86	60-114	
Phenanthrene	ug/L	24.9	27.7	111	82-128	
Pyrene	ug/L	24.9	24.3	98	70-145	
2-Fluorobiphenyl (S)	%			92	43-129	
p-Terphenyl-d14 (S)	%			108	64-162	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3611820 3611821

Parameter	Units	MS 50372470001		MSD		MS 3611820		MSD 3611821		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
1-Methylnaphthalene	ug/L	ND	24.6	24.9	21.6	21.3	88	85	35-144	2	20		
2-Methylnaphthalene	ug/L	ND	24.6	24.9	17.7	17.7	72	71	38-130	0	20		
Acenaphthene	ug/L	ND	24.6	24.9	22.9	23.0	93	92	52-131	0	20		
Acenaphthylene	ug/L	ND	24.6	24.9	25.9	25.5	105	102	57-120	2	20		
Anthracene	ug/L	ND	24.6	24.9	26.4	26.5	107	106	43-123	0	20		
Benzo(a)anthracene	ug/L	ND	24.6	24.9	24.3	23.6	99	95	79-132	3	20		
Benzo(a)pyrene	ug/L	ND	24.6	24.9	27.9	26.1	113	105	75-125	7	20		
Benzo(b)fluoranthene	ug/L	ND	24.6	24.9	27.2	27.0	110	108	79-149	1	20		
Benzo(g,h,i)perylene	ug/L	ND	24.6	24.9	29.1	26.5	118	106	48-156	9	20		
Benzo(k)fluoranthene	ug/L	ND	24.6	24.9	28.0	27.6	114	111	81-150	2	20		
Chrysene	ug/L	ND	24.6	24.9	27.8	26.8	113	107	78-130	3	20		
Dibenz(a,h)anthracene	ug/L	ND	24.6	24.9	28.5	26.0	116	104	62-149	9	20		
Fluoranthene	ug/L	ND	24.6	24.9	31.6	28.0	128	112	74-141	12	20		
Fluorene	ug/L	ND	24.6	24.9	26.2	25.2	106	101	56-145	4	20		
Indeno(1,2,3-cd)pyrene	ug/L	ND	24.6	24.9	28.4	26.0	115	104	51-146	9	20		
Naphthalene	ug/L	ND	24.6	24.9	21.2	21.0	86	84	31-147	1	20		
Phenanthrene	ug/L	ND	24.6	24.9	27.8	27.3	113	109	77-130	2	20		
Pyrene	ug/L	ND	24.6	24.9	25.2	26.6	102	107	75-150	5	20		
2-Fluorobiphenyl (S)	%						97	92	43-129				
p-Terphenyl-d14 (S)	%						117	112	64-162				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3611822 3611823

Parameter	Units	MS 50372487001		MSD		MS 3611822		MSD 3611823		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
1-Methylnaphthalene	ug/L	ND	25	24.8	22.7	22.1	91	89	35-144	3	20		
2-Methylnaphthalene	ug/L	ND	25	24.8	18.7	18.4	75	74	38-130	2	20		
Acenaphthene	ug/L	ND	25	24.8	23.8	23.4	95	94	52-131	2	20		
Acenaphthylene	ug/L	ND	25	24.8	26.5	25.9	106	105	57-120	2	20		
Anthracene	ug/L	ND	25	24.8	26.3	26.6	105	107	43-123	1	20		
Benzo(a)anthracene	ug/L	ND	25	24.8	24.4	23.2	97	94	79-132	5	20		
Benzo(a)pyrene	ug/L	ND	25	24.8	27.6	27.1	111	109	75-125	2	20		
Benzo(b)fluoranthene	ug/L	ND	25	24.8	27.9	27.0	111	109	79-149	3	20		
Benzo(g,h,i)perylene	ug/L	ND	25	24.8	28.2	26.2	113	106	48-156	7	20		

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QUALITY CONTROL DATA

Project: Norfolk & Western Railroad IFA
 Pace Project No.: 50372470

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3611822												3611823	
Parameter	Units	50372487001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Benzo(k)fluoranthene	ug/L	ND	25	24.8	30.6	30.0	122	121	81-150	2	20		
Chrysene	ug/L	ND	25	24.8	27.3	27.5	109	111	78-130	1	20		
Dibenz(a,h)anthracene	ug/L	ND	25	24.8	31.0	29.2	124	118	62-149	6	20		
Fluoranthene	ug/L	ND	25	24.8	28.1	28.9	112	117	74-141	3	20		
Fluorene	ug/L	ND	25	24.8	26.3	26.7	105	108	56-145	2	20		
Indeno(1,2,3-cd)pyrene	ug/L	ND	25	24.8	26.0	25.0	104	101	51-146	4	20		
Naphthalene	ug/L	ND	25	24.8	21.9	21.7	88	88	31-147	1	20		
Phenanthrene	ug/L	ND	25	24.8	27.8	28.2	111	114	77-130	1	20		
Pyrene	ug/L	ND	25	24.8	27.8	24.0	111	97	75-150	15	20		
2-Fluorobiphenyl (S)	%						85	89	43-129				
p-Terphenyl-d14 (S)	%						116	104	64-162				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3611824												3611825	
Parameter	Units	50372560002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
1-Methylnaphthalene	ug/L	ND	24.8	24.6	20.9	20.3	84	83	35-144	3	20		
2-Methylnaphthalene	ug/L	ND	24.8	24.6	17.2	16.7	69	68	38-130	3	20		
Acenaphthene	ug/L	ND	24.8	24.6	22.8	21.5	92	88	52-131	6	20		
Acenaphthylene	ug/L	ND	24.8	24.6	25.6	24.5	103	100	57-120	4	20		
Anthracene	ug/L	ND	24.8	24.6	26.7	25.5	108	104	43-123	4	20		
Benzo(a)anthracene	ug/L	ND	24.8	24.6	23.9	22.3	96	91	79-132	7	20		
Benzo(a)pyrene	ug/L	ND	24.8	24.6	28.3	26.6	114	108	75-125	6	20		
Benzo(b)fluoranthene	ug/L	ND	24.8	24.6	30.5	28.5	123	116	79-149	7	20		
Benzo(g,h,i)perylene	ug/L	ND	24.8	24.6	30.9	30.1	125	123	48-156	2	20		
Benzo(k)fluoranthene	ug/L	ND	24.8	24.6	32.4	31.6	131	128	81-150	3	20		
Chrysene	ug/L	ND	24.8	24.6	27.9	26.4	113	108	78-130	5	20		
Dibenz(a,h)anthracene	ug/L	ND	24.8	24.6	33.3	32.8	135	133	62-149	2	20		
Fluoranthene	ug/L	ND	24.8	24.6	29.8	28.0	120	114	74-141	6	20		
Fluorene	ug/L	ND	24.8	24.6	26.2	24.8	106	101	56-145	5	20		
Indeno(1,2,3-cd)pyrene	ug/L	ND	24.8	24.6	28.8	28.4	116	115	51-146	2	20		
Naphthalene	ug/L	ND	24.8	24.6	20.5	20.1	83	82	31-147	2	20		
Phenanthrene	ug/L	ND	24.8	24.6	28.3	27.2	114	111	77-130	4	20		
Pyrene	ug/L	ND	24.8	24.6	26.3	23.3	106	95	75-150	12	20		
2-Fluorobiphenyl (S)	%						96	95	43-129				
p-Terphenyl-d14 (S)	%						118	106	64-162				

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QUALIFIERS

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Norfolk & Western Railroad IFA

Pace Project No.: 50372470

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372470001	NW-GW-GP01	EPA 3010	788885	EPA 6010	789466
50372470002	NW-GW-GP02	EPA 3010	788885	EPA 6010	789466
50372470003	NW-GW-GP03	EPA 3010	788885	EPA 6010	789466
50372470004	NW-GW-GP04	EPA 3010	788885	EPA 6010	789466
50372470005	NW-GW-GP05	EPA 3010	788885	EPA 6010	789466
50372470006	NW-GW-FD01	EPA 3010	788885	EPA 6010	789466
50372470007	NW-GW-EB01	EPA 3010	788885	EPA 6010	789466
50372470001	NW-GW-GP01	EPA 3010	789961	EPA 6010	790591
50372470002	NW-GW-GP02	EPA 3010	789961	EPA 6010	790591
50372470003	NW-GW-GP03	EPA 3010	789961	EPA 6010	790591
50372470004	NW-GW-GP04	EPA 3010	789961	EPA 6010	790591
50372470005	NW-GW-GP05	EPA 3010	789961	EPA 6010	790591
50372470006	NW-GW-FD01	EPA 3010	789961	EPA 6010	790591
50372470001	NW-GW-GP01	EPA 7470	790071	EPA 7470	790266
50372470002	NW-GW-GP02	EPA 7470	790071	EPA 7470	790266
50372470003	NW-GW-GP03	EPA 7470	790071	EPA 7470	790266
50372470004	NW-GW-GP04	EPA 7470	790071	EPA 7470	790266
50372470005	NW-GW-GP05	EPA 7470	790071	EPA 7470	790266
50372470006	NW-GW-FD01	EPA 7470	790071	EPA 7470	790266
50372470007	NW-GW-EB01	EPA 7470	790071	EPA 7470	790266
50372470001	NW-GW-GP01	EPA 7470	790070	EPA 7470	790796
50372470002	NW-GW-GP02	EPA 7470	790070	EPA 7470	790796
50372470003	NW-GW-GP03	EPA 7470	790070	EPA 7470	790796
50372470004	NW-GW-GP04	EPA 7470	790070	EPA 7470	790796
50372470005	NW-GW-GP05	EPA 7470	790070	EPA 7470	790796
50372470006	NW-GW-FD01	EPA 7470	790070	EPA 7470	790796
50372470001	NW-GW-GP01	EPA 3511	789396	EPA 8270 by SIM 40E	789652
50372470002	NW-GW-GP02	EPA 3511	789396	EPA 8270 by SIM 40E	789652
50372470003	NW-GW-GP03	EPA 3511	789396	EPA 8270 by SIM 40E	789652
50372470004	NW-GW-GP04	EPA 3511	789396	EPA 8270 by SIM 40E	789652
50372470005	NW-GW-GP05	EPA 3511	789396	EPA 8270 by SIM 40E	789652
50372470006	NW-GW-FD01	EPA 3511	789396	EPA 8270 by SIM 40E	789652
50372470007	NW-GW-EB01	EPA 3511	789396	EPA 8270 by SIM 40E	789652
50372470001	NW-GW-GP01	EPA 8260	789008		
50372470002	NW-GW-GP02	EPA 8260	789008		
50372470003	NW-GW-GP03	EPA 8260	789008		
50372470004	NW-GW-GP04	EPA 8260	789008		
50372470005	NW-GW-GP05	EPA 8260	789008		
50372470006	NW-GW-FD01	EPA 8260	789008		
50372470007	NW-GW-EB01	EPA 8260	789008		
50372470008	NW-GW-TB01	EPA 8260	789008		

REPORT OF LABORATORY ANALYSIS

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SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: LQ 5/8/24 1155

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. 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?: 3098081

