



Land Recycling Program Transmittal Sheet for Plan/Report Submission

Instructions: Please provide all requested information in each of the four sections. This transmittal sheet shall accompany any plan/report submitted to the Department under the Land Recycling Program. Proper completion of the Transmittal Sheet will assist Department review and may avoid a finding of plan/report deficiency. The Facility ID number can be obtained from the Department's Environmental Cleanup Program in the region where the site is located.

Section 1 - Site Identification

eFACTS Facility ID 855927

Site Name Alliance 51st Street

Site Address 1646 South 51st Street

Municipality and County City of Philadelphia, Philadelphia County

Section 2 - Remediation Standard . . Plan/Report . . Fees

Identify the remediation standard being pursued and the type of plan/report being submitted. Please note required Department fees follow each type of plan/report.

Check the relevant standard and the type of plan/report being submitted.

- | | |
|--|--|
| <input type="checkbox"/> Background Standard
Final Report (\$250 fee) | <input type="checkbox"/> Statewide Health Standard*
Final Report (\$250 fee) |
| <input type="checkbox"/> Site-Specific Standard | <input type="checkbox"/> Special Industrial Area |
| <input type="checkbox"/> Remedial Investigation Report
(\$250 fee) | <input type="checkbox"/> Work Plan
(no fee) |
| <input checked="" type="checkbox"/> Risk Assessment Report (\$250 fee) | <input type="checkbox"/> Baseline Environmental Report
(no fee) |
| <input type="checkbox"/> Cleanup Plan (\$250 fee) | *A final report submitted under a combination of
cleanup standards should be accompanied with a
fee representing the higher of the two standards'
final report fee. |
| <input type="checkbox"/> Final Report (\$500 fee)* | |

Fee was paid in April 2025
(Ref No. 311781).
Resubmittal is within 60
days of Technical Deficiency
Letter.

Ensure your check covers all required fees and is made payable to the **Commonwealth of Pennsylvania**.

Section 3 - Municipal/Public Notice Confirmation

There are two stages in the Land Recycling Program where municipal and public notices are required. Read the information associated with each stage. You will be asked to confirm that information establishing your compliance with these notification requirements has been included with this submission.

- Check here if you are planning to meet the Background or Statewide Health Standard and your Final Report has been submitted within 90 days of the release.

Indicate date of release here _____

No further completion of this section is required if your Final Report for these two standards conforms to the 90 day time frame.

Stage 1 - Notice of Intent to Remediate (NIR)

- Check here to confirm you have included proof that a copy of your NIR was provided to each municipality where your site is located. Proof will be a copy of your cover letter and a copy of a signed certified mail receipt slip from the municipality.
- Check here to confirm a copy of a proof of publication document from a newspaper serving the area of your site has been included with this submission.
- Check here to indicate that a Site-Specific Standard or a Special Industrial Area is involved and a municipal request was received for development of a public involvement plan. The plan/report submission shall include municipality and public comments, which were submitted, and your responses to those comments.

Stage 2 - Cleanup Plan/Report Submission

April 21, 2025 Place date here that each municipality was notified of any plan or report submitted under any of the three remediation standards.

Philadelphia Inquirer April 21, 2025 Place the newspaper name and date that your notice of your plan/report submission was published.

Section 4 - Project Contact

On the lines below, place the name, company, mailing addresses and business phone number of the individuals who can be contacted regarding this submission:

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Alliance 51st Street LLC

Human Health Risk Assessment Report

**Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania**

Facility ID: 51-10420

April 21, 2025

Resubmitted September 5, 2025

Human Health Risk Assessment Report

**Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
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Facility ID: 51-10420

September 5, 2025

Prepared By:

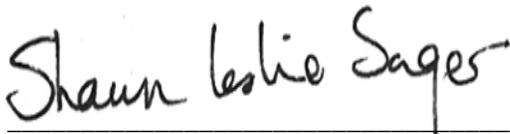
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Acronyms and Abbreviations

§	chapter
Act 2	Pennsylvania's Land Recycling Program
AF	adherence factor
Alliance	Alliance 51 st Street LLC
Arcadis	Arcadis U.S., Inc.
AST	aboveground storage tank
ATSDR	Agency for Toxic Substances and Disease Registry
bgs	below ground surface
BW	body weight
cm ²	square centimeter
COC	constituent of concern
CSF	cancer slope factor
CSF _a	cancer slope factor adjusted
CSF _o	cancer slope factor oral
CSM	conceptual site model
ED	exposure duration
EDR	Environmental Data Resources Inc.
EF	exposure frequency
ELCR	excess lifetime cancer risk
ET	exposure time
HEAST	Health Effect Assessment Summary Table
HHRA	human health risk assessment
HHRA Report	Human Health Risk Assessment Report
HI	hazard index
HQ	hazard quotient
IR	ingestion rate
IRIS	Integrated Risk Information System
IUR	inhalation unit risk
J	estimated

Human Health Risk Assessment Report

kg	kilogram
m ³ /kg	cubic meter per kilogram
mg/cm ²	milligram per square centimeter
mg/day	milligram per day
MSC	medium-specific concentration
PADEP	Pennsylvania Department of Environmental Protection
QA	quality assurance
QC	quality control
RfC	reference concentration
RfD	reference dose
RfD _a	reference dose adjusted
RfD _o	reference dose oral
RIR/CP	Act 2 Remedial Investigation Report and Cleanup Plan for Soils Only
RL	reporting limit
RSL	regional screening level
SA	surface area
Site	former 51 st Street Terminal, located at 1630-1646 South 51st Street, Philadelphia, Pennsylvania
TGM	Technical Guidance Manual
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish & Wildlife Service
youth	older children or adolescents (6 to 16 years old)

1 Introduction

On behalf of Alliance 51st Street LLC (Alliance) Arcadis U.S., Inc. (Arcadis) prepared this Human Health Risk Assessment Report (HHRA Report) for the offsite soils adjacent to the former 51st Street Terminal, owned by Alliance and located at 1630-1646 South 51st Street, Philadelphia, Pennsylvania (Site). The Site is shown on Figure 1. The Site was assigned Facility ID: 51-10420 by the Pennsylvania Department of Environmental Protection (PADEP).

On September 4, 2025, an Act 2 Remedial Investigation Report and Cleanup Plan for Soils Only (RIR/CP; Arcadis 9/2025) was submitted to the PADEP for the Site, in accordance with Title 25 of the Pennsylvania Code, Chapter (§) 250, which relates to the administration of Pennsylvania's Land Recycling Program (Act 2), and PADEP guidance (PADEP 2021a) and discussions with PADEP. This HHRA Report was prepared as requested by PADEP and in accordance with Act 2 requirements and evaluates potential human health and ecological risk from exposure to residual chromium determined to exist in offsite soil from sampling performed by PADEP and Arcadis.

The offsite soils are located in near a publicly accessible section of Bartram's Garden Mile Trail, located east of the Site. The Schuylkill River (Figure 2) parallels the trail and in some locations is as close as 5 feet from the trail. The basis for conducting a human health risk assessment (HHRA) was included in an email dated January 15, 2025, from the PADEP concerning potential exposure to recreator receptors accessing the public trail as set forth below:

"DEP has reviewed the information you provided and your proposal for the HHRA for the trail area. DEP agrees that some of the chromium VI contamination may be pre-existing and some may come from other sources, such as the railroad embankment and material eroded/deposited by the river. DEP also agrees that it is unlikely that stormwater has discharged from Alliance's swale since last year.

However, Alliance should use all data in the area of the inferred release downgradient from the property line in the risk assessment. There is uncertainty with partitioning chromium VI contamination in those samples between residual chromium VI from the Alliance property release and possible other sources. Including all data from the area of the inferred release in the HHRA does not mean that the contamination was all caused by Alliance or that Alliance is entirely responsible for it (and that can be explained in the report). Doing so will be conservative and would demonstrate that the result of Alliance's remediation is protective of public health.

Based on your figures and DEP's knowledge of the site, we consider the following sample locations to be within the area that stormwater flowed off of the Alliance property and onto the trail and riverbank: S3, S5, S6, S7, S8, and S16. The most recent data from those points should be used to determine the exposure point concentration in the HHRA." (PADEP 2025a)

As outlined in Title 25 of the Pennsylvania Code §250.409 and §250.600 (and subsequent sections), this HHRA Report is organized into the following sections in accordance with Act 2:

- *Section 2 – Site Characterization.* Summarizes the site characterization activities and identifies constituents of concern (COCs).
- *Section 3 – Exposure Assessment.* Includes the conceptual site model (CSM) and identifies the potentially exposed populations, exposure pathways, and assumptions.

- *Section 4 – Toxicity Assessment.* Identifies the toxicity values for COCs used to evaluate potential risks and noncancer hazards.
- *Section 5 – Risk Characterization.* Combines the exposure and toxicity information to provide a quantitative estimate of risk and hazards.
- *Section 6 – Uncertainty Analysis.* Describes the uncertainty associated with the assumptions used to characterize risks and hazards.
- *Section 7 – Ecological Screening.* Identifies any ecologically sensitive areas on or adjacent to the Site.
- *Section 8 – Summary and Conclusions.* Summarizes the results of the HHRA.
- *Section 9 – References.* Lists the references used to prepare this HHRA Report.

2 Site Characterization

This section describes the location and history of the Site and identifies the COCs that are addressed in this HHRA Report.

2.1 Site Description

The Site is located in a mixed industrial/commercial area and occupies an approximately 12-acre parcel. To the south of the Site, beyond the railroad tracks, is Bartram’s Garden, a public park that includes a welcome center and Bartram’s Garden Mile Trail. The property where the trail is located was historically occupied by the Warner Cement Company.

Former improvements onsite, including aboveground storage tanks (ASTs), have been demolished. The Site currently consists of gravel and fill areas where the ASTs were formerly located.

The focus of the HHRA (Figure 2), as agreed upon with PADEP, are soil samples designated as S3, S5, S6, S7, S8, and S16 as shown on Figure 3. Bartram’s Garden Mile Trail is a paved trail that is primarily used as an access point to the park from street parking areas located along Botanic Avenue. The riverbank is open in some locations along the trail for fishing and general river access, but otherwise the riverbank contains heavy vegetation and/or debris. A concrete wall is present along the trail near the Site, which a trail walker could potentially sit on. A rest area and picnic area, unrelated to the offsite soils area and constituents discussed in this HHRA Report, are located at Bartram’s Garden House approximately 0.4 mile away. Therefore, trail walkers are not expected to sit along the concrete wall or riverbank for prolonged periods of time, if at all. Homeless encampments or picnicking have not been observed along the trail during Arcadis field work at or in areas near the Site.

2.2 Soil and Geology

The predominant soil type in the area of the Site is urban land (EDR 2021). This soil type has variable drainage and hydrologic properties. Soil boring logs completed by Arcadis during the investigation indicate the surficial geology to be light brown silty sand with mica clasts. It is assumed that the soil encountered adjacent to Bartram’s Garden Mile Trail comprise a similar geology.

According to the Pennsylvania Geological Survey, the formation underlying the Site is the Wissahickon Formation, which is composed of a medium- to coarse-grained foliated crystalline rock ranging in texture from gneiss to schist. In the Delaware Valley, the Wissahickon Formation is typically a medium- to coarse-grained metamorphic rock characterized by abundant mica. It includes schistose beds in which mica is the predominant material, as well as other beds in which the rock has a gneissic character and where quartz, feldspar, and mica are the dominant minerals.

The Wissahickon Formation varies in composition and degrees of metamorphism and dates to the Paleozoic Era. Structurally, it is frequently folded and commonly fractured by numerous joints. Its total thickness has been estimated to be between 5,000 and 8,000 feet. Competent bedrock of the Wissahickon Formation was not encountered during investigation activities at the Site (Arcadis 9/2025).

2.3 Hydrogeology

Based on the investigation activities completed at the Site, groundwater is encountered in the overburden at depths between 3 and 13 feet below ground surface (bgs). Groundwater flows to the east-northeast, toward the Schuylkill River. This stretch of the Schuylkill River is in the tidal zone, where there is a tidal swing of approximately 6 feet.

2.4 Nature and Extent of Constituents and Identification of Constituents of Concern

The focus of the HHRA are the soils off of the Site along Bartram's Garden Mile Trail and near the Schuylkill River (Figure 2). Specifically, this HHRA Report discusses hexavalent chromium detected in and/or analyzed for in soil samples S3, S5, S6, S7, S8, and S16, collected by Arcadis and PADEP in July, August, and September 2024. These samples were collected from the area where stormwater flowed offsite and onto the trail and riverbank which are the focus of the HHRA. Soil sample locations are shown on Figure 3.

Soil analytical results are presented in Table 1. Data in the RIR/CP (Arcadis 9/2025) were evaluated in accordance with the Land Recycling Program Technical Guidance Manual (TGM; PADEP 2021a). Sample results were compared to current PADEP statewide health standard medium-specific concentrations (MSCs; PADEP 2021b). The data were compared to the lower of the residential direct contact and soil to groundwater protection MSCs. In this case, the lower concentration was the residential direct contact MSC.

Total chromium refers to all forms of chromium, including trivalent chromium and hexavalent chromium. Hexavalent chromium is considered more toxic than the trivalent form. Samples were analyzed for total chromium and hexavalent chromium. In the absence of hexavalent chromium, typically total chromium concentrations are evaluated as hexavalent chromium as a health-protective measure. In this case, hexavalent chromium data are available for each of the designated sample locations. As such, the total chromium concentration was compared to the trivalent chromium MSC on the basis that all total chromium is trivalent chromium. As presented in Table 1, all total chromium and hexavalent chromium concentrations were less than their MSCs (PADEP 2021b). The data were also compared to the United States Environmental Protection Agency (USEPA) residential soil regional screening levels (RSLs) based on the lower of a target excess lifetime cancer risk of 1×10^{-6} or a target hazard quotient of 0.1 (USEPA 2024). Only the maximum detected hexavalent chromium concentration exceeded the federal residential soil RSL. It should be noted that the maximum concentration of 24 milligrams per kilogram

(mg/kg) was only slightly greater than the nonresidential soil RSL of 20 milligrams per kilogram. While only hexavalent chromium exceeded a federal residential soil screening level, both total chromium evaluated as trivalent chromium, and hexavalent chromium were included in the HHRA as COCs.

3 Exposure Assessment

The purpose of the exposure assessment is to evaluate pathways for receptor exposure to COCs in the offsite soils area. Exposure can occur only when the potential exists for a receptor to contact COCs or when there is a mechanism for COCs to be transported to a receptor. Without exposure, there is no risk; therefore, the exposure assessment is a critical component of the risk assessment. The exposure assessment includes characterization of the physical environment, identification of exposure pathways (including migration pathways, exposure points, and exposure routes), and identification of potentially exposed individuals and populations.

A complete exposure pathway consists of four elements:

- Source of and mechanism for release (i.e., surface water runoff)
- Impacted or transport medium (e.g., surface water runoff)
- Exposure point (e.g., contacting soil)
- Receptor and exposure route (e.g., incidental ingestion by a potential receptor).

In addition to the four elements listed above, a concentration of a substance sufficient to cause harm must be present in the impacted medium at the point of exposure. If a substance is not present, or the concentration is not sufficient to cause harm, then the exposure is not significant. A potentially complete exposure pathway is a pathway for which one or more of the elements is currently missing but may be added in the future. If one or more of the elements is missing and it will not be added in the future, the pathway is incomplete, and there is no associated risk. To assess the potential for exposure to chromium in soil, the direct contact with soil exposure in the offsite soil samples was evaluated.

3.1 Conceptual Site Model

This section presents the CSM for the offsite soils area, the HHRA area identified on Figure 2. The CSM was prepared in accordance with Title 25 of the Pennsylvania Code, §250.404 and §250.602(1), and follows USEPA (1989) guidance. The CSM outlines the potential source area, release and transport mechanisms, environmental medium that show or may show the presence of COCs in the future, possible exposure pathways to potentially exposed human populations, and potential exposure routes. It considers current site conditions and surrounding land use, as well as the most likely future conditions and land use based on Arcadis' current understanding of the offsite soils area.

The CSM is shown on Figure 4 and provides information on potential receptors and exposure pathways based on the location of sources and potential migration pathways at the Site.

3.1.1 Potential Sources

In April 2024, the Philadelphia Water District responded to a report of yellow-colored water leaving the Site. Heavy rain led to runoff travelling offsite, to Bartram's Garden Mile Trail immediately outside the gate at the southeastern corner of the Site. The water was found in a low-lying area along the eastern portion of the Site.

Following investigation activities to identify the source, historical fill was identified onsite and on the perimeter of the Site indicating that this general area of Philadelphia was filled prior to development. Therefore, the presence of chromium on or around the paved walking path is expected to be due to historical fill and runoff from offsite areas into the drainage swale along the boundary of the Site, as well as other contributing factors including historical river deposits and tidal influences of the river. Impacted soil and sediment have been removed from onsite and offsite areas (Arcadis 9/2025) and the HHRA was conducted based on soil remaining in these areas.

3.1.2 Potential Receptors and Exposure Pathways

This HHRA Report evaluates potential exposure to the offsite soils which are near the Bartram's Garden Mile Trail and the Schuylkill River. The trail is used for walking and running, and occasionally for fishing along the Schuylkill River. Because this area is used primarily for recreational activities, it is anticipated that older children and adolescents (6 to 16 years old; youth) and adults would visit Bartram's Garden Mile Trail and could fish in this area. Potential exposure of a very young child (less than 3 years of age) is unlikely to occur because it would not be safe to have such a child crawl around or walk unsteadily adjacent to the Schuylkill River. Drowning would be a more significant issue than contacting potentially impacted soils. Similarly, it would be dangerous for a very young child to access soil on the steep slopes adjacent to the trail. Therefore, the only potentially plausible young child recreator would be one aged 3 to less than 6 years old. Additionally, workers may mow the grass or maintain the trail and contact the soil.

Based on the information discussed above, potential primary receptors include:

- *Maintenance workers mowing the grass along Bartram's Garden Mile Trail.* These individuals are assumed to be adults who are potentially exposed to soil through incidental ingestion, dermal contact, and inhalation of dust.
- *Recreators fishing along the riverbank.* These individuals are assumed to be young children (3 to less than 6 years old), youth, and adults. Exposure to chromium (both hexavalent chromium and total chromium) in soil could occur through incidental ingestion, dermal contact, and inhalation of dust.
- *Recreators walking or running on the trail.* These individuals are assumed to be youth and adults. Exposure to chromium (both hexavalent chromium and total chromium) in soil could occur through incidental ingestion, dermal contact, and inhalation of dust.

The equations used to evaluate potential exposure of these receptors are presented in Table 2.

3.2 Exposure Point Concentrations

The maximum detected total chromium and hexavalent chromium concentrations were used as the exposure point concentrations. This is a very conservative assumption because hexavalent chromium was detected in only three of the seven samples collected and the risk assessment assumes that the maximum detected concentration occurs throughout the offsite soil area.

3.3 Exposure Assumptions

Receptor-specific exposure assumptions were selected for each potentially complete exposure pathway. Exposure parameter values for human receptors were obtained preferentially from the following sources:

- TGM (PADEP 2021a)
- Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors (USEPA 2014)
- Exposure Factors Handbook (USEPA 2011a, and subsequent chapter updates)
- RAGS Volume 1: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment (USEPA 2004a)
- Other USEPA sources.

Site-specific information and professional judgment were also used to select exposure parameter values and are discussed below; receptor exposure parameters are presented in Table 3.

3.3.1 Exposure Duration

The exposure duration (ED) is an estimate of the period during which a receptor is exposed and is typically expressed in years. The ED for the current and future maintenance worker is the standard default ED of 25 years. The EDs for the current and future young child, youth, and adult recreators will be based primarily on the PADEP's default parameters based on age range or the default ED for residents (PADEP 2021a). The EDs for the potential receptors are:

- Maintenance worker – 25 years (PADEP 2021a; USEPA 2014)
- Fisherman – 3 years for a young child, 10 years for a youth, and 24 years for an adult
- Walker or runner – 3 years for a young child, 10 years for a youth, and 24 years for an adult

Typically, a young child is considered to be 0 to less than 6 years (USEPA 2014). In this case, it is assumed the exposure will be 3 years. Potential exposure of a very young child (less than 3 years old) is unlikely to occur near the Schuylkill River or along the Bartram's Garden Mile Trail, because it would not be safe to have such a child crawl or walk on the trail or near the river or the steep embankments along the trail. Therefore, the only potentially plausible young child receptor would be a young child aged 3 to less than 6 years old. The ED to be used for the young child will be 3 years.

3.3.2 Exposure Frequency

The exposure frequency (EF) is a receptor-specific estimate of how frequently (in days per year) exposure is expected to occur. The maintenance worker is assumed to cut the grass or work along Bartram's Garden Mile Trail for 1 day per month, 10 months per year. For the youth fisherman and adult fisherman, the EF for exposure to surface soil will be 90 days per year. This is one half of the nonresidential EF used to derive the soil MSCs. This corresponds to approximately twice a week during the nine warmest months of the year (March through November). The walker or runner youth or adult was assumed to be present for 180 days per year, which is the PADEP default nonresidential EF. This is approximately equal to exposure for 5 days per week during the nine warmest months (March through November). For the young child aged 3 to less than 6 years old, the EF is expected to be less. For the young child, an EF of 39 days per year or once per week during the warmer nine months of the year. In summary, the EFs for potential receptors are:

- Maintenance worker – 10 days per year
- Fisherman – 39 days per year for a young child, 90 days per year for a youth or adult

- Walker or runner – 39 days per year for a young child, 180 days per year for a youth or adult.

3.3.3 Exposure Time

The exposure time (ET), in hours per day, is a receptor-specific parameter that applies to inhalation exposure to fugitive dust. The ET value for the maintenance worker assumes that the individual spends a full workday once per month along Bartram's Garden Mile Trail and could potentially be exposed to chromium in soil. The fisherperson is assumed to be present for 2 hours per day. The walker or runner is assumed to be present for 1 hour per visit, although it is unlikely that this individual would spend that much time in this area because there are resting areas at Bartram's Garden. ETs for the potential receptors are summarized below:

- Maintenance worker – 8 hours per day
- Fisherperson – 2 hours per day
- Walker or runner – 1 hour per day.

3.3.4 Body Weight

The body weight (BW), in kilograms (kg), is a receptor-specific estimate that is obtained from either PADEP or USEPA sources or is calculated for the young child based on USEPA-recommended BWs for each age group (USEPA 2011, Table 8-24). The BWs used in the HHRA are provided below, by receptor:

- Maintenance worker – 80 kg
- Fisherperson – 18.3 kg for a young child, 45 kg for a youth, and 80 kg for an adult
- Walker or runner – 18.3 kg for a young child, 45 kg for a youth, and 80 kg for an adult.

3.3.5 Soil Ingestion Rate

The soil ingestion rates (IRs), in milligrams per day (mg/day), are receptor-specific estimates that apply to incidental soil ingestion. The IR for the maintenance worker is the USEPA (2014) worker default of 100 mg/day. This was selected assuming the maintenance worker would contact soil during their mowing or trail maintenance activities. The IR for the young child is based on the upper percentile USEPA-recommended values for daily soil ingestion (USEPA 2017, Table 5-1), which includes soil and outdoor settled dust. The IRs for the youth and adult recreational receptors are the PADEP's default soil IR for nonresidential receptors used to derive nonresidential soil MSCs as described below, by receptor:

- Maintenance worker – 100 mg/day
- Fisherperson – 90 mg/day for a young child, 50 mg/day for a youth and adult
- Walker or runner – 90 mg/day for a young child, 50 mg/day for a youth and adult.

3.3.6 Skin Surface Area

The skin surface area (SA) for dermal absorption, expressed in square centimeters (cm²), represents the exposed surface area of the skin that may contact soil and is highly dependent on the age of the receptor and nature of activities they are conducting. Values will assume exposure of face, hands, forearms, and lower legs for the recreational receptors. The SA for the maintenance worker is the USEPA (2014) default SA for workers. The SA

value for the young child recreator assumes exposure to face, hands, forearms, lower legs, and feet (USEPA 2004a, 2011a). The SA for the youth is the age-weighted average surface area of head, hands, forearms, and lower legs (USEPA 2011a, Table 7-2). The SA values to be used in the HHRA are as follows:

- Maintenance worker – 3,537 cm²
- Fisherman – 2,320 cm² for a young child, 3,616 cm² for a youth, and 5,196 cm² for an adult
- Walker or runner – 2,320 cm² for a young child, 3,616 cm² for a youth, and 5,196 cm² for an adult.

3.3.7 Soil to Skin Adherence Factor

The soil-to-skin adherence factor (AF), expressed in milligrams per square centimeter (mg/cm²), represents the amount of soil that adheres to the skin per unit of surface area during each event in which a receptor is in contact with soil. The AF for the maintenance worker was set at 0.12 mg/cm², which is the USEPA (2014) default AF for workers. The AF for the fisherman was set at 0.3 mg/cm², which is the geometric mean AF for reed gatherers (USEPA 2004a) who are assumed to contact moist soil during their activities. The residential AF was selected for the walker or runner receptors. The AFs to be used in the HHRA are described below, by receptor:

- Maintenance worker – 0.12 mg/cm²
- Fisherman – 0.3 mg/cm² for a young child, a youth, and an adult
- Walker/runner – 0.2 mg/cm² for a young child and 0.07 mg/cm² for a youth and adult.

3.4 Fate and Transport Evaluation

The soil concentrations (direct measurement data) were used to estimate ambient air concentrations based on the emission of particulates from exposed soil at the offsite soils area. The particulate emission factor (PEF) of 4.44×10⁹ cubic meters per kilogram (m³/kg) was derived using the USEPA (2002) equations to evaluate passive soil ambient air migration. The equation and assumptions used to derive the PEF are presented in Table 4.

3.5 Dermal Absorption

The dermal absorption factor is used to reflect desorption of a constituent from soil and absorption of a constituent across the skin. The dermal absorption factor for both trivalent chromium and hexavalent chromium is zero, indicating that this is not a complete exposure route (USEPA 2004a).

4 Toxicity Assessment

The toxicity assessment describes the relationship between the administered and/or the absorbed dose of a regulated substance, and the magnitude or likelihood of adverse health effects (USEPA 1989). For constituents that are known to cause or suspected of causing cancer, the toxicity assessment defines the relationship between the dose of the constituent or agent and the probability of inducing carcinogenic effects in humans or animal species of interest. For systemic toxicants, or constituents that give rise to toxic endpoints other than cancer and gene mutations (called noncarcinogenic effects), the toxicity assessment process determines a threshold value below which adverse noncarcinogenic effects are not expected in the general population, including sensitive

subgroups. Consistent with the TGM (PADEP 2021a), the most recent available toxicity values are used in the HHRA, including those obtained from the Integrated Risk Information System (IRIS; USEPA 2025).

The toxicity assessment discusses the two general categories of toxic effects (noncarcinogenic and carcinogenic) and constituent-specific toxicity values used to calculate potential risks for these two types of toxic effects. Consistent with Title 25 of the Pennsylvania Code, §250.605, the most recent available toxicity values were used in the risk assessment, including those from the following sources:

- IRIS (USEPA 2025)
- Land Recycling Program Toxicity Database (PADEP 2025b)
- Health Effects Assessment Summary Table (HEAST; USEPA 2011b)
- Minimal Risk Levels (Agency for Toxic Substances and Disease Registry [ATSDR] 2024).

4.1 Noncarcinogenic Effects

The potential for noncarcinogenic effects is estimated by comparing a calculated exposure dose with a reference dose (RfD) for oral and dermal exposure, and a reference concentration (RfC) for inhalation exposure with respect to each individual constituent. The RfD and RfC represent a daily exposure level that is designed to be protective of human health, even for sensitive individuals or subpopulations.

For a given constituent, the dose or concentration that elicits no adverse effect when evaluating the most sensitive response in the most sensitive species is referred to as the no observed adverse effect level. This level is used to establish noncancer toxicity values (RfCs). The RfC represents a daily exposure level that is not expected to cause adverse noncarcinogenic health effects. Chronic RfCs are used to assess long-term exposures ranging from 7 years to a lifetime. Subchronic RfCs are used to evaluate the potential for adverse health effects associated with exposure to constituents for 2 weeks to 7 years and are used in the hypothetical future construction worker evaluation.

Table 5 presents the RfDs used to assess oral and dermal exposures, and Table 6 presents the RfCs used to evaluate inhalation exposures. These tables also present the target sites associated with the noncarcinogenic toxicity values for each constituent varying with the exposure route. USEPA confidence values and uncertainty factors associated with the RfDs also are listed (USEPA 2025). The uncertainty factor represents areas of uncertainty inherent in extrapolation from the available data. The confidence levels (low, medium, and high) assess the degree of confidence in the extrapolation of available data. These levels account for data deficiencies or uncertainties, such as individual sensitivity and variability, interspecies variability (if animal data are used), database deficiency, and the extrapolation between exposure doses or durations.

4.2 Carcinogenic Effects

Cancer induction in humans and animals by constituents proceeds through a complex series of reactions and processes. Carcinogenic constituents may produce tumors at the point of application or contact, or in other tissues after they have been distributed throughout the body. Some constituents are associated with only one or two tumor types, while others may cause tumors at many different sites.

For carcinogens, the Guidelines for Carcinogen Risk Assessment (USEPA 2005) recommend a conservative default approach in which it is assumed that any level of exposure could cause cancer when data are not adequate to understand the mode of action. The USEPA (2005) guidelines recommend the consideration of both

linear and nonlinear dose-response models. However, the USEPA generally relies on the default approach and extrapolates from either the lowest dose or point of departure from laboratory animal data, using a mathematical model that plots a line through the zero point and, based on the slope of this dose-response line, assigns a risk level for increasingly smaller doses of a particular compound. While constructing the linear extrapolation from animal or human data, the USEPA uses values that are based on a 95 percent upper confidence limit of the dose-response slope. Therefore, any risk estimates derived from the model are based on values greater than those reported in the underlying studies. In addition, they are not the most likely estimates generated by applying the mathematical model to the actual study data, which is called the cancer slope factor (CSF) for oral and dermal exposure and the inhalation unit risk (IUR) for inhalation exposure.

The carcinogenic toxicity value used in the calculation of potential oral cancer risks is the CSF, which is derived from the conservative assumption that any dose level has a possibility of causing cancer (Table 7). The IUR for inhalation exposure is used in the indoor air models as the toxicity value (Table 8). The cumulative dose, regardless of the particular exposure period, determines the risk; therefore, CSFs are not derived separately for subchronic and chronic exposure periods.

4.3 Dermal Toxicity Values

The USEPA has not yet developed toxicity values for dermal exposures. For this reason, the oral toxicity values (reference dose oral [RfD_o] and cancer slope factor oral [CSF_o]) and the oral absorption efficiency were used to derive adjusted toxicity values (reference dose adjusted [RfD_a] and cancer slope factor adjusted [CSF_a]), adjusted to the absorbed dose, in assessing dermal exposure (USEPA 1989):

$$\text{RfD}_a = \text{RfD}_o \times \text{Oral Absorption Efficiency}$$

$$\text{CSF}_a = \text{CSF}_o / \text{Oral Absorption Efficiency}$$

The adjusted toxicity values presented in Table 5 (RfD_a) and Table 7 (CSF_a) represent the theoretical toxicity of the orally absorbed dose of a constituent secondary to dermal exposure. An oral absorption efficiency factor (or relative absorption factor) describes the ratio of the absorbed fraction of a constituent from a particular exposure medium to the fraction absorbed from the dosing vehicle used in the toxicity study for that constituent. Oral absorption efficiencies are constituent-specific because they depend on that constituent's unique physical-chemical properties. As a conservative measure, the USEPA (2004a) recommends that the oral toxicity values for organic constituents and many inorganic constituents should not be adjusted to assess dermal exposure (i.e., oral absorption efficiency = 1) and presents recommended oral absorption efficiencies for a few inorganics.

5 Risk Characterization

Risk characterization is the integration of the results of the data evaluation, exposure assessment, and toxicity assessment to yield a quantitative measure of cancer risk and noncancer hazard. Potential risks to human health are evaluated quantitatively by combining calculated exposure levels and toxicity data.

5.1 General Concepts

A distinction is made between noncarcinogenic and carcinogenic endpoints; therefore, two general criteria are used to describe risk:

- Hazard quotient (HQ) for noncarcinogenic effects

- Excess lifetime cancer risk (ELCR) for constituents evaluated as human carcinogens.

These criteria are discussed below.

5.1.1 Hazard Quotient for Noncancer Hazard

Exposure doses are averaged for the expected exposure period to evaluate noncarcinogenic effects. The HQ is the ratio of the estimated exposure dose and the RfC. Therefore, an HQ greater than 1 indicates that the estimated exposure level for that constituent exceeds the RfC. This ratio does not indicate the probability of an adverse effect. Although an HQ of less than 1 indicates that health effects should not occur, an HQ that exceeds 1 does not imply that health effects will occur, but that health effects are possible.

The sum of the HQs is the hazard index (HI). A limitation with the HI approach is that the assumption of dose additivity is applied to compounds that may induce different effects by different mechanisms of action. Consequently, the summing of HIs for several compounds that are not expected to induce the same type of effects, or that do not act by the same mechanism, may overestimate the potential for toxic effects. Consistent with USEPA (1989) risk assessment guidelines for chemical mixtures and as outlined by the PADEP (2021a), if the calculated HI exceeds 1 by summing several HQs for constituents that are not expected to induce the same type of effects, or that do not act by the same mechanism, it is incumbent upon a risk assessor to segregate HQs by target organ/critical effect (USEPA 1989) and to derive separate HIs for each target-organ/critical-effect group.

5.1.2 Excess Lifetime Cancer Risk

Potential cancer risks are estimated as the incremental increased probability of an individual developing cancer during a lifetime as a result of pathway-specific exposure to carcinogenic constituents, or the ELCR. To calculate the ELCR, the estimated daily intake of a carcinogen averaged throughout a lifetime is multiplied by a constituent-specific slope factor. Consideration is given to exposure to multiple constituents, as well as multiple exposure pathways, when calculating the risk of an individual developing cancer. This is accomplished by summing ELCRs for each constituent within a given pathway and across pathways within a scenario.

When evaluating potential individual cancer risks, the USEPA (1989) has established an acceptable risk range of 1 in 1,000,000 (1×10^{-6}) to 1 in 10,000 (1×10^{-4}) (National Contingency Plan, 40 Code of Federal Regulations 300.430). The PADEP used a target risk of 10^{-5} to derive the MSCs (Title 25 of the Pennsylvania Code, Chapter 250, Subchapter C), which is the midpoint of the federal acceptable risk range. The cumulative ELCR should not be greater than 1×10^{-4} [Title 25 of the Pennsylvania Code §250.702(a)(3)(ii)].

5.2 Risk Characterization Results

Risk and hazard estimates were calculated using the equations presented in Table 2 for exposure to soil along Bartram's Garden Mile Trail or the Schuylkill River near the offsite soils area. The result of the intermediate calculation is presented in Table 4 for the PEF. Finally, the receptor parameters are presented in Table 3. Risk and hazard calculations are presented in Tables 9 through 15 and are summarized in Table 16. The results are discussed below, by receptor.

5.2.1 Current or Future Maintenance Worker

Maintenance workers are assumed to mow the grass and maintain the trail. The calculated ELCR was 5×10^{-8} and the calculated HI was 0.009, as presented in Table 9. The results are well below the PADEP cumulative risk and noncancer hazard benchmarks of 1×10^{-4} and 1, respectively. Therefore, there are no adverse effects expected for this receptor.

5.2.2 Current or Future Fisherpersion

Individuals fishing along the Schuylkill River near the Site could contact chromium in soil that has migrated toward the offsite soils area. Potentially exposed individuals include a young child, a youth, and/or an adult. The results of the risk and hazard calculations are presented in Tables 10, 11, and 12, respectively. For the adult fisherpersion, the ELCR and HI were calculated to be 2×10^{-7} and 0.004, respectively, and are presented in Table 10. Table 11 presents the calculated results for a youth fisherpersion potentially exposed to soils. The ELCR was calculated to be 5×10^{-7} and the HI was calculated to be 0.008. Finally, potential exposure of a young child fisherpersion was evaluated and could result in an ELCR of 3×10^{-7} ; the calculated HI was 0.01 (Table 12). The results are all less than the PADEP cumulative risk benchmark of 1×10^{-4} and noncancer hazard benchmark of 1. Therefore, there are no adverse effects expected for this receptor. The calculation results are presented in Table 16.

5.2.3 Current or Future Walker/Runner

Bartram's Garden Mile Trail is used for walking and running. Young children, youth, and adults could walk or run on the trail and if they stray off the paved trail, could come into contact with chromium containing soil although some of the sample points are not readily accessible and there is no information to indicate that all soil that may be contacted is contaminated/. As explained in Section 2.4 above, not all sample results detected hexavalent chromium. The potential risks and hazards calculated for an adult walker or runner are presented in Table 13. The calculated ELCR was 4×10^{-7} and the calculated HI was 0.008. Potential exposure of youth ages 6 to 16 could result in an ELCR of 9×10^{-7} and an HI of 0.02, as presented in Table 14. Finally, Table 15 presents the calculation results for a young child with an ELCR and HI of 3×10^{-7} and 0.01. These results are less than the PADEP cumulative risk and noncancer hazard benchmarks of 1×10^{-4} and 1, respectively. Therefore, there are no adverse effects expected for this receptor.