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:		X	Circle: <u>HNO3</u> (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A
Rush TAT Requested (4 days or less):		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 Container Count form for details	Present	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	X		Trip Blank Present?	X		
Extra labels on Terracore Vials? (soils only)		X	Trip Blank Custody Seals?:	X		

COMMENTS:



ANALYTICAL REPORT

June 27, 2024

Revised Report

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

IWM Consulting Group, LLC

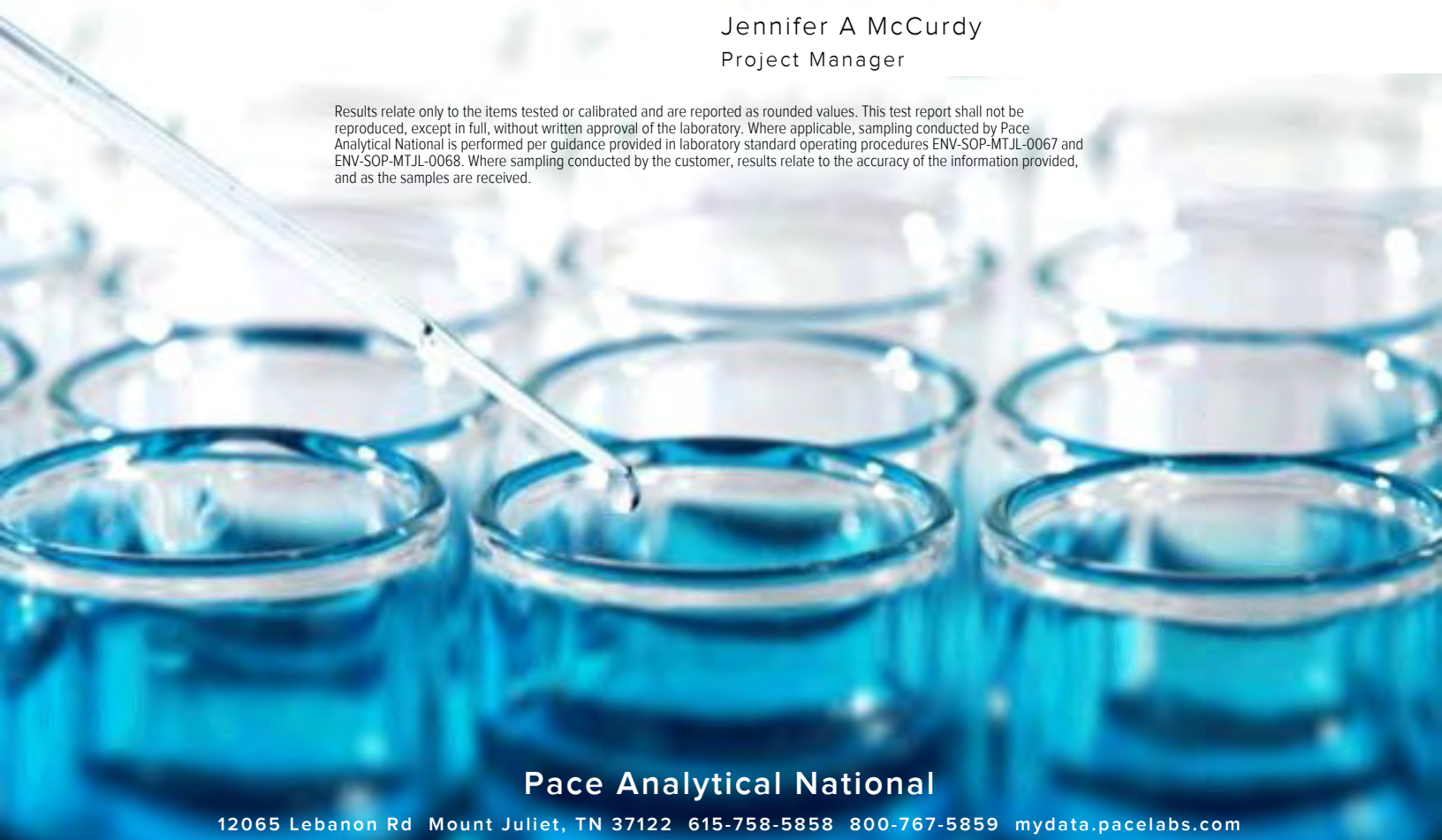
Sample Delivery Group: L1732333
 Samples Received: 05/03/2024
 Project Number:
 Description: Norfolk & Western Railroad Property

Report To: Mr. Chris Parks
 7428 Rockville Road
 Indianapolis, IN 46214

Entire Report Reviewed By:

Jennifer A McCurdy
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

Cp: Cover Page	1	¹Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	²Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³Ss
NW-SGE01 L1732333-01	5	
NW-SGE03 L1732333-03	7	⁴Cn
NW-SGE-FD1 L1732333-04	9	⁵Sr
Qc: Quality Control Summary	11	
Volatile Organic Compounds (MS) by Method TO-15	11	⁶Qc
Gl: Glossary of Terms	16	⁷Gl
Al: Accreditations & Locations	17	
Sc: Sample Chain of Custody	18	⁸Al
		⁹Sc

SAMPLE SUMMARY

NW-SGE01 L1732333-01 Air

Collected by: Chris S
 Collected date/time: 05/02/24 15:36
 Received date/time: 05/03/24 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2279909	1	05/03/24 16:22	05/03/24 16:22	GH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2281634	10	05/07/24 18:35	05/07/24 18:35	GH	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

NW-SGE03 L1732333-03 Air

Collected by: Chris S
 Collected date/time: 05/02/24 14:18
 Received date/time: 05/03/24 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2279909	1	05/03/24 16:50	05/03/24 16:50	SDS	Mt. Juliet, TN

⁴ Cn

⁵ Sr

NW-SGE-FD1 L1732333-04 Air

Collected by: Chris S
 Collected date/time: 05/02/24 14:18
 Received date/time: 05/03/24 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2279909	1	05/03/24 17:19	05/03/24 17:19	GH	Mt. Juliet, TN

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Jennifer A McCurdy
Project Manager

Report Revision History

Level II Report - Version 1: 05/15/24 09:02

Level II Report - Version 2: 06/25/24 17:22

Project Narrative

L1732333-02, NW-SGe02: Received at Lab at -27"Hg; Unable to analyze.

Report Revised for the following: Elevated levels of carbon dioxide caused a false positive which was removed upon tertiary review for Sample ID: NW-SGE03
06/25/24 JM

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	10.0	23.8		1	WG2279909
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2279909
Benzene	71-43-2	78.10	0.200	0.639	2.68	8.56		1	WG2279909
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2279909
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2279909
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2279909
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2279909
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2279909
Carbon disulfide	75-15-0	76.10	0.200	0.622	74.5	232		1	WG2279909
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2279909
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2279909
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2279909
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2279909
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG2279909
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2279909
Cyclohexane	110-82-7	84.20	0.200	0.689	5.87	20.2		1	WG2279909
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2279909
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2279909
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2279909
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2279909
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2279909
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2279909
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2279909
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2279909
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2279909
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2279909
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2279909
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2279909
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2279909
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2279909
Ethanol	64-17-5	46.10	2.50	4.71	7.04	13.3		1	WG2279909
Ethylbenzene	100-41-4	106	0.200	0.867	0.404	1.75		1	WG2279909
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.433	2.13		1	WG2279909
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.303	1.70		1	WG2279909
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.629	3.11		1	WG2279909
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2279909
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2279909
Heptane	142-82-5	100	0.200	0.818	6.83	27.9		1	WG2279909
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2279909
n-Hexane	110-54-3	86.20	0.630	2.22	19.3	68.0		1	WG2279909
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2279909
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG2279909
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2279909
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	1.31	3.86		1	WG2279909
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2279909
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2279909
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2279909
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2279909
2-Propanol	67-63-0	60.10	1.25	3.07	1.37	3.37		1	WG2279909
Propene	115-07-1	42.10	12.5	21.5	175	301		10	WG2281634
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG2279909
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2279909
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG2279909
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2279909
Toluene	108-88-3	92.10	0.500	1.88	2.72	10.2		1	WG2279909
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG2279909

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG2279909
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2279909
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG2279909
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.363	1.78		1	WG2279909
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG2279909
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG2279909
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG2279909
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2279909
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	WG2279909
Xylenes, Total	1330-20-7	106.16	0.600	2.61	1.20	5.21		1	WG2279909
m&p-Xylene	179601-23-1	106	0.400	1.73	0.851	3.69		1	WG2279909
o-Xylene	95-47-6	106	0.200	0.867	0.351	1.52		1	WG2279909
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.6				WG2279909
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		88.3				WG2281634

1
Cp

2
Tc

3
Ss

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Cn

5
Sr

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Qc

7
Gl

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Al

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Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	WG2279909
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2279909
Benzene	71-43-2	78.10	0.200	0.639	2.55	8.15		1	WG2279909
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2279909
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2279909
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2279909
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2279909
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2279909
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	WG2279909
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2279909
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2279909
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2279909
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2279909
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG2279909
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2279909
Cyclohexane	110-82-7	84.20	0.200	0.689	7.07	24.3		1	WG2279909
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2279909
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2279909
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2279909
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2279909
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2279909
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2279909
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2279909
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2279909
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2279909
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2279909
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2279909
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2279909
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2279909
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2279909
Ethanol	64-17-5	46.10	2.50	4.71	3.97	7.49		1	WG2279909
Ethylbenzene	100-41-4	106	0.200	0.867	0.407	1.76		1	WG2279909
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.453	2.22		1	WG2279909
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.209	1.17		1	WG2279909
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	ND	ND		1	WG2279909
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2279909
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2279909
Heptane	142-82-5	100	0.200	0.818	7.93	32.4		1	WG2279909
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2279909
n-Hexane	110-54-3	86.20	0.630	2.22	18.2	64.2		1	WG2279909
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2279909
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG2279909
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2279909
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG2279909
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2279909
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2279909
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2279909
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2279909
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG2279909
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG2279909
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2279909
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2279909
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.373	2.53		1	WG2279909
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2279909
Toluene	108-88-3	92.10	0.500	1.88	3.86	14.5		1	WG2279909
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG2279909

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG2279909
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2279909
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG2279909
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.358	1.76		1	WG2279909
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG2279909
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG2279909
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG2279909
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2279909
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	WG2279909
Xylenes, Total	1330-20-7	106.16	0.600	2.61	0.964	4.19		1	WG2279909
m&p-Xylene	179601-23-1	106	0.400	1.73	0.689	2.99		1	WG2279909
o-Xylene	95-47-6	106	0.200	0.867	0.275	1.19		1	WG2279909
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.9				WG2279909

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	WG2279909
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2279909
Benzene	71-43-2	78.10	0.200	0.639	2.49	7.95		1	WG2279909
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2279909
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2279909
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2279909
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2279909
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2279909
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG2279909
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2279909
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2279909
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2279909
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2279909
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG2279909
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2279909
Cyclohexane	110-82-7	84.20	0.200	0.689	11.2	38.6		1	WG2279909
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2279909
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2279909
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2279909
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2279909
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2279909
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2279909
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2279909
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2279909
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2279909
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2279909
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2279909
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2279909
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2279909
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2279909
Ethanol	64-17-5	46.10	2.50	4.71	7.27	13.7		1	WG2279909
Ethylbenzene	100-41-4	106	0.200	0.867	0.398	1.73		1	WG2279909
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG2279909
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.415	2.33		1	WG2279909
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	ND	ND		1	WG2279909
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2279909
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2279909
Heptane	142-82-5	100	0.200	0.818	7.99	32.7		1	WG2279909
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2279909
n-Hexane	110-54-3	86.20	0.630	2.22	28.9	102		1	WG2279909
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2279909
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG2279909
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2279909
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG2279909
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2279909
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2279909
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2279909
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2279909
2-Propanol	67-63-0	60.10	1.25	3.07	1.27	3.12		1	WG2279909
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG2279909
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG2279909
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2279909
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.376	2.55		1	WG2279909
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2279909
Toluene	108-88-3	92.10	0.500	1.88	3.89	14.7		1	WG2279909
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG2279909

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

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Gl

8
Al

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Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG2279909
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2279909
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG2279909
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.339	1.66		1	WG2279909
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG2279909
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG2279909
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG2279909
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2279909
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	WG2279909
Xylenes, Total	1330-20-7	106.16	0.600	2.61	1.01	4.39		1	WG2279909
m&p-Xylene	179601-23-1	106	0.400	1.73	0.721	3.13		1	WG2279909
o-Xylene	95-47-6	106	0.200	0.867	0.293	1.27		1	WG2279909
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		95.4				WG2279909

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4066373-1 05/03/24 09:33

Analyte	MB Result ug/m3	MB Qualifier	MB MDL ug/m3	MB RDL ug/m3
Acetone	U		1.39	2.97
Allyl chloride	U		0.357	0.626
Benzene	U		0.228	0.639
Benzyl Chloride	U		0.311	1.04
Bromodichloromethane	U		0.471	1.34
Bromoform	U		0.757	6.21
Bromomethane	U		0.381	0.776
1,3-Butadiene	U		0.230	4.43
Carbon disulfide	U		0.317	0.622
Carbon tetrachloride	U		0.461	1.26
Chlorobenzene	U		0.385	0.924
Chloroethane	U		0.263	0.528
Chloroform	U		0.349	0.973
Chloromethane	U		0.213	0.413
2-Chlorotoluene	U		0.427	1.03
Cyclohexane	U		0.259	0.689
Dibromochloromethane	U		0.618	1.70
1,2-Dibromoethane	U		0.554	1.54
1,2-Dichlorobenzene	U		0.770	1.20
1,3-Dichlorobenzene	U		1.09	1.20
1,4-Dichlorobenzene	U		0.335	1.20
1,2-Dichloroethane	U		0.283	0.810
1,1-Dichloroethane	U		0.290	0.802
1,1-Dichloroethene	U		0.302	0.793
cis-1,2-Dichloroethene	U		0.311	0.793
trans-1,2-Dichloroethene	U		0.267	0.793
1,2-Dichloropropane	U		0.351	0.924
cis-1,3-Dichloropropene	U		0.313	0.908
trans-1,3-Dichloropropene	U		0.331	0.908
1,4-Dioxane	U		0.300	2.27
Ethanol	U		0.500	4.71
Ethylbenzene	U		0.362	0.867
4-Ethyltoluene	U		0.384	0.982
Trichlorofluoromethane	U		0.460	1.12
Dichlorodifluoromethane	U		0.678	0.989
1,1,2-Trichlorotrifluoroethane	U		0.608	1.53
1,2-Dichlorotetrafluoroethane	U		0.622	1.40
Heptane	U		0.425	0.818
Hexachloro-1,3-butadiene	U		1.12	6.73
n-Hexane	U		0.726	2.22

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4066373-1 05/03/24 09:33

Analyte	MB Result ug/m3	MB Qualifier	MB MDL ug/m3	MB RDL ug/m3
Isopropylbenzene	U		0.382	0.983
Methylene Chloride	U		0.340	0.694
Methyl Butyl Ketone	U		0.544	5.11
2-Butanone (MEK)	U		0.240	3.69
4-Methyl-2-pentanone (MIBK)	U		0.313	5.12
Methyl methacrylate	U		0.359	0.819
MTBE	U		0.233	0.721
Naphthalene	U		1.83	3.30
2-Propanol	U		0.649	3.07
Propene	U		0.160	2.15
Styrene	U		0.335	0.851
1,1,2,2-Tetrachloroethane	U		0.511	1.37
Tetrachloroethylene	U		0.553	1.36
Tetrahydrofuran	U		0.216	0.590
Toluene	U		0.328	1.88
1,2,4-Trichlorobenzene	U		1.10	4.66
1,1,1-Trichloroethane	U		0.400	1.09
1,1,2-Trichloroethane	U		0.422	1.09
Trichloroethylene	U		0.364	1.07
1,2,4-Trimethylbenzene	U		0.375	0.982
1,3,5-Trimethylbenzene	U		0.382	0.982
2,2,4-Trimethylpentane	U		0.621	0.934
Vinyl chloride	U		0.243	0.511
Vinyl Bromide	U		0.373	0.875
Vinyl acetate	U		0.408	2.22
Xylenes, Total	U		0.586	2.61
m&p-Xylene	U		0.585	1.73
o-Xylene	U		0.359	0.867
(S) 1,4-Bromofluorobenzene	95.0			60.0-140

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4066373-2 05/03/24 11:18 • (LCSD) R4066373-3 05/03/24 11:47

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	8.91	9.39	9.36	105	105	70.0-130			0.253	25
Allyl chloride	11.7	12.3	11.7	105	99.5	70.0-130			5.48	25
Benzene	12.0	12.9	12.6	107	105	70.0-130			2.51	25
Benzyl Chloride	19.5	24.7	23.6	127	121	70.0-152			4.30	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4066373-2 05/03/24 11:18 • (LCSD) R4066373-3 05/03/24 11:47

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromodichloromethane	25.2	28.2	26.8	112	106	70.0-130			5.13	25
Bromoform	38.8	44.7	42.9	115	111	70.0-130			4.01	25
Bromomethane	14.6	15.0	14.1	103	97.1	70.0-130			5.87	25
1,3-Butadiene	8.30	8.47	8.36	102	101	70.0-130			1.31	25
Carbon disulfide	11.7	12.5	12.1	107	103	70.0-130			3.79	25
Carbon tetrachloride	23.6	26.5	25.3	112	107	70.0-130			4.87	25
Chlorobenzene	17.3	18.6	17.7	107	102	70.0-130			4.58	25
Chloroethane	9.89	10.1	9.52	102	96.3	70.0-130			5.91	25
Chloroform	18.3	19.8	18.7	109	102	70.0-130			5.82	25
Chloromethane	7.75	7.79	7.54	101	97.3	70.0-130			3.23	25
2-Chlorotoluene	19.3	21.1	20.4	109	105	70.0-130			3.73	25
Cyclohexane	12.9	13.8	13.5	107	105	70.0-130			2.26	25
Dibromochloromethane	31.9	36.2	34.2	114	107	70.0-130			5.80	25
1,2-Dibromoethane	28.8	32.0	30.3	111	105	70.0-130			5.43	25
1,2-Dichlorobenzene	22.5	25.7	24.8	114	110	70.0-130			3.57	25
1,3-Dichlorobenzene	22.5	26.3	25.3	117	112	70.0-130			3.97	25
1,4-Dichlorobenzene	22.5	26.2	25.3	116	112	70.0-130			3.50	25
1,2-Dichloroethane	15.2	16.4	15.6	108	103	70.0-130			4.82	25
1,1-Dichloroethane	15.0	16.2	15.7	107	105	70.0-130			2.77	25
1,1-Dichloroethene	14.9	15.2	14.7	102	99.2	70.0-130			2.91	25
cis-1,2-Dichloroethene	14.9	16.0	15.3	107	103	70.0-130			4.31	25
trans-1,2-Dichloroethene	14.9	16.4	14.6	110	98.1	70.0-130			11.5	25
1,2-Dichloropropane	17.3	18.9	18.2	109	105	70.0-130			3.98	25
cis-1,3-Dichloropropene	17.0	20.8	19.8	122	117	70.0-130			4.91	25
trans-1,3-Dichloropropene	17.0	19.7	18.7	116	110	70.0-130			5.20	25
1,4-Dioxane	13.5	16.5	17.4	122	129	70.0-140			5.74	25
Ethanol	7.07	7.03	6.94	99.5	98.1	55.0-148			1.35	25
Ethylbenzene	16.3	17.8	17.3	109	106	70.0-130			2.72	25
4-Ethyltoluene	18.4	21.0	20.4	114	111	70.0-130			2.61	25
Trichlorofluoromethane	21.1	21.8	21.0	103	99.7	70.0-130			3.67	25
Dichlorodifluoromethane	18.5	18.7	18.2	101	98.1	64.0-139			2.68	25
1,1,2-Trichlorotrifluoroethane	28.7	29.8	28.6	104	99.5	70.0-130			4.20	25
1,2-Dichlorotetrafluoroethane	26.2	26.8	25.6	102	97.6	70.0-130			4.54	25
Heptane	15.3	16.6	16.2	109	106	70.0-130			2.49	25
Hexachloro-1,3-butadiene	40.0	43.8	42.2	109	105	70.0-151			3.73	25
n-Hexane	13.2	14.3	13.9	109	105	70.0-130			3.50	25
Isopropylbenzene	18.4	20.2	19.6	109	106	70.0-130			2.72	25
Methylene Chloride	13.0	13.4	13.1	103	101	70.0-130			2.10	25
Methyl Butyl Ketone	15.3	21.3	20.5	139	134	70.0-149			3.52	25
2-Butanone (MEK)	11.1	12.5	11.8	113	107	70.0-130			5.83	25

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4066373-2 05/03/24 11:18 • (LCSD) R4066373-3 05/03/24 11:47