6 Uncertainty Analysis

The risk estimates presented in this HHRA Report are conservatively high estimates of potential risks associated with exposure to chromium detected in surface soil downgradient of the Site. Uncertainty is inherent in the risk assessment process and is discussed in this section. Each of the three basic building blocks for risk assessment (data evaluation, exposure assessment, and toxicity assessment) contributes to uncertainties. Such uncertainty is accounted for by using conservatively high assumptions wherever site-specific data are unavailable.

6.1 Data Evaluation

The data evaluation step can lead to uncertainty in the risk estimates, as discussed below.

6.1.1 Sampling Location and Sample Collection

This risk assessment assumes that the available monitoring data adequately describe the occurrence of constituents in surface soil in the offsite soils area. Environmental sampling introduces uncertainty. Such uncertainty can be reduced through a well-designed sampling plan, use of appropriate sampling and decontamination techniques, and implementation of laboratory data validation and quality assurance (QA) and quality control (QC). This risk assessment used data collected by both Arcadis and the PADEP that were analyzed by two laboratories. The sample locations were identified with PADEP concurrence. The data used in the HHRA meet QA and QC requirements, and are appropriate for use in a risk assessment.

6.1.2 Laboratory Procedures

Constituents that are detected greater than laboratory method detection limits but less than reporting limits (RLs) are qualified as estimated (J) in laboratory data packages. These values typically are used in risk assessment calculations as if they are not estimated, but there is uncertainty in the actual concentrations of these J-qualified results. For this risk assessment, the maximum detected concentrations of hexavalent chromium and total chromium were used as the EPCs. These concentrations were not considered to be estimated values. As a result, there is confidence that the measured concentrations reflect actual concentrations at those locations. Nondetected results are evaluated using RLs in risk assessment calculations, as discussed in Section 6.4.

Sample results obtained from laboratories are expected to meet data quality requirements for use in risk assessment calculations. Risk assessments assume that the QC methods used at accredited laboratories are adequate to ensure QA and QC, but this is an uncertainty. The laboratory analytical reports from the sampling events are presented in Appendix A.

6.1.3 Identification of Constituents of Concern

COCs were chosen based on communications with PADEP. Uncertainty is inherent in the selection of COCs for risk assessments. The screening concentrations used for human health screening were USEPA-recommended screening levels and PADEP MSCs. While total chromium was detected at a maximum concentration less than the PADEP and USEPA screening levels, it was included as a COC. Hexavalent chromium was detected at concentrations less than the residential soil MSC and greater than the USEPA residential soil RSL. Using a traditional approach, only hexavalent chromium would be selected as a COC. Nonetheless, both hexavalent chromium and total chromium were included as COCs in the HHRA which is a conservative approach.

6.2 Exposure Assessment

The exposure assessment also contributes uncertainty to the risk assessment. Bartram's Garden Mile Trail is a path along the Schuylkill River. There are no picnic areas along this portion of the trail, or park benches. Therefore, it is unlikely that walkers or runners on the trail would stop and contact soil. Similarly, the bank of the Schuylkill River adjacent to the trail could be used for fishing, but there are other locations closer to Bartram's Garden that are more conducive to fishing. Nonetheless, potential exposure of these potential receptor populations was evaluated in the HHRA. Uncertainty is inherent in the exposure assessment, exposure scenarios, EPCs, and receptors. The exposure assumptions were chosen to err on the side of conservatism, potentially leading to an overestimation of potential risk.

As a conservative measure, the maximum detected constituent concentrations in the offsite soils area were used in the HHRA. The maximum concentration provides a highly biased representation of COC distribution, which often results in overestimates of exposure. The exposure assumptions were selected to provide a reasonable maximum exposure evaluation. They were selected for use in the HHRA to provide an evaluation that is health protective and conservative.

6.3 Toxicity Assessment

The toxicity values and other toxicological information used in this HHRA Report are associated with uncertainty. Many toxicity values are developed using the results of studies in which laboratory animals are exposed to high doses of particular constituents throughout a lifetime. As such, these studies do not represent realistic examples of environmental exposures. In addition, humans are different from laboratory animals. Many, if not most, animals used for laboratory studies are genetically designed to be more sensitive than humans to specific compounds. In addition, the effects shown by animals in the high-dose studies are often very different from effects reported by humans in parallel epidemiological studies. This is because a particular compound may have a different mode of action in laboratory animals than it does in humans. Even epidemiological studies, which are generally preferable to animal toxicity studies, are characterized by several uncertainties, such as differential exposures and unknown (and uncontrolled) doses.

Finally, uncertainty is associated with the evaluation of noncarcinogenic and/or carcinogenic constituents that were detected in environmental media at the Site but for which toxicity values are not available. Quantitative risk and/or hazard estimates cannot be calculated for the exposure routes for COCs for which oral and inhalation toxicity values are unavailable. For example, an RfC is unavailable for trivalent chromium and the HQ is based only on ingestion exposure. The lack of a toxicity value for this constituent indicates that the estimated cumulative HIs for each receptor are underestimated, and the degree to which risk estimates are underestimated is also unknown.

6.4 Nondetected Constituents

Some constituents were identified as having an RL greater than the screening levels. In analytical chemistry, detection limits are calculated values that represent the lowest concentration at which the analytical laboratory has demonstrated that target analytes can be reliably measured and reported with a certain degree of confidence based upon accepted laboratory test procedures approved by USEPA. Laboratory detection limits can vary depending on the technique used to estimate the detection limit, as well as the sample matrix, sample dilution, interferences, model accuracy, and data quality objectives.

6.5 Risk Characterization

Constituent-specific risks are generally assumed to be additive (USEPA 1989). Noncancer hazards are thought to be additive if they act on the same target organ. This oversimplifies the fact that some constituents may act synergistically ($1 + 1 = \text{greater than } 2$) or antagonistically ($1 + 1 = \text{less than } 2$). The overall effect of these mechanisms on multiconstituent, multimedia risk estimates is difficult to determine, but the effects are usually assumed to balance.

Consistent with USEPA (1989, 2004b, 2009) guidance and Pennsylvania Cleanup Standards Scientific Advisory Board recommendations from their April 4, 2018, meeting, cumulative risk and hazard estimates are reported using only one significant digit. As noted in An Examination of EPA Risk Assessment Principles and Practices (USEPA 2004b), it is reasonable to present interim calculations in as many as two significant digits because this practice allows reviewers to verify the accuracy of risk calculations. However, final cumulative risk estimates should be reported to their proper level of precision. Because many inputs to risk assessment calculations are defined using one significant digit, the USEPA considers the proper level of precision for final risk and hazard estimates to be one significant digit (USEPA 2004b). This risk assessment presents final risk and hazard estimates at two significant digits in the calculation tables.

7 Ecological Screening

This section evaluates potential ecological receptors at the Site, and therefore the offsite soils area as well. It is beyond the scope of the PADEP request but added for completeness as this screening is usually part of a risk assessment.

7.1.1 Wetlands Inventory

Arcadis conducted an evaluation of wetlands in the area via the National Wetlands Inventory (NWI) wetlands mapping tool provided by the U.S. Fish & Wildlife Service (USFWS [2024]). NWI maps are used as a guide, along with other data, to indicate the potential presence of wetlands. The presence of an NWI feature is not a definitive indicator that a wetland or waterbody is present. The NWI data indicated a 0.08-acre freshwater emergent wetland habitat classified as a PEM1Fx, which is located approximately 0.1 mile northeast of the Site. The NWI data also indicated a 0.18-acre freshwater emergent wetland habitat classified as a PEM1Cx, which is located approximately 0.2 mile north of the boundary of the Site. Lastly, the NWI data indicated a 21,690.68-acre riverine habitat classified as a R1UBV, which is the Schuylkill River located adjacent to the Site and offsite soils area. The Site is located roughly 3.5 miles from where the Schuylkill River feeds into the Delaware River. An NWI feature map is provided in Appendix B. In conclusion, the offsite soil is not expected to impact wetlands in the area.

7.1.2 Pennsylvania Natural Diversity Inventory

Arcadis completed a Pennsylvania Natural Diversity Inventory (PNDI) survey for the Site and surrounding area in December 2024 as part of the Act 2 evaluations. Survey responses from the Pennsylvania Game Commission and USFWS indicated that there were no known adverse effects. The initial responses from both the Pennsylvania Department of Conservation and Natural Resources (PADCNR) and Pennsylvania Fish and Boat Commission indicated that there was a potential adverse effect and that further review was required. Following their subsequent reviews, the agencies confirmed that no adverse effects are anticipated within the project area. The PNDI survey and PADCNR and Pennsylvania Fish & Boat Commission clearance letters are provided in Appendix B. In conclusion, the offsite soil is not expected to impact ecological receptors in the area.

8 Summary and Conclusions

This HHRA Report summarizes the findings of the risk assessment completed for the offsite soils area. This HHRA Report interprets the data as they relate to COCs in site media, potential migration of COCs in each media, determination of COCs, and evaluation of potential effects of the COCs to human health.

The HHRA was completed based on communications with the PADEP to evaluate if potential exposure to total chromium and hexavalent chromium concentrations detected in soil pose a significant risk to human health. The HHRA involved the derivation of quantitative risk and hazard estimates based on relevant exposure scenarios identified in the exposure assessment. The exposure scenarios evaluated include:

- Potential exposure of a current or future onsite maintenance worker contacting soil while mowing the grass or maintaining the trail.
- Potential exposure of a current or future fisherperson. It was assumed that a young child, youth, or adult could have direct-contact exposure to surface soil (e.g., ingestion, dermal, inhalation).
- Potential exposure of a current or future walker or runner. It was assumed that a young child, youth, or adult could have direct-contact exposure to surface soil (e.g., ingestion, dermal, inhalation).

The results indicate that all of the calculated risks and noncancer hazards were less than the PADEP and USEPA cumulative risk benchmark of 1×10^{-4} or a noncancer hazard of 1.

9 References

- Arcadis. 9/2025. Act 2 Remedial Investigation Report and Cleanup Plan for Soils Only. Former 51st Street Terminal, 1630-1646 South 51st Street, Philadelphia, Pennsylvania, Facility ID: 51-10420. September 4.
- ATSDR. 2012. Toxicological Profile for Chromium. U.S. Department of Health and Human Services, Public Health Service, Atlanta, Georgia. Available at: [ATSDR Chromium Tox Profile](#). September.
- ATSDR. 2024. Minimal Risk Levels for Hazardous Substances. Available at: <http://www.atsdr.cdc.gov/mrls/index.html>.
- EDR. 2021. The EDR Radius Map™ Report with Geocheck – 1646 S. 51st St, Philadelphia, PA, Inquiry Number 6710972.2s. October 19.
- PADEP. 2021a. Land Recycling Program Technical Guidance Manual, Document Number: 261-0300-101. Available at: <http://www.dep.pa.gov/Business/Land/LandRecycling/Standards-Guidance-Procedures/Guidance-Technical-Tools/Pages/Technical-Guidance-Manual.aspx>. March 27.
- PADEP. 2021b. Statewide Health Standards. Available at: <http://www.dep.pa.gov/Business/Land/LandRecycling/Standards-Guidance-Procedures/Pages/Statewide-Health-Standards.aspx>. November.
- PADEP. 2025a. Email from A. Costello (PADEP) to Anthony Reitano (Herold Law) Re: Confirmed DEP / Alliance Call. January 15. 11:48 a.m.
- PADEP. 2025b. Land Recycling Program Toxicity Database. Available at: <https://www.pa.gov/agencies/dep/programs-and-services/land/land-recycling-program/standards->

- [guidance-and-procedures/guidance-and-technical-tools.html](#)USEPA. 1988. Superfund Exposure Assessment Manual. Office of Remedial Response, Washington, DC. April. EPA/540/1-88/001
- USEPA. 1989. Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual (Part A). Interim Final. EPA/540/1-89/002. Office of Emergency and Remedial Response, Washington, D.C.
- USEPA. 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Solid Waste and Emergency Response, Washington, DC. OSWER 9355.4-24. December
- USEPA. 2004a. Risk Assessment Guidance for Superfund Volume Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). Final. EPA/540/R/99/005. Office of Superfund Remediation and Technology Innovation, Washington, D.C.
- USEPA. 2004b. An Examination of EPA Risk Assessment Principles and Practices. Staff Paper Prepared for the U.S. Environmental Protection Agency by Members of the Risk Assessment Task Force. EPA/100/B-04/001. March.
- USEPA. 2005. Guidelines for Carcinogen Risk Assessment. EPA/630/P-03/001F. March.
- USEPA. 2005b. Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens. Risk Assessment Forum, Washington, D.C. EPA/630/R-03/003F
- USEPA. 2009. Supplemental Guidance for Inhalation Risk Assessment, or Part F Volume I of Risk Assessment Guidance for Superfund. Human Health Evaluation Manual. OSWER No. 9285.7-82. January.
- USEPA. 2011a. Exposure Factors Handbook 2011 Edition (Final). National Center for Environmental Assessment, Office of Research and Development. Washington, DC. EPA/600/R-090/052F. September.
- USEPA. 2011b. Health Effects Assessment Summary Tables. Office of Research and Development and Office of Emergency and Remedial Response, Washington, DC. Current as of December 2011. Available online at: <https://epa-heat.ornl.gov/>
- USEPA. 2014. Human Health Evaluation Manual, Supplemental Guidance, Update of Standard Default Exposure Factors. February – issued April. OSWER-Directive-9200-1-120. Available at: https://www.epa.gov/sites/default/files/2015-11/documents/oswer_directive_9200.1-120_exposurefactors_corrected2.pdf
- USEPA. 2017. Update for Chapter 5 of the Exposure Factors Handbook: Soil and Dust Ingestion. EPA/600/R-17/384F. National Center for Environmental Assessment, Office of Research and Development. September. Available online at: <https://www.epa.gov/expobox/exposure-factors-handbook-chapter-5>.
- USEPA. 2024. Regional Screening Level (RSL) Table and User's Guide. November. Available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.
- USEPA. 2025. Integrated Risk Information System. Office of Research and Development, National Center of Environmental Assessment (NCEA). Available at: <http://www.epa.gov/iris>.
- USFWS. 2024. National Wetland Inventory. Available online at <http://www.fws.gov/wetlands/Wetlands-Mapper.html>. United States Department of the Interior, United States Fish and Wildlife Service.

Tables

Table 1
Soil Data
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania



Sample ID:	Representative Pennsylvania Soil MSC (lower of Soil to GW and Residential Direct Contact Screening Values) (0 to 2 feet bgs)	USEPA (2024a) Residential Soil Regional Screening Level	S-3		S-5		S-6		DEP51-S7-240813		DEP51-S8		DEP51-S8		S-16	
Lab ID:			410-188472-10	410-188472-11	410-188472-12	L2445674-10	L2441149-08	L2444177-02	410-188472-2							
Collection Date:			9/16/2024	9/16/2024	9/16/2024	8/13/2024	7/22/2024	8/6/2024	9/16/2024							
Sample Depth:			0-0.5	0-0.5	0-0.5	0-5	0-5	0-0.5	0-0.5							
Sample Matrix:			Soil	Soil	Soil	SOIL	SOIL	SOIL	Soil							
Analyte:	(mg/kg)	(mg/kg)	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
Inorganics																
Chromium, Total	190,000	12,000	5		300		250		660		1,110		163		79	
Chromium, Hexavalent	180	0.95	0.011	U	24		5.8		0.466	J	0.265	U	0.246	U	0.42	U

Notes:

- Bold** indicates concentration exceeds screening level (USEPA 2024).
- Total chromium evaluated using trivalent chromium medium specific concentrations (MSCs; PADEP 2021).

Acronyms and Abbreviations:

bgs = below ground surface
 Conc = concentration
 GW = groundwater
 mg/kg = milligram per kilogram
 PADEP = Pennsylvania Department of Environmental Protection
 Q = data qualifier
 USEPA = United States Environmental Protection Agency

Qualifiers:

J = Estimated value.
 U = Not detected at the reporting limit.

References:

PADEP. 2021. Statewide Health Standards. Available at: <http://www.dep.pa.gov/Business/Land/LandRecycling/Standards-Guidance-Procedures/Pages/Statewide-Health-Standards.aspx>. November.
 USEPA. 2024. Regional Screening Level (RSL) Table and User's Guide. November. Available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

Table 2
Risk and Hazard Equations for Recreational Receptor Exposure to Soil
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

ROUTE-SPECIFIC RISK/HAZARD:

$$\begin{aligned} \text{Oral:} \quad \text{ELCR}_o \quad &= \frac{\text{EPC}_s \times \text{ADAF} \times \text{FI} \times \text{IR}_s \times \text{EF} \times \text{ED}}{(10^6 \text{ mg/kg}) \times \text{BW} \times (\text{AT}_C \text{ or } \text{AT}_{\text{NC}}) \times ([1/\text{CSF}_o] \text{ or } \text{RfD}_o)} \\ \text{or HQ}_o & \\ \text{Dermal:} \quad \text{ELCR}_d \quad &= \frac{\text{EPC}_s \times \text{ADAF} \times \text{SSA}_s \times \text{SAR} \times \text{ABS}_d \times \text{EF} \times \text{ED}}{(10^6 \text{ mg/kg}) \times \text{BW} \times (\text{AT}_C \text{ or } \text{AT}_{\text{NC}}) \times ([1/\text{CSF}_d] \text{ or } \text{RfD}_d)} \\ \text{or HQ}_d & \\ \text{Inhalation:} \quad \text{ELCR}_i \quad &= \frac{\text{EPC}_s \times \text{ADAF} \times \text{ET} \times \text{CF1} \times \text{EF} \times \text{ED}}{\text{PEF} \times (\text{AT}_C \text{ or } \text{AT}_{\text{NC}}) \times ([1/\text{IUR} \times 10^{-3} \text{ mg}/\mu\text{g}] \text{ or } \text{RfC})} \\ \text{or HQ}_i & \\ \text{PEF}_{\text{wind}} &= \frac{\text{Q}/\text{C}_{\text{wind}} \times (3,600 \text{ sec/hr})}{\text{RPF} \times (1-V) \times (\text{U}_m/\text{U}_t)^3 \times \text{F}(x)} \quad \text{used for nonvolatiles} \end{aligned}$$

TOTAL CANCER RISK: $\text{ELCR} = \text{ELCR}_o + \text{ELCR}_d + \text{ELCR}_i$

TOTAL NONCANCER HAZARD: $\text{HI} = \text{HQ}_o + \text{HQ}_d + \text{HQ}_i$

Acronyms and Abbreviations:

ABS _d	Dermal absorption efficiency (unitless).
ADAF	Age-Dependent Adjustment Factor for evaluation of risk from constituents with a mutagenicity mode of action (Table 3).
AT _C	Averaging time for cancer effects (days) (Table 3).
AT _{NC}	Averaging time for non-cancer effects (days) (Table 3).
BW	Body weight (kg) (Table 3).
CF	Conversion factor 0.042 day per hour.
cm ²	Square centimeter
CSF	Cancer slope factor for oral (CSF _o) or dermal (adjusted to an absorbed dose, CSF _a) exposure (kg-day/mg [inverse mg/kg/day]) (Table 7).
ED	Exposure duration (years) (Table 3).
EF	Exposure frequency (days/year) (Table 3).
ELCR	Excess lifetime cancer risk (unitless) from the following pathways: oral (o), dermal (d), and inhalation (i).
EPC _s	Exposure point concentration in soil (mg/kg).
ET	Exposure time (hrs/day) (Table 3).
FI	Fraction ingested from area of concern (unitless) (Table 3).
F(x)	Function of x; F(x) = 0.18 × (8x ³ + 12x) × exp(-x ²) (USEPA 2002 default).
g/m ² /sec	Gram per square meter per second
HI	Hazard index for noncancer effects (unitless); sum of the HQs.
HQ	Hazard quotient for noncancer effects (unitless) from the following pathways: oral (o), dermal (d), and inhalation (i).
IR _s	Ingestion rate of soil (mg/day) (Table 3).
IUR	Inhalation unit risk (m ³ /mg) (Table 8).
kg-day/mg	Kilogram per day per milligram
kg/m ³	Kilogram per cubic meter
m ³ /kg	Cubic meter per kilogram
m ³ /mg	Cubic meter per milligram
mg/μg	Milligram per microgram
mg/cm ² /day	Milligram per square centimeter per day
mg/kg	Milligram per kilogram
mg/kg/day	Milligram per kilogram per day
mg/m ³	Milligram per cubic meter
m/sec	Meter per second
PEF	Particulate emission factor
PEF _{wind}	Particulate emission factor due to wind (m ³ /kg) (Table 4).
Q/C _{wind}	Particulate emission flux per unit concentration [(g/m ² /sec)/(kg/m ³)] (Table 4).
RfC	Reference concentration (mg/m ³) (Table 6).
RfD	Reference dose for oral (RfDo) and dermal (adjusted to an absorbed dose, RfDa), exposure (mg/kg/day) (Table 5).
RPF	Respirable particle fraction.
SAR	Soil-to-skin adherence rate (mg/cm ² /day) (Table 3).
SSA _s	Exposed skin surface area for soil contact (cm ²) (Table 3).
U _m	Mean annual wind speed (m/sec) (Table 4).
USEPA	United States Environmental Protection Agency
U _t	Equivalent threshold value of windspeed at 7 meters (11.32 m/sec) (Table 4).
V	Fraction of vegetative cover (unitless) (Table 4).
x	Intermediate value in the calculation of PEF; x = 0.886 × (U _t /U _m) (Table 4).

Reference:

USEPA. 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Solid Waste and Emergency Response, Washington, DC. OSWER 9355.4-24. December.

Table 3
Receptor Exposure Parameters
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania



Parameter	Symbol	Units	Maintenance		Recreational Receptor - Fisherpersion						Recreational Receptor - Walker/Runner					
			Worker		Child		Youth		Adult		Child		Youth		Adult	
			Value	[ref]	(3 to 6 years)	[ref]	(6 to 16 years)	[ref]	(16 to 30 years)	[ref]	(3 to 6 years)	[ref]	(6 to 16 years)	[ref]	(16 to 30 years)	[ref]
<i>General Factors</i>																
Averaging Time (cancer)	AT _c	days	25,550	[1,2,a]	25,550	[1,2,a]	25,550	[1,2,a]	25,550	[1,2,a]	25,550	[1,2,a]	25,550	[1,2,a]	25,550	[1,2,a]
Averaging Time (noncancer)	AT _{nc}	days	9,125	[1,2,a]	1,095	[1,2,a]	3,650	[1,2,a]	8,760	[1,2,a]	1,095	[1,2,a]	3,650	[1,2,a]	8,760	[1,2,a]
Body Weight	BW	kg	80	[1,2]	18.3	[4]	45	[6]	80	[2]	18.3	[4]	45	[6]	80	[2]
Exposure Frequency	EF	days per year	10	PJ [b]	39	PJ [c]	90	PJ [4,g]	90	PJ [4,g]	39	PJ [c]	180	PJ [4,g]	180	PJ [4,g]
Exposure Duration	ED	years	25	PJ [1,b]	3	PJ [d]	10	[4]	24	[4]	3	PJ [d]	10	[4]	24	[4]
Age-Dependent Adjustment Factor	ADAF	unitless	1	[7]	3	[7]	3	[7]	1	[7]	3	[7]	3	[7]	1	[7]
Conversion Factor	CF1	day per hour	0.042		0.042		0.042		0.042		0.042		0.042		0.042	
<i>Inhalation</i>																
Exposure Time	ET	hour per day	8	[2]	2	PJ	2	PJ	2	PJ	1	PJ	1	PJ	1	PJ
<i>Soil - Ingestion (Oral)</i>																
Incidental Soil Ingestion Rate	IR _s	mg/day	100	[2]	90	[5,e]	50	[3]	50	[3]	90	[5,e]	50	[3]	50	[3]
Fraction Ingested from Source	FI	unitless	1		1	PJ	1	PJ	1	PJ	1	PJ	1	PJ	1	PJ
<i>Soil - Dermal Contact</i>																
Exposed Skin Surface Area	SSA _s	cm ²	3,527	[2]	2,320	[4,6,f]	3,616	[4,f]	5,196	[4,f]	2,320	[4,6,f]	3,616	[4,f]	5,196	[4,f]
Soil-to-Skin Adherence Rate	SAR	mg/cm ² /day	0.12	[2]	0.3	[6,g]	0.3	[6,g]	0.3	[6,g]	0.2	[2,h]	0.07	[2,h]	0.07	[2,h]

Notes:

- [a] The averaging time for cancer risk is the expected lifespan of 70 years, expressed in days.
The averaging time for noncancer hazard is the total exposure duration, expressed in days.
- [b] The maintenance worker is assumed to mow the grass and maintain the trail for 10 days a year (approximately once a month from March through November) for 25 years.
- [c] The young child recreator is assumed to be present 1 day per week for 9 months during the warmest months of the year (March to November).
- [d] Potential exposure of a very young child less than 3 years old is very unlikely to occur because it would not be safe to have such a child crawl around or walk unsteadily within the riverbank.
- [e] The soil ingestion rate for the young child is the upper percentile recommended values for daily soil ingestion, which includes soil and outdoor settled dust; the PADEP nonresidential default value for the adolescent and adult.
- [f] The skin surface area is the age weighted average of the surface area for the head, hands, forearms, and lower legs for the adolescent and adult, and includes feet for the young child.
- [g] The exposure frequency for the fisherpersion is half the default nonresidential exposure frequency and the default nonresidential exposure frequency for the walker or runner.
- [f] The incidental soil ingestion rate for the trespasser was set at the central tendency soil ingestion rate for 6 to less than 21 years (USEPA 2017).
- [g] The soil to skin adherence rate is the geometric mean adherence factor for reed gatherers who are assumed to contact moist soil during their activities.
- [h] The soil to skin adherence rate is the USEPA standard default.

Acronyms and Abbreviations:

- cm² = square centimeter
- kg = kilogram
- PJ = professional judgment
- mg/cm²/day = milligram per square centimeter per day
- mg/day = milligram per day
- PADEP = Pennsylvania Department of Environmental Protection
- USEPA = United States Environmental Protection Agency

Table 3
Receptor Exposure Parameters
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

References [ref]:

[1] USEPA. 1989. Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual (Part A). Interim Final. EPA/540/1-89/002. Office of Emergency and Remedial Response, Washington, D.C.

[2] USEPA. 2014. Human Health Evaluation Manual, Supplemental Guidance, Update of Standard Default Exposure Factors. February – issued April. OSWER-Directive-9200-1-120. Available at: https://www.epa.gov/sites/default/files/2015-11/documents/oswer_directive_9200.1-120_exposurefactors_corrected2.pdf

[3] PADEP. 2021. Land Recycling Program Technical Guidance Manual, Document Number: 261-0300-101. Available at: [http://www.dep.pa.gov/Business/Land/LandRecycling/Standards-Guidance-Procedures/Guidance- Technical-Tools/Pages/Technical-Guidance-Manual.aspx](http://www.dep.pa.gov/Business/Land/LandRecycling/Standards-Guidance-Procedures/Guidance-Technical-Tools/Pages/Technical-Guidance-Manual.aspx). March 27.

[4] USEPA. 2011. Exposure Factors Handbook 2011 Edition (Final). National Center for Environmental Assessment, Office of Research and Development. Washington, DC. EPA/600/R-090/052F. September.

[5] USEPA. 2017. Update for Chapter 5 of the Exposure Factors Handbook: Soil and Dust Ingestion. EPA/600/R-17/384F. National Center for Environmental Assessment, Office of Research and Development. September. Available online at: <https://www.epa.gov/expobox/exposure-factors-handbook-chapter-5>.

[6] USEPA. 2004. Risk Assessment Guidance for Superfund Volume Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). Final. EPA/540/R/99/005. Office of Superfund Remediation and Technology Innovation, Washington, D.C.

[7] USEPA. 2005. Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens. Risk Assessment Forum, Washington, D.C. EPA/630/R-03/003F

Table 4
Soil Particulate Emission Factors
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Particulate Emission Factor:

$PEF_{wind} = 4.44E+09 \text{ m}^3/\text{kg}$ Particulate emission factor (m^3/kg) due to wind under passive conditions; site-specific using USEPA (2002) equation.

Particulate Emission Factor for Wind-Blown Fugitive Dust for Commercial/Industrial and Residential Scenarios

$$PEF_{wind} = \frac{Q}{C_{wind}} \times \left[\frac{3600}{0.036 \times (1 - V) \times \left(\frac{U_m}{U_t}\right)^3 \times F(x)} \right]$$

Where:

$F(x)$	=	0.0827	unitless	Function of x ; $F(x) = 0.18 \times (8x^3 + 12x) \times \exp(-x^2)$ (USEPA 2002 default).
Q/C_{wind}	=	93.77	$(\text{g}/\text{m}^2/\text{sec})/(\text{kg}/\text{m}^3)$	Wind-related particulate emission flux per unit concentration (USEPA 2002 default).
RPF	=	0.036	$\text{g}/\text{m}^2/\text{hour}$	Respirable particle fraction (USEPA 2002 default).
U_m	=	4.2	m/sec	Mean annual wind speed for Philadelphia, Pennsylvania (NOAA 2020).
U_t	=	11.32	m/sec	Equivalent threshold value of windspeed at 7 meters (USEPA 2002 default).
V	=	0.5	unitless	Fraction vegetative cover (USEPA 2002 default).
x	=	2.388	unitless	Function of U_t/U_m ; $x = 0.886 \times (U_t/U_m)$ (USEPA 2002 default).

Acronyms and Abbreviations:

$\text{g}/\text{m}^2/\text{sec}$ = gram per square meter per second
 kg/m^3 = kilogram per cubic meter
 m^3/kg = cubic meter per kilogram
 m/sec = meter per second
 NOAA = National Oceanic and Atmospheric Administration
 USEPA = United States Environmental Protection Agency

References:

NOAA. 2020. Comparative Climatic Data for the United States Through 2020. Mean Annual Windspeed. Available online at: <https://www.ncei.noaa.gov/pub/data/ccd-data/wndspd20.dat>
 USEPA. 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. Solid Waste and Emergency Response, Washington, DC. OSWER 9355.4-24. December.

Table 5
Noncarcinogenic Toxicity Values for Oral and Dermal Exposure
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
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Constituent	Oral RfD (mg/kg/day) [a]				Adjustment Factor	Dermal RfD (mg/kg/day) [b]		Subchronic		Chronic	
	[ref]		[ref]			Subchronic	Chronic	Target Site/ Critical Effect	Confidence Level/ Uncertainty Factor	Target Site/ Critical Effect	Confidence Level/ Uncertainty Factor
	Subchronic	Chronic	Subchronic	Chronic							
Metals											
Chromium III	1.5E+00	HEAST	1.5E+00	IRIS	0.013	2.0E-02	2.0E-02	NA	NA \ 1000	NA	Low \ 100
Chromium VI	1.7E-03	ATSDR	9.0E-04	IRIS	0.025	4.4E-05	2.3E-05	Hematologic	NA \ 100	Gastrointestinal	Medium-High \ 100

Notes:

[a] Toxicity values were obtained following USEPA recommended hierarchy (USEPA 2021).

[b] The oral-to-dermal adjustment factor (oral absorption efficiency) as used to calculate the dermal reference dose (RfD) values (USEPA 2004).

RfD (dermal) = RfD (oral) × Adjustment Factor (oral absorption efficiency).

Acronyms and Abbreviations:

ATSDR = Agency for Toxic Substances Disease Registry (ATSDR 2012)

HEAST = Health Effects Summary Table (USEPA 2011)

IRIS = Integrated Risk Information System (USEPA 2025)

mg/kg/day = milligram per kilogram per day

NA = not available or applicable

ref = reference

RfD = reference dose

USEPA = United States Environmental Protection Agency

References:

ATSDR. 2012. Toxicological Profile for Chromium. U.S. Department of Health and Human Services, Public Health Service, Atlanta, Georgia. Available at: ATSDR Chromium Tox Profile. September.

USEPA. 2004. Risk Assessment Guidance for Superfund Volume Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). Final. EPA/540/R/99/005. Office of Superfund Remediation and Technology Innovation, Washington, D.C.

USEPA 2011. Health Effects Assessment Summary Tables. Office of Research and Development and Office of Emergency and Remedial Response, Washington, DC. Current as of December 2011. Available online at: <https://epa-heast.onml.gov/>

USEPA. 2021. Recommendations on the Use of Chronic or Subchronic Noncancer Values for Superfund Human Health Risk Assessments. May 26. Available online at: <https://semspub.epa.gov/work/HQ/100002839.pdf>.

USEPA. 2025. Integrated Risk Information System. Office of Research and Development, National Center of Environmental Assessment (NCEA). Available at: <http://www.epa.gov/iris>.

Table 6
Noncarcinogenic Toxicity Values for Inhalation Exposure
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent	Inhalation RfC (mg/m ³) [a]				Subchronic		Chronic	
	Subchronic		Chronic		Target Site/ Critical Effect	Confidence Level/ Uncertainty Factor	Target Site/ Critical Effect	Confidence Level/ Uncertainty Factor
	[ref]	[ref]	[ref]	[ref]				
Metals								
Chromium III	5.0E-03	ATSDR	NA	NA	Respiratory	NA	Respiratory	NA
Chromium VI	3.0E-05	c	3.0E-05	IRIS	Respiratory	NA \ 30	Respiratory	NA Medium \ 300

Note:

[a] Toxicity values were obtained following USEPA recommended hierarchy (USEPA 2021).

Acronyms and Abbreviations:

ATSDR = Agency for Toxic Substances Disease Registry (ATSDR 2012)

c = chronic value is used if subchronic value is not available

IRIS = Integrated Risk Information System (USEPA 2025)

mg/m³ = milligram per cubic meter

NA = not available or not applicable

ref = reference

RfC = reference concentration

USEPA = United States Environmental Protection Agency

References:

ATSDR. 2012. Toxicological Profile for Chromium. U.S. Department of Health and Human Services, Public Health Service, Atlanta, Georgia. Available at: ATSDR Chromium Tox Profile. September.

USEPA. 2021. Recommendations on the Use of Chronic or Subchronic Noncancer Values for Superfund Human Health Risk Assessments. May 26. Available online at: <https://semspub.epa.gov/work/HQ/100002839.pdf>.

USEPA. 2025. Integrated Risk Information System. Office of Research and Development, National Center of Environmental Assessment (NCEA). Available at: <http://www.epa.gov/iris>.

Table 7
Carcinogenic Toxicity Values for Oral and Dermal Exposure
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent	Oral CSF [a] (mg/kg/day) ⁻¹ [ref]	Adjustment Factor [b]	Dermal CSF [b] (mg/kg/day) ⁻¹	Mutagen	Tumor Site	Weight of Evidence Classification [c]
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Metals

Notes:

- [a] Toxicity values were obtained following USEPA recommended hierarchy (USEPA 2021).
- [b] The oral-to-dermal adjustment factor (oral absorption efficiency) as used to calculate the dermal CSF values (USEPA 2004).
 CSF (dermal) = CSF (oral) / Adjustment Factor (oral absorption efficiency)
- [c] The USEPA 1986 hierarchical cancer classification system and the more recent (USEPA 2005) narrative system were used.
 The most up-to-date classification is presented for each constituent.
 - 1986 D: Not classifiable as to human carcinogenicity (inadequate or no evidence).
 - 2005 L: Likely to be carcinogenic to humans.
 - L: Likely to be carcinogenic to humans.

1. The tumor site and weight of evidence classification for chromium VI are based on 2024 IRIS classifications (USEPA 2024).

Acronyms and Abbreviations:

- CSF = cancer slope factor
- IRIS = Integrated Risk Information System (USEPA 2025)
- M = carcinogen with a mutagenic mode of action; evaluated through use of age-dependent adjustment factors
- (mg/kg/day)⁻¹ = inverse milligram per kilogram per day (risk per unit dose)
- NA = not available or not applicable
- ref = reference
- USEPA = United States Environmental Protection Agency

References:

- USEPA. 2004. Risk Assessment Guidance for Superfund Volume Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). Final. EPA/540/R/99/005. Office of Superfund Remediation and Technology Innovation, Washington, D.C.
- USEPA. 2005. Guidelines for Carcinogen Risk Assessment. EPA/630/P-03/001F. March.
- USEPA. 2021. Recommendations on the Use of Chronic or Subchronic Noncancer Values for Superfund Human Health Risk Assessments. May 26. Available online at: <https://semspub.epa.gov/work/HQ/100002839.pdf>.
- USEPA. 2024. Integrated Risk Information System. Office of Research and Development, National Center of Environmental Assessment (NCEA). Available at: <http://www.epa.gov/iris>.
- USEPA. 2025. Integrated Risk Information System. Office of Research and Development, National Center of Environmental Assessment (NCEA). Available at: <http://www.epa.gov/iris>.