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	15.4	17.5	16.7	114	109	70.0-139			4.54	25
Methyl methacrylate	15.4	16.5	16.1	107	105	70.0-130			2.77	25
MTBE	13.5	14.4	13.9	107	103	70.0-130			3.30	25
Naphthalene	19.6	25.5	24.1	130	123	70.0-159			5.91	25
2-Propanol	9.22	9.78	9.54	106	103	70.0-139			2.54	25
Propene	6.46	6.97	6.66	108	103	64.0-144			4.55	25
Styrene	16.0	18.0	17.4	113	109	70.0-130			3.12	25
1,1,2,2-Tetrachloroethane	25.8	28.5	27.7	111	107	70.0-130			2.93	25
Tetrachloroethylene	25.5	27.4	26.4	107	104	70.0-130			3.54	25
Tetrahydrofuran	11.1	12.1	11.7	110	106	70.0-137			3.46	25
Toluene	14.1	15.3	14.6	108	103	70.0-130			4.53	25
1,2,4-Trichlorobenzene	27.8	32.6	29.5	118	106	70.0-160			10.3	25
1,1,1-Trichloroethane	20.4	22.2	21.2	109	104	70.0-130			4.51	25
1,1,2-Trichloroethane	20.4	21.6	20.9	106	103	70.0-130			3.07	25
Trichloroethylene	20.1	21.8	20.5	109	102	70.0-130			6.08	25
1,2,4-Trimethylbenzene	18.4	21.1	20.4	114	111	70.0-130			3.32	25
1,3,5-Trimethylbenzene	18.4	21.1	20.2	115	110	70.0-130			4.52	25
2,2,4-Trimethylpentane	17.5	19.2	18.6	110	106	70.0-130			3.46	25
Vinyl chloride	9.59	9.76	9.43	102	98.4	70.0-130			3.46	25
Vinyl Bromide	16.4	16.8	16.2	103	98.7	70.0-130			3.97	25
Vinyl acetate	13.2	14.1	11.6	107	88.0	70.0-130			19.4	25
Xylenes, Total	49.1	54.7	53.0	112	108	70.0-130			3.23	25
m&p-Xylene	32.5	36.3	34.7	112	107	70.0-130			4.51	25
o-Xylene	16.3	18.3	17.9	113	110	70.0-130			1.91	25
(S) 1,4-Bromofluorobenzene				101	99.3	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4066744-3 05/07/24 09:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/m3		ug/m3	ug/m3
Propene	U		0.160	2.15
(S) 1,4-Bromofluorobenzene	90.3			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4066744-1 05/07/24 08:36 • (LCSD) R4066744-2 05/07/24 09:08

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/m3	ug/m3	ug/m3	%	%	%			%	%
Propene	6.46	6.82	6.82	106	106	64.0-144			0.000	25
(S) 1,4-Bromofluorobenzene				99.6	102	60.0-140				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

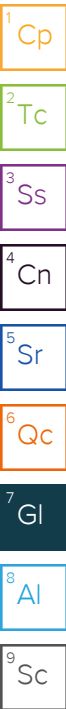
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Pace Air 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

Company Name: **IWMCONIN**
 Street Address:
 City, State Zip:
 Customer Project #: **Norfolk+Western**
 Project Name: **Norfolk+Western**
 Site Collection Info/Facility ID (as applicable):
 Time Zone Collected: [] AK [] PT [] MT [] CT ET
 Data Deliverables:
 Level II [] Level III [] Level IV
 EQUIS
 Other
 Regulatory Program (CAA, RCRA, etc.) as applicable:
 Rush (Pre-approval required): 2 Day 3 day 5 day Other
 Date Results Requested:
 Permit # as applicable:
 Units for Reporting: ug/m³ PPBV mg/m³ PPMV

Sample Receipt Checklist
 OGC Seal Present/Intact: Y N Airt
 OGC Signed/Accurate: Y N Size: 1L 2.4L
 Bottles arrive intact: Y N Tege Color: G W F B
 Correct bottles used: Y N Tubing Shunt
 Unlabeled: _____ T/F#:

Field Information

Analyses Requested: **OK 4/19/24**

Proj. Manager:
 AcctNum / Client ID:
 Table #:
 Profile / Template: **P1067385 / T250445**
 Prelog / Bottle Ord. ID:
 Lab Use Only: **TO-15 SUMMA**

* Matrix Codes (Insert in Matrix box below): Ambient (A), Indoor (I), Soil Vapor (SV), Other (O)

Customer Sample ID	Matrix *	Summa Canister ID	Flow Controller ID	Begin Collection		End Collection		Canister Pressure / Vacuum		Duration (minutes)	Flow Rate (m ³ /min or L/min)	Total Volume Sampled (m ³ or L)	Sample Comment
				Date	Time	Date	Time	Start Pressure / Vacuum (in Hg)	End Pressure / Vacuum (in Hg)				
NW-5Ge01	SV	022359	023021	5/21/24	1508	5/21/24	1536	-30	-3.5	28			L1732333-01
NW-5Ge02		022102	006727		1442		1644	-28	-26.5	122			02
NW-5Ge03		010799	013538		1468		1418	-30	-3	10			03
NW-5Ge-FDI		008417	021479		1408		1418	-30	-6	10			07

Customer Remarks / Special Conditions / Possible Hazards:

Collected By: **Chris Schoo**
 Printed Name: **Chris Schoo**
 Signature: *Chris Schoo*
 Additional Instructions from Pace*:
 # Coolers: _____ Thermometer ID: _____ Correction Factor (°C): _____ Obs. Temp. (°C): _____ Corrected Temp. (°C): _____

Relinquished by/Company: (Signature) **Chris Schoo / IWM** Date/Time: **5/21/24 1845**
 Relinquished by/Company: (Signature) _____ Date/Time: _____
 Relinquished by/Company: (Signature) _____ Date/Time: _____
 Relinquished by/Company: (Signature) _____ Date/Time: _____

Received by/Company: (Signature) **FedEx** Date/Time: _____
 Received by/Company: (Signature) _____ Date/Time: _____
 Received by/Company: (Signature) _____ Date/Time: _____
 Received by/Company: (Signature) _____ Date/Time: _____

Tracking Number:
 Delivered by: In-Person Courier
 FedEX UPS Other
 Date/Time: **5/21/24 0915** **4**
 Page: _____ of: _____

APPENDIX D

FIELD SAMPLING FORMS – LOW-FLOW GROUNDWATER & SOIL VAPOR



Groundwater Sampling Field Information Form

Site Name: Norfolk Western RAIL Personnel: DEW
Sample ID: NW GW-GP02 Sample Date: 5/6/24

Well Data

Depth to Water (feet below TOC): 19.84 Initial DTW: 19.84
Screen Interval (feet below TOC): 15.89 - 25.89 Volume Purged (gallons): 1.19
Total Well Depth (feet below TOC): 25.89 Purge Start Time: 11:11
Well Volume (gallons): 0.98 Purge End Time: 11:52

Sampling Data

Analysis Type: VOCs, PAHs, RCRA Metals Sample Tube Type: Teflon-lined polyethylene
Sample/Purge Device: QED Micropurge Pump Filtered? Yes No Type: _____
Pump Intake Elevation (feet below TOC): 22.06 Intake of pump should be the midpoint of the saturated screen/water column.

Field Parameters

Time	DTW (ft)	Purge Rate (mL/min)	pH ±0.1	COND (mS/cm) ±3%	D.O. (mg/L) ±10% or ±0.2 mg/L	TEMP (°C) ±10%	ORP (mV) ±10	Notes
11:25	19.90	110	6.74	1.153	2.33	12.03	-67.4	
11:28	↓	↓	6.72	1.144	2.20	12.20	-66.6	
11:31	6	↓	6.71	1.135	2.08	12.41	-65.9	
11:34	↓	↓	6.72	1.132	2.02	12.36	-65.5	
11:37	↓	↓	6.72	1.124	1.97	12.28	-65.1	

Sample Time: 11:52
Sample Appearance: TAN/turbid

Notes: Field Dup From this Sample Point
Weather Conditions: overcast 64° CALM



Groundwater Sampling Field Information Form

Site Name: Norfolk Western RAIL Personnel: DEW
 Sample ID: WW-GW-6P-05 Sample Date: 5/6/201

Well Data

Depth to Water (feet below TOC): 17.95 Initial DTW: 17.95
 Screen Interval (feet below TOC): 14.66-24.66 Volume Purged (gallons): 1.16
 Total Well Depth (feet below TOC): 24.66 Purge Start Time: 14:30
 Well Volume (gallons): 1.09 Purge End Time: 15:10

Sampling Data

Analysis Type: VOCs, PAHs, RCRA B METALS Sample Tube Type: Teflon-lined polyethylene
 Sample/Purge Device: QED Micropurge Pump Filtered? Yes No Type: _____
 Pump Intake Elevation (feet below TOC): 21.30 Intake of pump should be the midpoint of the saturated screen/water column.

Field Parameters

Time	DTW (ft)	Purge Rate (ml/min)	pH ± 0.1	COND (mS/cm) ± 3%	D.O. (mg/L) ± 10% or ± 0.2 mg/L	TEMP (°C) ± 10%	ORP (mV) ± 10	Notes
14:44	18.10	110	6.80	1.193	3.96	12.52	-32.3	
14:47	↓	↓	6.77	1.193	3.90	12.46	-30.1	
14:50	↓	↓	6.76	1.195	3.83	12.28	-27.5	
14:53	↓	↓	6.74	1.194	3.75	12.17	-25.3	
14:56	↓	↓	6.72	1.193	3.71	12.29	-23.8	

Sample Time: 15:10
 Sample Appearance: TAN - Turbid

Notes: _____
 Weather Conditions: PTL Cloudy 75° CALM



YSI 556 Calibration Form

Date: 5/6/24
 Personnel: DEW
 Project: Triangle Prop. Norfolk & Western

Parameter	Calibration Standard Value	Instrument Reading Before Calibration	Instrument Reading After Calibration	Calibration Accepted	Instrument Reading Post-Calibration
ORP	<u>240mV</u>	<u>235.9</u>	<u>240</u>	Y / N	
pH	7.00 s.u. (+/-50 pH mV)	<u>6.97</u>	<u>7.0</u>	Y / N	
pH	4.00 s.u. (+115-215 of 7.0 pH mV)	<u>4.04</u>	<u>4.0</u>	<input checked="" type="checkbox"/> Y / N	
Sp Conductance	4.49 mS/cm	<u>4.669</u>	<u>4.490</u>	<input checked="" type="checkbox"/> Y / N	
Sp Conductance	1.413 mS/cm			Y / N	
DO	8.92 mg/L (Multi-solution) or 95-105%	<u>100.2</u>	<u>97.5</u>	<input checked="" type="checkbox"/> Y / N	
pH	10.00 s.u. (-115-215 of 7.0 pH mV)	<u>9.88</u>	<u>10.0</u>	<input checked="" type="checkbox"/> Y / N	

* Out of ranges need to be noted.