Table 8
Carcinogenic Toxicity Values for Inhalation Exposure
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent	Inhalation Unit Risk [a] ($\mu\text{g}/\text{m}^3$) ⁻¹ [ref]		Mutagen	Tumor Site	Weight of Evidence Classification [b]
Metals					
Chromium III	NA			NA	D
Chromium VI	1.1E-02	IRIS	M	Lung	H

Notes:

[a] Toxicity values were obtained following USEPA recommended hierarchy (USEPA 2021).

[b] The USEPA 1986 hierarchal cancer classification system and the more recent (USEPA 2005a) narrative system were used.

The most up-to-date classification is presented for each constituent.

1986 D: Not classifiable as to human carcinogenicity (inadequate or no evidence).

2005 H: Carcinogenic to humans.

Acronyms and Abbreviations:

($\mu\text{g}/\text{m}^3$)⁻¹ = inverse microgram per cubic meter

IRIS = Integrated Risk Information System (USEPA 2025)

M = carcinogen with a mutagenic mode of action; evaluated through use of age-dependent adjustment factors

NA = not available or not applicable

ref = reference

USEPA = United States Environmental Protection Agency

References:

USEPA. 2005. Guidelines for Carcinogen Risk Assessment. EPA/630/P-03/001F. March.

USEPA. 2021. Recommendations on the Use of Chronic or Subchronic Noncancer Values for Superfund Human Health Risk Assessments. May 26. Available online at: <https://semspub.epa.gov/work/HQ/100002839.pdf>.

USEPA. 2025. Integrated Risk Information System. Office of Research and Development, National Center of Environmental Assessment (NCEA). Available at: <http://www.epa.gov/iris>.

Table 9
Risk and Hazard Calculations for a Current or Future Maintenance Worker Exposure to Surface Soil
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent [a]	EPC _s [b] (mg/kg)		ABS _d [c]	PEF [d] (m ³ /kg)	CANCER RISK					Percent Total ELCR	NONCANCER HAZARD				Percent Total HI
					Route-Specific Risk			Calculated Risk	Route-Specific Hazard			Calculated Hazard			
					Oral	Dermal	Inhalation		Oral		Dermal		Inhalation	Hazard	
		ELCR _o	ELCR _d	ELCR _i	ELCR			HQ _o	HQ _d	HQ _i	HI				
Metals															
Chromium III	1,110	max	0	4.44E+09	P	NA	NA	NA	–		2.5E-05	NA	NA	2.5E-05	3%
Chromium VI	24	max	0	4.44E+09	P	4.7E-08	NA	1.9E-10	4.7E-08	100%	9.1E-04	NA	1.6E-06	9.1E-04	97%
Total Risk or Hazard						Total ELCR			5E-08	100%	Total HI			0.0009	100%

Notes:

- [a] Only detected constituents of potential concern are presented.
- [b] EPCs marked with "max" are based on the maximum detected concentration.
- [c] Dermal absorption efficiency (ABS_d) for uptake of constituents from a soil matrix (unitless) (USEPA 2024).
- [d] The particulate emission factor (PEF; identified with P), is derived on Table 4.

Acronyms and Abbreviations:

- = not applicable
- % = percent
- cm² = square centimeter
- CSF = cancer slope factor (oral [o] and dermal [d])
- ELCR = excess lifetime cancer risk (oral [o], dermal [d], and inhalation [i])
- EPC_s = exposure point concentration in soil
- HI = hazard index (sum of the HQs)
- HQ = hazard quotient (oral [o], dermal [d], and inhalation [i])
- IUR = inhalation unit risk
- kg = kilogram
- m³/kg = cubic meter per kilogram
- mg/μg = milligram per microgram
- mg/cm²/day = milligram per square centimeter per day
- mg/day = milligram per day
- mg/kg = milligram per kilogram
- NA = toxicity value not available or not applicable
- RfC = reference concentration
- RfD = reference dose (oral [o] and dermal [d])

Reference:

USEPA. 2024. Regional Screening Level (RSL) Table and User's Guide. November. Available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

Equations:

1. Equations are presented in Table 2, and summarized below.
2. Constituent-specific toxicity values (CSF, IUR, RfC, RfD) are presented in Table 5 through Table 8.

$$ELCR_o = (EPC_s \times ADAF \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_o])$$

$$ELCR_d = (EPC_s \times ADAF \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_d])$$

$$ELCR_i = (EPC_s \times ADAF \times ET \times CF1 \times EF \times ED) / (PEF \times AT_c \times [1/IUR \times 10^{-3} \text{ mg/}\mu\text{g}])$$

$$HQ_o = (EPC_s \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_o)$$

$$HQ_d = (EPC_s \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_d)$$

$$HQ_i = (EPC_s \times ET \times CF1 \times EF \times ED) / (PEF \times AT_{nc} \times RfC)$$

Variable	Acronym	Value	Unit	Source
Averaging time, cancer	AT _c	25,550	days	See Table 3
Averaging time, noncancer	AT _{nc}	9,125	days	See Table 3
Body weight	BW	80	kg	See Table 3
Exposure time	ET	8	hours per day	See Table 3
Exposure frequency	EF	10	days per year	See Table 3
Exposure duration	ED	25	years	See Table 3
Conversion factor (days per hour)	CF1	0.042	days per hour	See Table 3
Fraction ingested from site	FI	1	unitless	See Table 3
Ingestion rate of soil	IR _s	100	mg/day	See Table 3
Age-dependent adjustment factor	ADAF	1	unitless	See Table 3
Soil-to-skin adherence rate	SAR	0.12	mg/cm ² /day	See Table 3
Skin surface area for soil contact	SSA _s	3,527	cm ²	See Table 3

Table 10
Risk and Hazard Calculations for an Adult Fisherperson Exposure to Surface Soil
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent [a]	EPC _s [b] (mg/kg)	ABS _d [c]	PEF [d] (m ³ /kg)	CANCER RISK					Percent Total ELCR	NONCANCER HAZARD				Percent Total HI	
				Route-Specific Risk			Calculated Risk	Route-Specific Hazard			Calculated Hazard				
				Oral	Dermal	Inhalation		Oral		Dermal		Inhalation			
				ELCR _o	ELCR _d	ELCR _i	ELCR	HQ _o	HQ _d	HQ _i	HI				
Metals															
Chromium III	1,110	max	0	4.44E+09	P	NA	NA	NA	–		1.1E-04	NA	NA	1.1E-04	3%
Chromium VI	24	max	0	4.44E+09	P	2.0E-07	NA	4.2E-10	2.0E-07	100%	4.1E-03	NA	3.7E-06	4.1E-03	97%
Total Risk or Hazard				Total ELCR			2E-07	100%	Total HI			0.004	100%		

Notes:

- [a] Only detected constituents of potential concern are presented.
- [b] The exposure point concentration (EPC) was the maximum concentration (max).
- [c] Dermal absorption efficiency (ABS_d) for uptake of constituents from a soil matrix (unitless) (USEPA 2024).
- [d] The particulate emission factor (PEF; identified with P), is derived on Table 4.

Acronyms and Abbreviations:

- = not applicable
- % = percent
- cm² = square centimeter
- CSF = cancer slope factor (oral [o] and dermal [d])
- ELCR = excess lifetime cancer risk (oral [o], dermal [d], and inhalation [i])
- EPC_s = exposure point concentration in soil
- HI = hazard index (sum of the HQs)
- HQ = hazard quotient (oral [o], dermal [d], and inhalation [i])
- IUR = inhalation unit risk
- kg = kilogram
- m³/kg = cubic meter per kilogram
- mg/μg = milligram per microgram
- mg/cm²/day = milligram per square centimeter per day
- mg/day = milligram per day
- mg/kg = milligram per kilogram
- NA = toxicity value not available or not applicable
- RfC = reference concentration
- RfD = reference dose (oral [o] and dermal [d])

Reference:

USEPA. 2024. Regional Screening Level (RSL) Table and User's Guide. November. Available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

Equations:

1. Equations are presented in Table 2.
2. Receptor-specific exposure parameters are presented in Table 3 while constituent specific dermal absorption parameters are presented in Table 15.
3. Constituent-specific toxicity values are presented in Table 5 through Table 8.

$$ELCR_o = (EPC_s \times ADAF \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_o])$$

$$ELCR_d = (EPC_s \times ADAF \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_d])$$

$$ELCR_i = (EPC_s \times ADAF \times ET \times CF1 \times EF \times ED) / (PEF \times AT_c \times [1/IUR \times 10^{-3} \text{ mg/}\mu\text{g}])$$

$$HQ_o = (EPC_s \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_o)$$

$$HQ_d = (EPC_s \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_d)$$

$$HQ_i = (EPC_s \times ET \times CF1 \times EF \times ED) / (PEF \times AT_{nc} \times RfC)$$

Variable	Acronym	Value	Unit	Source
Averaging time, cancer	AT _c	25,550	days	See Table 3
Averaging time, noncancer	AT _{nc}	8,760	days	See Table 3
Body weight	BW	80	kg	See Table 3
Exposure time	ET	2	hours per day	See Table 3
Exposure frequency	EF	90	days per year	See Table 3
Exposure duration	ED	24	years	See Table 3
Conversion factor 1	CF1	0.042	days per hour	See Table 3
Fraction ingested from site	FI	1	unitless	See Table 3
Ingestion rate of soil	IR _s	50	mg/day	See Table 3
Age-dependent adjustment factor	ADAF	1	unitless	See Table 3
Soil-to-skin adherence rate	SAR	0.3	mg/cm ² /day	See Table 3
Skin surface area for soil contact	SSA _s	5,196	cm ²	See Table 3

Table 11
Risk and Hazard Calculations for a Youth Fisherperson Exposure to Surface Soil
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent [a]	EPC _s [b] (mg/kg)		ABS _d [c]	PEF [d] (m ³ /kg)	CANCER RISK					Percent Total ELCR	NONCANCER HAZARD				Percent Total HI
					Route-Specific Risk			Calculated Risk	Route-Specific Hazard			Calculated Hazard			
					Oral	Dermal	Inhalation		Oral		Dermal		Inhalation		
					ELCR _o	ELCR _d	ELCR _i	ELCR		HQ _o	HQ _d	HQ _i	HI		
Metals															
Chromium III	1,110	max	0	4.44E+09	P	NA	NA	NA	–		2.0E-04	NA	NA	2.0E-04	3%
Chromium VI	24	max	0	4.44E+09	P	4.5E-07	NA	5.2E-10	4.5E-07	100%	7.3E-03	NA	3.7E-06	7.3E-03	97%
Total Risk or Hazard															
						Total ELCR			5E-07	100%	Total HI			0.008	100%

Notes:

- [a] Only detected constituents of potential concern are presented.
- [b] The exposure point concentration (EPC) was the maximum concentration (max).
- [c] Dermal absorption efficiency (ABS_d) for uptake of constituents from a soil matrix (unitless) (USEPA 2024).
- [d] The particulate emission factor (PEF; identified with P), is derived on Table 4.

Acronyms and Abbreviations:

- = not applicable
- % = percent
- cm² = square centimeter
- CSF = cancer slope factor (oral [o] and dermal [d])
- ELCR = excess lifetime cancer risk (oral [o], dermal [d], and inhalation [i])
- EPC_s = exposure point concentration in soil
- HI = hazard index (sum of the HQs)
- HQ = hazard quotient (oral [o], dermal [d], and inhalation [i])
- IUR = inhalation unit risk
- kg = kilogram
- m³/kg = cubic meter per kilogram
- mg/μg = milligram per microgram
- mg/cm²/day = milligram per square centimeter per day
- mg/day = milligram per day
- mg/kg = milligram per kilogram
- NA = toxicity value not available or not applicable
- RfC = reference concentration
- RfD = reference dose (oral [o] and dermal [d])

Reference:

USEPA. 2024. Regional Screening Level (RSL) Table and User's Guide. November. Available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

Equations:

1. Equations are presented in Table 2.
2. Receptor-specific exposure parameters are presented in Table 3 while constituent specific dermal absorption parameters are presented in Table 15.
3. Constituent-specific toxicity values are presented in Table 5 through Table 8.

$$ELCR_o = (EPC_s \times ADAF \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_o])$$

$$ELCR_d = (EPC_s \times ADAF \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_d])$$

$$ELCR_i = (EPC_s \times ADAF \times ET \times CF1 \times EF \times ED) / (PEF \times AT_c \times [1/IUR \times 10^{-3} \text{ mg/}\mu\text{g}])$$

$$HQ_o = (EPC_s \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_o)$$

$$HQ_d = (EPC_s \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_d)$$

$$HQ_i = (EPC_s \times ET \times CF1 \times EF \times ED) / (PEF \times AT_{nc} \times RfC)$$

Variable	Acronym	Value	Unit	Source
Averaging time, cancer	AT _c	25,550	days	See Table 3
Averaging time, noncancer	AT _{nc}	3,650	days	See Table 3
Body weight	BW	45	kg	See Table 3
Exposure time	ET	2	hours per day	See Table 3
Exposure frequency	EF	90	days per year	See Table 3
Exposure duration	ED	10	years	See Table 3
Conversion factor 1	CF1	0.042	days per hour	See Table 3
Fraction ingested from site	FI	1	unitless	See Table 3
Ingestion rate of soil	IR _s	50	mg/day	See Table 3
Age-dependent adjustment factor	ADAF	3	unitless	See Table 3
Soil-to-skin adherence rate	SAR	0.3	mg/cm ² /day	See Table 3
Skin surface area for soil contact	SSA _s	3,616	cm ²	See Table 3

Table 12
Risk and Hazard Calculations for a Young Child Fisherperson Exposure to Surface Soil
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent [a]	EPC _s [b] (mg/kg)	ABS _d [c]	PEF [d] (m ³ /kg)	CANCER RISK					Percent Total ELCR	NONCANCER HAZARD					Percent Total HI
				Route-Specific Risk			Calculated Risk	Route-Specific Hazard			Calculated Hazard				
				Oral	Dermal	Inhalation		Oral		Dermal		Inhalation			
				ELCR _o	ELCR _d	ELCR _i	ELCR					HI			
Metals															
Chromium III	1,110	max	0	4.44E+09	P	NA	NA	NA	–		3.9E-04	NA	NA	3.9E-04	3%
Chromium VI	24	max	0	4.44E+09	P	2.6E-07	NA	6.8E-11	2.6E-07	100%	1.4E-02	NA	1.6E-06	1.4E-02	97%
Total Risk or Hazard						Total ELCR			3E-07	100%	Total HI			0.01	100%

Notes:

- [a] Only detected constituents of potential concern are presented.
- [b] The exposure point concentration (EPC) was the maximum concentration (max).
- [c] Dermal absorption efficiency (ABS_d) for uptake of constituents from a soil matrix (unitless) (USEPA 2024).
- [d] The particulate emission factor (PEF; identified with P), is derived on Table 4.

Acronyms and Abbreviations:

- = not applicable
- % = percent
- cm² = square centimeter
- CSF = cancer slope factor (oral [o] and dermal [d])
- ELCR = excess lifetime cancer risk (oral [o], dermal [d], and inhalation [i])
- EPC_s = exposure point concentration in soil
- HI = hazard index (sum of the HQs)
- HQ = hazard quotient (oral [o], dermal [d], and inhalation [i])
- IUR = inhalation unit risk
- kg = kilogram
- m³/kg = cubic meter per kilogram
- mg/μg = milligram per microgram
- mg/cm²/day = milligram per square centimeter per day
- mg/day = milligram per day
- mg/kg = milligram per kilogram
- NA = toxicity value not available or not applicable
- RfC = reference concentration
- RfD = reference dose (oral [o] and dermal [d])

Reference:

USEPA. 2024. Regional Screening Level (RSL) Table and User's Guide. November. Available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

Equations:

1. Equations are presented in Table 2.
2. Receptor-specific exposure parameters are presented in Table 3 while constituent specific dermal absorption parameters are presented in Table 15.
3. Constituent-specific toxicity values are presented in Table 5 through Table 8.

$$ELCR_o = (EPC_s \times ADAF \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_o])$$

$$ELCR_d = (EPC_s \times ADAF \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_d])$$

$$ELCR_i = (EPC_s \times ADAF \times ET \times CF1 \times EF \times ED) / (PEF \times AT_c \times [1/IUR \times 10^{-3} \text{ mg/}\mu\text{g}])$$

$$HQ_o = (EPC_s \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_o)$$

$$HQ_d = (EPC_s \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_d)$$

$$HQ_i = (EPC_s \times ET \times CF1 \times EF \times ED) / (PEF \times AT_{nc} \times RfC)$$

Variable	Acronym	Value	Unit	Source
Averaging time, cancer	AT _c	25,550	days	See Table 3
Averaging time, noncancer	AT _{nc}	1,095	days	See Table 3
Body weight	BW	18.3	kg	See Table 3
Exposure time	ET	2	hours per day	See Table 3
Exposure frequency	EF	39	days per year	See Table 3
Exposure duration	ED	3	years	See Table 3
Conversion factor 1	CF1	0.042	days per hour	See Table 3
Fraction ingested from site	FI	1	unitless	See Table 3
Ingestion rate of soil	IR _s	90	mg/day	See Table 3
Age-dependent adjustment factor	ADAF	3	unitless	See Table 3
Soil-to-skin adherence rate	SAR	0.3	mg/cm ² /day	See Table 3
Skin surface area for soil contact	SSA _s	2,320	cm ²	See Table 3

Table 13
Risk and Hazard Calculations for an Adult Walker/Runner Exposure to Surface Soil
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent [a]	EPCs [b] (mg/kg)		ABSd [c]	PEF [d] (m ³ /kg)	CANCER RISK					Percent Total ELCR	NONCANCER HAZARD					Percent Total HI		
					Route-Specific Risk			Calculated Risk	Route-Specific Hazard			Calculated Hazard						
					Oral	Dermal	Inhalation		Oral		Dermal		Inhalation					
					ELCR _o	ELCR _d	ELCR _i	ELCR						HI				
Metals																		
Chromium III	1,110	max	0	4.44E+09	P	NA	NA	NA	–		2.3E-04	NA	NA	2.3E-04	3%			
Chromium VI	24	max	0	4.44E+09	P	4.1E-07	NA	4.2E-10	4.1E-07	100%	8.2E-03	NA	3.7E-06	8.2E-03	97%			
Total Risk or Hazard					Total ELCR					4E-07	100%	Total HI					0.008	100%

Notes:

- [a] Only detected constituents of potential concern are presented.
- [b] The exposure point concentration (EPC) was the maximum concentration (max).
- [c] Dermal absorption efficiency (ABSd) for uptake of constituents from a soil matrix (unitless) (USEPA 2024).
- [d] The particulate emission factor (PEF; identified with P), is derived on Table 4.

Acronyms and Abbreviations:

- = not applicable
- % = percent
- cm² = square centimeter
- CSF = cancer slope factor (oral [o] and dermal [d])
- ELCR = excess lifetime cancer risk (oral [o], dermal [d], and inhalation [i])
- EPC_s = exposure point concentration in soil
- HI = hazard index (sum of the HQs)
- HQ = hazard quotient (oral [o], dermal [d], and inhalation [i])
- IUR = inhalation unit risk
- kg = kilogram
- m³/kg = cubic meter per kilogram
- mg/μg = milligram per microgram
- mg/cm²/day = milligram per square centimeter per day
- mg/day = milligram per day
- mg/kg = milligram per kilogram
- NA = toxicity value not available or not applicable
- RfC = reference concentration
- RfD = reference dose (oral [o] and dermal [d])

Reference:

USEPA. 2024. Regional Screening Level (RSL) Table and User's Guide. November. Available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

Equations:

1. Equations are presented in Table 2.
2. Receptor-specific exposure parameters are presented in Table 3 while constituent specific dermal absorption parameters are presented in Table 15.
3. Constituent-specific toxicity values are presented in Table 5 through Table 8.

$$ELCR_o = (EPC_s \times ADAF \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_o])$$

$$ELCR_d = (EPC_s \times ADAF \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_d])$$

$$ELCR_i = (EPC_s \times ADAF \times ET \times CF1 \times EF \times ED) / (PEF \times AT_c \times [1/IUR \times 10^{-3} \text{ mg/}\mu\text{g}])$$

$$HQ_o = (EPC_s \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_o)$$

$$HQ_d = (EPC_s \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_a)$$

$$HQ_i = (EPC_s \times ET \times CF1 \times EF \times ED) / (PEF \times AT_{nc} \times RfC)$$

Variable	Acronym	Value	Unit	Source
Averaging time, cancer	AT _c	25,550	days	See Table 3
Averaging time, noncancer	AT _{nc}	8,760	days	See Table 3
Body weight	BW	80	kg	See Table 3
Exposure time	ET	1	hours per day	See Table 3
Exposure frequency	EF	180	days per year	See Table 3
Exposure duration	ED	24	years	See Table 3
Conversion factor 1	CF1	0.042	days per hour	See Table 3
Fraction ingested from site	FI	1	unitless	See Table 3
Ingestion rate of soil	IR _s	50	mg/day	See Table 3
Age-dependent adjustment factor	ADAF	1	unitless	See Table 3
Soil-to-skin adherence rate	SAR	0.07	mg/cm ² /day	See Table 3
Skin surface area for soil contact	SSA _s	5,196	cm ²	See Table 3

Table 14
Risk and Hazard Calculations for a Youth Walker/Runner Exposure to Surface Soil
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent [a]	EPCs [b] (mg/kg)		ABSd [c]	PEF [d] (m ³ /kg)		CANCER RISK				Percent Total ELCR	NONCANCER HAZARD				Percent Total HI				
						Route-Specific Risk			Calculated Risk		Route-Specific Hazard			Calculated Hazard					
						Oral	Dermal	Inhalation			Oral	Dermal	Inhalation						
						ELCR _o	ELCR _d	ELCR _i	ELCR							HQ _o	HQ _d	HQ _i	HI
Metals																			
Chromium III	1,110	max	0	4.44E+09	P	NA	NA	NA	–		4.1E-04	NA	NA	4.1E-04	3%				
Chromium VI	24	max	0	4.44E+09	P	9.0E-07	NA	5.2E-10	9.0E-07	100%	1.5E-02	NA	3.7E-06	1.5E-02	97%				
Total Risk or Hazard						Total ELCR			9E-07	100%	Total HI			0.02	100%				

Notes:

- [a] Only detected constituents of potential concern are presented.
- [b] The exposure point concentration (EPC) was the maximum concentration (max).
- [c] Dermal absorption efficiency (ABSd) for uptake of constituents from a soil matrix (unitless) (USEPA 2024).
- [d] The particulate emission factor (PEF; identified with P), is derived on Table 4.

Acronyms and Abbreviations:

- = not applicable
- % = percent
- cm² = square centimeter
- CSF = cancer slope factor (oral [o] and dermal [d])
- ELCR = excess lifetime cancer risk (oral [o], dermal [d], and inhalation [i])
- EPC_s = exposure point concentration in soil
- HI = hazard index (sum of the HQs)
- HQ = hazard quotient (oral [o], dermal [d], and inhalation [i])
- IUR = inhalation unit risk
- kg = kilogram
- m³/kg = cubic meter per kilogram
- mg/μg = milligram per microgram
- mg/cm²/day = milligram per square centimeter per day
- mg/day = milligram per day
- mg/kg = milligram per kilogram
- NA = toxicity value not available or not applicable
- RfC = reference concentration
- RfD = reference dose (oral [o] and dermal [d])

Reference:

USEPA. 2024. Regional Screening Level (RSL) Table and User's Guide. November. Available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

Equations:

1. Equations are presented in Table 2.
2. Receptor-specific exposure parameters are presented in Table 3 while constituent specific dermal absorption parameters are presented in Table 15.
3. Constituent-specific toxicity values are presented in Table 5 through Table 8.

$$ELCR_o = (EPC_s \times ADAF \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_o])$$

$$ELCR_d = (EPC_s \times ADAF \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_d])$$

$$ELCR_i = (EPC_s \times ADAF \times ET \times CF1 \times EF \times ED) / (PEF \times AT_c \times [1/IUR \times 10^{-3} \text{ mg/}\mu\text{g}])$$

$$HQ_o = (EPC_s \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_o)$$

$$HQ_d = (EPC_s \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_d)$$

$$HQ_i = (EPC_s \times ET \times CF1 \times EF \times ED) / (PEF \times AT_{nc} \times RfC)$$

Variable	Acronym	Value	Unit	Source
Averaging time, cancer	AT _c	25,550	days	See Table 3
Averaging time, noncancer	AT _{nc}	3,650	days	See Table 3
Body weight	BW	45	kg	See Table 3
Exposure time	ET	1	hours per day	See Table 3
Exposure frequency	EF	180	days per year	See Table 3
Exposure duration	ED	10	years	See Table 3
Conversion factor 1	CF1	0.042	days per hour	See Table 3
Fraction ingested from site	FI	1	unitless	See Table 3
Ingestion rate of soil	IR _s	50	mg/day	See Table 3
Age-dependent adjustment factor	ADAF	3	unitless	See Table 3
Soil-to-skin adherence rate	SAR	0.07	mg/cm ² /day	See Table 3
Skin surface area for soil contact	SSA _s	3,616	cm ²	See Table 3

Table 15
Risk and Hazard Calculations for a Young Child Walker/Runner Exposure to Surface Soil
Human Health Risk Assessment Report
Offsite Soils Adjacent to Former 51st Street Terminal
1630-1646 South 51st Street
Philadelphia, Pennsylvania

Constituent [a]	EPCs [b] (mg/kg)		ABSd [c]	PEF [d] (m ³ /kg)	CANCER RISK					Percent Total ELCR	NONCANCER HAZARD				Percent Total HI		
					Route-Specific Risk			Calculated Risk	Route-Specific Hazard			Calculated Hazard					
					Oral	Dermal	Inhalation		Oral		Dermal		Inhalation				
					ELCR _o	ELCR _d	ELCR _i	ELCR						HQ _o	HQ _d	HQ _i	HI
Metals																	
Chromium III	1,110	max	0	4.44E+09	P	NA	NA	NA	–		3.9E-04	NA	NA	3.9E-04	3%		
Chromium VI	24	max	0	4.44E+09	P	2.6E-07	NA	3.4E-11	2.6E-07	100%	1.4E-02	NA	8.0E-07	1.4E-02	97%		
Total Risk or Hazard						Total ELCR			3E-07	100%	Total HI			0.01	100%		

Notes:

- [a] Only detected constituents of potential concern are presented.
- [b] The exposure point concentration (EPC) was the maximum concentration (max).
- [c] Dermal absorption efficiency (ABSd) for uptake of constituents from a soil matrix (unitless) (USEPA 2024).
- [d] The particulate emission factor (PEF; identified with P), is derived on Table 4.

Acronyms and Abbreviations:

- = not applicable
- % = percent
- cm² = square centimeter
- CSF = cancer slope factor (oral [o] and dermal [d])
- ELCR = excess lifetime cancer risk (oral [o], dermal [d], and inhalation [i])
- EPC_s = exposure point concentration in soil
- HI = hazard index (sum of the HQs)
- HQ = hazard quotient (oral [o], dermal [d], and inhalation [i])
- IUR = inhalation unit risk
- kg = kilogram
- m³/kg = cubic meter per kilogram
- mg/μg = milligram per microgram
- mg/cm²/day = milligram per square centimeter per day
- mg/day = milligram per day
- mg/kg = milligram per kilogram
- NA = toxicity value not available or not applicable
- RfC = reference concentration
- RfD = reference dose (oral [o] and dermal [d])

Reference:

USEPA. 2024. Regional Screening Level (RSL) Table and User's Guide. November. Available at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>.

Equations:

1. Equations are presented in Table 2.
2. Receptor-specific exposure parameters are presented in Table 3 while constituent specific dermal absorption parameters are presented in Table 15.
3. Constituent-specific toxicity values are presented in Table 5 through Table 8.

$$ELCR_o = (EPC_s \times ADAF \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_o])$$

$$ELCR_d = (EPC_s \times ADAF \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_c \times [1/CSF_d])$$

$$ELCR_i = (EPC_s \times ADAF \times ET \times CF1 \times EF \times ED) / (PEF \times AT_c \times [1/IUR \times 10^{-3} \text{ mg/}\mu\text{g}])$$

$$HQ_o = (EPC_s \times FI \times IR_s \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_o)$$

$$HQ_d = (EPC_s \times SSA_s \times SAR \times ABS_d \times EF \times ED) / (1,000,000 \text{ mg/kg} \times BW \times AT_{nc} \times RfD_a)$$

$$HQ_i = (EPC_s \times ET \times CF1 \times EF \times ED) / (PEF \times AT_{nc} \times RfC)$$

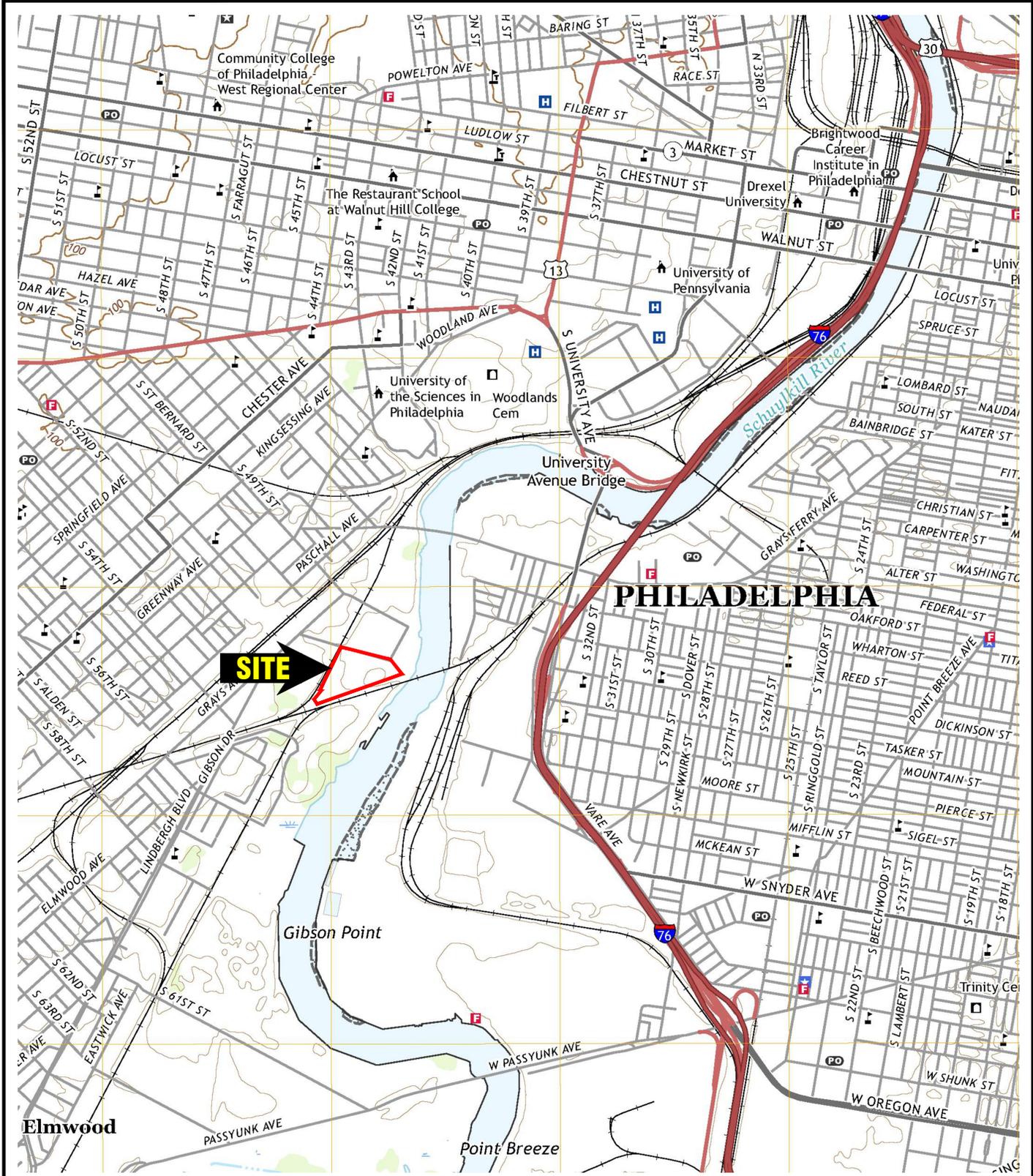
Variable	Acronym	Value	Unit	Source
Averaging time, cancer	AT _c	25,550	days	See Table 3
Averaging time, noncancer	AT _{nc}	1,095	days	See Table 3
Body weight	BW	18.3	kg	See Table 3
Exposure time	ET	1	hours per day	See Table 3
Exposure frequency	EF	39	days per year	See Table 3
Exposure duration	ED	3	years	See Table 3
Conversion factor 1	CF1	0.042	days per hour	See Table 3
Fraction ingested from site	FI	1	unitless	See Table 3
Ingestion rate of soil	IR _s	90	mg/day	See Table 3
Age-dependent adjustment factor	ADAF	3	unitless	See Table 3
Soil-to-skin adherence rate	SAR	0.2	mg/cm ² /day	See Table 3
Skin surface area for soil contact	SSA _s	2,320	cm ²	See Table 3

Table 16
 Summary of Calculated Human Health Risks and Hazards
 Human Health Risk Assessment Report
 Offsite Soils Adjacent to Former 51st Street Terminal
 1630-1646 South 51st Street
 Philadelphia, Pennsylvania

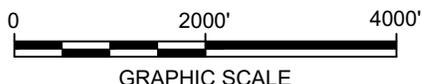


<u>RECEPTOR</u> Exposure Medium – Scenario	Calculation Table	Total Excess Lifetime Cancer Risk	Total Noncancer Hazard
<u>Current or Future Maintenance Worker</u> Direct Contact with Soil	Table 9	5E-08	0.0009
<u>Current or Future Fisherman</u> Direct Contact with Soil			
Adult	Table 10	2E-07	0.004
Youth	Table 11	5E-07	0.008
Young Child	Table 12	3E-07	0.01
<u>Current or Future Walker/Runner</u> Direct Contact with Soil			
Adult	Table 13	4E-07	0.008
Youth	Table 14	9E-07	0.02
Young Child	Table 15	3E-07	0.01

Figures



SOURCE: U.S. GEOLOGICAL SURVEY
 TOPOGRAPHIC MAP QUADRANGLE:
 PHILADELPHIA PENNSYLVANIA,
 DATED: 2019



GRAPHIC SCALE

ALLIANCE 51st STREET, LLC
 OFFSITE SOILS AREA ADJACENT TO FORMER 51ST STREET
 TERMINAL
 1630-1646 SOUTH 51ST STREET, PHILADELPHIA, PENNSYLVANIA
HUMAN HEALTH RISK ASSESSMENT REPORT

SITE LOCATION MAP



FIGURE
1

IMAGES: GEN-X\USGS-2019.jpg
 Arcadis Logo.png
 XREFS: HIRA-X-RAP

C:\Users\kjavis\OneDrive\Arcadis\ACC.US\ALUS-99999999-ALLIANCE_S 51ST ST - PHILADELPHIA_PA\Project Files\10_WIP\10101_ARC_ENV\20250101-DWG\HRA-F02-EXPOSURE AREA.dwg LAYOUT:2 SAVED: 4/16/2025 4:53 PM ACADYER: 24.2S (LMS TECH) PAGES: 25 OF 25 PLOTSTYLETABLE: ----
 XREFS: REPRX-SITE HRA-X-RBL
 IMAGES: Arcadis Logo.PNG



LEGEND:

---	SITE BOUNDARY
1.	MONITORING WELL
---	CHAIN LINK FENCE

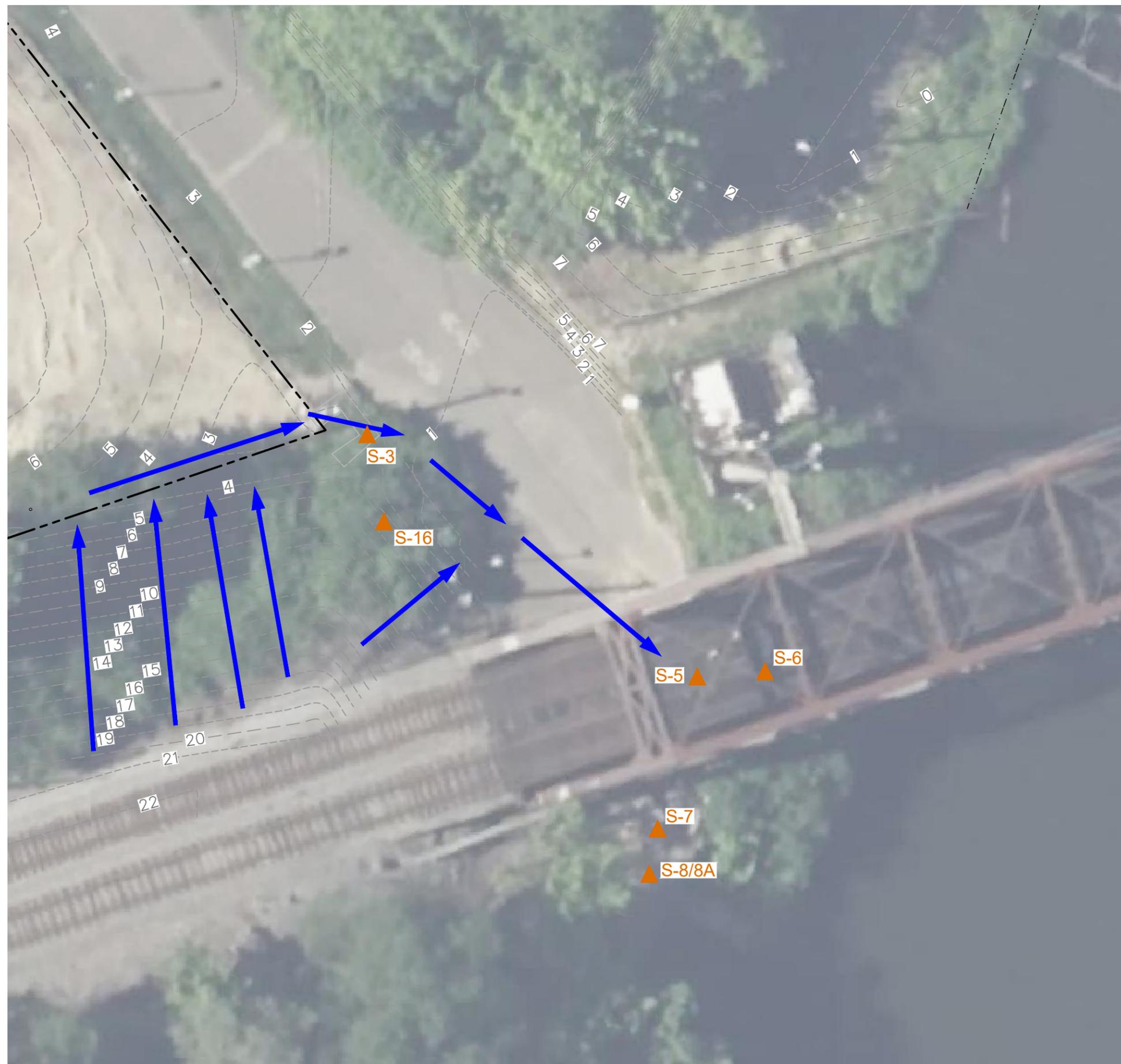
- NOTES:**
- SOURCE:** 2024 Microsoft Corporation Maxar CNES (2024) Distribution Airbus DS
 - PLAN DATUM:** PENNSYLVANIA STATE PLANE COORDINATES: PA83-SF.