Notes: _____

ORP Measurements Reference Table

Temperature °F	Temperature °C	Potential in mV
32	0	237
41	5	232
50	10	230
59	15	237
68	20	223
77	25	220
86	30	226
95	35	213
104	40	219
113	45	205
122	50	201
131	55	197
140	60	193
149	65	189
158	70	185

Soil Gas Sampling Data Sheet

VI Sampling Event Date: 5/2/24
 Project: Norfolk+Western RR Property

Weather Conditions: P12-80%
 Sampling Personnel: C. Schoo

Sample ID	Sampling Location	Sampling Time		Vacuum (in Hg)		Canister Details	
		Start	End	Initial	Final	Canister ID #	Flow Controller #
NW-5Ge03	see figure	1408	1418	-30	-3	010799	013538
Time							
Vacuum (in Hg)							

Sample Type: Soil-Gas Sewer Backfill Material Gas Timeframe: 24-Hr 8-Hr Grab Canister Type: 6L Summa 1L Summa Other
 Helium Test: Shroud: 8.7 %; Sample Train 0 ppm Bottom of Screen Depth (ft.): 4 Analytical Method: TO-15 TO-15 SIM Shortlist
 Notes: _____

Sample ID	Sampling Location	Sampling Time		Vacuum (in Hg)		Canister Details	
		Start	End	Initial	Final	Canister ID #	Flow Controller #
NW-5Ge-F01	duplicate of NW-5Ge03	1408	1418	-30	-6	008917	021479
Time							
Vacuum (in Hg)							

Sample Type: Soil-Gas Sewer Backfill Material Gas Timeframe: 24-Hr 8-Hr Grab Canister Type: 6L Summa 1L Summa Other
 Helium Test: Shroud: 8.7 %; Sample Train 0 ppm Bottom of Screen Depth (ft.): 4 Analytical Method: TO-15 TO-15 SIM Shortlist
 Notes: _____

Sample ID	Sampling Location	Sampling Time		Vacuum (in Hg)		Canister Details	
		Start	End	Initial	Final	Canister ID #	Flow Controller #
NW-5Ge02	see figure	1442	1644	-28	-26.5	022102	006721
Time			<u>1452</u>				
Vacuum (in Hg)			<u>-27.5</u>				

Sample Type: Soil-Gas Sewer Backfill Material Gas Timeframe: 24-Hr 8-Hr Grab Canister Type: 6L Summa 1L Summa Other
 Helium Test: Shroud: 6.1 %; Sample Train 0 ppm Bottom of Screen Depth (ft.): 5 Analytical Method: TO-15 TO-15 SIM Shortlist
 Notes: _____

Soil Gas Sampling Data Sheet

VI Sampling Event Date: 5/2/24
 Project: Norfolk+Western

Weather Conditions: PIC-80's
 Sampling Personnel: C. Schae

Sample ID	Sampling Location	Sampling Time		Vacuum (in Hg)		Canister Details	
		Start	End	Initial	Final	Canister ID #	Flow Controller #
NW-56e01	see figure	1508		-30		022359	
		1536		-3.5		023021	
Time							
Vacuum (in Hg)							

Sample Type: Soil-Gas Sewer Backfill Material Gas Timeframe: 24-Hr 8-Hr Grab Canister Type: 6L Summa 1L Summa Other
 Helium Test: Shroud: N/A %; Sample Train N/A ppm Bottom of Screen Depth (ft.): 5 Analytical Method: TO-15 TO-15 SIM Shortlist
 Notes: _____

Sample ID	Sampling Location	Sampling Time		Vacuum (in Hg)		Canister Details	
		Start	End	Initial	Final	Canister ID #	Flow Controller #
Time							
Vacuum (in Hg)							

Sample Type: Soil-Gas Sewer Backfill Material Gas Timeframe: 24-Hr 8-Hr Grab Canister Type: 6L Summa 1L Summa Other
 Helium Test: Shroud: _____ %; Sample Train _____ ppm Bottom of Screen Depth (ft.): _____ Analytical Method: TO-15 TO-15 SIM Shortlist
 Notes: _____

Sample ID	Sampling Location	Sampling Time		Vacuum (in Hg)		Canister Details	
		Start	End	Initial	Final	Canister ID #	Flow Controller #
Time							
Vacuum (in Hg)							

Sample Type: Soil-Gas Sewer Backfill Material Gas Timeframe: 24-Hr 8-Hr Grab Canister Type: 6L Summa 1L Summa Other
 Helium Test: Shroud: _____ %; Sample Train _____ ppm Bottom of Screen Depth (ft.): _____ Analytical Method: TO-15 TO-15 SIM Shortlist
 Notes: _____

APPENDIX E
FIELD AUDIT REPORT
AND DATA ASSESSMENT REPORTS

Attachment A

QAPP Field Audit Form

Location/Project Audit Was Performed For: Norfolk & Western RR, S. 5th St & 5th St NE, Lafayette,

IN

Groundwater Sampling Audit

Date & Time Audit Was Performed: May 6, 2024; 14:15 – 15:15

IWM/Contractor Personnel Present On-Site: IWM: Duane White, Brad Gentry

1, 2, 3

Audit of General Field Methodology		Yes	No	Notes
	Were IWM Consulting personnel on-site during sampling activities?	<input checked="" type="checkbox"/>		
	Do the sampling methods utilized follow those identified in the QAPP/SAP?	<input checked="" type="checkbox"/>		
	If sampling procedures were modified, were the changes properly documented?	<input checked="" type="checkbox"/>		
	Did equipment decontamination procedures follow those identified in the SAP?	<input checked="" type="checkbox"/>		
	Did sample handling procedures follow those identified in the QAPP/SAP?	<input checked="" type="checkbox"/>		
	Were appropriate containers, preservatives, and sample labeling utilized?	<input checked="" type="checkbox"/>		
	Were quality control samples utilized?	<input checked="" type="checkbox"/>		
	Were field QA/QC samples consistent with the SAP?	<input checked="" type="checkbox"/>		
2	Was proper field documentation utilized? (Field books, field forms, COC, etc.)	<input checked="" type="checkbox"/>		
As applicable, field instruments will be calibrated daily prior to use and the calibration will be verified by a calibration standard.				
Field equipment utilized: (1) Solinst 101 WLI (2) YSI 556 Multi-Meter				
	Was the field equipment calibrated prior to use?	<input checked="" type="checkbox"/>		
2	Was the equipment calibration documented?	<input checked="" type="checkbox"/>		
	Was a field check of the equipment performed during the audit? (e.g., sensitivity of a PID to organic vapors and/or ambient air, or YSI field check)	<input checked="" type="checkbox"/>		
2	Was project field documentation adequate? (i.e., use of field books, field forms, documentation of sample locations, sampling times, types of samples collected, etc.)	<input checked="" type="checkbox"/>		
2	Was custody protocol observed? (i.e., were samples and/or field data maintained in a person's possession, secured vehicle or similar location, COC forms utilized, custody seals?, etc.?)	<input checked="" type="checkbox"/>		
	Were sample handling protocols observed? (i.e., use of nitrile gloves, proper sampling containers, proper sample labeling, prompt sealing of sampling containers, ice in cooler(s), safe sample packaging for transportation, etc.)	<input checked="" type="checkbox"/>		
	Were unique sample identifications utilized?	<input checked="" type="checkbox"/>		
	Was waterproof ink used on sample labels?	<input checked="" type="checkbox"/>		
3	Were custody seals utilized on sample coolers?	<input checked="" type="checkbox"/>		

Notes:

- 1 NA denotes not applicable and/or not observed during this audit.
- 2 Reviewed in part via project documentation following field audit.
- 3 Cooler custody seal not warranted. Coolers delivered by IWM personnel to lab.

Audit of Soil Sampling Methodology and Quality Assurance			Yes	No	Notes
Was direct-push sampling equipment utilized?					1
Was soil sampling equipment properly decontaminated between sampling locations?					1
Was a new PVC sampling sleeve utilized for each sample?					1
Were the samples field screened with a PID and/or XRF?					1
Was the PID and/or XRF calibrated prior to use?					1
Was the calibration documented?					1
Were the soil samples logged in accordance with the USCS system?					1
Were the soil borings properly logged/documented?					1
Were soil samples for VOC analysis obtained in general accordance with sampling method 5035?					1
Were new disposable nitrile gloves utilized for each sample?					1
Were sample containers appropriate/laboratory supplied?					1
Were the containers properly preserved?					1
Were the containers properly labeled?					1
Was proper COC documentation utilized?					1
Were proper sampling and sample handling protocols observed?					1
Was adequate ice present in the cooler?					1
Were the borings properly sealed with bentonite?					1
Was the site adequately restored after sampling activities?					1

Audit of Groundwater Sampling Methodology and Quality Assurance			Yes	No	Notes
Was low-flow GW sampling performed?			<input checked="" type="checkbox"/>		
Was a bladder pump utilized?			<input checked="" type="checkbox"/>		
Was the field equipment properly calibrated prior to use?			<input checked="" type="checkbox"/>		
Was the calibration procedure documented?			<input checked="" type="checkbox"/>		
Was dedicated tubing utilized for each sampling location?			<input checked="" type="checkbox"/>		
Was disposable bladder utilized for each sampling location?			<input checked="" type="checkbox"/>		
Was bladder pump properly decontaminated between sampling locations?			<input checked="" type="checkbox"/>		
Were drawdown, temperature, pH, SpC, and/or ORP measurements recorded?			<input checked="" type="checkbox"/>		
Was purge water properly managed on-site?			<input checked="" type="checkbox"/>		
Were sample containers appropriate/laboratory supplied?			<input checked="" type="checkbox"/>		
Were the containers properly preserved?			<input checked="" type="checkbox"/>		
Were the containers properly labeled?			<input checked="" type="checkbox"/>		
Was proper COC documentation utilized?			<input checked="" type="checkbox"/>		2
Were proper sampling and sample handling protocols observed?			<input checked="" type="checkbox"/>		
Was adequate ice present in the cooler?			<input checked="" type="checkbox"/>		
Were the borings properly sealed with bentonite?			<input checked="" type="checkbox"/>		2
Was the site adequately restored after sampling activities?			<input checked="" type="checkbox"/>		2

Notes:
1

NA denotes not applicable and/or not observed during this audit.
2 Reviewed in part via project documentation following field audit.

Audit of QA/QC Sampling Methodology and Quality Assurance				Yes	No	Notes
Were field duplicate soil samples obtained?						1
Were field duplicate groundwater samples obtained?		<input checked="" type="checkbox"/>				2
Were field duplicate asbestos samples obtained?						1
Were the number and matrices for the field duplicates sufficient?		<input checked="" type="checkbox"/>				2
Were MS/MSD soil samples obtained?						1
Were MS/MSD groundwater samples obtained?		<input checked="" type="checkbox"/>				2
Was a trip blank(s) utilized?		<input checked="" type="checkbox"/>				2
Did the trip blank consist of reagent-grade water or was the blank lab prepared?	Lab prepared	<input checked="" type="checkbox"/>				
Were sufficient trip blanks utilized? (one per cooler containing VOC samples)		<input checked="" type="checkbox"/>				2
Was an equipment blank or field blank collected? (If only disposable or single use sampling equipment is used, then a field blank, consisting of analyte-free water poured into a laboratory provided container in the field in order to assess the potential for sample contamination due to field conditions, will be collected in lieu of an equipment blank at a rate of one per sampling event or per lot of bottles, whichever is more frequent.)		<input checked="" type="checkbox"/>				
Describe equipment blank preparation: The soil and groundwater sampling equipment blanks were prepared in the field after the sampling equipment was field decontaminated.						
Were equipment blanks utilized at a ratio of 1:20 per matrix or one per sampling event?						

Audit of Health & Safety Procedures				Yes	No	Notes
Was a site-specific HASP prepared?		<input checked="" type="checkbox"/>				
Was a site-specific HASP available?		<input checked="" type="checkbox"/>				
Was the HASP adequate for the proposed work scope?		<input checked="" type="checkbox"/>				
Was the HASP signed by site personnel?		<input checked="" type="checkbox"/>				
Were site utilities properly cleared?		<input checked="" type="checkbox"/>				
Were standard H&S protocols observed?		<input checked="" type="checkbox"/>				

Notes:

1

2

NA denotes not applicable and/or not observed during this audit.
 Reviewed in part via project documentation following field audit.

Audit Summary

Were any deficiencies/deviations from the planned sampling program observed during the field audit?

No

If deficiencies/deviations were observed during the audit, were corrective action procedures required or implemented, and was the project manager notified?

NA

Data collection activities that occurred during sampling event that may affect the integrity of the samples are as follows:

NA

Data Limitations and Actions. Sources of sampling and analytical error will be identified and corrected as early as possible to the onset of sample collection activities. An ongoing data assessment process will be incorporated during the project, rather than just as a final step, to facilitate the early detection and correction of problems, ensuring that project quality objectives are met.

Data that do not meet the measurement performance criteria specified in this QAPP will be identified and the impact on the project quality objectives will be assessed and discussed within the Phase II. Specific actions for data that do not meet the measurement performance criteria depend on the use of the data and may require that additional samples are collected or the use of the data to be restricted.

Based upon the findings of the audit, the data derived from the sampling event should be determined to be; (1) usable without limitations, (2) usable with limitations, or (3) of limited usability for the purpose intended.

Statement of data validation/usability. Based upon the field audit QA/QC activities performed to ensure that the collected data are scientifically defensible, properly documented, and of known quality, and meet project objectives, it is my professional opinion that the data is:

- 1) Usable without limitations.

Sincerely,

IWM Consulting Group, LLC



Bradley E. Gentry, LPG #2165
Vice President



Data Assessment Report
Norfolk & Western Railroad Property
South 5th Street & 5th Street NE
Lafayette, Tippecanoe County, Indiana
USEPA Cooperative Agreement: 4B-00E3203
EPA ACRES ID: 259714

Assessment of
Volatile Organic Compounds, Polycyclic Aromatic Hydrocarbon
Compounds, and RCRA 8 Metals in Soil and/or Water
Samples Collected April 30 to May 6, 2024

Laboratory Analysis performed by:

Pace Analytical Services, LLC of
Indianapolis, Indiana
Pace Project Nos.: 50372019 and 50372470

Data Assessment performed by:

Christopher D. Schoo
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(317) 347-1111

Project IN23055.15

June 26, 2024

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	ii
1.0 INTRODUCTION	1
2.0 PRESERVATION, SAMPLE INTEGRITY AND QA/QC SAMPLES	1
3.0 HOLDING TIMES, ANALYTICAL METHODS, METHOD DETECTION LIMITS (MDLS), REPORTING LIMITS (RLS), UNITS AND DATA QUALIFICATIONS UTILIZED	2
4.0 BLANKS.....	2
5.0 SURROGATE RECOVERY	2
6.0 SPIKED ANALYSES.....	3
6.1 Matrix Spike/Matrix Spike Duplicate (MS/MSD)	3
6.1.1 Laboratory Control Sample (LCS).....	4
6.2 Duplicates	4
6.2.1 Laboratory Duplicates.....	4
6.2.2 Field Duplicates	5
7.0 COMPOUND IDENTIFICATION, QUANTITATION AND REPORTED DETECTION LIMITS.....	6
8.0 DOCUMENTATION	7
9.0 OTHER	7
10. OVERALL ASSESSMENT	7

EXECUTIVE SUMMARY

IWM Consulting Group, LLC (IWM Consulting) prepared a Quality Assurance Project Plan (QAPP) for the Community-Wide Assessment Grant (CWAG) Initiative of the Lafayette Target Area which was submitted to the United States Environmental Protection Agency (EPA) on August 11, 2023, and approved by the EPA and Indiana Brownfields Program (IBP) on August 23, 2023. Mr. Christopher Schoo, an IWM Consulting Quality Assurance Manager, completed this Data Assessment Report (DAR) for soil and water samples submitted for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and Resource Conservation and Recovery Act (RCRA) 8 metals from the Norfolk & Western Railroad property located at South 5th Street and 5th Street Northeast in Lafayette, Tippecanoe County, Indiana. The samples were collected between April 30 and May 6, 2024. The samples were analyzed by Pace Analytical Services, LLC (Pace) of Indianapolis, Indiana. The following two laboratory reports were generated: Pace Project Numbers 50372019 and 50372470.

Pace Report No. 50372019 contained the analytical results for 20 soil samples, one soil duplicate sample, one soil matrix spike/matrix spike duplicate (MS/MSD) sample, one soil equipment blank sample, and one trip blank sample. Pace Report No. 50372470 contained the analytical results for five groundwater samples, one duplicate groundwater sample, one groundwater equipment blank sample, one groundwater MS/MSD sample, and one trip blank sample.

In general, the chain of custody (COC) documentation was accurately completed and included appropriate sample receiving information. The COC contained some minor deviations from protocol, which did not affect the usability of the data (see Section 2.0).

In general, the method detection limits (MDLs) and reporting limits (RLs) were acceptable and quantitation limits were found to be acceptable for the data's intended use [comparison to the Indiana Department of Environmental Management's (IDEM's) *Risk-Based Closure Guide* (R2) Published Levels (PLs)].

Method blanks were prepared and analyzed as required by the referenced methods. No target compounds were detected above their respective MDLs.

Trip blanks were utilized in coolers containing samples for VOC analyses. All trip blanks were reported as non-detect.

Soil sampling equipment blanks (NW-SL-EB1) and a groundwater sampling equipment blank (NW-GW-EB01) were prepared in the field after the sampling equipment was field decontaminated. The equipment sample blanks were reported as non-detect.

Surrogates, internal standards, MS/MSD samples, and LCSs were prepared and analyzed as required by the referenced method(s). Multiple analytes were found to be outside of control limits in several MS/MSD and LCS samples. The RPD of several analytes was also to be outside of control limits. The data was properly qualified/annotated and referenced in the laboratory Quality Control Data summary and no additional data qualification is required. Additionally, sufficient QA/QC information exists to support the conclusion that the control limit exceedances do not impact the usability of the data for its intended use.

The RPDs for the field duplicate soil analytes were found to be in compliance with the QAPP objectives in comparing NW-SL-SS03 (0.0-1') and TP-SL-FD, as well as the laboratory duplicates. The RPDs of the groundwater field duplicate analytes detected at concentrations equal to or greater than five times their quantitation limit were found to be in compliance with the QAPP objectives in comparing NW-GW-GP02 and NW-GW-FD01.

Based on this DAR, the results for the analyses of the samples reported in the Norfolk & Western Railroad property data set (Pace Report Nos. 50372019 and 50372470) were determined to be acceptable for their intended use within the limitations described above.

1.0 INTRODUCTION

Soil samples obtained for volatile organic compound (VOC) analyses were collected utilizing United States Environmental Protection Agency (EPA) Method 5035A. Soil and groundwater samples were analyzed for VOCs using EPA analytical Method 8260, polycyclic aromatic compounds (PAHs) using EPA analytical Method 8270 SIM, and Resource Conservation Recovery Act (RCRA) 8 metals using EPA analytical Method 6010 (with mercury as the exception using EPA analytical Methods 7471 or 7470). Soil samples were also analyzed for percent moisture utilizing analytical Method SM 2540G for moisture correction, as necessary.

To the extent applicable, this data assessment was performed following the Quality Assurance Project Plan (QAPP) dated August 11, 2023. The data assessment process is intended to evaluate data on a technical basis in addition to a method compliance basis, rather than on a contract compliance basis. The data package as received from the laboratory must contain sufficient raw data documentation to facilitate the assessment process and allow verification of all reported sample results. The review is based on the data provided by the laboratory and assumes that it is accurate, true, and complete. In addition, professional judgment was applied as necessary and appropriate.

Unless a specific laboratory report is indicated, comments in this Data Assessment Report (DAR) apply to each of the two Pace Analytical Services, LLC (Pace) laboratory reports (Nos. 50372019 and 50372470).

2.0 PRESERVATION, SAMPLE INTEGRITY, AND QA/QC SAMPLES

The samples were received in good condition. The following observations were noted:

- Chain-of-Custody (COC) documentation was utilized.
- In general, the COC documentation was accurately completed and followed proper protocol with no exceptions.
- The cooler temperatures were measured and were within acceptance limits.
- Ice was present in all coolers upon receipt.
- Custody seals were not utilized on the coolers; however, the aforementioned coolers were delivered directly to the laboratory by IWM Consulting personnel or picked up from IWM Consulting by Pace personnel.
- The samples in all coolers arrived intact and no loss or breakage was noted.
- The QAPP field completeness goal of 90% for samples collected/analyzed was achieved.
- The samples contained in all the coolers were delivered within the respective sample holding time(s).
- The samples contained in all coolers contained sufficient sample volume.
- The samples contained in all coolers utilized the correct containers and preservation.
- No headspace was noted in the 40-mL vials for water samples upon receipt.
- The sample labels in the coolers matched the COC, except for those noted above.
- The cooler(s) containing samples utilized in Pace Report No. 50372019 contained:
 - 20 soil samples, one duplicate soil sample, one soil MS/MSD sample, one soil equipment blank sample, and one trip blank sample.
- The cooler(s) containing samples utilized in Pace Report No. 50372487 contained:

- Five groundwater samples, one duplicate groundwater sample, one groundwater equipment blank sample, one groundwater MS/MSD sample, and one trip blank sample.
- The QAPP field duplication rate (1:20) was observed.
- The QAPP equipment blank rate (1:20) was observed.
- The QAPP MS/MSD rate (1:20) was observed.
- Trip blanks were utilized in coolers containing samples for VOC analyses.
- The sample designations were found to be appropriate and in compliance with the QAPP.

3.0 HOLDING TIMES, ANALYTICAL METHODS, METHOD DETECTION LIMITS (MDLS), REPORTING LIMITS (RLS), UNITS, AND DATA QUALIFICATIONS UTILIZED

The laboratory analytical reports were acceptable for the intended use of the data. The following observations were noted:

- The samples were analyzed within the established holding times without exception
- The analytical methods utilized were appropriate.
- The analytical methods utilized were properly noted/cited.
- In general, the method detection limits (MDLs) and reporting limits (RLs) were acceptable and quantitation limits were found to be acceptable for the data's intended use [comparison to the Indiana Department of Environmental Management's (IDEM's) *Risk-Based Closure Guide* (R2) Published Levels (PLs)].
- The dilution factors (DL) were properly noted.
- The units of measure were appropriate.
- Data qualifiers for individual samples and/or parameters were utilized as appropriate.

4.0 BLANKS

Method blanks were prepared and analyzed as required by the referenced method. No target compounds were detected above their respective MDLs.

Trip blanks were utilized in coolers containing samples for VOC analyses. All trip blanks were reported as non-detect.

A soil sampling equipment blank (NW-SL-EB1) and a groundwater sampling equipment blank (NW-GW-EB01) were prepared in the field after the sampling equipment was field decontaminated. All target analytes were non-detect in the blanks.