ALLIANCE 51st STREET, LLC
 OFFSITE SOILS AREA ADJACENT TO FORMER 51ST STREET TERMINAL
 1630-1646 SOUTH 51ST STREET, PHILADELPHIA, PENNSYLVANIA
HUMAN HEALTH RISK ASSESSMENT REPORT

SITE PLAN AND HUMAN HEALTH RISK ASSESSMENT AREA

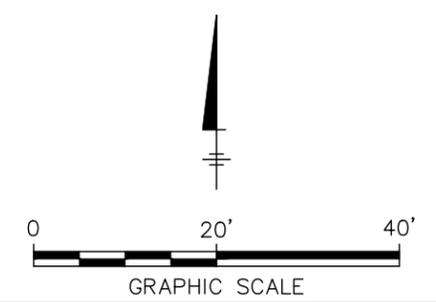
FIGURE
2



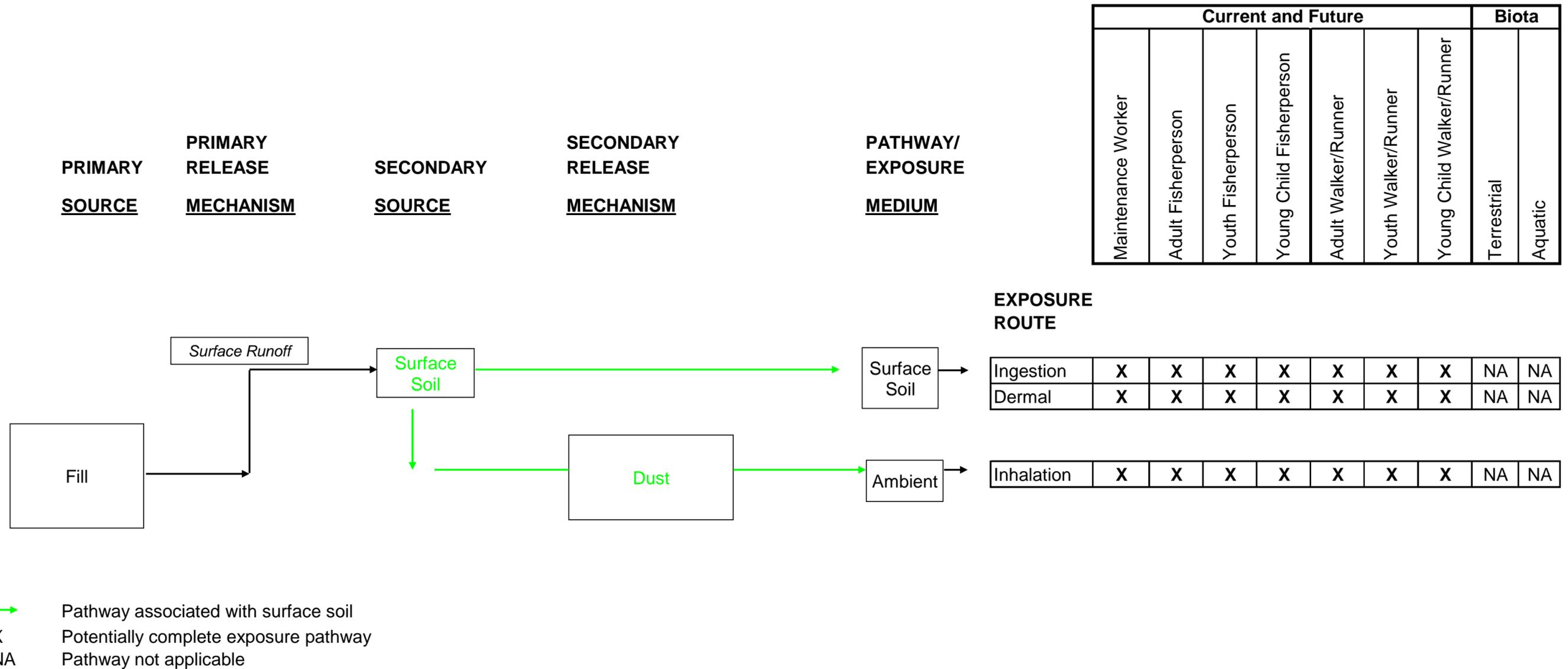
LEGEND:
▲ SOIL SAMPLE EVALUATED IN HUMAN HEALTH RISK ASSESSMENT
➡ PATH OF SURFACE WATER RUNOFF

NOTE:
1. PLAN DATUM: PENNSYLVANIA STATE PLANE COORDINATES: PA83-SF.

SOURCE:
© Microsoft Corporation © Maxar © CNES (2021) Distribution Airbus DS



ALLIANCE 51st STREET, LLC OFFSITE SOILS AREA ADJACENT TO FORMER 51ST STREET TERMINAL 1630-1646 SOUTH 51ST STREET, PHILADELPHIA, PENNSYLVANIA HUMAN HEALTH RISK ASSESSMENT REPORT	
SAMPLE LOCATIONS	
	FIGURE 3



Appendix A

Laboratory Analytical Reports



ANALYTICAL REPORT

Lab Number:	L2441149
Client:	Arcadis U.S., Inc 1 Harvard Way Suite 5 Hillsborough, NJ 08844
ATTN:	Larry Brunt
Phone:	(908) 526-1000
Project Name:	ALLIANCE 51ST
Project Number:	30108678.07
Report Date:	07/29/24

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2441149-01	DEP51-S1	SOIL	51ST ST. PHILA PA	07/22/24 10:30	07/22/24
L2441149-02	DEP51-S2	SOIL	51ST ST. PHILA PA	07/22/24 10:45	07/22/24
L2441149-03	DEP51-S3	SOIL	51ST ST. PHILA PA	07/22/24 10:50	07/22/24
L2441149-04	DEP51-S4	SOIL	51ST ST. PHILA PA	07/22/24 11:00	07/22/24
L2441149-05	DEP51-S5	SOIL	51ST ST. PHILA PA	07/22/24 11:05	07/22/24
L2441149-06	DEP51-S6	SOIL	51ST ST. PHILA PA	07/22/24 11:10	07/22/24
L2441149-07	DEP51-S7	SOIL	51ST ST. PHILA PA	07/22/24 11:15	07/22/24
L2441149-08	DEP51-S8	SOIL	51ST ST. PHILA PA	07/22/24 11:20	07/22/24
L2441149-09	DEP51-S9	SOIL	51ST ST. PHILA PA	07/22/24 11:25	07/22/24
L2441149-10	DEP51-S10	SOIL	51ST ST. PHILA PA	07/22/24 11:30	07/22/24
L2441149-11	DEP51-S11	SOIL	51ST ST. PHILA PA	07/22/24 11:40	07/22/24
L2441149-12	DUP-S	SOIL	51ST ST. PHILA PA	07/22/24 00:00	07/22/24
L2441149-13	DEP51-W1	WATER	51ST ST. PHILA PA	07/22/24 12:05	07/22/24
L2441149-14	DEP51-W2	WATER	51ST ST. PHILA PA	07/22/24 12:10	07/22/24
L2441149-15	DEP51-W3	WATER	51ST ST. PHILA PA	07/22/24 12:15	07/22/24
L2441149-16	DEP51-W4	WATER	51ST ST. PHILA PA	07/22/24 13:00	07/22/24
L2441149-17	DUP-W	WATER	51ST ST. PHILA PA	07/22/24 00:00	07/22/24

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Case Narrative (continued)

Report Submission

July 29, 2024: This final report includes the results of all requested analyses.

July 24, 2024: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Total Metals

L2441149-01 through -12: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

The WG1950093-3 MS recovery, performed on L2441149-13, is outside the acceptance criteria for calcium (65%). A post digestion spike was performed and was within acceptance criteria.

Dissolved Metals

The WG1950096-3 MS recovery, performed on L2441149-13, is outside the acceptance criteria for calcium (54%). A post digestion spike was performed and was within acceptance criteria.

Hexavalent Chromium

The WG1950129-4 Insoluble MS recovery for chromium, hexavalent (45%), performed on L2441149-11, is outside the acceptance criteria. The Soluble MS recovery for chromium, hexavalent (48%) was also outside criteria. This has been attributed to matrix interference. A post-spike was performed with a recovery of 91%.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Melissa Sturgis

Title: Technical Director/Representative

Date: 07/29/24

ORGANICS

VOLATILES

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-01
 Client ID: DEP51-S1
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:30
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 19:52
 Analyst: AJK
 Percent Solids: 99%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.012	0.0010	1
Chloromethane	ND		mg/kg	0.0046	0.0011	1
Vinyl chloride	ND		mg/kg	0.0012	0.00039	1
Bromomethane	ND		mg/kg	0.0023	0.00067	1
Chloroethane	ND		mg/kg	0.0023	0.00052	1
Trichlorofluoromethane	ND		mg/kg	0.0046	0.00080	1
1,1-Dichloroethene	ND		mg/kg	0.0012	0.00027	1
Carbon disulfide	ND		mg/kg	0.012	0.0052	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0046	0.00080	1
Methylene chloride	ND		mg/kg	0.0058	0.0026	1
Acetone	ND		mg/kg	0.029	0.012	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0017	0.00016	1
Methyl Acetate	ND		mg/kg	0.0046	0.0011	1
Methyl tert butyl ether	ND		mg/kg	0.0023	0.00023	1
1,1-Dichloroethane	ND		mg/kg	0.0012	0.00017	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0012	0.00020	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0012	0.00016	1
Cyclohexane	ND		mg/kg	0.012	0.00063	1
Bromochloromethane	ND		mg/kg	0.0023	0.00024	1
Chloroform	ND		mg/kg	0.0017	0.00016	1
Carbon tetrachloride	ND		mg/kg	0.0012	0.00026	1
1,1,1-Trichloroethane	ND		mg/kg	0.00058	0.00019	1
2-Butanone	ND		mg/kg	0.012	0.0026	1
Benzene	ND		mg/kg	0.00058	0.00019	1
1,2-Dichloroethane	ND		mg/kg	0.0012	0.00030	1
Methyl cyclohexane	ND		mg/kg	0.0046	0.00070	1
Trichloroethene	ND		mg/kg	0.00058	0.00016	1
1,2-Dichloropropane	ND		mg/kg	0.0012	0.00014	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-01
 Client ID: DEP51-S1
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:30
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.00058	0.00012	1
1,4-Dioxane	ND		mg/kg	0.092	0.040	1
cis-1,3-Dichloropropene	ND		mg/kg	0.00058	0.00018	1
Toluene	ND		mg/kg	0.0012	0.00063	1
4-Methyl-2-pentanone	ND		mg/kg	0.012	0.0015	1
Tetrachloroethene	ND		mg/kg	0.00058	0.00023	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0012	0.00032	1
1,3-Dichloropropene, Total	ND		mg/kg	0.00058	0.00018	1
1,1,2-Trichloroethane	ND		mg/kg	0.0012	0.00031	1
Dibromochloromethane	ND		mg/kg	0.0012	0.00016	1
1,2-Dibromoethane	ND		mg/kg	0.00058	0.00034	1
2-Hexanone	ND		mg/kg	0.012	0.0014	1
Chlorobenzene	ND		mg/kg	0.00058	0.00015	1
Ethylbenzene	ND		mg/kg	0.0012	0.00016	1
p/m-Xylene	ND		mg/kg	0.0023	0.00065	1
o-Xylene	ND		mg/kg	0.0012	0.00034	1
Xylenes, Total	ND		mg/kg	0.0012	0.00034	1
Styrene	ND		mg/kg	0.0012	0.00023	1
Bromoform	ND		mg/kg	0.0046	0.00028	1
Isopropylbenzene	ND		mg/kg	0.0012	0.00012	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.00058	0.00019	1
1,3-Dichlorobenzene	ND		mg/kg	0.0023	0.00017	1
1,4-Dichlorobenzene	ND		mg/kg	0.0023	0.00020	1
1,2-Dichlorobenzene	ND		mg/kg	0.0023	0.00017	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0035	0.0012	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0023	0.00031	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0023	0.00037	1

Tentatively Identified Compounds

Total TIC Compounds	0.00432	J	mg/kg	1
Unknown Cycloalkane	0.00432	J	mg/kg	1

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-01

Date Collected: 07/22/24 10:30

Client ID: DEP51-S1

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
-----------	--------	-----------	-------	----	-----	-----------------

Volatile Organics by EPA 5035 Low - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	102		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-02
 Client ID: DEP51-S2
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:45
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 20:18
 Analyst: AJK
 Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.016	0.0014	1
Chloromethane	ND		mg/kg	0.0062	0.0014	1
Vinyl chloride	ND		mg/kg	0.0016	0.00052	1
Bromomethane	ND		mg/kg	0.0031	0.00090	1
Chloroethane	ND		mg/kg	0.0031	0.00070	1
Trichlorofluoromethane	ND		mg/kg	0.0062	0.0011	1
1,1-Dichloroethene	ND		mg/kg	0.0016	0.00037	1
Carbon disulfide	ND		mg/kg	0.016	0.0071	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0062	0.0011	1
Methylene chloride	ND		mg/kg	0.0078	0.0036	1
Acetone	ND		mg/kg	0.039	0.016	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0023	0.00021	1
Methyl Acetate	ND		mg/kg	0.0062	0.0015	1
Methyl tert butyl ether	ND		mg/kg	0.0031	0.00031	1
1,1-Dichloroethane	ND		mg/kg	0.0016	0.00022	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0016	0.00027	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0016	0.00021	1
Cyclohexane	ND		mg/kg	0.016	0.00085	1
Bromochloromethane	ND		mg/kg	0.0031	0.00032	1
Chloroform	ND		mg/kg	0.0023	0.00022	1
Carbon tetrachloride	ND		mg/kg	0.0016	0.00036	1
1,1,1-Trichloroethane	ND		mg/kg	0.00078	0.00026	1
2-Butanone	ND		mg/kg	0.016	0.0034	1
Benzene	ND		mg/kg	0.00078	0.00026	1
1,2-Dichloroethane	ND		mg/kg	0.0016	0.00040	1
Methyl cyclohexane	ND		mg/kg	0.0062	0.00094	1
Trichloroethene	ND		mg/kg	0.00078	0.00021	1
1,2-Dichloropropane	ND		mg/kg	0.0016	0.00019	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-02
 Client ID: DEP51-S2
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:45
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.00078	0.00017	1
1,4-Dioxane	ND		mg/kg	0.12	0.054	1
cis-1,3-Dichloropropene	ND		mg/kg	0.00078	0.00024	1
Toluene	ND		mg/kg	0.0016	0.00084	1
4-Methyl-2-pentanone	ND		mg/kg	0.016	0.0020	1
Tetrachloroethene	ND		mg/kg	0.00078	0.00030	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0016	0.00042	1
1,3-Dichloropropene, Total	ND		mg/kg	0.00078	0.00024	1
1,1,2-Trichloroethane	ND		mg/kg	0.0016	0.00042	1
Dibromochloromethane	ND		mg/kg	0.0016	0.00022	1
1,2-Dibromoethane	ND		mg/kg	0.00078	0.00046	1
2-Hexanone	ND		mg/kg	0.016	0.0018	1
Chlorobenzene	ND		mg/kg	0.00078	0.00020	1
Ethylbenzene	ND		mg/kg	0.0016	0.00022	1
p/m-Xylene	ND		mg/kg	0.0031	0.00087	1
o-Xylene	ND		mg/kg	0.0016	0.00045	1
Xylenes, Total	ND		mg/kg	0.0016	0.00045	1
Styrene	ND		mg/kg	0.0016	0.00030	1
Bromoform	ND		mg/kg	0.0062	0.00038	1
Isopropylbenzene	ND		mg/kg	0.0016	0.00017	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.00078	0.00026	1
1,3-Dichlorobenzene	ND		mg/kg	0.0031	0.00023	1
1,4-Dichlorobenzene	ND		mg/kg	0.0031	0.00026	1
1,2-Dichlorobenzene	ND		mg/kg	0.0031	0.00022	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0047	0.0016	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0031	0.00042	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0031	0.00050	1

Tentatively Identified Compounds

No Tentatively Identified Compounds	ND	mg/kg	1
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Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-02

Date Collected: 07/22/24 10:45

Client ID: DEP51-S2

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by EPA 5035 Low - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	103		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-03
 Client ID: DEP51-S3
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:50
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 20:44
 Analyst: AJK
 Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.024	0.0022	1
Chloromethane	ND		mg/kg	0.0095	0.0022	1
Vinyl chloride	ND		mg/kg	0.0024	0.00079	1
Bromomethane	ND		mg/kg	0.0047	0.0014	1
Chloroethane	ND		mg/kg	0.0047	0.0011	1
Trichlorofluoromethane	ND		mg/kg	0.0095	0.0016	1
1,1-Dichloroethene	ND		mg/kg	0.0024	0.00056	1
Carbon disulfide	ND		mg/kg	0.024	0.011	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0095	0.0016	1
Methylene chloride	ND		mg/kg	0.012	0.0054	1
Acetone	ND		mg/kg	0.059	0.024	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0036	0.00032	1
Methyl Acetate	ND		mg/kg	0.0095	0.0022	1
Methyl tert butyl ether	ND		mg/kg	0.0047	0.00048	1
1,1-Dichloroethane	ND		mg/kg	0.0024	0.00034	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0024	0.00041	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0024	0.00032	1
Cyclohexane	ND		mg/kg	0.024	0.0013	1
Bromochloromethane	ND		mg/kg	0.0047	0.00048	1
Chloroform	ND		mg/kg	0.0036	0.00033	1
Carbon tetrachloride	ND		mg/kg	0.0024	0.00054	1
1,1,1-Trichloroethane	ND		mg/kg	0.0012	0.00040	1
2-Butanone	ND		mg/kg	0.024	0.0053	1
Benzene	ND		mg/kg	0.0012	0.00039	1
1,2-Dichloroethane	ND		mg/kg	0.0024	0.00061	1
Methyl cyclohexane	ND		mg/kg	0.0095	0.0014	1
Trichloroethene	ND		mg/kg	0.0012	0.00032	1
1,2-Dichloropropane	ND		mg/kg	0.0024	0.00030	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-03
 Client ID: DEP51-S3
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:50
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.0012	0.00026	1
1,4-Dioxane	ND		mg/kg	0.19	0.083	1
cis-1,3-Dichloropropene	ND		mg/kg	0.0012	0.00037	1
Toluene	ND		mg/kg	0.0024	0.0013	1
4-Methyl-2-pentanone	ND		mg/kg	0.024	0.0030	1
Tetrachloroethene	ND		mg/kg	0.0012	0.00046	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0024	0.00065	1
1,3-Dichloropropene, Total	ND		mg/kg	0.0012	0.00037	1
1,1,2-Trichloroethane	ND		mg/kg	0.0024	0.00063	1
Dibromochloromethane	ND		mg/kg	0.0024	0.00033	1
1,2-Dibromoethane	ND		mg/kg	0.0012	0.00069	1
2-Hexanone	ND		mg/kg	0.024	0.0028	1
Chlorobenzene	ND		mg/kg	0.0012	0.00030	1
Ethylbenzene	ND		mg/kg	0.0024	0.00033	1
p/m-Xylene	ND		mg/kg	0.0047	0.0013	1
o-Xylene	ND		mg/kg	0.0024	0.00069	1
Xylenes, Total	ND		mg/kg	0.0024	0.00069	1
Styrene	ND		mg/kg	0.0024	0.00046	1
Bromoform	ND		mg/kg	0.0095	0.00058	1
Isopropylbenzene	ND		mg/kg	0.0024	0.00026	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.0012	0.00039	1
1,3-Dichlorobenzene	ND		mg/kg	0.0047	0.00035	1
1,4-Dichlorobenzene	ND		mg/kg	0.0047	0.00040	1
1,2-Dichlorobenzene	ND		mg/kg	0.0047	0.00034	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0071	0.0024	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0047	0.00064	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0047	0.00076	1

Tentatively Identified Compounds

Total TIC Compounds	0.0181	J	mg/kg			1
Unknown	0.0181	J	mg/kg			1

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-03
 Client ID: DEP51-S3
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:50
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	104		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-04
 Client ID: DEP51-S4
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 21:10
 Analyst: AJK
 Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.020	0.0018	1
Chloromethane	ND		mg/kg	0.0079	0.0018	1
Vinyl chloride	ND		mg/kg	0.0020	0.00066	1
Bromomethane	ND		mg/kg	0.0039	0.0011	1
Chloroethane	ND		mg/kg	0.0039	0.00089	1
Trichlorofluoromethane	ND		mg/kg	0.0079	0.0014	1
1,1-Dichloroethene	ND		mg/kg	0.0020	0.00047	1
Carbon disulfide	ND		mg/kg	0.020	0.0090	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0079	0.0014	1
Methylene chloride	ND		mg/kg	0.0099	0.0045	1
Acetone	ND		mg/kg	0.049	0.020	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0030	0.00027	1
Methyl Acetate	ND		mg/kg	0.0079	0.0019	1
Methyl tert butyl ether	ND		mg/kg	0.0039	0.00040	1
1,1-Dichloroethane	ND		mg/kg	0.0020	0.00029	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0020	0.00034	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0020	0.00027	1
Cyclohexane	ND		mg/kg	0.020	0.0011	1
Bromochloromethane	ND		mg/kg	0.0039	0.00040	1
Chloroform	ND		mg/kg	0.0030	0.00028	1
Carbon tetrachloride	ND		mg/kg	0.0020	0.00045	1
1,1,1-Trichloroethane	ND		mg/kg	0.00099	0.00033	1
2-Butanone	ND		mg/kg	0.020	0.0044	1
Benzene	ND		mg/kg	0.00099	0.00033	1
1,2-Dichloroethane	ND		mg/kg	0.0020	0.00051	1
Methyl cyclohexane	ND		mg/kg	0.0079	0.0012	1
Trichloroethene	ND		mg/kg	0.00099	0.00027	1
1,2-Dichloropropane	ND		mg/kg	0.0020	0.00025	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-04
 Client ID: DEP51-S4
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.00099	0.00022	1
1,4-Dioxane	ND		mg/kg	0.16	0.069	1
cis-1,3-Dichloropropene	ND		mg/kg	0.00099	0.00031	1
Toluene	ND		mg/kg	0.0020	0.0011	1
4-Methyl-2-pentanone	ND		mg/kg	0.020	0.0025	1
Tetrachloroethene	ND		mg/kg	0.00099	0.00039	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0020	0.00054	1
1,3-Dichloropropene, Total	ND		mg/kg	0.00099	0.00031	1
1,1,2-Trichloroethane	ND		mg/kg	0.0020	0.00053	1
Dibromochloromethane	ND		mg/kg	0.0020	0.00028	1
1,2-Dibromoethane	ND		mg/kg	0.00099	0.00058	1
2-Hexanone	ND		mg/kg	0.020	0.0023	1
Chlorobenzene	ND		mg/kg	0.00099	0.00025	1
Ethylbenzene	ND		mg/kg	0.0020	0.00028	1
p/m-Xylene	ND		mg/kg	0.0039	0.0011	1
o-Xylene	ND		mg/kg	0.0020	0.00057	1
Xylenes, Total	ND		mg/kg	0.0020	0.00057	1
Styrene	ND		mg/kg	0.0020	0.00039	1
Bromoform	ND		mg/kg	0.0079	0.00048	1
Isopropylbenzene	ND		mg/kg	0.0020	0.00022	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.00099	0.00033	1
1,3-Dichlorobenzene	ND		mg/kg	0.0039	0.00029	1
1,4-Dichlorobenzene	ND		mg/kg	0.0039	0.00034	1
1,2-Dichlorobenzene	ND		mg/kg	0.0039	0.00028	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0059	0.0020	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0039	0.00054	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0039	0.00064	1

Tentatively Identified Compounds

Total TIC Compounds	0.00965	J	mg/kg			1
Cyclopentane	0.00965	NJ	mg/kg			1

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-04

Date Collected: 07/22/24 11:00

Client ID: DEP51-S4

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by EPA 5035 Low - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	104		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-05
 Client ID: DEP51-S5
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:05
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 21:36
 Analyst: AJK
 Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.015	0.0014	1
Chloromethane	ND		mg/kg	0.0062	0.0014	1
Vinyl chloride	ND		mg/kg	0.0015	0.00052	1
Bromomethane	ND		mg/kg	0.0031	0.00090	1
Chloroethane	ND		mg/kg	0.0031	0.00070	1
Trichlorofluoromethane	ND		mg/kg	0.0062	0.0011	1
1,1-Dichloroethene	ND		mg/kg	0.0015	0.00037	1
Carbon disulfide	ND		mg/kg	0.015	0.0070	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0062	0.0011	1
Methylene chloride	ND		mg/kg	0.0077	0.0035	1
Acetone	ND		mg/kg	0.038	0.015	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0023	0.00021	1
Methyl Acetate	ND		mg/kg	0.0062	0.0015	1
Methyl tert butyl ether	ND		mg/kg	0.0031	0.00031	1
1,1-Dichloroethane	ND		mg/kg	0.0015	0.00022	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0015	0.00027	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0015	0.00021	1
Cyclohexane	ND		mg/kg	0.015	0.00084	1
Bromochloromethane	ND		mg/kg	0.0031	0.00032	1
Chloroform	ND		mg/kg	0.0023	0.00022	1
Carbon tetrachloride	ND		mg/kg	0.0015	0.00035	1
1,1,1-Trichloroethane	ND		mg/kg	0.00077	0.00026	1
2-Butanone	ND		mg/kg	0.015	0.0034	1
Benzene	ND		mg/kg	0.00077	0.00026	1
1,2-Dichloroethane	ND		mg/kg	0.0015	0.00040	1
Methyl cyclohexane	ND		mg/kg	0.0062	0.00093	1
Trichloroethene	ND		mg/kg	0.00077	0.00021	1
1,2-Dichloropropane	ND		mg/kg	0.0015	0.00019	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-05
 Client ID: DEP51-S5
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:05
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.00077	0.00017	1
1,4-Dioxane	ND		mg/kg	0.12	0.054	1
cis-1,3-Dichloropropene	ND		mg/kg	0.00077	0.00024	1
Toluene	ND		mg/kg	0.0015	0.00084	1
4-Methyl-2-pentanone	ND		mg/kg	0.015	0.0020	1
Tetrachloroethene	ND		mg/kg	0.00077	0.00030	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0015	0.00042	1
1,3-Dichloropropene, Total	ND		mg/kg	0.00077	0.00024	1
1,1,2-Trichloroethane	ND		mg/kg	0.0015	0.00041	1
Dibromochloromethane	ND		mg/kg	0.0015	0.00022	1
1,2-Dibromoethane	ND		mg/kg	0.00077	0.00045	1
2-Hexanone	ND		mg/kg	0.015	0.0018	1
Chlorobenzene	ND		mg/kg	0.00077	0.00020	1
Ethylbenzene	ND		mg/kg	0.0015	0.00022	1
p/m-Xylene	ND		mg/kg	0.0031	0.00086	1
o-Xylene	ND		mg/kg	0.0015	0.00045	1
Xylenes, Total	ND		mg/kg	0.0015	0.00045	1
Styrene	ND		mg/kg	0.0015	0.00030	1
Bromoform	ND		mg/kg	0.0062	0.00038	1
Isopropylbenzene	ND		mg/kg	0.0015	0.00017	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.00077	0.00026	1
1,3-Dichlorobenzene	ND		mg/kg	0.0031	0.00023	1
1,4-Dichlorobenzene	ND		mg/kg	0.0031	0.00026	1
1,2-Dichlorobenzene	ND		mg/kg	0.0031	0.00022	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0046	0.0015	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0031	0.00042	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0031	0.00050	1

Tentatively Identified Compounds

Total TIC Compounds	0.0120	J	mg/kg			1
Unknown	0.0120	J	mg/kg			1

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-05
 Client ID: DEP51-S5
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:05
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	102		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-06
 Client ID: DEP51-S6
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:10
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 22:02
 Analyst: AJK
 Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.014	0.0013	1
Chloromethane	ND		mg/kg	0.0056	0.0013	1
Vinyl chloride	ND		mg/kg	0.0014	0.00046	1
Bromomethane	ND		mg/kg	0.0028	0.00081	1
Chloroethane	ND		mg/kg	0.0028	0.00063	1
Trichlorofluoromethane	ND		mg/kg	0.0056	0.00097	1
1,1-Dichloroethene	ND		mg/kg	0.0014	0.00033	1
Carbon disulfide	ND		mg/kg	0.014	0.0063	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0056	0.00096	1
Methylene chloride	ND		mg/kg	0.0070	0.0032	1
Acetone	ND		mg/kg	0.035	0.014	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0021	0.00019	1
Methyl Acetate	0.0044	J	mg/kg	0.0056	0.0013	1
Methyl tert butyl ether	ND		mg/kg	0.0028	0.00028	1
1,1-Dichloroethane	ND		mg/kg	0.0014	0.00020	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0014	0.00024	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0014	0.00019	1
Cyclohexane	ND		mg/kg	0.014	0.00076	1
Bromochloromethane	ND		mg/kg	0.0028	0.00028	1
Chloroform	ND		mg/kg	0.0021	0.00019	1
Carbon tetrachloride	ND		mg/kg	0.0014	0.00032	1
1,1,1-Trichloroethane	ND		mg/kg	0.00070	0.00023	1
2-Butanone	ND		mg/kg	0.014	0.0031	1
Benzene	ND		mg/kg	0.00070	0.00023	1
1,2-Dichloroethane	ND		mg/kg	0.0014	0.00036	1
Methyl cyclohexane	ND		mg/kg	0.0056	0.00084	1
Trichloroethene	ND		mg/kg	0.00070	0.00019	1
1,2-Dichloropropane	ND		mg/kg	0.0014	0.00017	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-06
 Client ID: DEP51-S6
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:10
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.00070	0.00015	1
1,4-Dioxane	ND		mg/kg	0.11	0.049	1
cis-1,3-Dichloropropene	ND		mg/kg	0.00070	0.00022	1
Toluene	ND		mg/kg	0.0014	0.00076	1
4-Methyl-2-pentanone	ND		mg/kg	0.014	0.0018	1
Tetrachloroethene	ND		mg/kg	0.00070	0.00027	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0014	0.00038	1
1,3-Dichloropropene, Total	ND		mg/kg	0.00070	0.00022	1
1,1,2-Trichloroethane	ND		mg/kg	0.0014	0.00037	1
Dibromochloromethane	ND		mg/kg	0.0014	0.00019	1
1,2-Dibromoethane	ND		mg/kg	0.00070	0.00041	1
2-Hexanone	ND		mg/kg	0.014	0.0016	1
Chlorobenzene	ND		mg/kg	0.00070	0.00018	1
Ethylbenzene	ND		mg/kg	0.0014	0.00020	1
p/m-Xylene	ND		mg/kg	0.0028	0.00078	1
o-Xylene	ND		mg/kg	0.0014	0.00040	1
Xylenes, Total	ND		mg/kg	0.0014	0.00040	1
Styrene	ND		mg/kg	0.0014	0.00027	1
Bromoform	ND		mg/kg	0.0056	0.00034	1
Isopropylbenzene	ND		mg/kg	0.0014	0.00015	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.00070	0.00023	1
1,3-Dichlorobenzene	ND		mg/kg	0.0028	0.00020	1
1,4-Dichlorobenzene	ND		mg/kg	0.0028	0.00024	1
1,2-Dichlorobenzene	ND		mg/kg	0.0028	0.00020	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0042	0.0014	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0028	0.00038	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0028	0.00045	1

Tentatively Identified Compounds

Total TIC Compounds	0.00572	J	mg/kg			1
Cyclopentane	0.00572	NJ	mg/kg			1

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-06

Date Collected: 07/22/24 11:10

Client ID: DEP51-S6

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by EPA 5035 Low - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-07
 Client ID: DEP51-S7
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:15
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 22:28
 Analyst: AJK
 Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.016	0.0015	1
Chloromethane	ND		mg/kg	0.0066	0.0015	1
Vinyl chloride	ND		mg/kg	0.0016	0.00055	1
Bromomethane	ND		mg/kg	0.0033	0.00096	1
Chloroethane	ND		mg/kg	0.0033	0.00075	1
Trichlorofluoromethane	ND		mg/kg	0.0066	0.0011	1
1,1-Dichloroethene	ND		mg/kg	0.0016	0.00039	1
Carbon disulfide	ND		mg/kg	0.016	0.0075	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0066	0.0011	1
Methylene chloride	ND		mg/kg	0.0082	0.0038	1
Acetone	ND		mg/kg	0.041	0.016	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0025	0.00023	1
Methyl Acetate	ND		mg/kg	0.0066	0.0016	1
Methyl tert butyl ether	ND		mg/kg	0.0033	0.00033	1
1,1-Dichloroethane	ND		mg/kg	0.0016	0.00024	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0016	0.00029	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0016	0.00023	1
Cyclohexane	ND		mg/kg	0.016	0.00090	1
Bromochloromethane	ND		mg/kg	0.0033	0.00034	1
Chloroform	ND		mg/kg	0.0025	0.00023	1
Carbon tetrachloride	ND		mg/kg	0.0016	0.00038	1
1,1,1-Trichloroethane	ND		mg/kg	0.00082	0.00028	1
2-Butanone	ND		mg/kg	0.016	0.0037	1
Benzene	ND		mg/kg	0.00082	0.00027	1
1,2-Dichloroethane	ND		mg/kg	0.0016	0.00042	1
Methyl cyclohexane	ND		mg/kg	0.0066	0.0010	1
Trichloroethene	ND		mg/kg	0.00082	0.00023	1
1,2-Dichloropropane	ND		mg/kg	0.0016	0.00021	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-07
 Client ID: DEP51-S7
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:15
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.00082	0.00018	1
1,4-Dioxane	ND		mg/kg	0.13	0.058	1
cis-1,3-Dichloropropene	ND		mg/kg	0.00082	0.00026	1
Toluene	ND		mg/kg	0.0016	0.00090	1
4-Methyl-2-pentanone	ND		mg/kg	0.016	0.0021	1
Tetrachloroethene	ND		mg/kg	0.00082	0.00032	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0016	0.00045	1
1,3-Dichloropropene, Total	ND		mg/kg	0.00082	0.00026	1
1,1,2-Trichloroethane	ND		mg/kg	0.0016	0.00044	1
Dibromochloromethane	ND		mg/kg	0.0016	0.00023	1
1,2-Dibromoethane	ND		mg/kg	0.00082	0.00048	1
2-Hexanone	ND		mg/kg	0.016	0.0019	1
Chlorobenzene	ND		mg/kg	0.00082	0.00021	1
Ethylbenzene	ND		mg/kg	0.0016	0.00023	1
p/m-Xylene	ND		mg/kg	0.0033	0.00092	1
o-Xylene	ND		mg/kg	0.0016	0.00048	1
Xylenes, Total	ND		mg/kg	0.0016	0.00048	1
Styrene	ND		mg/kg	0.0016	0.00032	1
Bromoform	ND		mg/kg	0.0066	0.00041	1
Isopropylbenzene	ND		mg/kg	0.0016	0.00018	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.00082	0.00027	1
1,3-Dichlorobenzene	ND		mg/kg	0.0033	0.00024	1
1,4-Dichlorobenzene	ND		mg/kg	0.0033	0.00028	1
1,2-Dichlorobenzene	ND		mg/kg	0.0033	0.00024	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0050	0.0016	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0033	0.00045	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0033	0.00053	1