5.0 SURROGATE RECOVERY/INTERNAL STANDARDS

Surrogate standards and internal standards were added to the VOC and PAH laboratory quality control (QC), and soil and groundwater samples as required by the referenced methods. None of the VOC and PAH laboratory QC sample surrogate recoveries exceeded their respective laboratory control limits unless outlined below:

Pace Report No. 50370219

- In soil sample NW-SL-SB02 (0.5-2') the percent recovery for VOC surrogates dibromofluoromethane and toluene-d8 exceeded their upper recovery limits. All VOCs were below reporting limits in the sample.
- In soil sample NW-SL-SB03 (0.5-2') the percent recovery for VOC surrogate toluene-d8 exceeded its upper recovery limit. All VOCs were below reporting limits in the sample.
- In method blank sample 3604209 the PAH surrogates 2-fluorobiphenyl and p-terphenyl-d14 exceeded their upper recovery limits. All PAHs were below reporting limits in the sample.

All other surrogate/internal standard recoveries were within acceptance limits and all data was properly qualified/annotated and referenced.

6.0 SPIKED ANALYSES

6.1 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Matrix spike samples were prepared and analyzed as required by the referenced method.

The data was properly qualified/annotated and referenced as noted below.

Pace Report No. 50372019:

- For MS/MSD laboratory sample numbers 3606085/3606086, the MS and MSD percent recoveries for barium and lead were found to be below their respective control limits due to matrix interference.
- For MS/MSD laboratory sample numbers 3606089/3606090, the MS and MSD percent recoveries for barium were found to be below their respective control limits due to matrix interference.
- For MS/MSD laboratory sample numbers 3606091/3606092, the MSD percent recovery for barium and the MS percent recovery for lead were found to be below their respective control limits due. The RPDs of the MS/MSD results for these analytes were within their respective control limits.
- For MS/MSD laboratory sample numbers 3605158/3605159, the MS and MSD percent recoveries for vinyl acetate were found to be above their respective control limits. The resulting RPD was within control limits.
- Although the QAPP MS/MSD rate of 1:20 samples collected was observed for the project, an MS/MSD laboratory sample is not associated with VOC Method Blank sample number 3607168 due to insufficient volume. This QA/QC batch is associated with eight of the submitted soil samples.
- For MS/MSD laboratory sample numbers 3607170/3607171, the MS and MSD percent recoveries for acrolein and ethyl methacrylate were found to be below their respective control limits. The batch was accepted based on the LCS recovery.
- Although the QAPP MS/MSD rate of 1:20 samples collected was observed for the project, an MS/MSD laboratory sample is not associated with PAH Method Blank sample number 3604209 due to insufficient volume. This QA/QC batch is associated with an equipment blank sample.
- For MS/MSD laboratory sample numbers 3608235/3608236, the MS percent recovery for benzo(b)fluoranthene was found to be above its upper control limit. The batch was accepted based on the LCS recovery. The resulting RPD was within control limits.

Pace Report No. 50372470:

- For MS/MSD laboratory sample numbers 3609515/3609516, the RPD of the MS/MSD results for iodomethane were found to be above their control limits (20%).

Based on the information presented in the laboratory Quality Control Data summary, the soil and groundwater MS/MSD results were properly annotated and no additional data qualification is required. Additionally, sufficient QA/QC information exists to support the conclusion that the soil and groundwater MS/MSD results that were outside of control limits do not impact the usability of the data for its intended use.

6.1.1 Laboratory Control Sample (LCS)

An LCS was prepared and analyzed with each analytical batch as required by the referenced methods.

Pace Report No. 50372019:

- For LCS laboratory sample number 3605157, the vinyl acetate spiked percent recovery was found to be above its upper control limits. Results for this analyte may be biased high in the associated equipment blank samples. This analyte was not detected above the reporting limit in the equipment blank sample.

Pace Report No. 50372470:

- For LCS laboratory sample number 3609512, the vinyl acetate spiked percent recovery was found to be above its upper control limits. Results for this analyte may be biased high in all of the groundwater samples submitted. This analyte was not detected above the reporting limit in any of the submitted groundwater samples.

All other LCSs were within their respective percent recovery limits.

6.2 Duplicates

6.2.1 Laboratory Duplicates

Pace Report No. 503742019 Quality Control Data summary report indicated that three soil moisture laboratory duplicates were included in the data set associated with the submitted soil samples. The duplicate sample report is summarized below:

Laboratory QA/QC Duplicate Summary					
Sample ID	Duplicate ID	Analyte	Sample Value	Duplicate Value	RPD
					%
Pace Report No. 50372019					
50372019019	3612739	Moisture (%)	17.9	17.2	4
50372114019	3613553	Moisture (%)	5.2	8.2	40
50372114020	3613554	Moisture (%)	14.2	15.4	8

The RPDs for one of the soil duplicate samples were outside of the laboratory’s internal control standards for moisture (10%) but complied with the QAPP objectives.

No other laboratory duplicates (other than MS/MSD discussed in section 6.1 above) were noted in the data packages.

6.2.2 Field Duplicates

Water matrix samples can be readily duplicated due to their homogeneous nature; conversely, the duplication of soil or sediment samples is much more difficult due to their non-homogeneous nature. The QAPP indicates that an RPD of ± 50 percent and ± 100 percent for water and soil sample field duplicates, respectively, will be used as advisory limits for analytes detected in both investigative and field duplicate samples at concentrations greater than or equal to five times its quantitation limit. The field duplicates were evaluated by calculating the percent difference. The field duplicate IDs were provided to the validator as shown in the table below. Note that values near or below the RL would be expected to be wider than others.

As indicated in the following table, the RPDs of the individual groundwater field duplicate analytes were found to be in compliance with the QAPP objectives.

Field Duplicate Groundwater RPD Summary							
Sample ID	Duplicate ID	Analyte	Sample Conc.	RL	Duplicate Conc.	RL	RPD
			µg/L	µg/L	µg/L	µg/L	%
Pace Report No. 50372470							
NW-GW-GP02	NW-GW-FD01	Arsenic	45.2	10.0	35.6	10.0	23.8
		Barium	116	10.0	112	10.0	3.5
		Barium, dissolved	63.0	10.0	62.8	10.0	0.3
		Chromium	30.4	10.0	27.0	10.0	11.8
		Lead	16.1	10.0	14.4	10.0	11.1

As indicated in the following table, the RPDs of the individual soil field duplicate analyte were found to comply with the QAPP objectives regardless of being detected at concentrations equal to or greater than five times their quantitation limit.

Field Duplicate Soil RPD Summary							
Sample ID	Duplicate ID	Analyte	Sample Conc.	RL	Duplicate Conc.	RL	RPD
			mg/kg	mg/kg	mg/kg	mg/kg	%
Pace Report No. 50372019							
NW-SL-SS03 (0.0-1')	NW-SL-FD1	Acenaphthylene	0.073	0.028	0.16	0.028	74.7 ¹
		Anthracene	0.069	0.028	0.13	0.028	61.3 ¹
		Benzo(a)anthracene	0.13	0.028	0.21	0.028	47.1 ¹
		Benzo(a)pyrene	0.21	0.028	0.35	0.028	50.0
		Benzo(b)fluoranthene	0.38	0.028	0.59	0.028	43.3
		Benzo(g,h,i)perylene	0.16	0.028	0.30	0.028	60.9
		Benzo(k)fluoranthene	0.14	0.028	0.25	0.028	56.4
		Chrysene	0.17	0.028	0.26	0.028	41.9
		Dibenz(a,h)anthracene	0.046	0.028	0.084	0.028	58.5 ¹
		Fluoranthene	0.14	0.028	0.23	0.028	48.6
		Indeno(1,2,3-cd)pyrene	0.15	0.028	0.29	0.028	63.6
		1-methylnaphthalene	0.039	0.028	0.040	0.028	2.5 ¹
		2-methylnaphthalene	0.048	0.028	0.048	0.028	0.0 ¹
		Naphthalene	0.035	0.028	0.035	0.028	0.0 ¹
		Phenanthrene	0.072	0.028	0.098	0.028	30.6 ¹
		Pyrene	0.18	0.028	0.28	0.028	43.5 ¹
		Arsenic	9.4	1.1	9.9	1.1	5.2
		Barium	126	1.1	69.0	1.1	58.5
		Chromium	12.9	1.1	11.8	1.1	8.9
		Lead	34.1	1.1	31.1	1.1	9.2
Moisture (Percent)	13.5	0.10	12.3	0.10	9.3		

¹ An analyte concentration is less than five times its quantitation limit.

7.0 COMPOUND IDENTIFICATION, QUANTITATION, AND REPORTED DETECTION LIMITS

The analytes reported were appropriate for the intended use of the data. Target compounds for the analyses were appropriately identified in the quality control samples and the field samples. Sample-specific RLs were calculated and reported for the analyses. The RLs were adjusted for the dilution of the sample.

In general, the MDLs and RLs were acceptable and the quantitation limits were found to be acceptable for the data's intended use (comparison to the IDEM's R2 PLs). The following RLs above an R2 PL were noted:

- The groundwater RLs for all samples were above their respective R2 PLs for the analytes acrolein, acrylonitrile, 1,2-dibromoethane (EDB), trans-1,4-dichloro-2-butene, hexachloro-1,3-butadiene, 1,1,2,2-tetrachloroethane, and 1,2,3-trichloropropane due to the quantitation limits for these analytes by the laboratory.

8.0 DOCUMENTATION

A copy of the COC record documenting all samples submitted to the laboratory in this group was included in the data package. In general, the COC documentation was accurately completed and included appropriate sample receiving information. The COC contained no minor deviation from protocol.

9.0 OTHER

On May 6, 2024, a quality assurance field audit was performed at the subject site. The purpose of the audit was to observe and oversee assessment activities to ensure that sampling methodology, sample preservation methods, and COC procedures were followed. The field audit was part of the QAPP quality control requirements to ensure that the environmental data collected is of the highest standard feasible as appropriate for the intended application. The field audits are a means to ensure that the QAPP and the property-specific SAPs are adhered to and that all samples are properly handled and analyzed to satisfy the comparability of field data.

No data collection activities were observed during the sampling event that would adversely affect the integrity of the samples collected. Based upon the findings of the field audit, the data derived from the sampling event are scientifically defensible, properly documented, of sufficient quality to meet the project objectives, and determined to be usable without limitations (subject to QA/QC review of the laboratory results).

10. OVERALL ASSESSMENT

In general, the COC documentation was accurately completed and included appropriate sample receiving information. The COC contained no deviations from protocol.

In general, the MDLs and RLs were acceptable and quantitation limits were found to be acceptable for the data's intended use (comparison to IDEM's R2 PLs).

Method blanks were prepared and analyzed as required by the referenced methods. No target compounds were detected above their respective MDLs.

Trip blanks were utilized in coolers containing samples for VOC analyses. All trip blanks were reported as non-detect.

A soil sampling equipment blank (NW-SL-EB1) and a groundwater sampling equipment blank (NW-GW-EB01) were prepared in the field after the sampling equipment was field decontaminated. The equipment sample blanks were reported as non-detect.