Tentatively Identified Compounds

Total TIC Compounds	0.00761	J	mg/kg			1
Unknown	0.00761	J	mg/kg			1

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-07

Date Collected: 07/22/24 11:15

Client ID: DEP51-S7

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by EPA 5035 Low - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	104		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-08
 Client ID: DEP51-S8
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:20
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 22:54
 Analyst: AJK
 Percent Solids: 60%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.020	0.0018	1
Chloromethane	ND		mg/kg	0.0079	0.0018	1
Vinyl chloride	ND		mg/kg	0.0020	0.00066	1
Bromomethane	ND		mg/kg	0.0040	0.0011	1
Chloroethane	ND		mg/kg	0.0040	0.00089	1
Trichlorofluoromethane	ND		mg/kg	0.0079	0.0014	1
1,1-Dichloroethene	ND		mg/kg	0.0020	0.00047	1
Carbon disulfide	ND		mg/kg	0.020	0.0090	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0079	0.0014	1
Methylene chloride	ND		mg/kg	0.0099	0.0045	1
Acetone	ND		mg/kg	0.049	0.020	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0030	0.00027	1
Methyl Acetate	ND		mg/kg	0.0079	0.0019	1
Methyl tert butyl ether	ND		mg/kg	0.0040	0.00040	1
1,1-Dichloroethane	ND		mg/kg	0.0020	0.00029	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0020	0.00035	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0020	0.00027	1
Cyclohexane	ND		mg/kg	0.020	0.0011	1
Bromochloromethane	ND		mg/kg	0.0040	0.00040	1
Chloroform	ND		mg/kg	0.0030	0.00028	1
Carbon tetrachloride	ND		mg/kg	0.0020	0.00046	1
1,1,1-Trichloroethane	ND		mg/kg	0.00099	0.00033	1
2-Butanone	ND		mg/kg	0.020	0.0044	1
Benzene	ND		mg/kg	0.00099	0.00033	1
1,2-Dichloroethane	ND		mg/kg	0.0020	0.00051	1
Methyl cyclohexane	ND		mg/kg	0.0079	0.0012	1
Trichloroethene	ND		mg/kg	0.00099	0.00027	1
1,2-Dichloropropane	ND		mg/kg	0.0020	0.00025	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-08
 Client ID: DEP51-S8
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:20
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.00099	0.00022	1
1,4-Dioxane	ND		mg/kg	0.16	0.069	1
cis-1,3-Dichloropropene	ND		mg/kg	0.00099	0.00031	1
Toluene	ND		mg/kg	0.0020	0.0011	1
4-Methyl-2-pentanone	ND		mg/kg	0.020	0.0025	1
Tetrachloroethene	ND		mg/kg	0.00099	0.00039	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0020	0.00054	1
1,3-Dichloropropene, Total	ND		mg/kg	0.00099	0.00031	1
1,1,2-Trichloroethane	ND		mg/kg	0.0020	0.00053	1
Dibromochloromethane	ND		mg/kg	0.0020	0.00028	1
1,2-Dibromoethane	ND		mg/kg	0.00099	0.00058	1
2-Hexanone	ND		mg/kg	0.020	0.0023	1
Chlorobenzene	ND		mg/kg	0.00099	0.00025	1
Ethylbenzene	ND		mg/kg	0.0020	0.00028	1
p/m-Xylene	ND		mg/kg	0.0040	0.0011	1
o-Xylene	ND		mg/kg	0.0020	0.00058	1
Xylenes, Total	ND		mg/kg	0.0020	0.00058	1
Styrene	ND		mg/kg	0.0020	0.00039	1
Bromoform	ND		mg/kg	0.0079	0.00049	1
Isopropylbenzene	ND		mg/kg	0.0020	0.00022	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.00099	0.00033	1
1,3-Dichlorobenzene	ND		mg/kg	0.0040	0.00029	1
1,4-Dichlorobenzene	ND		mg/kg	0.0040	0.00034	1
1,2-Dichlorobenzene	ND		mg/kg	0.0040	0.00028	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0059	0.0020	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0040	0.00054	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0040	0.00064	1

Tentatively Identified Compounds

Total TIC Compounds	0.0121	J	mg/kg			1
Unknown	0.0121	J	mg/kg			1

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-08

Date Collected: 07/22/24 11:20

Client ID: DEP51-S8

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by EPA 5035 Low - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	105		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-09
 Client ID: DEP51-S9
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:25
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 23:20
 Analyst: AJK
 Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.021	0.0019	1
Chloromethane	ND		mg/kg	0.0083	0.0019	1
Vinyl chloride	ND		mg/kg	0.0021	0.00070	1
Bromomethane	ND		mg/kg	0.0042	0.0012	1
Chloroethane	ND		mg/kg	0.0042	0.00094	1
Trichlorofluoromethane	ND		mg/kg	0.0083	0.0014	1
1,1-Dichloroethene	ND		mg/kg	0.0021	0.00050	1
Carbon disulfide	ND		mg/kg	0.021	0.0095	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0083	0.0014	1
Methylene chloride	ND		mg/kg	0.010	0.0048	1
Acetone	ND		mg/kg	0.052	0.021	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0031	0.00028	1
Methyl Acetate	ND		mg/kg	0.0083	0.0020	1
Methyl tert butyl ether	ND		mg/kg	0.0042	0.00042	1
1,1-Dichloroethane	ND		mg/kg	0.0021	0.00030	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0021	0.00036	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0021	0.00028	1
Cyclohexane	ND		mg/kg	0.021	0.0011	1
Bromochloromethane	ND		mg/kg	0.0042	0.00043	1
Chloroform	ND		mg/kg	0.0031	0.00029	1
Carbon tetrachloride	ND		mg/kg	0.0021	0.00048	1
1,1,1-Trichloroethane	ND		mg/kg	0.0010	0.00035	1
2-Butanone	ND		mg/kg	0.021	0.0046	1
Benzene	ND		mg/kg	0.0010	0.00034	1
1,2-Dichloroethane	ND		mg/kg	0.0021	0.00054	1
Methyl cyclohexane	ND		mg/kg	0.0083	0.0012	1
Trichloroethene	ND		mg/kg	0.0010	0.00028	1
1,2-Dichloropropane	ND		mg/kg	0.0021	0.00026	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-09
 Client ID: DEP51-S9
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:25
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.0010	0.00023	1
1,4-Dioxane	ND		mg/kg	0.17	0.073	1
cis-1,3-Dichloropropene	ND		mg/kg	0.0010	0.00033	1
Toluene	ND		mg/kg	0.0021	0.0011	1
4-Methyl-2-pentanone	ND		mg/kg	0.021	0.0027	1
Tetrachloroethene	ND		mg/kg	0.0010	0.00041	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0021	0.00057	1
1,3-Dichloropropene, Total	ND		mg/kg	0.0010	0.00033	1
1,1,2-Trichloroethane	ND		mg/kg	0.0021	0.00056	1
Dibromochloromethane	ND		mg/kg	0.0021	0.00029	1
1,2-Dibromoethane	ND		mg/kg	0.0010	0.00061	1
2-Hexanone	ND		mg/kg	0.021	0.0024	1
Chlorobenzene	ND		mg/kg	0.0010	0.00026	1
Ethylbenzene	ND		mg/kg	0.0021	0.00029	1
p/m-Xylene	ND		mg/kg	0.0042	0.0012	1
o-Xylene	ND		mg/kg	0.0021	0.00061	1
Xylenes, Total	ND		mg/kg	0.0021	0.00061	1
Styrene	ND		mg/kg	0.0021	0.00041	1
Bromoform	ND		mg/kg	0.0083	0.00051	1
Isopropylbenzene	ND		mg/kg	0.0021	0.00023	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.0010	0.00034	1
1,3-Dichlorobenzene	ND		mg/kg	0.0042	0.00031	1
1,4-Dichlorobenzene	ND		mg/kg	0.0042	0.00036	1
1,2-Dichlorobenzene	ND		mg/kg	0.0042	0.00030	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0062	0.0021	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0042	0.00057	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0042	0.00067	1

Tentatively Identified Compounds

No Tentatively Identified Compounds ND mg/kg 1

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-09
 Client ID: DEP51-S9
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:25
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	106		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-10
 Client ID: DEP51-S10
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:30
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/24/24 23:46
 Analyst: AJK
 Percent Solids: 60%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.024	0.0022	1
Chloromethane	ND		mg/kg	0.0097	0.0023	1
Vinyl chloride	ND		mg/kg	0.0024	0.00082	1
Bromomethane	ND		mg/kg	0.0049	0.0014	1
Chloroethane	ND		mg/kg	0.0049	0.0011	1
Trichlorofluoromethane	ND		mg/kg	0.0097	0.0017	1
1,1-Dichloroethene	ND		mg/kg	0.0024	0.00058	1
Carbon disulfide	ND		mg/kg	0.024	0.011	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0097	0.0017	1
Methylene chloride	ND		mg/kg	0.012	0.0056	1
Acetone	ND		mg/kg	0.061	0.024	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0036	0.00033	1
Methyl Acetate	ND		mg/kg	0.0097	0.0023	1
Methyl tert butyl ether	ND		mg/kg	0.0049	0.00049	1
1,1-Dichloroethane	ND		mg/kg	0.0024	0.00035	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0024	0.00043	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0024	0.00033	1
Cyclohexane	ND		mg/kg	0.024	0.0013	1
Bromochloromethane	ND		mg/kg	0.0049	0.00050	1
Chloroform	ND		mg/kg	0.0036	0.00034	1
Carbon tetrachloride	ND		mg/kg	0.0024	0.00056	1
1,1,1-Trichloroethane	ND		mg/kg	0.0012	0.00041	1
2-Butanone	ND		mg/kg	0.024	0.0054	1
Benzene	ND		mg/kg	0.0012	0.00040	1
1,2-Dichloroethane	ND		mg/kg	0.0024	0.00063	1
Methyl cyclohexane	ND		mg/kg	0.0097	0.0015	1
Trichloroethene	ND		mg/kg	0.0012	0.00033	1
1,2-Dichloropropane	ND		mg/kg	0.0024	0.00030	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-10
 Client ID: DEP51-S10
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:30
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.0012	0.00026	1
1,4-Dioxane	ND		mg/kg	0.19	0.086	1
cis-1,3-Dichloropropene	ND		mg/kg	0.0012	0.00038	1
Toluene	ND		mg/kg	0.0024	0.0013	1
4-Methyl-2-pentanone	ND		mg/kg	0.024	0.0031	1
Tetrachloroethene	ND		mg/kg	0.0012	0.00048	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0024	0.00066	1
1,3-Dichloropropene, Total	ND		mg/kg	0.0012	0.00038	1
1,1,2-Trichloroethane	ND		mg/kg	0.0024	0.00065	1
Dibromochloromethane	ND		mg/kg	0.0024	0.00034	1
1,2-Dibromoethane	ND		mg/kg	0.0012	0.00071	1
2-Hexanone	ND		mg/kg	0.024	0.0029	1
Chlorobenzene	ND		mg/kg	0.0012	0.00031	1
Ethylbenzene	ND		mg/kg	0.0024	0.00034	1
p/m-Xylene	ND		mg/kg	0.0049	0.0014	1
o-Xylene	ND		mg/kg	0.0024	0.00071	1
Xylenes, Total	ND		mg/kg	0.0024	0.00071	1
Styrene	ND		mg/kg	0.0024	0.00048	1
Bromoform	ND		mg/kg	0.0097	0.00060	1
Isopropylbenzene	ND		mg/kg	0.0024	0.00026	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.0012	0.00040	1
1,3-Dichlorobenzene	ND		mg/kg	0.0049	0.00036	1
1,4-Dichlorobenzene	ND		mg/kg	0.0049	0.00042	1
1,2-Dichlorobenzene	ND		mg/kg	0.0049	0.00035	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0073	0.0024	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0049	0.00066	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0049	0.00078	1

Tentatively Identified Compounds

No Tentatively Identified Compounds ND mg/kg 1

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-10

Date Collected: 07/22/24 11:30

Client ID: DEP51-S10

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by EPA 5035 Low - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	105		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-11
 Client ID: DEP51-S11
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:40
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/25/24 00:12
 Analyst: AJK
 Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.022	0.0020	1
Chloromethane	ND		mg/kg	0.0090	0.0021	1
Vinyl chloride	ND		mg/kg	0.0022	0.00075	1
Bromomethane	ND		mg/kg	0.0045	0.0013	1
Chloroethane	ND		mg/kg	0.0045	0.0010	1
Trichlorofluoromethane	ND		mg/kg	0.0090	0.0016	1
1,1-Dichloroethene	ND		mg/kg	0.0022	0.00054	1
Carbon disulfide	ND		mg/kg	0.022	0.010	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0090	0.0016	1
Methylene chloride	ND		mg/kg	0.011	0.0051	1
Acetone	0.23		mg/kg	0.056	0.022	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0034	0.00031	1
Methyl Acetate	ND		mg/kg	0.0090	0.0021	1
Methyl tert butyl ether	ND		mg/kg	0.0045	0.00045	1
1,1-Dichloroethane	ND		mg/kg	0.0022	0.00032	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0022	0.00039	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0022	0.00031	1
Cyclohexane	ND		mg/kg	0.022	0.0012	1
Bromochloromethane	ND		mg/kg	0.0045	0.00046	1
Chloroform	ND		mg/kg	0.0034	0.00031	1
Carbon tetrachloride	ND		mg/kg	0.0022	0.00052	1
1,1,1-Trichloroethane	ND		mg/kg	0.0011	0.00038	1
2-Butanone	0.14		mg/kg	0.022	0.0050	1
Benzene	ND		mg/kg	0.0011	0.00037	1
1,2-Dichloroethane	ND		mg/kg	0.0022	0.00058	1
Methyl cyclohexane	ND		mg/kg	0.0090	0.0014	1
Trichloroethene	ND		mg/kg	0.0011	0.00031	1
1,2-Dichloropropane	ND		mg/kg	0.0022	0.00028	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-11
 Client ID: DEP51-S11
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:40
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.0011	0.00024	1
1,4-Dioxane	ND		mg/kg	0.18	0.079	1
cis-1,3-Dichloropropene	ND		mg/kg	0.0011	0.00036	1
Toluene	ND		mg/kg	0.0022	0.0012	1
4-Methyl-2-pentanone	ND		mg/kg	0.022	0.0029	1
Tetrachloroethene	ND		mg/kg	0.0011	0.00044	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0022	0.00061	1
1,3-Dichloropropene, Total	ND		mg/kg	0.0011	0.00036	1
1,1,2-Trichloroethane	ND		mg/kg	0.0022	0.00060	1
Dibromochloromethane	ND		mg/kg	0.0022	0.00031	1
1,2-Dibromoethane	ND		mg/kg	0.0011	0.00066	1
2-Hexanone	ND		mg/kg	0.022	0.0026	1
Chlorobenzene	ND		mg/kg	0.0011	0.00028	1
Ethylbenzene	ND		mg/kg	0.0022	0.00032	1
p/m-Xylene	ND		mg/kg	0.0045	0.0012	1
o-Xylene	ND		mg/kg	0.0022	0.00065	1
Xylenes, Total	ND		mg/kg	0.0022	0.00065	1
Styrene	ND		mg/kg	0.0022	0.00044	1
Bromoform	ND		mg/kg	0.0090	0.00055	1
Isopropylbenzene	ND		mg/kg	0.0022	0.00024	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.0011	0.00037	1
1,3-Dichlorobenzene	ND		mg/kg	0.0045	0.00033	1
1,4-Dichlorobenzene	ND		mg/kg	0.0045	0.00038	1
1,2-Dichlorobenzene	ND		mg/kg	0.0045	0.00032	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0067	0.0022	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0045	0.00061	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0045	0.00072	1

Tentatively Identified Compounds

Total TIC Compounds	0.140	J	mg/kg			1
Unknown	0.00742	J	mg/kg			1
Unknown	0.0766	J	mg/kg			1
Unknown	0.0565	J	mg/kg			1

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-11

Date Collected: 07/22/24 11:40

Client ID: DEP51-S11

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by EPA 5035 Low - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	106		70-130

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-12
 Client ID: DUP-S
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 00:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260D
 Analytical Date: 07/25/24 00:39
 Analyst: AJK
 Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Dichlorodifluoromethane	ND		mg/kg	0.016	0.0015	1
Chloromethane	ND		mg/kg	0.0064	0.0015	1
Vinyl chloride	ND		mg/kg	0.0016	0.00054	1
Bromomethane	ND		mg/kg	0.0032	0.00093	1
Chloroethane	ND		mg/kg	0.0032	0.00072	1
Trichlorofluoromethane	ND		mg/kg	0.0064	0.0011	1
1,1-Dichloroethene	ND		mg/kg	0.0016	0.00038	1
Carbon disulfide	ND		mg/kg	0.016	0.0073	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0064	0.0011	1
Methylene chloride	ND		mg/kg	0.0080	0.0037	1
Acetone	ND		mg/kg	0.040	0.016	1
trans-1,2-Dichloroethene	ND		mg/kg	0.0024	0.00022	1
Methyl Acetate	ND		mg/kg	0.0064	0.0015	1
Methyl tert butyl ether	ND		mg/kg	0.0032	0.00032	1
1,1-Dichloroethane	ND		mg/kg	0.0016	0.00023	1
cis-1,2-Dichloroethene	ND		mg/kg	0.0016	0.00028	1
1,2-Dichloroethene, Total	ND		mg/kg	0.0016	0.00022	1
Cyclohexane	ND		mg/kg	0.016	0.00087	1
Bromochloromethane	ND		mg/kg	0.0032	0.00033	1
Chloroform	ND		mg/kg	0.0024	0.00022	1
Carbon tetrachloride	ND		mg/kg	0.0016	0.00037	1
1,1,1-Trichloroethane	ND		mg/kg	0.00080	0.00027	1
2-Butanone	ND		mg/kg	0.016	0.0036	1
Benzene	ND		mg/kg	0.00080	0.00026	1
1,2-Dichloroethane	ND		mg/kg	0.0016	0.00041	1
Methyl cyclohexane	ND		mg/kg	0.0064	0.00096	1
Trichloroethene	ND		mg/kg	0.00080	0.00022	1
1,2-Dichloropropane	ND		mg/kg	0.0016	0.00020	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-12
 Client ID: DUP-S
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 00:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Bromodichloromethane	ND		mg/kg	0.00080	0.00017	1
1,4-Dioxane	ND		mg/kg	0.13	0.056	1
cis-1,3-Dichloropropene	ND		mg/kg	0.00080	0.00025	1
Toluene	ND		mg/kg	0.0016	0.00087	1
4-Methyl-2-pentanone	ND		mg/kg	0.016	0.0020	1
Tetrachloroethene	ND		mg/kg	0.00080	0.00031	1
trans-1,3-Dichloropropene	ND		mg/kg	0.0016	0.00044	1
1,3-Dichloropropene, Total	ND		mg/kg	0.00080	0.00025	1
1,1,2-Trichloroethane	ND		mg/kg	0.0016	0.00043	1
Dibromochloromethane	ND		mg/kg	0.0016	0.00022	1
1,2-Dibromoethane	ND		mg/kg	0.00080	0.00047	1
2-Hexanone	ND		mg/kg	0.016	0.0019	1
Chlorobenzene	ND		mg/kg	0.00080	0.00020	1
Ethylbenzene	ND		mg/kg	0.0016	0.00022	1
p/m-Xylene	ND		mg/kg	0.0032	0.00090	1
o-Xylene	ND		mg/kg	0.0016	0.00046	1
Xylenes, Total	ND		mg/kg	0.0016	0.00046	1
Styrene	ND		mg/kg	0.0016	0.00031	1
Bromoform	ND		mg/kg	0.0064	0.00039	1
Isopropylbenzene	ND		mg/kg	0.0016	0.00017	1
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.00080	0.00026	1
1,3-Dichlorobenzene	ND		mg/kg	0.0032	0.00024	1
1,4-Dichlorobenzene	ND		mg/kg	0.0032	0.00027	1
1,2-Dichlorobenzene	ND		mg/kg	0.0032	0.00023	1
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0048	0.0016	1
1,2,4-Trichlorobenzene	ND		mg/kg	0.0032	0.00044	1
1,2,3-Trichlorobenzene	ND		mg/kg	0.0032	0.00052	1

Tentatively Identified Compounds

Total TIC Compounds	0.00542	J	mg/kg			1
Cyclopentane	0.00542	NJ	mg/kg			1

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-12

Date Collected: 07/22/24 00:00

Client ID: DUP-S

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by EPA 5035 Low - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	103		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-13
 Client ID: DEP51-W1
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:05
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D
 Analytical Date: 07/26/24 08:49
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	1.8	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Cyclohexane	ND		ug/l	10	0.27	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Methyl cyclohexane	ND		ug/l	10	0.40	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-13
 Client ID: DEP51-W1
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:05
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l 1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	123		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-13
 Client ID: DEP51-W1
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:05
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 07/26/24 08:49
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	3.0	1.1	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
4-Bromofluorobenzene	89		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-14
 Client ID: DEP51-W2
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:10
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D
 Analytical Date: 07/26/24 09:12
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	1.7	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Cyclohexane	ND		ug/l	10	0.27	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Methyl cyclohexane	ND		ug/l	10	0.40	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-14
 Client ID: DEP51-W2
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:10
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l 1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	124		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-14
 Client ID: DEP51-W2
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:10
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 07/26/24 09:12
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	3.0	1.1	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
4-Bromofluorobenzene	89		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-15
 Client ID: DEP51-W3
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:15
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D
 Analytical Date: 07/26/24 09:36
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Cyclohexane	ND		ug/l	10	0.27	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Methyl cyclohexane	ND		ug/l	10	0.40	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-15
 Client ID: DEP51-W3
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:15
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l 1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	121		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-15
 Client ID: DEP51-W3
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:15
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 07/26/24 09:36
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	3.0	1.1	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
4-Bromofluorobenzene	90		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-16
 Client ID: DEP51-W4
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 13:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D
 Analytical Date: 07/26/24 10:00
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	1.6	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Cyclohexane	ND		ug/l	10	0.27	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Methyl cyclohexane	ND		ug/l	10	0.40	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-16
 Client ID: DEP51-W4
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 13:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l 1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	123		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-16
 Client ID: DEP51-W4
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 13:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 07/26/24 10:00
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	3.0	1.1	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
4-Bromofluorobenzene	89		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-17
 Client ID: DUP-W
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 00:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D
 Analytical Date: 07/26/24 10:24
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	1.7	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Cyclohexane	ND		ug/l	10	0.27	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Methyl cyclohexane	ND		ug/l	10	0.40	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-17
 Client ID: DUP-W
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 00:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l 1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	127		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	121		70-130

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**SAMPLE RESULTS**

Lab ID: L2441149-17
 Client ID: DUP-W
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 00:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 07/26/24 10:24
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	3.0	1.1	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
4-Bromofluorobenzene	89		70-130

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/24/24 16:50
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-12 Batch: WG1951348-5					
Dichlorodifluoromethane	ND		mg/kg	0.010	0.00092
Chloromethane	ND		mg/kg	0.0040	0.00093
Vinyl chloride	ND		mg/kg	0.0010	0.00034
Bromomethane	ND		mg/kg	0.0020	0.00058
Chloroethane	ND		mg/kg	0.0020	0.00045
Trichlorofluoromethane	ND		mg/kg	0.0040	0.00070
1,1-Dichloroethene	ND		mg/kg	0.0010	0.00024
Carbon disulfide	ND		mg/kg	0.010	0.0046
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		mg/kg	0.0040	0.00069
Methylene chloride	ND		mg/kg	0.0050	0.0023
Acetone	ND		mg/kg	0.025	0.010
trans-1,2-Dichloroethene	ND		mg/kg	0.0015	0.00014
Methyl Acetate	ND		mg/kg	0.0040	0.00095
Methyl tert butyl ether	ND		mg/kg	0.0020	0.00020
1,1-Dichloroethane	ND		mg/kg	0.0010	0.00014
cis-1,2-Dichloroethene	ND		mg/kg	0.0010	0.00018
1,2-Dichloroethene, Total	ND		mg/kg	0.0010	0.00014
Cyclohexane	ND		mg/kg	0.010	0.00054
Bromochloromethane	ND		mg/kg	0.0020	0.00020
Chloroform	ND		mg/kg	0.0015	0.00014
Carbon tetrachloride	ND		mg/kg	0.0010	0.00023
1,1,1-Trichloroethane	ND		mg/kg	0.00050	0.00017
2-Butanone	ND		mg/kg	0.010	0.0022
Benzene	ND		mg/kg	0.00050	0.00017
1,2-Dichloroethane	ND		mg/kg	0.0010	0.00026
Methyl cyclohexane	ND		mg/kg	0.0040	0.00060
Trichloroethene	ND		mg/kg	0.00050	0.00014
1,2-Dichloropropane	ND		mg/kg	0.0010	0.00012
Bromodichloromethane	ND		mg/kg	0.00050	0.00011

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/24/24 16:50
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-12 Batch: WG1951348-5					
1,4-Dioxane	ND		mg/kg	0.080	0.035
cis-1,3-Dichloropropene	ND		mg/kg	0.00050	0.00016
Toluene	ND		mg/kg	0.0010	0.00054
4-Methyl-2-pentanone	ND		mg/kg	0.010	0.0013
Tetrachloroethene	ND		mg/kg	0.00050	0.00020
trans-1,3-Dichloropropene	ND		mg/kg	0.0010	0.00027
1,3-Dichloropropene, Total	ND		mg/kg	0.00050	0.00016
1,1,2-Trichloroethane	ND		mg/kg	0.0010	0.00027
Dibromochloromethane	ND		mg/kg	0.0010	0.00014
1,2-Dibromoethane	ND		mg/kg	0.00050	0.00029
2-Hexanone	ND		mg/kg	0.010	0.0012
Chlorobenzene	ND		mg/kg	0.00050	0.00013
Ethylbenzene	ND		mg/kg	0.0010	0.00014
p/m-Xylene	ND		mg/kg	0.0020	0.00056
o-Xylene	ND		mg/kg	0.0010	0.00029
Xylenes, Total	ND		mg/kg	0.0010	0.00029
Styrene	ND		mg/kg	0.0010	0.00020
Bromoform	ND		mg/kg	0.0040	0.00025
Isopropylbenzene	ND		mg/kg	0.0010	0.00011
1,1,2,2-Tetrachloroethane	ND		mg/kg	0.00050	0.00017
1,3-Dichlorobenzene	ND		mg/kg	0.0020	0.00015
1,4-Dichlorobenzene	ND		mg/kg	0.0020	0.00017
1,2-Dichlorobenzene	ND		mg/kg	0.0020	0.00014
1,2-Dibromo-3-chloropropane	ND		mg/kg	0.0030	0.0010
1,2,4-Trichlorobenzene	ND		mg/kg	0.0020	0.00027
1,2,3-Trichlorobenzene	ND		mg/kg	0.0020	0.00032

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/24/24 16:50
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-12 Batch: WG1951348-5					

Tentatively Identified Compounds

Total TIC Compounds	0.00370	J	mg/kg		
Unknown	0.00370	J	mg/kg		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	100		70-130

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/26/24 07:37
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 13-17 Batch: WG1952468-5					
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Chloromethane	ND		ug/l	2.5	0.20
Vinyl chloride	ND		ug/l	1.0	0.07
Bromomethane	ND		ug/l	1.0	0.26
Chloroethane	ND		ug/l	1.0	0.13
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Carbon disulfide	ND		ug/l	5.0	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15
Methylene chloride	ND		ug/l	2.5	0.68
Acetone	ND		ug/l	5.0	1.5
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Methyl Acetate	ND		ug/l	2.0	0.23
Methyl tert butyl ether	ND		ug/l	1.0	0.17
1,1-Dichloroethane	ND		ug/l	0.75	0.21
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16
Cyclohexane	ND		ug/l	10	0.27
Bromochloromethane	ND		ug/l	2.5	0.15
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
2-Butanone	ND		ug/l	5.0	1.9
Benzene	ND		ug/l	0.50	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Methyl cyclohexane	ND		ug/l	10	0.40
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Bromodichloromethane	ND		ug/l	0.50	0.19

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/26/24 07:37
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 13-17 Batch: WG1952468-5					
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Toluene	ND		ug/l	0.75	0.20
Tetrachloroethene	ND		ug/l	0.50	0.18
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,2-Dibromoethane	ND		ug/l	2.0	0.19
2-Hexanone	ND		ug/l	5.0	0.52
Chlorobenzene	ND		ug/l	0.50	0.18
Ethylbenzene	ND		ug/l	0.50	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
Styrene	ND		ug/l	1.0	0.36
Bromoform	ND		ug/l	2.0	0.25
Isopropylbenzene	ND		ug/l	0.50	0.19
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/26/24 07:37
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 13-17 Batch: WG1952468-5					

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	120		70-130

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/26/24 07:37
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 13-17 Batch: WG1952470-5					
1,4-Dioxane	ND		ug/l	3.0	1.1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
4-Bromofluorobenzene	90		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-12 Batch: WG1951348-3 WG1951348-4								
Dichlorodifluoromethane	84		81		30-146	4		30
Chloromethane	79		77		52-130	3		30
Vinyl chloride	110		106		67-130	4		30
Bromomethane	114		117		57-147	3		30
Chloroethane	95		98		50-151	3		30
Trichlorofluoromethane	111		109		70-139	2		30
1,1-Dichloroethene	105		102		65-135	3		30
Carbon disulfide	101		98		59-130	3		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	111		109		50-139	2		30
Methylene chloride	94		92		70-130	2		30
Acetone	75		74		54-140	1		30
trans-1,2-Dichloroethene	95		100		70-130	5		30
Methyl Acetate	70		75		51-146	7		30
Methyl tert butyl ether	100		105		66-130	5		30
1,1-Dichloroethane	96		94		70-130	2		30
cis-1,2-Dichloroethene	94		92		70-130	2		30
Cyclohexane	105		95		59-142	10		30
Bromochloromethane	99		91		70-130	8		30
Chloroform	97		90		70-130	7		30
Carbon tetrachloride	100		93		70-130	7		30
1,1,1-Trichloroethane	101		95		70-130	6		30
2-Butanone	80		73		70-130	9		30
Benzene	107		95		70-130	12		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-12 Batch: WG1951348-3 WG1951348-4								
1,2-Dichloroethane	92		86		70-130	7		30
Methyl cyclohexane	106		105		70-130	1		30
Trichloroethene	99		98		70-130	1		30
1,2-Dichloropropane	103		104		70-130	1		30
Bromodichloromethane	95		94		70-130	1		30
1,4-Dioxane	110		108		65-136	2		30
cis-1,3-Dichloropropene	101		99		70-130	2		30
Toluene	113		106		70-130	6		30
4-Methyl-2-pentanone	106		101		70-130	5		30
Tetrachloroethene	112		111		70-130	1		30
trans-1,3-Dichloropropene	106		103		70-130	3		30
1,1,2-Trichloroethane	99		97		70-130	2		30
Dibromochloromethane	104		103		70-130	1		30
1,2-Dibromoethane	100		97		70-130	3		30
2-Hexanone	84		79		70-130	6		30
Chlorobenzene	109		106		70-130	3		30
Ethylbenzene	111		104		70-130	7		30
p/m-Xylene	114		104		70-130	9		30
o-Xylene	111		94		70-130	17		30
Styrene	112		98		70-130	13		30
Bromoform	105		98		70-130	7		30
Isopropylbenzene	116		109		70-130	6		30
1,1,2,2-Tetrachloroethane	106		81		70-130	27		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-12 Batch: WG1951348-3 WG1951348-4								
1,3-Dichlorobenzene	111		108		70-130	3		30
1,4-Dichlorobenzene	108		107		70-130	1		30
1,2-Dichlorobenzene	106		105		70-130	1		30
1,2-Dibromo-3-chloropropane	100		97		68-130	3		30
1,2,4-Trichlorobenzene	127		129		70-130	2		30
1,2,3-Trichlorobenzene	119		117		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	88		84		70-130
Toluene-d8	103		100		70-130
4-Bromofluorobenzene	102		80		70-130
Dibromofluoromethane	94		88		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13-17 Batch: WG1952468-3 WG1952468-4								
Dichlorodifluoromethane	65		64		36-147	2		20
Chloromethane	91		89		64-130	2		20
Vinyl chloride	80		79		55-140	1		20
Bromomethane	60		60		39-139	0		20
Chloroethane	84		81		55-138	4		20
Trichlorofluoromethane	100		100		62-150	0		20
1,1-Dichloroethene	99		100		61-145	1		20
Carbon disulfide	99		96		51-130	3		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		110		70-130	0		20
Methylene chloride	99		98		70-130	1		20
Acetone	120		120		58-148	0		20
trans-1,2-Dichloroethene	99		99		70-130	0		20
Methyl Acetate	120		120		70-130	0		20
Methyl tert butyl ether	120		120		63-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Cyclohexane	98		97		70-130	1		20
Bromochloromethane	110		110		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,1,1-Trichloroethane	110		100		67-130	10		20
2-Butanone	110		130		63-138	17		20
Benzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13-17 Batch: WG1952468-3 WG1952468-4								
1,2-Dichloroethane	110		110		70-130	0		20
Methyl cyclohexane	99		97		70-130	2		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichloropropane	98		98		70-130	0		20
Bromodichloromethane	100		100		67-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
Toluene	93		92		70-130	1		20
Tetrachloroethene	90		88		70-130	2		20
4-Methyl-2-pentanone	88		90		59-130	2		20
trans-1,3-Dichloropropene	96		98		70-130	2		20
1,1,2-Trichloroethane	97		94		70-130	3		20
Dibromochloromethane	92		91		63-130	1		20
1,2-Dibromoethane	98		99		70-130	1		20
2-Hexanone	89		94		57-130	5		20
Chlorobenzene	93		93		75-130	0		20
Ethylbenzene	87		88		70-130	1		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	80		80		70-130	0		20
Styrene	80		80		70-130	0		20
Bromoform	76		75		54-136	1		20
Isopropylbenzene	72		72		70-130	0		20
1,3-Dichlorobenzene	92		88		70-130	4		20
1,4-Dichlorobenzene	81		83		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13-17 Batch: WG1952468-3 WG1952468-4								
1,2-Dichlorobenzene	83		82		70-130	1		20
1,2-Dibromo-3-chloropropane	81		85		41-144	5		20
1,2,4-Trichlorobenzene	72		72		70-130	0		20
1,2,3-Trichlorobenzene	77		75		70-130	3		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	106		104		70-130
Toluene-d8	98		100		70-130
4-Bromofluorobenzene	98		97		70-130
Dibromofluoromethane	108		107		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 13-17 Batch: WG1952470-3 WG1952470-4								
1,4-Dioxane	120		120		70-130	0		25
1,1,2,2-Tetrachloroethane	108		112		70-130	4		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	108		110		70-130
4-Bromofluorobenzene	91		89		70-130

METALS

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-01
 Client ID: DEP51-S1
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:30
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 99%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	4600		mg/kg	7.78	2.10	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Antimony, Total	ND		mg/kg	3.89	0.296	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Arsenic, Total	3.62		mg/kg	0.778	0.162	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Barium, Total	65.3		mg/kg	0.778	0.135	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.295	J	mg/kg	0.389	0.026	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.113	J	mg/kg	0.778	0.076	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Calcium, Total	30400		mg/kg	7.78	2.72	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Chromium, Total	332		mg/kg	0.778	0.075	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Cobalt, Total	5.95		mg/kg	1.56	0.129	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Copper, Total	17.9		mg/kg	0.778	0.201	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Iron, Total	11400		mg/kg	3.89	0.702	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Lead, Total	66.1		mg/kg	3.89	0.208	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Magnesium, Total	3580		mg/kg	7.78	1.20	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Manganese, Total	203		mg/kg	0.778	0.124	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Mercury, Total	0.065		mg/kg	0.065	0.042	1	07/23/24 09:30	07/23/24 10:51	EPA 7471B	1,7471B	MJR
Nickel, Total	20.4		mg/kg	1.94	0.188	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Potassium, Total	2100		mg/kg	194	11.2	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Selenium, Total	ND		mg/kg	1.56	0.201	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.389	0.220	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Sodium, Total	69.5	J	mg/kg	156	2.45	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Thallium, Total	0.605	J	mg/kg	1.56	0.245	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Vanadium, Total	21.1		mg/kg	0.778	0.158	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
Zinc, Total	114		mg/kg	3.89	0.228	2	07/23/24 08:55	07/23/24 13:52	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	332	J	mg/kg	0.809	0.162	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-02