Surrogates, internal standards, MS/MSD samples, and LCSs were prepared and analyzed as required by the referenced method(s). Multiple analytes were found to be outside of control limits in several MS/MSD and LCS samples. The RPD of several analytes was also to be outside of control limits. The data was properly qualified/annotated and referenced in the laboratory Quality Control Data summary and no additional data qualification is required. Additionally, sufficient QA/QC information exists to support the conclusion that the control limit exceedances do not impact the usability of the data for its intended use. The RPDs for the field duplicate soil analytes were found to comply with the QAPP objectives in comparing NW-SL-SS03 (0.0-1') and

NW-SL-FD1, as well as the laboratory duplicates. The RPDs of the groundwater field duplicate analytes detected at concentrations equal to or greater than five times their quantitation limit were found to be in compliance with the QAPP objectives in comparing NW-GW-GP02 and NW-GW-FD01.

Based on this DAR, the results for the analyses of the samples reported in the Norfolk & Western Railroad property data set (Pace Report Nos. 50372019 and 50372470) were determined to be acceptable for their intended use within the limitations described above.



Data Assessment Report
Norfolk & Western Railroad Property
South 5th Street and 5th Street Northeast
Lafayette, Tippecanoe County, Indiana
EPA Cooperative Agreement: 4B-00E3203
EPA ACRES ID: 259714

Assessment of
Volatile Organic Compounds
in Soil Vapor
Samples Collected May 2, 2024

Laboratory Analysis performed by:

Pace Analytical National
Mt. Juliet, Tennessee
Pace Project No.: L1732333

Data Assessment performed by:

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Project IN23018.16

June 26, 2024

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	ii
1.0 INTRODUCTION	1
2.0 PRESERVATION, SAMPLE INTEGRITY AND QA/QC SAMPLES	1
3.0 HOLDING TIMES, ANALYTICAL METHODS, METHOD DETECTION LIMITS (MDLs), REPORTED DETECTION LIMITS (RDLs), UNITS AND DATA QUALIFICATIONS UTILIZED	1
4.0 BLANKS.....	2
5.0 SURROGATE RECOVERY	2
6.0 SPIKED ANALYSES.....	2
6.1 Laboratory Control Samples	2
6.2 Field Duplicates.....	2
7.0 COMPOUND IDENTIFICATION, QUANTITATION AND REPORTED DETECTION LIMITS	3
8.0 DOCUMENTATION	3
9.0 OTHER	3
10.0 OVERALL ASSESSMENT	4

EXECUTIVE SUMMARY

IWM Consulting Group, LLC (IWM Consulting) prepared a Quality Assurance Project Plan (QAPP) for the Community-Wide Assessment Grant (CWAG) Initiative of the Lafayette Target Area which was submitted to the United States Environmental Protection Agency (EPA) on August 11, 2023, and approved by the EPA and Indiana Brownfields Program (IBP) on August 23, 2023. Mr. Christopher Schoo, an IWM Consulting Quality Assurance Manager, completed this Data Assessment Report (DAR) for soil gas vapor samples submitted for volatile organic compounds (VOCs) from the Norfolk & Western Railroad property located at South 5th Street and 5th Street Northeast in Lafayette, Tippecanoe County, Indiana. The samples were collected on May 2, 2024. The samples were analyzed by Pace Analytical National (Pace) of Mount Juliet, Tennessee. The following laboratory report was generated: Pace Project Number L1732333.

Pace Report No. L1732333 includes three soil vapor samples and one duplicate sample, although due to insufficient sample volume in NW-SGe02, only two samples were analyzed.

The Chain-of-Custody (COC) documentation was accurately completed and included appropriate sample receiving information.

The method detection limits (MDLs) and reported detection limits (RDLs) were acceptable and quantitation limits were found to be acceptable for the data's intended use [comparison to the Indiana Department of Environmental Management (IDEM) *Risk-Based Closure Guide* (R2) Published Levels (PLs)].

No detections occurred in the laboratory method blanks. A laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) were prepared and analyzed as required by the referenced method. All LCS/LCSD sample results were within their respective percent recovery limits.

Based on this DAR, the results for the analyses of the samples reported in the Norfolk & Western Railroad Property data set (Pace Report No. L1732333) were determined to be acceptable for their intended use.

1.0 INTRODUCTION

Soil vapor samples were analyzed for volatile organic compounds (VOCs) using United States Environmental Protection Agency (EPA) analytical Method TO-15.

To the extent applicable, this data assessment was performed following the Quality Assurance Project Plan (QAPP) dated August 11, 2023. The data assessment process is intended to evaluate data on a technical basis in addition to a method compliance basis, rather than on a contract compliance basis. The data package as received from the laboratory must contain sufficient raw data documentation to facilitate the assessment process and allow verification of all reported sample results. The review is based on the data provided by the laboratory and assumes that it is accurate, true, and complete. In addition, professional judgment was applied as necessary and appropriate.

2.0 PRESERVATION, SAMPLE INTEGRITY, AND QA/QC SAMPLES

The samples were received in good condition. The following observations were noted:

- Chain-of-Custody (COC) documentation was utilized.
- The COC documentation was accurately completed and followed proper protocol.
- The final field, post-sampling Summa canister vacuum levels were recorded and were within acceptable limits.
- Custody Seals were not utilized on the soil vapor sample shipping container(s). The aforementioned container(s) were shipped to the laboratory via FedEx. The final field vacuum pressures recorded in the field for the Summa air canisters were in conformance with the laboratory receiving vacuum pressures.
- The samples arrived intact and no loss or breakage was noted.
 - The QAPP field completeness goal of 90% for samples collected/analyzed was achieved.
- The samples were delivered within the respective sample holding time(s).
- The samples contained sufficient sample volume except sample NW-SGe02 which could not be analyzed.
- The soil vapor sampling event utilized the correct containers.
- The sample labels in the soil vapor sampling shipping container(s) matched the COC.
- The shipping container(s) containing samples utilized in Pace Report No. L1732333 contained:
 - Three soil vapor samples and one duplicate sample.
- The soil vapor sampling utilized batch-certified Summa canisters.
- The QAPP field duplication rate (1:20) was observed.
- The sample designations were found to be appropriate and in compliance with the QAPP.

3.0 HOLDING TIMES, ANALYTICAL METHODS, METHOD DETECTION LIMITS (MDLs), REPORTED DETECTION LIMITS (RDLs), UNITS, AND DATA QUALIFICATIONS UTILIZED

The laboratory analytical reports were acceptable for the intended use of the data. The following observations were noted:

- The samples were analyzed within the established holding times.
- The analytical methods utilized were appropriate.

- The analytical methods utilized were properly noted/cited.
- The method detection limits (MDLs) and reported detection limits (RDLs) were acceptable and quantitation limits were found to be acceptable for the data's intended use [comparison to the Indiana Department of Environmental Management's (IDEM's) *Risk-Based Closure Guide* (R2) Published Levels (PLs)].
- The dilution factors (DL) were properly noted.
- The units of measure were appropriate.
- Data qualifiers for individual samples and/or parameters were utilized as appropriate.

4.0 BLANKS

Method blanks were prepared and analyzed as required by the referenced method. No target analytes were detected in the method blanks.

5.0 SURROGATE RECOVERY

Surrogate standards were added to the quality control (QC) and soil vapor samples as required by the referenced methods. None of the laboratory QC samples surrogates or soil vapor sample surrogate recoveries exceeded their respective laboratory control limits.

6.0 SPIKED ANALYSES

6.1 *Laboratory Control Samples*

Laboratory control samples (LCS) and laboratory control sample duplicates (LCSD) were prepared and analyzed with each analytical batch as required by the referenced method. The LCS/LCSD samples (R4066373-2/R4066373-3) results were within their respective percent recovery limits. The relative percent difference (RPD) for the LCS/LCSD samples were within their control limits (25%).

6.2 *Field Duplicates*

Soil vapor samples can normally be readily duplicated due to their homogeneous nature. The field duplicate was evaluated by calculating the RPD. The field duplicate ID was provided to the validator as shown in the table below. Note that values near or below the RDL would be expected to be wider than others.

As indicated in the following table, the soil vapor duplicate sample (NW-SGe-FD1) displayed conformance to the associated parent sample (NW-SGe03) for analytes detected in both samples at concentrations equal to or greater than five times their quantitation limit and were found to comply with the QAPP objectives.

Field Duplicate Soil Gas Vapor RPD Summary							
Sample ID	Duplicate ID	Analyte	Sample Conc.	RDL	Duplicate Conc.	RDL	RPD
			µg/m ³	µg/m ³	µg/m ³	µg/m ³	%
L1732333							
NW-SGe03	NW-SGe-FD1	Benzene	8.15	0.639	7.95	0.639	2.5
		Cyclohexane	24.3	0.689	38.6	0.689	45.5
		Ethanol	7.49	4.71	13.7	4.71	58.6 ¹
		Ethylbenzene	1.76	0.867	1.73	0.867	1.7 ¹
		4-ethyltoluene	2.22	0.982	<0.982	0.982	NC
		Trichlorofluoromethane	1.17	1.12	2.33	1.12	4.4 ¹
		n-heptane	32.4	0.818	32.7	0.818	0.9
		n-hexane	64.2	2.22	102	2.22	45.5
		2-Butanone (MEK)	<3.69	3.69	3.69	3.69	NC
		2-propanol (isopropanol)	<3.07	3.07	3.12	3.07	NC
		Tetrachlorethylene	2.53	1.36	2.55	1.36	0.8 ¹
		Toluene	14.5	1.88	14.7	1.88	1.4
		1,2,4-trimethylbenzene	1.76	0.982	1.66	0.982	5.8 ¹
		Total xylenes	4.18	2.60	4.40	2.60	5.1 ¹

¹ An analyte concentration is less than five times its quantitation limit.
NC- not calculable.

7.0 COMPOUND IDENTIFICATION, QUANTITATION, AND REPORTED DETECTION LIMITS

The analytes reported were appropriate for the intended use of the data. Target analytes for the TO-15 analysis were appropriately identified in the quality control samples and the field samples. Sample-specific RDLs were calculated and reported for the analyses. The RDLs were adjusted for the dilution of the sample.

The MDLs and RDLs were acceptable and quantitation limits were found to be acceptable for the data's intended use (comparison to the IDEM's R2 Published Levels).

8.0 DOCUMENTATION

A copy of the COC record documenting all samples submitted to the laboratory in this group was included in the data package. The COC documentation was accurately completed and included appropriate sample receiving information.

9.0 OTHER

Based on a review of field documentation, no data collection activities were noted during the sampling event that would adversely affect the integrity of the samples collected. The data derived from the sampling event are scientifically defensible, properly documented, of sufficient quality to meet the project

objectives, and determined to be usable without limitations [subject to quality assurance/quality control (QA/QC) review of the laboratory results].

10.0 OVERALL ASSESSMENT

The MDLs and RDLs were acceptable and quantitation limits were found to be acceptable for the data's intended use (comparison to the IDEM R2 Published Levels).

No detections occurred in the laboratory method blanks. An LCS and LCSD were prepared and analyzed as required by the referenced method. All LCS/LCSD laboratory samples were within their respective percent recovery limits and RPD limits.

Based on this DAR, the results for the analyses of the samples reported in the Norfolk & Western Railroad Property data set (Pace Report No. L1732333) were determined to be acceptable for their intended use.