Date Collected: 07/22/24 10:45

Client ID: DEP51-S2

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	8440		mg/kg	8.18	2.21	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Antimony, Total	ND		mg/kg	4.09	0.311	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Arsenic, Total	5.70		mg/kg	0.818	0.170	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Barium, Total	88.0		mg/kg	0.818	0.142	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.370	J	mg/kg	0.409	0.027	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.206	J	mg/kg	0.818	0.080	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Calcium, Total	32300		mg/kg	8.18	2.86	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Chromium, Total	834		mg/kg	0.818	0.079	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Cobalt, Total	10.2		mg/kg	1.64	0.136	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Copper, Total	20.6		mg/kg	0.818	0.211	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Iron, Total	17900		mg/kg	4.09	0.739	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Lead, Total	59.4		mg/kg	4.09	0.219	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Magnesium, Total	5640		mg/kg	8.18	1.26	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Manganese, Total	301		mg/kg	0.818	0.130	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Mercury, Total	0.063	J	mg/kg	0.067	0.043	1	07/23/24 09:30	07/23/24 10:55	EPA 7471B	1,7471B	MJR
Nickel, Total	38.6		mg/kg	2.04	0.198	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Potassium, Total	3810		mg/kg	204	11.8	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Selenium, Total	0.212	J	mg/kg	1.64	0.211	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.409	0.232	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Sodium, Total	114	J	mg/kg	164	2.58	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Thallium, Total	1.00	J	mg/kg	1.64	0.258	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Vanadium, Total	35.4		mg/kg	0.818	0.166	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
Zinc, Total	162		mg/kg	4.09	0.240	2	07/23/24 08:55	07/23/24 13:55	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	830		mg/kg	0.851	0.170	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-03

Date Collected: 07/22/24 10:50

Client ID: DEP51-S3

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	13400		mg/kg	8.06	2.18	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Antimony, Total	ND		mg/kg	4.03	0.306	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Arsenic, Total	9.04		mg/kg	0.806	0.168	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Barium, Total	137		mg/kg	0.806	0.140	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.570		mg/kg	0.403	0.027	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.289	J	mg/kg	0.806	0.079	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Calcium, Total	42800		mg/kg	8.06	2.82	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Chromium, Total	1240		mg/kg	0.806	0.077	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Cobalt, Total	14.3		mg/kg	1.61	0.134	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Copper, Total	40.5		mg/kg	0.806	0.208	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Iron, Total	23500		mg/kg	4.03	0.728	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Lead, Total	110		mg/kg	4.03	0.216	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Magnesium, Total	8260		mg/kg	8.06	1.24	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Manganese, Total	437		mg/kg	0.806	0.128	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Mercury, Total	0.137		mg/kg	0.066	0.043	1	07/23/24 09:30	07/23/24 10:58	EPA 7471B	1,7471B	MJR
Nickel, Total	55.8		mg/kg	2.01	0.195	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Potassium, Total	6180		mg/kg	201	11.6	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Selenium, Total	0.328	J	mg/kg	1.61	0.208	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.403	0.228	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Sodium, Total	176		mg/kg	161	2.54	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Thallium, Total	1.58	J	mg/kg	1.61	0.254	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Vanadium, Total	54.2		mg/kg	0.806	0.164	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
Zinc, Total	252		mg/kg	4.03	0.236	2	07/23/24 08:55	07/23/24 13:59	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	1240		mg/kg	0.826	0.165	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-04

Date Collected: 07/22/24 11:00

Client ID: DEP51-S4

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	10900		mg/kg	7.86	2.12	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Antimony, Total	0.767	J	mg/kg	3.93	0.299	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Arsenic, Total	9.50		mg/kg	0.786	0.164	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Barium, Total	118		mg/kg	0.786	0.137	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.518		mg/kg	0.393	0.026	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.389	J	mg/kg	0.786	0.077	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Calcium, Total	24400		mg/kg	7.86	2.75	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Chromium, Total	890		mg/kg	0.786	0.076	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Cobalt, Total	13.4		mg/kg	1.57	0.130	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Copper, Total	44.9		mg/kg	0.786	0.203	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Iron, Total	24700		mg/kg	3.93	0.710	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Lead, Total	201		mg/kg	3.93	0.211	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Magnesium, Total	7410		mg/kg	7.86	1.21	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Manganese, Total	496		mg/kg	0.786	0.125	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Mercury, Total	0.121		mg/kg	0.065	0.042	1	07/23/24 09:30	07/23/24 11:08	EPA 7471B	1,7471B	MJR
Nickel, Total	48.4		mg/kg	1.97	0.190	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Potassium, Total	4460		mg/kg	197	11.3	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Selenium, Total	0.450	J	mg/kg	1.57	0.203	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Silver, Total	0.234	J	mg/kg	0.393	0.222	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Sodium, Total	169		mg/kg	157	2.48	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Thallium, Total	1.10	J	mg/kg	1.57	0.248	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Vanadium, Total	43.8		mg/kg	0.786	0.160	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
Zinc, Total	299		mg/kg	3.93	0.230	2	07/23/24 08:55	07/23/24 14:02	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	890		mg/kg	0.827	0.165	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-05
 Client ID: DEP51-S5
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:05
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	8300		mg/kg	10.2	2.76	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Antimony, Total	1.68	J	mg/kg	5.12	0.389	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Arsenic, Total	6.80		mg/kg	1.02	0.213	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Barium, Total	121		mg/kg	1.02	0.178	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.411	J	mg/kg	0.512	0.034	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.379	J	mg/kg	1.02	0.100	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Calcium, Total	9870		mg/kg	10.2	3.58	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Chromium, Total	559		mg/kg	1.02	0.098	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Cobalt, Total	9.38		mg/kg	2.05	0.170	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Copper, Total	54.8		mg/kg	1.02	0.264	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Iron, Total	21600		mg/kg	5.12	0.924	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Lead, Total	2330		mg/kg	5.12	0.274	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Magnesium, Total	5450		mg/kg	10.2	1.58	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Manganese, Total	371		mg/kg	1.02	0.163	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Mercury, Total	0.059	J	mg/kg	0.086	0.056	1	07/23/24 09:30	07/23/24 11:11	EPA 7471B	1,7471B	MJR
Nickel, Total	29.6		mg/kg	2.56	0.248	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Potassium, Total	4200		mg/kg	256	14.7	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Selenium, Total	0.587	J	mg/kg	2.05	0.264	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.512	0.290	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Sodium, Total	146	J	mg/kg	205	3.22	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Thallium, Total	0.685	J	mg/kg	2.05	0.322	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Vanadium, Total	29.8		mg/kg	1.02	0.208	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
Zinc, Total	387		mg/kg	5.12	0.300	2	07/23/24 08:55	07/23/24 14:06	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	559		mg/kg	1.08	0.217	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-06

Date Collected: 07/22/24 11:10

Client ID: DEP51-S6

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6380		mg/kg	9.65	2.60	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Antimony, Total	4.00	J	mg/kg	4.82	0.366	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Arsenic, Total	12.9		mg/kg	0.965	0.201	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Barium, Total	115		mg/kg	0.965	0.168	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.372	J	mg/kg	0.482	0.032	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.517	J	mg/kg	0.965	0.095	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Calcium, Total	12800		mg/kg	9.65	3.38	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Chromium, Total	311		mg/kg	0.965	0.093	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Cobalt, Total	8.70		mg/kg	1.93	0.160	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Copper, Total	93.9		mg/kg	0.965	0.249	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Iron, Total	36800		mg/kg	4.82	0.871	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Lead, Total	290		mg/kg	4.82	0.258	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Magnesium, Total	3390		mg/kg	9.65	1.48	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Manganese, Total	394		mg/kg	0.965	0.153	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Mercury, Total	0.225		mg/kg	0.079	0.051	1	07/23/24 09:30	07/23/24 11:15	EPA 7471B	1,7471B	MJR
Nickel, Total	31.3		mg/kg	2.41	0.233	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Potassium, Total	2040		mg/kg	241	13.9	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Selenium, Total	0.971	J	mg/kg	1.93	0.249	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Silver, Total	0.369	J	mg/kg	0.482	0.273	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Sodium, Total	148	J	mg/kg	193	3.04	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Thallium, Total	0.594	J	mg/kg	1.93	0.304	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Vanadium, Total	27.2		mg/kg	0.965	0.196	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
Zinc, Total	210		mg/kg	4.82	0.283	2	07/23/24 08:55	07/23/24 14:09	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	311		mg/kg	0.990	0.198	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-07

Date Collected: 07/22/24 11:15

Client ID: DEP51-S7

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	10900		mg/kg	10.4	2.80	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Antimony, Total	0.464	J	mg/kg	5.18	0.394	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Arsenic, Total	8.85		mg/kg	1.04	0.215	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Barium, Total	117		mg/kg	1.04	0.180	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.531		mg/kg	0.518	0.034	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.304	J	mg/kg	1.04	0.102	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Calcium, Total	11600		mg/kg	10.4	3.62	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Chromium, Total	433		mg/kg	1.04	0.099	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Cobalt, Total	12.2		mg/kg	2.07	0.172	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Copper, Total	41.5		mg/kg	1.04	0.267	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Iron, Total	22600		mg/kg	5.18	0.935	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Lead, Total	140		mg/kg	5.18	0.278	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Magnesium, Total	6740		mg/kg	10.4	1.60	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Manganese, Total	526		mg/kg	1.04	0.165	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Mercury, Total	0.090		mg/kg	0.086	0.056	1	07/23/24 09:30	07/23/24 11:18	EPA 7471B	1,7471B	MJR
Nickel, Total	35.1		mg/kg	2.59	0.251	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Potassium, Total	5090		mg/kg	259	14.9	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Selenium, Total	0.448	J	mg/kg	2.07	0.267	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.518	0.293	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Sodium, Total	178	J	mg/kg	207	3.26	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Thallium, Total	1.04	J	mg/kg	2.07	0.326	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Vanadium, Total	38.4		mg/kg	1.04	0.210	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
Zinc, Total	230		mg/kg	5.18	0.304	2	07/23/24 08:55	07/23/24 14:20	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	433	J	mg/kg	1.09	0.218	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-08
 Client ID: DEP51-S8
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:20
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 60%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	12500		mg/kg	12.6	3.40	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Antimony, Total	20.8		mg/kg	6.30	0.479	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Arsenic, Total	13.9		mg/kg	1.26	0.262	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Barium, Total	146		mg/kg	1.26	0.219	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.622	J	mg/kg	0.630	0.042	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.469	J	mg/kg	1.26	0.124	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Calcium, Total	37700		mg/kg	12.6	4.41	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Chromium, Total	1110		mg/kg	1.26	0.121	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Cobalt, Total	16.0		mg/kg	2.52	0.209	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Copper, Total	59.7		mg/kg	1.26	0.325	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Iron, Total	28000		mg/kg	6.30	1.14	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Lead, Total	474		mg/kg	6.30	0.338	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Magnesium, Total	8690		mg/kg	12.6	1.94	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Manganese, Total	575		mg/kg	1.26	0.200	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Mercury, Total	0.155		mg/kg	0.105	0.069	1	07/23/24 09:30	07/23/24 11:21	EPA 7471B	1,7471B	MJR
Nickel, Total	59.1		mg/kg	3.15	0.305	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Potassium, Total	5120		mg/kg	315	18.2	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Selenium, Total	0.862	J	mg/kg	2.52	0.325	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.630	0.357	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Sodium, Total	233	J	mg/kg	252	3.97	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Thallium, Total	1.26	J	mg/kg	2.52	0.397	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Vanadium, Total	52.2		mg/kg	1.26	0.256	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
Zinc, Total	407		mg/kg	6.30	0.370	2	07/23/24 08:55	07/23/24 14:24	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	1110		mg/kg	1.33	0.265	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-09

Date Collected: 07/22/24 11:25

Client ID: DEP51-S9

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	10200		mg/kg	9.46	2.55	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Antimony, Total	0.698	J	mg/kg	4.73	0.360	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Arsenic, Total	10.3		mg/kg	0.946	0.197	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Barium, Total	110		mg/kg	0.946	0.165	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.592		mg/kg	0.473	0.031	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.452	J	mg/kg	0.946	0.093	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Calcium, Total	14800		mg/kg	9.46	3.31	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Chromium, Total	491		mg/kg	0.946	0.091	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Cobalt, Total	13.0		mg/kg	1.89	0.157	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Copper, Total	50.0		mg/kg	0.946	0.244	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Iron, Total	33900		mg/kg	4.73	0.854	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Lead, Total	1120		mg/kg	4.73	0.254	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Magnesium, Total	7190		mg/kg	9.46	1.46	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Manganese, Total	558		mg/kg	0.946	0.150	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Mercury, Total	0.102		mg/kg	0.079	0.052	1	07/23/24 09:30	07/23/24 11:25	EPA 7471B	1,7471B	MJR
Nickel, Total	35.6		mg/kg	2.36	0.229	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Potassium, Total	3670		mg/kg	236	13.6	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Selenium, Total	0.669	J	mg/kg	1.89	0.244	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Silver, Total	0.286	J	mg/kg	0.473	0.268	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Sodium, Total	172	J	mg/kg	189	2.98	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Thallium, Total	0.900	J	mg/kg	1.89	0.298	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Vanadium, Total	35.7		mg/kg	0.946	0.192	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
Zinc, Total	363		mg/kg	4.73	0.277	2	07/23/24 08:55	07/23/24 14:27	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	491		mg/kg	0.990	0.198	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-10

Date Collected: 07/22/24 11:30

Client ID: DEP51-S10

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 60%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	11200		mg/kg	13.1	3.54	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Antimony, Total	0.777	J	mg/kg	6.56	0.499	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Arsenic, Total	13.8		mg/kg	1.31	0.273	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Barium, Total	119		mg/kg	1.31	0.228	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.668		mg/kg	0.656	0.043	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.481	J	mg/kg	1.31	0.129	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Calcium, Total	19900		mg/kg	13.1	4.59	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Chromium, Total	1030		mg/kg	1.31	0.126	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Cobalt, Total	16.0		mg/kg	2.62	0.218	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Copper, Total	60.7		mg/kg	1.31	0.338	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Iron, Total	24900		mg/kg	6.56	1.18	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Lead, Total	242		mg/kg	6.56	0.352	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Magnesium, Total	9220		mg/kg	13.1	2.02	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Manganese, Total	656		mg/kg	1.31	0.209	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Mercury, Total	0.219		mg/kg	0.107	0.070	1	07/23/24 09:30	07/23/24 11:28	EPA 7471B	1,7471B	MJR
Nickel, Total	52.2		mg/kg	3.28	0.318	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Potassium, Total	3410		mg/kg	328	18.9	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Selenium, Total	0.754	J	mg/kg	2.62	0.338	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.656	0.371	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Sodium, Total	227	J	mg/kg	262	4.13	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Thallium, Total	0.819	J	mg/kg	2.62	0.413	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Vanadium, Total	50.5		mg/kg	1.31	0.266	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
Zinc, Total	343		mg/kg	6.56	0.384	2	07/23/24 08:55	07/23/24 14:31	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	1030		mg/kg	1.33	0.267	1		07/24/24 03:52	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-11
 Client ID: DEP51-S11
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:40
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	9980		mg/kg	8.99	2.43	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Antimony, Total	1.09	J	mg/kg	4.50	0.342	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Arsenic, Total	7.01		mg/kg	0.899	0.187	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Barium, Total	104		mg/kg	0.899	0.156	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.619		mg/kg	0.450	0.030	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.425	J	mg/kg	0.899	0.088	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Calcium, Total	8320		mg/kg	8.99	3.15	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Chromium, Total	101		mg/kg	0.899	0.086	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Cobalt, Total	9.09		mg/kg	1.80	0.149	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Copper, Total	50.9		mg/kg	0.899	0.232	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Iron, Total	20700		mg/kg	4.50	0.812	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Lead, Total	185		mg/kg	4.50	0.241	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Magnesium, Total	5450		mg/kg	8.99	1.38	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Manganese, Total	412		mg/kg	0.899	0.143	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Mercury, Total	0.202		mg/kg	0.074	0.048	1	07/23/24 09:30	07/23/24 11:31	EPA 7471B	1,7471B	MJR
Nickel, Total	18.6		mg/kg	2.25	0.218	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Potassium, Total	1830		mg/kg	225	12.9	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Selenium, Total	0.291	J	mg/kg	1.80	0.232	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Silver, Total	0.448	J	mg/kg	0.450	0.254	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Sodium, Total	221		mg/kg	180	2.83	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Thallium, Total	0.538	J	mg/kg	1.80	0.283	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Vanadium, Total	33.9		mg/kg	0.899	0.182	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
Zinc, Total	222		mg/kg	4.50	0.263	2	07/23/24 08:55	07/23/24 14:34	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	101		mg/kg	0.928	0.186	1		07/24/24 04:07	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-12
 Client ID: DUP-S
 Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 00:00
 Date Received: 07/22/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6280		mg/kg	9.76	2.63	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Antimony, Total	4.16	J	mg/kg	4.88	0.371	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Arsenic, Total	16.9		mg/kg	0.976	0.203	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Barium, Total	122		mg/kg	0.976	0.170	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Beryllium, Total	0.409	J	mg/kg	0.488	0.032	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.488	J	mg/kg	0.976	0.096	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Calcium, Total	11600		mg/kg	9.76	3.42	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Chromium, Total	305		mg/kg	0.976	0.094	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Cobalt, Total	7.75		mg/kg	1.95	0.162	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Copper, Total	83.2		mg/kg	0.976	0.252	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Iron, Total	28400		mg/kg	4.88	0.881	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Lead, Total	236		mg/kg	4.88	0.261	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Magnesium, Total	3150		mg/kg	9.76	1.50	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Manganese, Total	316		mg/kg	0.976	0.155	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Mercury, Total	0.249		mg/kg	0.082	0.053	1	07/23/24 09:30	07/23/24 11:35	EPA 7471B	1,7471B	MJR
Nickel, Total	28.1		mg/kg	2.44	0.236	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Potassium, Total	1840		mg/kg	244	14.0	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Selenium, Total	0.546	J	mg/kg	1.95	0.252	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Silver, Total	0.335	J	mg/kg	0.488	0.276	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Sodium, Total	152	J	mg/kg	195	3.07	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Thallium, Total	0.617	J	mg/kg	1.95	0.307	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Vanadium, Total	25.3		mg/kg	0.976	0.198	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
Zinc, Total	192		mg/kg	4.88	0.286	2	07/23/24 08:55	07/23/24 14:38	EPA 3050B	1,6010D	DHL
General Chemistry - Mansfield Lab											
Chromium, Trivalent	305		mg/kg	1.04	0.208	1		07/24/24 04:07	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-13

Date Collected: 07/22/24 12:05

Client ID: DEP51-W1

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	60.9		ug/l	10.0	3.27	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Antimony, Total	1.215	J	ug/l	4.000	0.4290	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Arsenic, Total	0.9562		ug/l	0.5000	0.1650	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Barium, Total	45.70		ug/l	0.5000	0.1730	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Beryllium, Total	ND		ug/l	0.5000	0.1070	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Cadmium, Total	ND		ug/l	0.2000	0.0599	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Calcium, Total	31100		ug/l	100.	39.4	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Chromium, Total	0.3406	J	ug/l	1.000	0.1780	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Cobalt, Total	0.3777	J	ug/l	0.5000	0.1630	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Copper, Total	3.167		ug/l	1.000	0.3840	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Iron, Total	169.		ug/l	50.0	19.1	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Lead, Total	1.069		ug/l	1.000	0.3430	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Magnesium, Total	12100		ug/l	70.0	24.2	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Manganese, Total	45.85		ug/l	1.000	0.4400	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Mercury, Total	0.1050	J	ug/l	0.2000	0.0915	1	07/23/24 08:20	07/23/24 11:43	EPA 7470A	1,7470A	MJR
Nickel, Total	1.761	J	ug/l	2.000	0.5560	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Potassium, Total	3820		ug/l	100.	30.9	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Selenium, Total	ND		ug/l	5.00	1.73	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Silver, Total	ND		ug/l	0.4000	0.1630	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Sodium, Total	28800		ug/l	100.	29.3	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Thallium, Total	ND		ug/l	1.000	0.1430	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Vanadium, Total	ND		ug/l	5.000	1.570	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
Zinc, Total	7.520	J	ug/l	10.00	3.410	1	07/23/24 07:42	07/23/24 11:24	EPA 3005A	1,6020B	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		ug/l	10.0	3.00	1		07/23/24 11:24	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-13

Date Collected: 07/22/24 12:05

Client ID: DEP51-W1

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	8.49	J	ug/l	10.0	3.27	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Antimony, Dissolved	0.6591	J	ug/l	4.000	0.4290	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Arsenic, Dissolved	0.9911		ug/l	0.5000	0.1650	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Barium, Dissolved	43.00		ug/l	0.5000	0.1730	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Beryllium, Dissolved	ND		ug/l	0.5000	0.1070	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Cadmium, Dissolved	ND		ug/l	0.2000	0.0599	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Calcium, Dissolved	31500		ug/l	100.	39.4	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Chromium, Dissolved	0.2748	J	ug/l	1.000	0.1780	1	07/24/24 06:03	07/24/24 11:30	EPA 3005A	1,6020B	EJF
Cobalt, Dissolved	0.2237	J	ug/l	0.5000	0.1630	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Copper, Dissolved	2.925		ug/l	1.000	0.3840	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Iron, Dissolved	50.1		ug/l	50.0	19.1	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Lead, Dissolved	ND		ug/l	1.000	0.3430	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Magnesium, Dissolved	12000		ug/l	70.0	24.2	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Manganese, Dissolved	4.750		ug/l	1.000	0.4400	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Mercury, Dissolved	ND		ug/l	0.2000	0.0915	1	07/24/24 06:55	07/24/24 09:57	EPA 7470A	1,7470A	MJR
Nickel, Dissolved	2.390		ug/l	2.000	0.5560	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Potassium, Dissolved	3890		ug/l	100.	30.9	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Selenium, Dissolved	ND		ug/l	5.00	1.73	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Silver, Dissolved	ND		ug/l	0.4000	0.1630	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Sodium, Dissolved	28000		ug/l	100.	29.3	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Thallium, Dissolved	ND		ug/l	1.000	0.1430	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Vanadium, Dissolved	ND		ug/l	5.000	1.570	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF
Zinc, Dissolved	3.552	J	ug/l	10.00	3.410	1	07/24/24 06:03	07/24/24 09:25	EPA 3005A	1,6020B	EJF



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-14

Date Collected: 07/22/24 12:10

Client ID: DEP51-W2

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	36.1		ug/l	10.0	3.27	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Antimony, Total	0.5472	J	ug/l	4.000	0.4290	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Arsenic, Total	0.9875		ug/l	0.5000	0.1650	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Barium, Total	44.09		ug/l	0.5000	0.1730	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Beryllium, Total	ND		ug/l	0.5000	0.1070	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Cadmium, Total	ND		ug/l	0.2000	0.0599	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Calcium, Total	30500		ug/l	100.	39.4	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Chromium, Total	0.2938	J	ug/l	1.000	0.1780	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Cobalt, Total	0.3086	J	ug/l	0.5000	0.1630	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Copper, Total	2.672		ug/l	1.000	0.3840	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Iron, Total	112.		ug/l	50.0	19.1	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Lead, Total	0.5946	J	ug/l	1.000	0.3430	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Magnesium, Total	12000		ug/l	70.0	24.2	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Manganese, Total	38.67		ug/l	1.000	0.4400	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Mercury, Total	0.2490		ug/l	0.2000	0.0915	1	07/23/24 08:20	07/23/24 11:33	EPA 7470A	1,7470A	MJR
Nickel, Total	1.719	J	ug/l	2.000	0.5560	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Potassium, Total	3740		ug/l	100.	30.9	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Selenium, Total	ND		ug/l	5.00	1.73	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Silver, Total	ND		ug/l	0.4000	0.1630	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Sodium, Total	28500		ug/l	100.	29.3	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Thallium, Total	ND		ug/l	1.000	0.1430	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Vanadium, Total	ND		ug/l	5.000	1.570	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
Zinc, Total	5.536	J	ug/l	10.00	3.410	1	07/23/24 07:42	07/23/24 11:47	EPA 3005A	1,6020B	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		ug/l	10.0	3.00	1		07/23/24 11:47	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-14

Date Collected: 07/22/24 12:10

Client ID: DEP51-W2

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	8.44	J	ug/l	10.0	3.27	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Antimony, Dissolved	1.200	J	ug/l	4.000	0.4290	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Arsenic, Dissolved	1.043		ug/l	0.5000	0.1650	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Barium, Dissolved	41.81		ug/l	0.5000	0.1730	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Beryllium, Dissolved	ND		ug/l	0.5000	0.1070	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Cadmium, Dissolved	ND		ug/l	0.2000	0.0599	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Calcium, Dissolved	30400		ug/l	100.	39.4	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Chromium, Dissolved	0.2298	J	ug/l	1.000	0.1780	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Cobalt, Dissolved	0.1692	J	ug/l	0.5000	0.1630	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Copper, Dissolved	2.313		ug/l	1.000	0.3840	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Iron, Dissolved	31.4	J	ug/l	50.0	19.1	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Lead, Dissolved	ND		ug/l	1.000	0.3430	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Magnesium, Dissolved	11600		ug/l	70.0	24.2	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Manganese, Dissolved	5.665		ug/l	1.000	0.4400	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Mercury, Dissolved	ND		ug/l	0.2000	0.0915	1	07/24/24 06:55	07/24/24 09:47	EPA 7470A	1,7470A	MJR
Nickel, Dissolved	1.705	J	ug/l	2.000	0.5560	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Potassium, Dissolved	3900		ug/l	100.	30.9	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Selenium, Dissolved	ND		ug/l	5.00	1.73	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Silver, Dissolved	ND		ug/l	0.4000	0.1630	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Sodium, Dissolved	27100		ug/l	100.	29.3	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Thallium, Dissolved	0.1919	J	ug/l	1.000	0.1430	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Vanadium, Dissolved	ND		ug/l	5.000	1.570	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF
Zinc, Dissolved	3.568	J	ug/l	10.00	3.410	1	07/24/24 06:03	07/24/24 10:34	EPA 3005A	1,6020B	EJF



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-15

Date Collected: 07/22/24 12:15

Client ID: DEP51-W3

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	41.0		ug/l	10.0	3.27	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Antimony, Total	0.4983	J	ug/l	4.000	0.4290	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Arsenic, Total	0.9090		ug/l	0.5000	0.1650	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Barium, Total	42.13		ug/l	0.5000	0.1730	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Beryllium, Total	ND		ug/l	0.5000	0.1070	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Cadmium, Total	ND		ug/l	0.2000	0.0599	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Calcium, Total	30000		ug/l	100.	39.4	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Chromium, Total	0.2700	J	ug/l	1.000	0.1780	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Cobalt, Total	0.3100	J	ug/l	0.5000	0.1630	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Copper, Total	2.474		ug/l	1.000	0.3840	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Iron, Total	129.		ug/l	50.0	19.1	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Lead, Total	0.6150	J	ug/l	1.000	0.3430	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Magnesium, Total	11500		ug/l	70.0	24.2	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Manganese, Total	41.98		ug/l	1.000	0.4400	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Mercury, Total	0.0920	J	ug/l	0.2000	0.0915	1	07/23/24 08:20	07/23/24 11:46	EPA 7470A	1,7470A	MJR
Nickel, Total	1.577	J	ug/l	2.000	0.5560	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Potassium, Total	3680		ug/l	100.	30.9	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Selenium, Total	ND		ug/l	5.00	1.73	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Silver, Total	ND		ug/l	0.4000	0.1630	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Sodium, Total	26800		ug/l	100.	29.3	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Thallium, Total	ND		ug/l	1.000	0.1430	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Vanadium, Total	ND		ug/l	5.000	1.570	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
Zinc, Total	7.010	J	ug/l	10.00	3.410	1	07/23/24 07:42	07/23/24 11:51	EPA 3005A	1,6020B	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		ug/l	10.0	3.00	1		07/23/24 11:51	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-15

Date Collected: 07/22/24 12:15

Client ID: DEP51-W3

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	8.42	J	ug/l	10.0	3.27	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Antimony, Dissolved	0.7665	J	ug/l	4.000	0.4290	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Arsenic, Dissolved	0.9474		ug/l	0.5000	0.1650	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Barium, Dissolved	41.30		ug/l	0.5000	0.1730	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Beryllium, Dissolved	ND		ug/l	0.5000	0.1070	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Cadmium, Dissolved	ND		ug/l	0.2000	0.0599	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Calcium, Dissolved	29700		ug/l	100.	39.4	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Chromium, Dissolved	0.2059	J	ug/l	1.000	0.1780	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Cobalt, Dissolved	0.1663	J	ug/l	0.5000	0.1630	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Copper, Dissolved	2.164		ug/l	1.000	0.3840	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Iron, Dissolved	28.9	J	ug/l	50.0	19.1	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Lead, Dissolved	ND		ug/l	1.000	0.3430	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Magnesium, Dissolved	11400		ug/l	70.0	24.2	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Manganese, Dissolved	5.916		ug/l	1.000	0.4400	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Mercury, Dissolved	ND		ug/l	0.2000	0.0915	1	07/24/24 06:55	07/24/24 10:00	EPA 7470A	1,7470A	MJR
Nickel, Dissolved	1.638	J	ug/l	2.000	0.5560	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Potassium, Dissolved	3690		ug/l	100.	30.9	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Selenium, Dissolved	ND		ug/l	5.00	1.73	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Silver, Dissolved	ND		ug/l	0.4000	0.1630	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Sodium, Dissolved	26400		ug/l	100.	29.3	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Thallium, Dissolved	ND		ug/l	1.000	0.1430	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Vanadium, Dissolved	ND		ug/l	5.000	1.570	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF
Zinc, Dissolved	3.439	J	ug/l	10.00	3.410	1	07/24/24 06:03	07/24/24 10:39	EPA 3005A	1,6020B	EJF



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-16

Date Collected: 07/22/24 13:00

Client ID: DEP51-W4

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	44.3		ug/l	10.0	3.27	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Antimony, Total	0.4872	J	ug/l	4.000	0.4290	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Arsenic, Total	0.9654		ug/l	0.5000	0.1650	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Barium, Total	44.53		ug/l	0.5000	0.1730	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Beryllium, Total	ND		ug/l	0.5000	0.1070	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Cadmium, Total	ND		ug/l	0.2000	0.0599	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Calcium, Total	30200		ug/l	100.	39.4	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Chromium, Total	0.2745	J	ug/l	1.000	0.1780	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Cobalt, Total	0.3318	J	ug/l	0.5000	0.1630	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Copper, Total	2.706		ug/l	1.000	0.3840	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Iron, Total	143.		ug/l	50.0	19.1	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Lead, Total	0.7412	J	ug/l	1.000	0.3430	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Magnesium, Total	11600		ug/l	70.0	24.2	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Manganese, Total	44.83		ug/l	1.000	0.4400	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Mercury, Total	ND		ug/l	0.2000	0.0915	1	07/23/24 08:20	07/23/24 11:50	EPA 7470A	1,7470A	MJR
Nickel, Total	1.630	J	ug/l	2.000	0.5560	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Potassium, Total	3730		ug/l	100.	30.9	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Selenium, Total	ND		ug/l	5.00	1.73	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Silver, Total	ND		ug/l	0.4000	0.1630	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Sodium, Total	27900		ug/l	100.	29.3	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Thallium, Total	ND		ug/l	1.000	0.1430	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Vanadium, Total	ND		ug/l	5.000	1.570	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
Zinc, Total	5.595	J	ug/l	10.00	3.410	1	07/23/24 07:42	07/23/24 11:56	EPA 3005A	1,6020B	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		ug/l	10.0	3.00	1		07/23/24 11:56	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-16

Date Collected: 07/22/24 13:00

Client ID: DEP51-W4

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	8.57	J	ug/l	10.0	3.27	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Antimony, Dissolved	0.8044	J	ug/l	4.000	0.4290	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Arsenic, Dissolved	0.9409		ug/l	0.5000	0.1650	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Barium, Dissolved	41.26		ug/l	0.5000	0.1730	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Beryllium, Dissolved	ND		ug/l	0.5000	0.1070	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Cadmium, Dissolved	ND		ug/l	0.2000	0.0599	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Calcium, Dissolved	29700		ug/l	100.	39.4	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Chromium, Dissolved	0.2308	J	ug/l	1.000	0.1780	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Cobalt, Dissolved	0.1872	J	ug/l	0.5000	0.1630	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Copper, Dissolved	2.307		ug/l	1.000	0.3840	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Iron, Dissolved	30.2	J	ug/l	50.0	19.1	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Lead, Dissolved	ND		ug/l	1.000	0.3430	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Magnesium, Dissolved	11600		ug/l	70.0	24.2	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Manganese, Dissolved	5.980		ug/l	1.000	0.4400	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Mercury, Dissolved	ND		ug/l	0.2000	0.0915	1	07/24/24 06:55	07/24/24 10:03	EPA 7470A	1,7470A	MJR
Nickel, Dissolved	1.725	J	ug/l	2.000	0.5560	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Potassium, Dissolved	3720		ug/l	100.	30.9	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Selenium, Dissolved	ND		ug/l	5.00	1.73	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Silver, Dissolved	ND		ug/l	0.4000	0.1630	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Sodium, Dissolved	27100		ug/l	100.	29.3	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Thallium, Dissolved	ND		ug/l	1.000	0.1430	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Vanadium, Dissolved	ND		ug/l	5.000	1.570	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF
Zinc, Dissolved	3.950	J	ug/l	10.00	3.410	1	07/24/24 06:03	07/24/24 10:43	EPA 3005A	1,6020B	EJF



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-17

Date Collected: 07/22/24 00:00

Client ID: DUP-W

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	41.0		ug/l	10.0	3.27	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Antimony, Total	0.4810	J	ug/l	4.000	0.4290	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Arsenic, Total	0.9336		ug/l	0.5000	0.1650	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Barium, Total	44.93		ug/l	0.5000	0.1730	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Beryllium, Total	ND		ug/l	0.5000	0.1070	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Cadmium, Total	ND		ug/l	0.2000	0.0599	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Calcium, Total	31600		ug/l	100.	39.4	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Chromium, Total	0.2831	J	ug/l	1.000	0.1780	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Cobalt, Total	0.3182	J	ug/l	0.5000	0.1630	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Copper, Total	2.737		ug/l	1.000	0.3840	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Iron, Total	141.		ug/l	50.0	19.1	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Lead, Total	0.6885	J	ug/l	1.000	0.3430	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Magnesium, Total	12100		ug/l	70.0	24.2	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Manganese, Total	43.03		ug/l	1.000	0.4400	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Mercury, Total	ND		ug/l	0.2000	0.0915	1	07/23/24 08:20	07/23/24 11:53	EPA 7470A	1,7470A	MJR
Nickel, Total	1.730	J	ug/l	2.000	0.5560	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Potassium, Total	3820		ug/l	100.	30.9	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Selenium, Total	ND		ug/l	5.00	1.73	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Silver, Total	ND		ug/l	0.4000	0.1630	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Sodium, Total	28900		ug/l	100.	29.3	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Thallium, Total	ND		ug/l	1.000	0.1430	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Vanadium, Total	ND		ug/l	5.000	1.570	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
Zinc, Total	5.687	J	ug/l	10.00	3.410	1	07/23/24 07:42	07/23/24 12:17	EPA 3005A	1,6020B	NTB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		ug/l	10.0	3.00	1		07/23/24 12:17	NA	107,-	



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-17

Date Collected: 07/22/24 00:00

Client ID: DUP-W

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	6.20	J	ug/l	10.0	3.27	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Antimony, Dissolved	0.7301	J	ug/l	4.000	0.4290	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Arsenic, Dissolved	0.9913		ug/l	0.5000	0.1650	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Barium, Dissolved	43.75		ug/l	0.5000	0.1730	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Beryllium, Dissolved	ND		ug/l	0.5000	0.1070	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Cadmium, Dissolved	ND		ug/l	0.2000	0.0599	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Calcium, Dissolved	30100		ug/l	100.	39.4	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Chromium, Dissolved	0.2487	J	ug/l	1.000	0.1780	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Cobalt, Dissolved	0.1669	J	ug/l	0.5000	0.1630	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Copper, Dissolved	2.374		ug/l	1.000	0.3840	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Iron, Dissolved	20.6	J	ug/l	50.0	19.1	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Lead, Dissolved	ND		ug/l	1.000	0.3430	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Magnesium, Dissolved	11700		ug/l	70.0	24.2	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Manganese, Dissolved	1.940		ug/l	1.000	0.4400	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Mercury, Dissolved	ND		ug/l	0.2000	0.0915	1	07/24/24 06:55	07/24/24 10:07	EPA 7470A	1,7470A	MJR
Nickel, Dissolved	1.904	J	ug/l	2.000	0.5560	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Potassium, Dissolved	3810		ug/l	100.	30.9	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Selenium, Dissolved	ND		ug/l	5.00	1.73	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Silver, Dissolved	ND		ug/l	0.4000	0.1630	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Sodium, Dissolved	27600		ug/l	100.	29.3	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Thallium, Dissolved	ND		ug/l	1.000	0.1430	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Vanadium, Dissolved	ND		ug/l	5.000	1.570	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF
Zinc, Dissolved	3.462	J	ug/l	10.00	3.410	1	07/24/24 06:03	07/24/24 10:48	EPA 3005A	1,6020B	EJF



Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-12 Batch: WG1950082-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Antimony, Total	0.258	J	mg/kg	2.00	0.152	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Arsenic, Total	ND		mg/kg	0.400	0.083	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Barium, Total	ND		mg/kg	0.400	0.070	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Beryllium, Total	ND		mg/kg	0.200	0.013	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Cadmium, Total	ND		mg/kg	0.400	0.039	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Calcium, Total	ND		mg/kg	4.00	1.40	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Chromium, Total	ND		mg/kg	0.400	0.038	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Cobalt, Total	ND		mg/kg	0.800	0.066	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Copper, Total	ND		mg/kg	0.400	0.103	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Iron, Total	1.04	J	mg/kg	2.00	0.361	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Lead, Total	ND		mg/kg	2.00	0.107	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Magnesium, Total	ND		mg/kg	4.00	0.616	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Manganese, Total	ND		mg/kg	0.400	0.064	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Nickel, Total	ND		mg/kg	1.00	0.097	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Potassium, Total	ND		mg/kg	100	5.76	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Selenium, Total	ND		mg/kg	0.800	0.103	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Silver, Total	ND		mg/kg	0.200	0.113	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Sodium, Total	ND		mg/kg	80.0	1.26	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Thallium, Total	ND		mg/kg	0.800	0.126	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Vanadium, Total	ND		mg/kg	0.400	0.081	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL
Zinc, Total	ND		mg/kg	2.00	0.117	1	07/23/24 08:55	07/23/24 12:55	1,6010D	DHL

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-12 Batch: WG1950083-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	07/23/24 09:30	07/23/24 10:34	1,7471B	MJR



Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 13-17 Batch: WG1950093-1									
Aluminum, Total	ND	ug/l	10.0	3.27	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Antimony, Total	ND	ug/l	4.000	0.4290	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Arsenic, Total	ND	ug/l	0.5000	0.1650	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Barium, Total	ND	ug/l	0.5000	0.1730	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Beryllium, Total	ND	ug/l	0.5000	0.1070	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Cadmium, Total	ND	ug/l	0.2000	0.0599	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Calcium, Total	ND	ug/l	100	39.4	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Chromium, Total	ND	ug/l	1.000	0.1780	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Cobalt, Total	ND	ug/l	0.5000	0.1630	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Copper, Total	ND	ug/l	1.000	0.3840	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Iron, Total	ND	ug/l	50.0	19.1	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Lead, Total	ND	ug/l	1.000	0.3430	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Magnesium, Total	ND	ug/l	70.0	24.2	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Manganese, Total	ND	ug/l	1.000	0.4400	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Nickel, Total	ND	ug/l	2.000	0.5560	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Potassium, Total	ND	ug/l	100	30.9	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Selenium, Total	ND	ug/l	5.00	1.73	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Silver, Total	ND	ug/l	0.4000	0.1630	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Sodium, Total	ND	ug/l	100	29.3	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Thallium, Total	ND	ug/l	1.000	0.1430	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Vanadium, Total	ND	ug/l	5.000	1.570	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB
Zinc, Total	ND	ug/l	10.00	3.410	1	07/23/24 07:42	07/23/24 11:15	1,6020B	NTB

Prep Information

Digestion Method: EPA 3005A



Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 13-17 Batch: WG1950095-1									
Mercury, Total	ND	ug/l	0.2000	0.0915	1	07/23/24 08:20	07/23/24 11:15	1,7470A	MJR

Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 13-17 Batch: WG1950096-1									
Aluminum, Dissolved	ND	ug/l	10.0	3.27	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Antimony, Dissolved	0.4414 J	ug/l	4.000	0.4290	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Arsenic, Dissolved	ND	ug/l	0.5000	0.1650	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Barium, Dissolved	ND	ug/l	0.5000	0.1730	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Beryllium, Dissolved	ND	ug/l	0.5000	0.1070	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Cadmium, Dissolved	ND	ug/l	0.2000	0.0599	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Calcium, Dissolved	ND	ug/l	100	39.4	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Chromium, Dissolved	ND	ug/l	1.000	0.1780	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Cobalt, Dissolved	ND	ug/l	0.5000	0.1630	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Copper, Dissolved	ND	ug/l	1.000	0.3840	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Iron, Dissolved	ND	ug/l	50.0	19.1	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Lead, Dissolved	ND	ug/l	1.000	0.3430	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Magnesium, Dissolved	ND	ug/l	70.0	24.2	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Manganese, Dissolved	ND	ug/l	1.000	0.4400	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Nickel, Dissolved	ND	ug/l	2.000	0.5560	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Potassium, Dissolved	ND	ug/l	100	30.9	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Selenium, Dissolved	ND	ug/l	5.00	1.73	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Silver, Dissolved	ND	ug/l	0.4000	0.1630	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Sodium, Dissolved	38.9 J	ug/l	100	29.3	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Thallium, Dissolved	ND	ug/l	1.000	0.1430	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Vanadium, Dissolved	ND	ug/l	5.000	1.570	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF
Zinc, Dissolved	ND	ug/l	10.00	3.410	1	07/24/24 06:03	07/24/24 10:13	1,6020B	EJF

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 13-17 Batch: WG1950098-1									
Mercury, Dissolved	ND	ug/l	0.2000	0.0915	1	07/24/24 06:55	07/24/24 09:40	1,7470A	MJR

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 01-12 Batch: WG1950082-2								
Aluminum, Total	101		-		80-120	-		
Antimony, Total	106		-		80-120	-		
Arsenic, Total	109		-		80-120	-		
Barium, Total	102		-		80-120	-		
Beryllium, Total	104		-		80-120	-		
Cadmium, Total	102		-		80-120	-		
Calcium, Total	103		-		80-120	-		
Chromium, Total	101		-		80-120	-		
Cobalt, Total	103		-		80-120	-		
Copper, Total	105		-		80-120	-		
Iron, Total	104		-		80-120	-		
Lead, Total	106		-		80-120	-		
Magnesium, Total	104		-		80-120	-		
Manganese, Total	102		-		80-120	-		
Nickel, Total	103		-		80-120	-		
Potassium, Total	106		-		80-120	-		
Selenium, Total	110		-		80-120	-		
Silver, Total	108		-		80-120	-		
Sodium, Total	107		-		80-120	-		
Thallium, Total	104		-		80-120	-		
Vanadium, Total	103		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-12 Batch: WG1950082-2					
Zinc, Total	104	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01-12 Batch: WG1950083-2					
Mercury, Total	102	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 13-17 Batch: WG1950093-2					
Aluminum, Total	93	-	80-120	-	
Antimony, Total	82	-	80-120	-	
Arsenic, Total	93	-	80-120	-	
Barium, Total	95	-	80-120	-	
Beryllium, Total	93	-	80-120	-	
Cadmium, Total	92	-	80-120	-	
Calcium, Total	87	-	80-120	-	
Chromium, Total	93	-	80-120	-	
Cobalt, Total	94	-	80-120	-	
Copper, Total	94	-	80-120	-	
Iron, Total	113	-	80-120	-	
Lead, Total	89	-	80-120	-	
Magnesium, Total	92	-	80-120	-	
Manganese, Total	96	-	80-120	-	
Nickel, Total	96	-	80-120	-	
Potassium, Total	92	-	80-120	-	
Selenium, Total	88	-	80-120	-	
Silver, Total	96	-	80-120	-	
Sodium, Total	96	-	80-120	-	
Thallium, Total	88	-	80-120	-	
Vanadium, Total	92	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 13-17 Batch: WG1950093-2					
Zinc, Total	93	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 13-17 Batch: WG1950095-2					
Mercury, Total	112	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 13-17 Batch: WG1950096-2					
Aluminum, Dissolved	95	-	80-120	-	
Antimony, Dissolved	85	-	80-120	-	
Arsenic, Dissolved	104	-	80-120	-	
Barium, Dissolved	101	-	80-120	-	
Beryllium, Dissolved	103	-	80-120	-	
Cadmium, Dissolved	100	-	80-120	-	
Calcium, Dissolved	119	-	80-120	-	
Chromium, Dissolved	98	-	80-120	-	
Cobalt, Dissolved	106	-	80-120	-	
Copper, Dissolved	107	-	80-120	-	
Iron, Dissolved	110	-	80-120	-	
Lead, Dissolved	104	-	80-120	-	
Magnesium, Dissolved	98	-	80-120	-	
Manganese, Dissolved	100	-	80-120	-	
Nickel, Dissolved	107	-	80-120	-	
Potassium, Dissolved	102	-	80-120	-	
Selenium, Dissolved	96	-	80-120	-	
Silver, Dissolved	103	-	80-120	-	
Sodium, Dissolved	104	-	80-120	-	
Thallium, Dissolved	105	-	80-120	-	
Vanadium, Dissolved	97	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 13-17 Batch: WG1950096-2					
Zinc, Dissolved	105	-	80-120	-	
Dissolved Metals - Mansfield Lab Associated sample(s): 13-17 Batch: WG1950098-2					
Mercury, Dissolved	99	-	80-120	-	

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-12 QC Batch ID: WG1950082-3 QC Sample: L2441006-01 Client ID: MS Sample												
Aluminum, Total	4500	226	4920	186	Q	-	-		75-125	-		20
Antimony, Total	ND	56.4	54.2	96		-	-		75-125	-		20
Arsenic, Total	4.11	13.5	18.1	103		-	-		75-125	-		20
Barium, Total	12.0	226	230	97		-	-		75-125	-		20
Beryllium, Total	0.240J	5.64	5.79	103		-	-		75-125	-		20
Cadmium, Total	ND	5.98	5.70	95		-	-		75-125	-		20
Calcium, Total	1000	1130	2000	89		-	-		75-125	-		20
Chromium, Total	6.81	22.6	28.3	95		-	-		75-125	-		20
Cobalt, Total	1.95J	56.4	56.1	99		-	-		75-125	-		20
Copper, Total	4.32	28.2	32.8	101		-	-		75-125	-		20
Iron, Total	5610	113	6040	381	Q	-	-		75-125	-		20
Lead, Total	8.16	59.8	67.8	100		-	-		75-125	-		20
Magnesium, Total	1110	1130	2370	112		-	-		75-125	-		20
Manganese, Total	67.0	56.4	125	103		-	-		75-125	-		20
Nickel, Total	5.33	56.4	60.3	97		-	-		75-125	-		20
Potassium, Total	658	1130	1720	94		-	-		75-125	-		20
Selenium, Total	0.353J	13.5	13.9	103		-	-		75-125	-		20
Silver, Total	ND	5.64	5.78	102		-	-		75-125	-		20
Sodium, Total	52.3J	1130	1200	106		-	-		75-125	-		20
Thallium, Total	ND	13.5	13.2	98		-	-		75-125	-		20
Vanadium, Total	8.88	56.4	64.4	98		-	-		75-125	-		20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-12 QC Batch ID: WG1950082-3 QC Sample: L2441006-01 Client ID: MS Sample									
Zinc, Total	23.1	56.4	79.7	100	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-12 QC Batch ID: WG1950083-3 QC Sample: L2440891-01 Client ID: MS Sample									
Mercury, Total	ND	2.37	2.49	105	-	-	80-120	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950093-3 QC Sample: L2441149-13 Client ID: DEP51-W1									
Aluminum, Total	60.9	2000	1940	94	-	-	75-125	-	20
Antimony, Total	1.215J	500	438.0	88	-	-	75-125	-	20
Arsenic, Total	0.9562	120	112.9	93	-	-	75-125	-	20
Barium, Total	45.70	2000	1972	96	-	-	75-125	-	20
Beryllium, Total	ND	50	45.69	91	-	-	75-125	-	20
Cadmium, Total	ND	53	50.31	95	-	-	75-125	-	20
Calcium, Total	31100	10000	37600	65	Q	-	75-125	-	20
Chromium, Total	0.3406J	200	186.1	93	-	-	75-125	-	20
Cobalt, Total	0.3777J	500	471.5	94	-	-	75-125	-	20
Copper, Total	3.167	250	237.0	94	-	-	75-125	-	20
Iron, Total	169.	1000	1260	109	-	-	75-125	-	20
Lead, Total	1.069	530	504.7	95	-	-	75-125	-	20
Magnesium, Total	12100	10000	21000	89	-	-	75-125	-	20
Manganese, Total	45.85	500	518.3	94	-	-	75-125	-	20
Nickel, Total	1.761J	500	474.2	95	-	-	75-125	-	20
Potassium, Total	3820	10000	12800	90	-	-	75-125	-	20
Selenium, Total	ND	120	104	87	-	-	75-125	-	20
Silver, Total	ND	50	48.76	98	-	-	75-125	-	20
Sodium, Total	28800	10000	39600	108	-	-	75-125	-	20
Thallium, Total	ND	120	112.8	94	-	-	75-125	-	20
Vanadium, Total	ND	500	455.9	91	-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950093-3 QC Sample: L2441149-13 Client ID: DEP51-W1									
Zinc, Total	7.520J	500	461.5	92	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950095-3 QC Sample: L2441149-14 Client ID: DEP51-W2									
Mercury, Total	0.2490	5	5.005	95	-	-	75-125	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950096-3 QC Sample: L2441149-13 Client ID: DEP51-W1									
Aluminum, Dissolved	8.49J	2000	1740	87	-	-	75-125	-	20
Antimony, Dissolved	0.6591J	500	447.0	89	-	-	75-125	-	20
Arsenic, Dissolved	0.9911	120	118.5	98	-	-	75-125	-	20
Barium, Dissolved	43.00	2000	1994	98	-	-	75-125	-	20
Beryllium, Dissolved	ND	50	51.92	104	-	-	75-125	-	20
Cadmium, Dissolved	ND	53	52.33	99	-	-	75-125	-	20
Calcium, Dissolved	31500	10000	36900	54	Q	-	75-125	-	20
Chromium, Dissolved	0.2748J	200	180.9	90	-	-	75-125	-	20
Cobalt, Dissolved	0.2237J	500	480.4	96	-	-	75-125	-	20
Copper, Dissolved	2.925	250	251.2	99	-	-	75-125	-	20
Iron, Dissolved	50.1	1000	1050	100	-	-	75-125	-	20
Lead, Dissolved	ND	530	534.3	101	-	-	75-125	-	20
Magnesium, Dissolved	12000	10000	19600	76	-	-	75-125	-	20
Manganese, Dissolved	4.750	500	445.1	88	-	-	75-125	-	20
Nickel, Dissolved	2.390	500	488.5	97	-	-	75-125	-	20
Potassium, Dissolved	3890	10000	12400	85	-	-	75-125	-	20
Selenium, Dissolved	ND	120	109	91	-	-	75-125	-	20
Silver, Dissolved	ND	50	50.04	100	-	-	75-125	-	20
Sodium, Dissolved	28000	10000	35600	76	-	-	75-125	-	20
Thallium, Dissolved	ND	120	123.7	103	-	-	75-125	-	20
Vanadium, Dissolved	ND	500	451.9	90	-	-	75-125	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950096-3 QC Sample: L2441149-13 Client ID: DEP51-W1									
Zinc, Dissolved	3.552J	500	489.2	98	-	-	75-125	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950098-3 QC Sample: L2441149-14 Client ID: DEP51-W2									
Mercury, Dissolved	ND	5	5.104	102	-	-	75-125	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-12 QC Batch ID: WG1950082-4 QC Sample: L2441006-01 Client ID: DUP Sample						
Arsenic, Total	4.11	4.13	mg/kg	0		20
Total Metals - Mansfield Lab Associated sample(s): 01-12 QC Batch ID: WG1950083-4 QC Sample: L2440891-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/kg	NC		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950093-4 QC Sample: L2441149-13 Client ID: DEP51-W1					
Aluminum, Total	60.9	54.9	ug/l	10	20
Antimony, Total	1.215J	1.095J	ug/l	NC	20
Arsenic, Total	0.9562	0.9548	ug/l	0	20
Barium, Total	45.70	44.41	ug/l	3	20
Beryllium, Total	ND	ND	ug/l	NC	20
Cadmium, Total	ND	ND	ug/l	NC	20
Calcium, Total	31100	29900	ug/l	4	20
Chromium, Total	0.3406J	0.3212J	ug/l	NC	20
Cobalt, Total	0.3777J	0.3516J	ug/l	NC	20
Copper, Total	3.167	2.880	ug/l	9	20
Iron, Total	169.	165	ug/l	2	20
Lead, Total	1.069	1.023	ug/l	4	20
Magnesium, Total	12100	11600	ug/l	4	20
Manganese, Total	45.85	44.06	ug/l	4	20
Nickel, Total	1.761J	1.757J	ug/l	NC	20
Potassium, Total	3820	3600	ug/l	6	20
Selenium, Total	ND	ND	ug/l	NC	20
Silver, Total	ND	ND	ug/l	NC	20
Sodium, Total	28800	27600	ug/l	4	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950093-4 QC Sample: L2441149-13 Client ID: DEP51-W1					
Thallium, Total	ND	ND	ug/l	NC	20
Vanadium, Total	ND	ND	ug/l	NC	20
Zinc, Total	7.520J	7.041J	ug/l	NC	20
Total Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950095-4 QC Sample: L2441149-14 Client ID: DEP51-W2					
Mercury, Total	0.2490	0.1280J	ug/l	NC	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950096-4 QC Sample: L2441149-13 Client ID: DEP51-W1					
Aluminum, Dissolved	8.49J	8.10J	ug/l	NC	20
Antimony, Dissolved	0.6591J	1.708J	ug/l	NC	20
Arsenic, Dissolved	0.9911	1.025	ug/l	3	20
Barium, Dissolved	43.00	42.52	ug/l	1	20
Beryllium, Dissolved	ND	ND	ug/l	NC	20
Cadmium, Dissolved	ND	ND	ug/l	NC	20
Calcium, Dissolved	31500	31300	ug/l	1	20
Chromium, Dissolved	0.2748J	0.3535J	ug/l	NC	20
Cobalt, Dissolved	0.2237J	0.2392J	ug/l	NC	20
Copper, Dissolved	2.925	2.478	ug/l	17	20
Iron, Dissolved	50.1	32.2J	ug/l	NC	20
Lead, Dissolved	ND	ND	ug/l	NC	20
Magnesium, Dissolved	12000	12300	ug/l	2	20
Manganese, Dissolved	4.750	4.846	ug/l	2	20
Nickel, Dissolved	2.390	1.882J	ug/l	NC	20
Potassium, Dissolved	3890	3960	ug/l	2	20
Selenium, Dissolved	ND	ND	ug/l	NC	20
Silver, Dissolved	ND	ND	ug/l	NC	20
Sodium, Dissolved	28000	28800	ug/l	3	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950096-4 QC Sample: L2441149-13 Client ID: DEP51-W1					
Thallium, Dissolved	ND	ND	ug/l	NC	20
Vanadium, Dissolved	ND	ND	ug/l	NC	20
Zinc, Dissolved	3.552J	3.505J	ug/l	NC	20
Dissolved Metals - Mansfield Lab Associated sample(s): 13-17 QC Batch ID: WG1950098-4 QC Sample: L2441149-14 Client ID: DEP51-W2					
Mercury, Dissolved	ND	ND	ug/l	NC	20

INORGANICS & MISCELLANEOUS

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-01

Client ID: DEP51-S1

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:30

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	98.9		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	0.212	J	mg/kg	0.809	0.162	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-02

Client ID: DEP51-S2

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:45

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.0		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	3.73		mg/kg	0.851	0.170	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-03

Client ID: DEP51-S3

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 10:50

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.8		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	0.826	0.165	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-04

Client ID: DEP51-S4

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:00

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.7		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	0.827	0.165	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-05

Client ID: DEP51-S5

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:05

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.8		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.08	0.217	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-06

Date Collected: 07/22/24 11:10

Client ID: DEP51-S6

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.8		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	0.990	0.198	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-07

Client ID: DEP51-S7

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:15

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.3		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	0.273	J	mg/kg	1.09	0.218	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-08

Client ID: DEP51-S8

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:20

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	60.3		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.33	0.265	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-09

Date Collected: 07/22/24 11:25

Client ID: DEP51-S9

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.8		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	0.990	0.198	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-10

Date Collected: 07/22/24 11:30

Client ID: DEP51-S10

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	60.0		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.33	0.267	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-11

Client ID: DEP51-S11

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 11:40

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.2		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	0.928	0.186	1	07/23/24 09:09	07/24/24 04:07	1,7196A	DTH



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-12

Client ID: DUP-S

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 00:00

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.0		%	0.100	NA	1	-	07/23/24 08:53	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.04	0.208	1	07/23/24 09:09	07/24/24 04:07	1,7196A	DTH



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-13

Client ID: DEP51-W1

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:05

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		ug/l	10.0	3.00	1	07/23/24 05:45	07/23/24 06:25	1,7196A	CAR



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-14

Client ID: DEP51-W2

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:10

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		ug/l	10.0	3.00	1	07/23/24 05:45	07/23/24 06:25	1,7196A	CAR



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-15

Client ID: DEP51-W3

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 12:15

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		ug/l	10.0	3.00	1	07/23/24 05:45	07/23/24 06:26	1,7196A	CAR



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-16

Date Collected: 07/22/24 13:00

Client ID: DEP51-W4

Date Received: 07/22/24

Sample Location: 51ST ST. PHILA PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		ug/l	10.0	3.00	1	07/23/24 05:45	07/23/24 06:26	1,7196A	CAR



Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

SAMPLE RESULTS

Lab ID: L2441149-17

Client ID: DUP-W

Sample Location: 51ST ST. PHILA PA

Date Collected: 07/22/24 00:00

Date Received: 07/22/24

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		ug/l	10.0	3.00	1	07/23/24 05:45	07/23/24 06:26	1,7196A	CAR



Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 13-17 Batch: WG1950068-1									
Chromium, Hexavalent	ND	ug/l	10.0	3.00	1	07/23/24 05:45	07/23/24 06:24	1,7196A	CAR
General Chemistry - Westborough Lab for sample(s): 01-10 Batch: WG1950127-1									
Chromium, Hexavalent	ND	mg/kg	0.800	0.160	1	07/23/24 09:09	07/24/24 03:52	1,7196A	DTH
General Chemistry - Westborough Lab for sample(s): 11-12 Batch: WG1950129-1									
Chromium, Hexavalent	ND	mg/kg	0.800	0.160	1	07/23/24 09:09	07/24/24 04:07	1,7196A	DTH

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 13-17 Batch: WG1950068-2								
Chromium, Hexavalent	99		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-10 Batch: WG1950127-2								
Chromium, Hexavalent	95		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 11-12 Batch: WG1950129-2								
Chromium, Hexavalent	95		-		80-120	-		20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Lab Number: L2441149
Report Date: 07/29/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 13-17 QC Batch ID: WG1950068-4 QC Sample: L2441149-13 Client ID: DEP51-W1												
Chromium, Hexavalent	ND	100	101	101	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1950127-4 QC Sample: L2441149-06 Client ID: DEP51-S6												
Chromium, Hexavalent	ND	1580	1520	96	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 11-12 QC Batch ID: WG1950129-4 QC Sample: L2441149-11 Client ID: DEP51-S11												
Chromium, Hexavalent	ND	1230	554	45	Q	-	-	-	75-125	-	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678.07

Lab Number: L2441149

Report Date: 07/29/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 13-17 QC Batch ID: WG1950068-3 QC Sample: L2441149-13 Client ID: DEP51-W1						
Chromium, Hexavalent	ND	ND	ug/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG1950112-1 QC Sample: L2437747-04 Client ID: DUP Sample						
Solids, Total	88.3	88.5	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1950127-6 QC Sample: L2441149-06 Client ID: DEP51-S6						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20
General Chemistry - Westborough Lab Associated sample(s): 11-12 QC Batch ID: WG1950129-6 QC Sample: L2441149-11 Client ID: DEP51-S11						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: ALLIANCE 51ST**Lab Number:** L2441149**Project Number:** 30108678.07**Report Date:** 07/29/24**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2441149-01A	Vial MeOH preserved	B	NA		3.5	Y	Absent		PA-8260HLW(14)
L2441149-01B	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-01C	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-01D	Plastic 120ml unpreserved	B	NA		3.5	Y	Absent		TS(7)
L2441149-01E	Metals Only-Glass 60mL/2oz unpreserved	B	NA		3.5	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),TL-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),SB-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),MG-TI(180),HG-T(28),MN-TI(180),FE-TI(180),CA-TI(180),K-TI(180),NA-TI(180),CD-TI(180)
L2441149-01F	Glass 120ml/4oz unpreserved	B	NA		3.5	Y	Absent		HEXCR-7196(30)
L2441149-02A	Vial MeOH preserved	B	NA		3.5	Y	Absent		PA-8260HLW(14)
L2441149-02B	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-02C	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-02D	Plastic 120ml unpreserved	B	NA		3.5	Y	Absent		TS(7)
L2441149-02E	Metals Only-Glass 60mL/2oz unpreserved	B	NA		3.5	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),CU-TI(180),SE-TI(180),PB-TI(180),ZN-TI(180),SB-TI(180),CO-TI(180),V-TI(180),HG-T(28),FE-TI(180),MN-TI(180),MG-TI(180),NA-TI(180),CD-TI(180),CA-TI(180),K-TI(180)
L2441149-02F	Glass 120ml/4oz unpreserved	B	NA		3.5	Y	Absent		HEXCR-7196(30)
L2441149-03A	Vial MeOH preserved	B	NA		3.5	Y	Absent		PA-8260HLW(14)
L2441149-03B	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-03C	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-03D	Plastic 120ml unpreserved	B	NA		3.5	Y	Absent		TS(7)

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2441149-03E	Metals Only-Glass 60mL/2oz unpreserved	B	NA		3.5	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),TL-TI(180),NI-TI(180),CU-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),PB-TI(180),V-TI(180),CO-TI(180),MG-TI(180),FE-TI(180),HG-T(28),MN-TI(180),CD-TI(180),NA-TI(180),K-TI(180),CA-TI(180)
L2441149-03F	Glass 120ml/4oz unpreserved	B	NA		3.5	Y	Absent		HEXCR-7196(30)
L2441149-04A	Vial MeOH preserved	B	NA		3.5	Y	Absent		PA-8260HLW(14)
L2441149-04B	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-04C	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-04D	Plastic 120ml unpreserved	B	NA		3.5	Y	Absent		TS(7)
L2441149-04E	Metals Only-Glass 60mL/2oz unpreserved	B	NA		3.5	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),TL-TI(180),AL-TI(180),NI-TI(180),CR-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CU-TI(180),V-TI(180),CO-TI(180),FE-TI(180),MG-TI(180),MN-TI(180),HG-T(28),CA-TI(180),CD-TI(180),NA-TI(180),K-TI(180)
L2441149-04F	Glass 120ml/4oz unpreserved	B	NA		3.5	Y	Absent		HEXCR-7196(30)
L2441149-05A	Vial MeOH preserved	B	NA		3.5	Y	Absent		PA-8260HLW(14)
L2441149-05B	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-05C	Vial water preserved	B	NA		3.5	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-05D	Plastic 120ml unpreserved	B	NA		3.5	Y	Absent		TS(7)
L2441149-05E	Metals Only-Glass 60mL/2oz unpreserved	B	NA		3.5	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),TL-TI(180),AL-TI(180),NI-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),SB-TI(180),CU-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),MG-TI(180),FE-TI(180),HG-T(28),MN-TI(180),K-TI(180),CD-TI(180),CA-TI(180),NA-TI(180)
L2441149-05F	Glass 120ml/4oz unpreserved	B	NA		3.5	Y	Absent		HEXCR-7196(30)
L2441149-06A	Vial MeOH preserved	A	NA		5.3	Y	Absent		PA-8260HLW(14)
L2441149-06B	Vial water preserved	A	NA		5.3	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-06C	Vial water preserved	A	NA		5.3	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-06D	Plastic 120ml unpreserved	A	NA		5.3	Y	Absent		TS(7)
L2441149-06E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		5.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),AL-TI(180),TL-TI(180),NI-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CU-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2441149-06F	Glass 120ml/4oz unpreserved	A	NA		5.3	Y	Absent		HEXCR-7196(30)
L2441149-07A	Vial MeOH preserved	C	NA		4.1	Y	Absent		PA-8260HLW(14)
L2441149-07B	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-07C	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-07D	Plastic 120ml unpreserved	C	NA		4.1	Y	Absent		TS(7)
L2441149-07E	Metals Only-Glass 60mL/2oz unpreserved	C	NA		4.1	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),TL-TI(180),CR-TI(180),NI-TI(180),AL-TI(180),PB-TI(180),SB-TI(180),ZN-TI(180),CU-TI(180),SE-TI(180),V-TI(180),CO-TI(180),MN-TI(180),MG-TI(180),FE-TI(180),HG-T(28),K-TI(180),NA-TI(180),CA-TI(180),CD-TI(180)
L2441149-07F	Glass 120ml/4oz unpreserved	C	NA		4.1	Y	Absent		HEXCR-7196(30)
L2441149-08A	Vial MeOH preserved	C	NA		4.1	Y	Absent		PA-8260HLW(14)
L2441149-08B	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-08C	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-08D	Plastic 120ml unpreserved	C	NA		4.1	Y	Absent		TS(7)
L2441149-08E	Metals Only-Glass 60mL/2oz unpreserved	C	NA		4.1	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),TL-TI(180),CR-TI(180),NI-TI(180),AL-TI(180),SB-TI(180),PB-TI(180),CU-TI(180),SE-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),HG-T(28),FE-TI(180),MG-TI(180),MN-TI(180),CD-TI(180),NA-TI(180),CA-TI(180),K-TI(180)
L2441149-08F	Glass 120ml/4oz unpreserved	C	NA		4.1	Y	Absent		HEXCR-7196(30)
L2441149-09A	Vial MeOH preserved	C	NA		4.1	Y	Absent		PA-8260HLW(14)
L2441149-09B	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-09C	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-09D	Plastic 120ml unpreserved	C	NA		4.1	Y	Absent		TS(7)
L2441149-09E	Metals Only-Glass 60mL/2oz unpreserved	C	NA		4.1	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),CR-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),ZN-TI(180),SE-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CD-TI(180),K-TI(180),CA-TI(180),NA-TI(180)
L2441149-09F	Glass 120ml/4oz unpreserved	C	NA		4.1	Y	Absent		HEXCR-7196(30)
L2441149-10A	Vial MeOH preserved	C	NA		4.1	Y	Absent		PA-8260HLW(14)
L2441149-10B	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)

Project Name: ALLIANCE 51ST
Project Number: 30108678.07

Serial_No:07292410:58
Lab Number: L2441149
Report Date: 07/29/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2441149-10C	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-10D	Plastic 120ml unpreserved	C	NA		4.1	Y	Absent		TS(7)
L2441149-10E	Metals Only-Glass 60mL/2oz unpreserved	C	NA		4.1	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),AL-TI(180),TL-TI(180),NI-TI(180),PB-TI(180),CU-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),MN-TI(180),FE-TI(180),MG-TI(180),HG-T(28),CA-TI(180),NA-TI(180),CD-TI(180),K-TI(180)
L2441149-10F	Glass 120ml/4oz unpreserved	C	NA		4.1	Y	Absent		HEXCR-7196(30)
L2441149-11A	Vial MeOH preserved	C	NA		4.1	Y	Absent		PA-8260HLW(14)
L2441149-11B	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-11C	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-11D	Plastic 120ml unpreserved	C	NA		4.1	Y	Absent		TS(7)
L2441149-11E	Metals Only-Glass 60mL/2oz unpreserved	C	NA		4.1	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),NI-TI(180),CR-TI(180),AL-TI(180),TL-TI(180),PB-TI(180),ZN-TI(180),CU-TI(180),SB-TI(180),SE-TI(180),CO-TI(180),V-TI(180),FE-TI(180),MN-TI(180),MG-TI(180),HG-T(28),K-TI(180),NA-TI(180),CD-TI(180),CA-TI(180)
L2441149-11F	Glass 120ml/4oz unpreserved	C	NA		4.1	Y	Absent		HEXCR-7196(30)
L2441149-12A	Vial MeOH preserved	C	NA		4.1	Y	Absent		PA-8260HLW(14)
L2441149-12B	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-12C	Vial water preserved	C	NA		4.1	Y	Absent	23-JUL-24 05:27	PA-8260HLW(14)
L2441149-12D	Plastic 120ml unpreserved	C	NA		4.1	Y	Absent		TS(7)
L2441149-12E	Metals Only-Glass 60mL/2oz unpreserved	C	NA		4.1	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),AL-TI(180),TL-TI(180),NI-TI(180),CR-TI(180),ZN-TI(180),SE-TI(180),PB-TI(180),CU-TI(180),SB-TI(180),V-TI(180),CO-TI(180),HG-T(28),FE-TI(180),MG-TI(180),MN-TI(180),CD-TI(180),CA-TI(180),K-TI(180),NA-TI(180)
L2441149-12F	Glass 120ml/4oz unpreserved	C	NA		4.1	Y	Absent		HEXCR-7196(30)
L2441149-13A	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-13B	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-13C	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-13D	Plastic 250ml unpreserved	A	7	7	5.3	Y	Absent		-

Project Name: ALLIANCE 51ST

Lab Number: L2441149

Project Number: 30108678.07

Report Date: 07/29/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2441149-13E	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	Y	Absent		CO-6020T-PPB(180),AL-6020T-PPB(180),SB-6020T-PPB(180),CR-6020T-PPB(180),HG-T-PPB(28),BE-6020T-PPB(180),CD-6020T-PPB(180),CA-6020T-PPB(180),CU-6020T-PPB(180),BA-6020T-PPB(180),TL-6020T-PPB(180),AG-6020T-PPB(180),PB-6020T-PPB(180),K-6020T-PPB(180),AS-6020T-PPB(180),FE-6020T-PPB(180),NA-6020T-PPB(180),ZN-6020T-PPB(180),MG-6020T-PPB(180),NI-6020T-PPB(180),MN-6020T-PPB(180),SE-6020T-PPB(180),V-6020T-PPB(180)
L2441149-13F	Plastic 500ml unpreserved	A	7	7	5.3	Y	Absent		HEXCR-7196-PPB(1)
L2441149-13X	Plastic 120ml HNO3 preserved Filtrates	A	NA	NA	5.3	Y	Absent		PB-6020S-PPB(180),AG-6020S-PPB(180),BE-6020S-PPB(180),K-6020S-PPB(180),TL-6020S-PPB(180),HG-S-PPB(28),ZN-6020S-PPB(180),CU-6020S-PPB(180),CD-6020S-PPB(180),CO-6020S-PPB(180),SB-6020S-PPB(180),AS-6020S-PPB(180),CR-6020S-PPB(180),MN-6020S-PPB(180),BA-6020S-PPB(180),FE-6020S-PPB(180),MG-6020S-PPB(180),CA-6020S-PPB(180),NA-6020S-PPB(180),V-6020S-PPB(180),AL-6020S-PPB(180),NI-6020S-PPB(180),SE-6020S-PPB(180)
L2441149-14A	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-14B	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-14C	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-14D	Plastic 250ml unpreserved	A	7	7	5.3	Y	Absent		-
L2441149-14E	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	Y	Absent		AL-6020T-PPB(180),CO-6020T-PPB(180),CD-6020T-PPB(180),HG-T-PPB(28),SB-6020T-PPB(180),CR-6020T-PPB(180),BE-6020T-PPB(180),CA-6020T-PPB(180),CU-6020T-PPB(180),BA-6020T-PPB(180),TL-6020T-PPB(180),K-6020T-PPB(180),PB-6020T-PPB(180),AS-6020T-PPB(180),AG-6020T-PPB(180),FE-6020T-PPB(180),NI-6020T-PPB(180),ZN-6020T-PPB(180),MG-6020T-PPB(180),NA-6020T-PPB(180),MN-6020T-PPB(180),SE-6020T-PPB(180),V-6020T-PPB(180)
L2441149-14F	Plastic 500ml unpreserved	A	7	7	5.3	Y	Absent		HEXCR-7196-PPB(1)

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2441149-14X	Plastic 120ml HNO3 preserved Filtrates	A	NA	NA	5.3	Y	Absent		PB-6020S-PPB(180),K-6020S-PPB(180),AG-6020S-PPB(180),BE-6020S-PPB(180),TL-6020S-PPB(180),HG-S-PPB(28),ZN-6020S-PPB(180),CU-6020S-PPB(180),CO-6020S-PPB(180),CD-6020S-PPB(180),SB-6020S-PPB(180),AS-6020S-PPB(180),MN-6020S-PPB(180),CR-6020S-PPB(180),NA-6020S-PPB(180),FE-6020S-PPB(180),BA-6020S-PPB(180),MG-6020S-PPB(180),V-6020S-PPB(180),CA-6020S-PPB(180),AL-6020S-PPB(180),NI-6020S-PPB(180),SE-6020S-PPB(180)
L2441149-15A	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-15B	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-15C	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-15D	Plastic 250ml unpreserved	A	7	7	5.3	Y	Absent		-
L2441149-15E	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	Y	Absent		AL-6020T-PPB(180),CO-6020T-PPB(180),BE-6020T-PPB(180),CR-6020T-PPB(180),SB-6020T-PPB(180),CD-6020T-PPB(180),HG-T-PPB(28),CA-6020T-PPB(180),CU-6020T-PPB(180),TL-6020T-PPB(180),BA-6020T-PPB(180),K-6020T-PPB(180),AG-6020T-PPB(180),AS-6020T-PPB(180),PB-6020T-PPB(180),FE-6020T-PPB(180),NA-6020T-PPB(180),MG-6020T-PPB(180),NI-6020T-PPB(180),ZN-6020T-PPB(180),V-6020T-PPB(180),MN-6020T-PPB(180),SE-6020T-PPB(180)
L2441149-15F	Plastic 500ml unpreserved	A	7	7	5.3	Y	Absent		HEXCR-7196-PPB(1)
L2441149-15X	Plastic 120ml HNO3 preserved Filtrates	A	NA	NA	5.3	Y	Absent		PB-6020S-PPB(180),K-6020S-PPB(180),AG-6020S-PPB(180),BE-6020S-PPB(180),TL-6020S-PPB(180),HG-S-PPB(28),ZN-6020S-PPB(180),CO-6020S-PPB(180),CD-6020S-PPB(180),CU-6020S-PPB(180),MN-6020S-PPB(180),CR-6020S-PPB(180),AS-6020S-PPB(180),SB-6020S-PPB(180),BA-6020S-PPB(180),MG-6020S-PPB(180),CA-6020S-PPB(180),NA-6020S-PPB(180),V-6020S-PPB(180),FE-6020S-PPB(180),AL-6020S-PPB(180),SE-6020S-PPB(180),NI-6020S-PPB(180)
L2441149-16A	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-16B	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-16C	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-16D	Plastic 250ml unpreserved	A	7	7	5.3	Y	Absent		-

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2441149-16E	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	Y	Absent		CO-6020T-PPB(180),AL-6020T-PPB(180),CD-6020T-PPB(180),SB-6020T-PPB(180),BE-6020T-PPB(180),HG-T-PPB(28),CR-6020T-PPB(180),CU-6020T-PPB(180),CA-6020T-PPB(180),BA-6020T-PPB(180),TL-6020T-PPB(180),AS-6020T-PPB(180),PB-6020T-PPB(180),AG-6020T-PPB(180),K-6020T-PPB(180),FE-6020T-PPB(180),NA-6020T-PPB(180),ZN-6020T-PPB(180),MG-6020T-PPB(180),NI-6020T-PPB(180),V-6020T-PPB(180),SE-6020T-PPB(180),MN-6020T-PPB(180)
L2441149-16F	Plastic 500ml unpreserved	A	7	7	5.3	Y	Absent		HEXCR-7196-PPB(1)
L2441149-16X	Plastic 120ml HNO3 preserved Filtrates	A	NA	NA	5.3	Y	Absent		PB-6020S-PPB(180),TL-6020S-PPB(180),K-6020S-PPB(180),AG-6020S-PPB(180),BE-6020S-PPB(180),ZN-6020S-PPB(180),HG-S-PPB(28),CU-6020S-PPB(180),CD-6020S-PPB(180),CO-6020S-PPB(180),CR-6020S-PPB(180),MN-6020S-PPB(180),AS-6020S-PPB(180),SB-6020S-PPB(180),BA-6020S-PPB(180),FE-6020S-PPB(180),NA-6020S-PPB(180),CA-6020S-PPB(180),MG-6020S-PPB(180),V-6020S-PPB(180),AL-6020S-PPB(180),SE-6020S-PPB(180),NI-6020S-PPB(180)
L2441149-17A	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-17B	Vial HCl preserved	A	NA		5.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2441149-17D	Plastic 250ml unpreserved	A	7	7	5.3	Y	Absent		-
L2441149-17E	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	Y	Absent		CO-6020T-PPB(180),AL-6020T-PPB(180),SB-6020T-PPB(180),CD-6020T-PPB(180),CR-6020T-PPB(180),HG-T-PPB(28),BE-6020T-PPB(180),CA-6020T-PPB(180),CU-6020T-PPB(180),TL-6020T-PPB(180),BA-6020T-PPB(180),K-6020T-PPB(180),AS-6020T-PPB(180),AG-6020T-PPB(180),PB-6020T-PPB(180),FE-6020T-PPB(180),NI-6020T-PPB(180),ZN-6020T-PPB(180),NA-6020T-PPB(180),MG-6020T-PPB(180),MN-6020T-PPB(180),SE-6020T-PPB(180),V-6020T-PPB(180)
L2441149-17F	Plastic 500ml unpreserved	A	7	7	5.3	Y	Absent		HEXCR-7196-PPB(1)

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2441149-17X	Plastic 120ml HNO3 preserved Filtrates	A	NA	NA	5.3	Y	Absent		PB-6020S-PPB(180),BE-6020S-PPB(180),K-6020S-PPB(180),TL-6020S-PPB(180),AG-6020S-PPB(180),HG-S-PPB(28),ZN-6020S-PPB(180),CU-6020S-PPB(180),CO-6020S-PPB(180),CD-6020S-PPB(180),CR-6020S-PPB(180),AS-6020S-PPB(180),SB-6020S-PPB(180),MN-6020S-PPB(180),FE-6020S-PPB(180),V-6020S-PPB(180),BA-6020S-PPB(180),MG-6020S-PPB(180),NA-6020S-PPB(180),CA-6020S-PPB(180),NI-6020S-PPB(180),SE-6020S-PPB(180),AL-6020S-PPB(180)

*Values in parentheses indicate holding time in days



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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

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REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 107 Alpha Analytical - In-house calculation method.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: EPA RSK-175 Dissolved Gases

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW JERSEY CHAIN OF CUSTODY

Service Centers
 Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
 Albany, NY 12205: 14 Walker Way
 Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page
 1 of 3

Date Rec'd
 in Lab 7/23/24

Westborough, MA 01581
 8 Walkup Dr.
 TEL: 508-898-9220
 FAX: 508-898-9193

Mansfield, MA 02048
 320 Forbes Blvd
 TEL: 508-822-9300
 FAX: 508-822-3288

Project Information

Project Name: *Allyre 5/2*
 Project Location: *Philly PA*
 Project # *32108678.27*

Deliverables

NJ Full / Reduced
 EQUIS (1 File) EQUIS (4 File)
 Other

PO #

PO #

Client Information

Client: *Allyre*
 Address: *1 Harvard Way 8th*
Harvard MA
 Phone: *781-226-1222*
 Fax:
 Email: *Larry.Gard@allyre.com*

Regulatory Requirement

(Use Project name as Project #)
 Project Manager: *LARRY BIRN*
 ALPHAQuote #:
 Turn-Around Time
 Standard Due Date:
 Rush (only if pre approved) # of Days:

Site Information

SRS Residential/Non Residential
 SRS Impact to Groundwater
 NJ Ground Water Quality Standards
 NJ IGW SPLP Leachate Criteria
 Other

Site Information

Is this site impacted by Petroleum? Yes
 Petroleum Product:

These samples have been previously analyzed by Alpha

For EPH, selection is REQUIRED:
 Category 1
 Category 2

For VOC, selection is REQUIRED:
 1,4-Dioxane
 8011

Other project specific requirements/comments:
Hex Cr, TAL Metals 48 hr TAD
Please specify Metals or TAL
VOCs Acronyl TAD
Per Soil and Labor

ANALYSIS

<i>Hex Cr</i>	<i>TAL</i>	<i>Metals</i>	<i>48 hr TAD</i>
<i>VOCs</i>	<i>Acronyl</i>	<i>TAD</i>	

Sample Filtration

Done
 Lab to do
Preservation
 Lab to do
 (Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	VOC	HEX Cr	TAL	Metals	TAD	Total Bottle
		Date	Time								
41149-01	DEPA1-51	7/22/24	1030	Soil	MN	X	X	X	X	X	6
02	DEPA1-52		1045			X	X	X	X	X	
03	DEPA1-53		1050			X	X	X	X	X	
04	DEPA1-54		1100			X	X	X	X	X	
05	DEPA1-55		1105			X	X	X	X	X	
06	DEPA1-56		1110			X	X	X	X	X	
07	DEPA1-57		1115			X	X	X	X	X	
08	DEPA1-58		1120			X	X	X	X	X	
09	DEPA1-59		1125			X	X	X	X	X	
10	DEPA1-510		1130			X	X	X	X	X	

Preservative Code:
 A = None
 B = HCl
 C = HNO₃
 D = H₂SO₄
 E = NaOH
 F = MeOH
 G = NaHSO₄
 H = Na₂S₂O₃
 K/E = Zn Ac/NaOH
 O = Other - *terracore*

Container Code
 P = Plastic
 A = Amber Glass
 V = Vial
 G = Glass
 B = Bacteria Cup
 C = Cube
 O = Other
 E = Encore
 D = BOD Bottle

Westboro: Certification No: MA935
 Mansfield: Certification No: MA015

Container Type
 V A A A

Preservative
 O A A A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Relinquished By:	Date/Time	Received By:	Date/Time
<i>Mark Lillis</i>	<i>7/22/24 1430</i>	<i>Anthony Green</i>	<i>07-22-24 1620</i>
<i>Anthony Green</i>	<i>07-22-24 1800</i>	<i>Anthony Green</i>	<i>7/22/24 1800</i>
<i>Anthony Green</i>	<i>7/22/24 2100</i>	<i>Anthony Green</i>	<i>JUL 22 2024 2200</i>

Anthony Green 7/23/24 0225
Anthony Green 7/23/24 0225

 NEW JERSEY CHAIN OF CUSTODY Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288	Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105	Page 2 of 2	Date Rec'd in Lab 7/23/24	ALPHA Job # 22441149									
		Project Information Project Name: Allstate 5/52 Project Location: Pitts, PA Project # 20108678.7 (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> NJ Full / Reduced <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		Billing Information <input type="checkbox"/> Same as Client Info PO #								
Client Information Client: Arradix Address: 1 Newark Hwy Ste 5 Wallingborough MA Phone: 908-526-7400 Fax: Email: Laura.Grant@arradix.com		Project Manager: Larry Grant ALPHAQuote #: Turn-Around Time Standard <input type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		Regulatory Requirement <input type="checkbox"/> SRS Residential/Non Residential <input type="checkbox"/> SRS Impact to Groundwater <input type="checkbox"/> NJ Ground Water Quality Standards <input type="checkbox"/> NJ IGW SPLP Leachate Criteria <input type="checkbox"/> Other		Site Information Is this site impacted by Petroleum? Yes <input type="checkbox"/> Petroleum Product:								
These samples have been previously analyzed by Alpha <input type="checkbox"/>			ANALYSIS		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do (Please Specify below)									
For EPH, selection is REQUIRED: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2	For VOC, selection is REQUIRED: <input type="checkbox"/> 1,4-Dioxane <input type="checkbox"/> 8011	Other project specific requirements/comments: Hex Cr, TAL Metals 45 hr TAT Please specify Metals or TAL. VOCs Normal TAT Per Soil and water				Total Bottles								
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials		VOC +10	Hex Cr	TAL Metals	Inhibit Cr	VOC +10	Hex Cr	TAL Metals	Residual Metals
41149-11	DEPA1-511	7/22/24	1140	Soil	ML	X								
-12	DAP-5		X			X								
-13	DEPA1-61		1205	AG										
-14	DEPA1-62		1210											
-15	DEPA1-63		1215											
-16	DEPA1-64		1300											
-17	DAP-6		X											
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type Preservative		V A A A A A D P P O A A A B A C A						Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)
Form No: 01-14 HC (rev. 30-Sept-2013)		Relinquished By:		Date/Time		Received By:		Date/Time						
		Ma-J H. 1/24		7/22/24 1620		Bart J. 1/24 1620		07/22/24 1620						
		Anthony Green		7/22/24 2100		Anthony Green		7/22/24 1800						
		Anthony Green		7/23/24 0220		Anthony Green		7/23/24 0220						



ANALYTICAL REPORT

Lab Number:	L2444177
Client:	Arcadis U.S., Inc 1 Harvard Way Suite 5 Hillsborough, NJ 08844
ATTN:	Larry Brunt
Phone:	(908) 526-1000
Project Name:	ALLISURE 51ST
Project Number:	30108678
Report Date:	08/07/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: ALLISURE 51ST
Project Number: 30108678

Lab Number: L2444177
Report Date: 08/07/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2444177-01	DEP51-S3	SOIL	PHILA, PA	08/06/24 10:55	08/06/24
L2444177-02	DEP51-S8	SOIL	PHILA, PA	08/06/24 11:00	08/06/24
L2444177-03	DEP51-S10	SOIL	PHILA, PA	08/06/24 11:05	08/06/24

Project Name: ALLISURE 51ST
Project Number: 30108678

Lab Number: L2444177
Report Date: 08/07/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: ALLISURE 51ST
Project Number: 30108678

Lab Number: L2444177
Report Date: 08/07/24

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Total Metals

L2444177-01 through -03: The sample has an elevated detection limit for chromium due to the dilution required by the sample matrix.

The WG1956229-3 MS recovery for chromium (343%), performed on L2444177-01, does not apply because the sample concentration is greater than four times the spike amount added.

The WG1956229-4 Laboratory Duplicate RPD for chromium (29%), performed on L2444177-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Tiffani Morrissey

Title: Technical Director/Representative

Date: 08/07/24

METALS

Project Name: ALLISURE 51ST

Lab Number: L2444177

Project Number: 30108678

Report Date: 08/07/24

SAMPLE RESULTS

Lab ID: L2444177-01

Date Collected: 08/06/24 10:55

Client ID: DEP51-S3

Date Received: 08/06/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	266		mg/kg	0.947	0.091	2	08/07/24 08:15	08/07/24 11:53	EPA 3050B	1,6010D	JMF



Project Name: ALLISURE 51ST

Lab Number: L2444177

Project Number: 30108678

Report Date: 08/07/24

SAMPLE RESULTS

Lab ID: L2444177-02

Date Collected: 08/06/24 11:00

Client ID: DEP51-S8

Date Received: 08/06/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 65%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	163		mg/kg	1.19	0.114	2	08/07/24 08:15	08/07/24 11:41	EPA 3050B	1,6010D	JMF



Project Name: ALLISURE 51ST

Lab Number: L2444177

Project Number: 30108678

Report Date: 08/07/24

SAMPLE RESULTS

Lab ID: L2444177-03

Date Collected: 08/06/24 11:05

Client ID: DEP51-S10

Date Received: 08/06/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 67%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	1000		mg/kg	1.17	0.112	2	08/07/24 08:15	08/07/24 11:45	EPA 3050B	1,6010D	JMF



Project Name: ALLISURE 51ST

Lab Number: L2444177

Project Number: 30108678

Report Date: 08/07/24

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1956229-1									
Chromium, Total	ND	mg/kg	0.400	0.038	1	08/07/24 08:15	08/07/24 11:33	1,6010D	JMF

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLISURE 51ST

Lab Number: L2444177

Project Number: 30108678

Report Date: 08/07/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1956229-2								
Chromium, Total	98		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: ALLISURE 51ST

Lab Number: L2444177

Project Number: 30108678

Report Date: 08/07/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1956229-3 QC Sample: L2444177-01 Client ID: DEP51-S3												
Chromium, Total	266	18.6	330	343	Q	-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLISURE 51ST

Project Number: 30108678

Lab Number: L2444177

Report Date: 08/07/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1956229-4 QC Sample: L2444177-01 Client ID: DEP51-S3						
Chromium, Total	266	357	mg/kg	29	Q	20

INORGANICS & MISCELLANEOUS

Project Name: ALLISURE 51ST

Project Number: 30108678

Lab Number: L2444177

Report Date: 08/07/24

SAMPLE RESULTS

Lab ID: L2444177-01

Client ID: DEP51-S3

Sample Location: PHILA, PA

Date Collected: 08/06/24 10:55

Date Received: 08/06/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.6		%	0.100	NA	1	-	08/07/24 01:39	121,2540G	WJM
Chromium, Hexavalent	ND		mg/kg	0.992	0.198	1	08/07/24 04:51	08/07/24 09:14	1,7196A	LOF



Project Name: ALLISURE 51ST

Project Number: 30108678

Lab Number: L2444177

Report Date: 08/07/24

SAMPLE RESULTS

Lab ID: L2444177-02

Client ID: DEP51-S8

Sample Location: PHILA, PA

Date Collected: 08/06/24 11:00

Date Received: 08/06/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	64.9		%	0.100	NA	1	-	08/07/24 01:39	121,2540G	WJM
Chromium, Hexavalent	ND		mg/kg	1.23	0.246	1	08/07/24 04:51	08/07/24 09:14	1,7196A	LOF



Project Name: ALLISURE 51ST

Project Number: 30108678

Lab Number: L2444177

Report Date: 08/07/24

SAMPLE RESULTS

Lab ID: L2444177-03

Client ID: DEP51-S10

Sample Location: PHILA, PA

Date Collected: 08/06/24 11:05

Date Received: 08/06/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	67.1		%	0.100	NA	1	-	08/07/24 01:39	121,2540G	WJM
Chromium, Hexavalent	ND		mg/kg	1.19	0.238	1	08/07/24 04:51	08/07/24 09:14	1,7196A	LOF



Project Name: ALLISURE 51ST

Lab Number: L2444177

Project Number: 30108678

Report Date: 08/07/24

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1956213-1									
Chromium, Hexavalent	ND	mg/kg	0.800	0.160	1	08/07/24 04:51	08/07/24 09:14	1,7196A	LOF

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLISURE 51ST

Lab Number: L2444177

Project Number: 30108678

Report Date: 08/07/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1956213-2								
Chromium, Hexavalent	95		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: ALLISURE 51ST

Lab Number: L2444177

Project Number: 30108678

Report Date: 08/07/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1956213-4 QC Sample: L2444177-01 Client ID: DEP51-S3												
Chromium, Hexavalent	ND	1290	1240	96		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLISURE 51ST

Project Number: 30108678

Lab Number: L2444177

Report Date: 08/07/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1956179-1 QC Sample: L2444064-01 Client ID: DUP Sample						
Solids, Total	89.5	89.4	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1956213-6 QC Sample: L2444177-01 Client ID: DEP51-S3						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: ALLISURE 51ST

Project Number: 30108678

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2444177-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		CR-TI(180)
L2444177-01B	Glass 120ml/4oz unpreserved	A	NA		2.8	Y	Absent		TS(7),HEXCR-7196(30)
L2444177-02A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		CR-TI(180)
L2444177-02B	Glass 120ml/4oz unpreserved	A	NA		2.8	Y	Absent		TS(7),HEXCR-7196(30)
L2444177-03A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.8	Y	Absent		CR-TI(180)
L2444177-03B	Glass 120ml/4oz unpreserved	A	NA		2.8	Y	Absent		TS(7),HEXCR-7196(30)

Project Name: ALLISURE 51ST
Project Number: 30108678

Lab Number: L2444177
Report Date: 08/07/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: ALLISURE 51ST
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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: ALLISURE 51ST
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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: ALLISURE 51ST
Project Number: 30108678

Lab Number: L2444177
Report Date: 08/07/24

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: EPA RSK-175 Dissolved Gases

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



ANALYTICAL REPORT

Lab Number:	L2445674
Client:	Arcadis U.S., Inc 1 Harvard Way Suite 5 Hillsborough, NJ 08844
ATTN:	Larry Brunt
Phone:	(908) 526-1000
Project Name:	ALLIANCE 51ST
Project Number:	30108678
Report Date:	08/16/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2445674-01	DEP51-S3-240813	SOIL	PHILA, PA	08/13/24 10:45	08/13/24
L2445674-02	DEP51-S5-240813	SOIL	PHILA, PA	08/13/24 11:10	08/13/24
L2445674-03	DEP51-S6-240813	SOIL	PHILA, PA	08/13/24 11:20	08/13/24
L2445674-04	DEP51-S8A-240813	SOIL	PHILA, PA	08/13/24 11:30	08/13/24
L2445674-05	DEP51-S10A-240813	SOIL	PHILA, PA	08/13/24 11:35	08/13/24
L2445674-06	DEP51-S12-240813	SOIL	PHILA, PA	08/13/24 10:51	08/13/24
L2445674-07	DEP51-S13-240813	SOIL	PHILA, PA	08/13/24 11:05	08/13/24
L2445674-08	DEP51-S14-240813	SOIL	PHILA, PA	08/13/24 11:45	08/13/24
L2445674-09	DEP51-S15-240813	SOIL	PHILA, PA	08/13/24 11:55	08/13/24
L2445674-10	DEP51-S7-240813	SOIL	PHILA, PA	08/13/24 11:25	08/13/24
L2445674-11	DUP-S 240813	SOIL	PHILA, PA	08/13/24 00:00	08/13/24
L2445674-12	DEP51-W5-240813	WATER	PHILA, PA	08/13/24 12:30	08/13/24
L2445674-13	DEP51-W6-240813	WATER	PHILA, PA	08/13/24 12:55	08/13/24

Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Total Metals

L2445674-01 through -13: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

Chromium, Hexavalent

The WG1959251-5 Soluble MS recovery for chromium, hexavalent (71%), performed on L2445674-11, was outside the acceptance criteria. This has been attributed to matrix interference. A post-spike was performed with a recovery of 89%.

The WG1959316-6 Laboratory Duplicate RPD for chromium, hexavalent (26%), performed on L2445674-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 08/16/24

METALS

Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-01
 Client ID: DEP51-S3-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 10:45
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	11000		mg/kg	8.74	2.36	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	4.37	0.332	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Arsenic, Total	6.46		mg/kg	0.874	0.182	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Barium, Total	120		mg/kg	0.874	0.152	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.542		mg/kg	0.437	0.029	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.340	J	mg/kg	0.874	0.086	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Calcium, Total	36100		mg/kg	8.74	3.06	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Chromium, Total	828		mg/kg	0.874	0.084	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Cobalt, Total	12.3		mg/kg	1.75	0.145	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Copper, Total	32.7		mg/kg	0.874	0.226	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Iron, Total	18400		mg/kg	4.37	0.790	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Lead, Total	68.5		mg/kg	4.37	0.234	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Magnesium, Total	7140		mg/kg	8.74	1.35	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Manganese, Total	401		mg/kg	0.874	0.139	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Mercury, Total	0.089		mg/kg	0.080	0.052	1	08/14/24 23:55	08/15/24 08:14	EPA 7471B	1,7471B	JWN
Nickel, Total	42.3		mg/kg	2.19	0.212	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Potassium, Total	5760		mg/kg	219	12.6	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.75	0.226	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.437	0.247	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Sodium, Total	149	J	mg/kg	175	2.75	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.75	0.275	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Vanadium, Total	42.6		mg/kg	0.874	0.178	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF
Zinc, Total	184		mg/kg	4.37	0.256	2	08/14/24 22:56	08/15/24 20:08	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-02
 Client ID: DEP51-S5-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 11:10
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6320		mg/kg	9.80	2.65	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	4.90	0.372	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Arsenic, Total	3.99		mg/kg	0.980	0.204	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Barium, Total	77.5		mg/kg	0.980	0.170	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.372	J	mg/kg	0.490	0.032	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.301	J	mg/kg	0.980	0.096	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Calcium, Total	10700		mg/kg	9.80	3.43	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Chromium, Total	246		mg/kg	0.980	0.094	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Cobalt, Total	7.32		mg/kg	1.96	0.163	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Copper, Total	27.2		mg/kg	0.980	0.253	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Iron, Total	18300		mg/kg	4.90	0.885	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Lead, Total	132		mg/kg	4.90	0.263	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Magnesium, Total	4300		mg/kg	9.80	1.51	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Manganese, Total	274		mg/kg	0.980	0.156	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Mercury, Total	ND		mg/kg	0.089	0.058	1	08/14/24 23:55	08/15/24 08:48	EPA 7471B	1,7471B	JWN
Nickel, Total	22.4		mg/kg	2.45	0.237	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Potassium, Total	3450		mg/kg	245	14.1	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.96	0.253	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.490	0.277	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Sodium, Total	169	J	mg/kg	196	3.09	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.96	0.309	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Vanadium, Total	22.7		mg/kg	0.980	0.199	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF
Zinc, Total	164		mg/kg	4.90	0.287	2	08/14/24 22:56	08/15/24 20:16	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-03
 Client ID: DEP51-S6-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 11:20
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	5690		mg/kg	17.8	4.80	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Antimony, Total	5.88	J	mg/kg	8.90	0.676	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Arsenic, Total	8.96		mg/kg	1.78	0.370	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Barium, Total	74.5		mg/kg	1.78	0.310	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.529	J	mg/kg	0.890	0.059	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.875	J	mg/kg	1.78	0.174	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Calcium, Total	13300		mg/kg	17.8	6.23	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Chromium, Total	522		mg/kg	1.78	0.171	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Cobalt, Total	11.7		mg/kg	3.56	0.295	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Copper, Total	81.3		mg/kg	1.78	0.459	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Iron, Total	51900		mg/kg	8.90	1.61	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Lead, Total	1060		mg/kg	8.90	0.477	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Magnesium, Total	4210		mg/kg	17.8	2.74	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Manganese, Total	483		mg/kg	1.78	0.283	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Mercury, Total	ND		mg/kg	0.074	0.048	1	08/14/24 23:55	08/15/24 08:51	EPA 7471B	1,7471B	JWN
Nickel, Total	40.9		mg/kg	4.45	0.430	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Potassium, Total	2420		mg/kg	445	25.6	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Selenium, Total	0.734	J	mg/kg	3.56	0.459	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.890	0.504	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Sodium, Total	141	J	mg/kg	356	5.60	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	3.56	0.560	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Vanadium, Total	29.0		mg/kg	1.78	0.361	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF
Zinc, Total	311		mg/kg	8.90	0.521	4	08/14/24 22:56	08/15/24 22:28	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-04
 Client ID: DEP51-S8A-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 11:30
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 64%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	3840		mg/kg	11.8	3.19	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	5.90	0.449	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Arsenic, Total	5.93		mg/kg	1.18	0.246	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Barium, Total	44.1		mg/kg	1.18	0.205	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.220	J	mg/kg	0.590	0.039	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.392	J	mg/kg	1.18	0.116	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Calcium, Total	12800		mg/kg	11.8	4.13	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Chromium, Total	204		mg/kg	1.18	0.113	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Cobalt, Total	6.04		mg/kg	2.36	0.196	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Copper, Total	25.3		mg/kg	1.18	0.305	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Iron, Total	34600		mg/kg	5.90	1.07	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Lead, Total	80.3		mg/kg	5.90	0.316	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Magnesium, Total	3840		mg/kg	11.8	1.82	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Manganese, Total	267		mg/kg	1.18	0.188	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Mercury, Total	ND		mg/kg	0.098	0.064	1	08/14/24 23:55	08/15/24 08:54	EPA 7471B	1,7471B	JWN
Nickel, Total	15.1		mg/kg	2.95	0.286	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Potassium, Total	1710		mg/kg	295	17.0	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	2.36	0.305	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.590	0.334	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Sodium, Total	94.0	J	mg/kg	236	3.72	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	2.36	0.372	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Vanadium, Total	16.0		mg/kg	1.18	0.240	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF
Zinc, Total	86.2		mg/kg	5.90	0.346	2	08/14/24 22:56	08/15/24 20:47	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-05
 Client ID: DEP51-S10A-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 11:35
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 72%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	7860		mg/kg	11.0	2.98	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Antimony, Total	0.893	J	mg/kg	5.51	0.419	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Arsenic, Total	8.72		mg/kg	1.10	0.229	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Barium, Total	92.5		mg/kg	1.10	0.192	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.514	J	mg/kg	0.551	0.036	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.477	J	mg/kg	1.10	0.108	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Calcium, Total	23100		mg/kg	11.0	3.86	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Chromium, Total	535		mg/kg	1.10	0.106	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Cobalt, Total	11.5		mg/kg	2.20	0.183	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Copper, Total	50.7		mg/kg	1.10	0.284	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Iron, Total	16700		mg/kg	5.51	0.996	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Lead, Total	223		mg/kg	5.51	0.296	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Magnesium, Total	10600		mg/kg	11.0	1.70	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Manganese, Total	411		mg/kg	1.10	0.175	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Mercury, Total	0.110		mg/kg	0.087	0.057	1	08/14/24 23:55	08/15/24 08:58	EPA 7471B	1,7471B	JWN
Nickel, Total	34.7		mg/kg	2.76	0.267	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Potassium, Total	2820		mg/kg	276	15.9	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Selenium, Total	0.297	J	mg/kg	2.20	0.284	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.551	0.312	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Sodium, Total	180	J	mg/kg	220	3.47	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	2.20	0.347	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Vanadium, Total	35.2		mg/kg	1.10	0.224	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF
Zinc, Total	244		mg/kg	5.51	0.323	2	08/14/24 22:56	08/15/24 20:54	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-06

Date Collected: 08/13/24 10:51

Client ID: DEP51-S12-240813

Date Received: 08/13/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	9440		mg/kg	10.8	2.91	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Antimony, Total	0.783	J	mg/kg	5.38	0.409	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Arsenic, Total	9.93		mg/kg	1.08	0.224	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Barium, Total	126		mg/kg	1.08	0.187	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.536	J	mg/kg	0.538	0.036	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.546	J	mg/kg	1.08	0.106	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Calcium, Total	26500		mg/kg	10.8	3.77	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Chromium, Total	822		mg/kg	1.08	0.103	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Cobalt, Total	12.9		mg/kg	2.15	0.179	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Copper, Total	59.0		mg/kg	1.08	0.278	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Iron, Total	18100		mg/kg	5.38	0.972	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Lead, Total	145		mg/kg	5.38	0.289	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Magnesium, Total	5630		mg/kg	10.8	1.66	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Manganese, Total	391		mg/kg	1.08	0.171	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Mercury, Total	0.173		mg/kg	0.095	0.062	1	08/14/24 23:55	08/15/24 09:01	EPA 7471B	1,7471B	JWN
Nickel, Total	46.3		mg/kg	2.69	0.261	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Potassium, Total	3740		mg/kg	269	15.5	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Selenium, Total	0.394	J	mg/kg	2.15	0.278	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.538	0.305	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Sodium, Total	170	J	mg/kg	215	3.39	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	2.15	0.339	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Vanadium, Total	44.0		mg/kg	1.08	0.219	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF
Zinc, Total	278		mg/kg	5.38	0.316	2	08/14/24 22:56	08/15/24 21:01	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-07
 Client ID: DEP51-S13-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 11:05
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 98%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	8390		mg/kg	7.83	2.11	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Antimony, Total	0.646	J	mg/kg	3.92	0.298	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Arsenic, Total	6.25		mg/kg	0.783	0.163	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Barium, Total	107		mg/kg	0.783	0.136	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.451		mg/kg	0.392	0.026	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.401	J	mg/kg	0.783	0.077	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Calcium, Total	35600		mg/kg	7.83	2.74	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Chromium, Total	412		mg/kg	0.783	0.075	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Cobalt, Total	9.70		mg/kg	1.57	0.130	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Copper, Total	39.1		mg/kg	0.783	0.202	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Iron, Total	20200		mg/kg	3.92	0.707	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Lead, Total	1290		mg/kg	3.92	0.210	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Magnesium, Total	7150		mg/kg	7.83	1.21	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Manganese, Total	386		mg/kg	0.783	0.124	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Mercury, Total	0.057	J	mg/kg	0.072	0.047	1	08/14/24 23:55	08/15/24 09:04	EPA 7471B	1,7471B	JWN
Nickel, Total	29.9		mg/kg	1.96	0.190	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Potassium, Total	4260		mg/kg	196	11.3	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.57	0.202	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.392	0.222	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Sodium, Total	309		mg/kg	157	2.47	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.57	0.247	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Vanadium, Total	32.1		mg/kg	0.783	0.159	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF
Zinc, Total	197		mg/kg	3.92	0.230	2	08/14/24 22:56	08/15/24 21:08	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-08
 Client ID: DEP51-S14-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 11:45
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 62%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	12500		mg/kg	11.9	3.23	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Antimony, Total	2.05	J	mg/kg	5.97	0.454	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Arsenic, Total	6.80		mg/kg	1.19	0.248	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Barium, Total	491		mg/kg	1.19	0.208	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.725		mg/kg	0.597	0.039	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.631	J	mg/kg	1.19	0.117	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Calcium, Total	18800		mg/kg	11.9	4.18	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Chromium, Total	292		mg/kg	1.19	0.115	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Cobalt, Total	18.6		mg/kg	2.39	0.198	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Copper, Total	121		mg/kg	1.19	0.308	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Iron, Total	27000		mg/kg	5.97	1.08	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Lead, Total	253		mg/kg	5.97	0.320	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Magnesium, Total	9510		mg/kg	11.9	1.84	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Manganese, Total	456		mg/kg	1.19	0.190	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Mercury, Total	0.174		mg/kg	0.105	0.068	1	08/14/24 23:55	08/15/24 09:07	EPA 7471B	1,7471B	JWN
Nickel, Total	38.3		mg/kg	2.99	0.289	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Potassium, Total	4670		mg/kg	299	17.2	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Selenium, Total	0.326	J	mg/kg	2.39	0.308	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Silver, Total	0.731		mg/kg	0.597	0.338	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Sodium, Total	115	J	mg/kg	239	3.76	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	2.39	0.376	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Vanadium, Total	41.6		mg/kg	1.19	0.242	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF
Zinc, Total	740		mg/kg	5.97	0.350	2	08/14/24 22:56	08/15/24 21:15	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-09
 Client ID: DEP51-S15-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 11:55
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6080		mg/kg	11.0	2.97	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Antimony, Total	0.545	J	mg/kg	5.51	0.419	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Arsenic, Total	3.60		mg/kg	1.10	0.229	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Barium, Total	65.6		mg/kg	1.10	0.192	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.383	J	mg/kg	0.551	0.036	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.396	J	mg/kg	1.10	0.108	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Calcium, Total	19900		mg/kg	11.0	3.86	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Chromium, Total	57.1		mg/kg	1.10	0.106	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Cobalt, Total	6.54		mg/kg	2.20	0.183	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Copper, Total	38.3		mg/kg	1.10	0.284	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Iron, Total	12100		mg/kg	5.51	0.995	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Lead, Total	139		mg/kg	5.51	0.295	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Magnesium, Total	12100		mg/kg	11.0	1.70	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Manganese, Total	257		mg/kg	1.10	0.175	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Mercury, Total	0.101		mg/kg	0.089	0.058	1	08/14/24 23:55	08/15/24 09:11	EPA 7471B	1,7471B	JWN
Nickel, Total	12.8		mg/kg	2.75	0.267	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Potassium, Total	2230		mg/kg	275	15.9	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Selenium, Total	0.411	J	mg/kg	2.20	0.284	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.551	0.312	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Sodium, Total	99.1	J	mg/kg	220	3.47	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	2.20	0.347	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Vanadium, Total	23.7		mg/kg	1.10	0.224	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF
Zinc, Total	118		mg/kg	5.51	0.323	2	08/14/24 22:56	08/15/24 21:22	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-10
 Client ID: DEP51-S7-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 11:25
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	10600		mg/kg	9.55	2.58	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Antimony, Total	0.614	J	mg/kg	4.77	0.363	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Arsenic, Total	8.89		mg/kg	0.955	0.199	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Barium, Total	119		mg/kg	0.955	0.166	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.574		mg/kg	0.477	0.032	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.566	J	mg/kg	0.955	0.094	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Calcium, Total	16000		mg/kg	9.55	3.34	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Chromium, Total	660		mg/kg	0.955	0.092	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Cobalt, Total	14.3		mg/kg	1.91	0.158	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Copper, Total	45.7		mg/kg	0.955	0.246	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Iron, Total	20500		mg/kg	4.77	0.862	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Lead, Total	154		mg/kg	4.77	0.256	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Magnesium, Total	7600		mg/kg	9.55	1.47	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Manganese, Total	508		mg/kg	0.955	0.152	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Mercury, Total	0.092		mg/kg	0.087	0.057	1	08/14/24 23:55	08/15/24 09:14	EPA 7471B	1,7471B	JWN
Nickel, Total	46.6		mg/kg	2.39	0.231	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Potassium, Total	4730		mg/kg	239	13.7	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Selenium, Total	0.293	J	mg/kg	1.91	0.246	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.477	0.270	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Sodium, Total	157	J	mg/kg	191	3.01	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.91	0.301	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Vanadium, Total	42.8		mg/kg	0.955	0.194	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF
Zinc, Total	276		mg/kg	4.77	0.280	2	08/14/24 22:56	08/15/24 21:28	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-11
 Client ID: DUP-S 240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 00:00
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	11900		mg/kg	10.7	2.89	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Antimony, Total	0.891	J	mg/kg	5.36	0.407	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Arsenic, Total	11.6		mg/kg	1.07	0.223	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Barium, Total	150		mg/kg	1.07	0.186	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.678		mg/kg	0.536	0.035	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.709	J	mg/kg	1.07	0.105	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Calcium, Total	25900		mg/kg	10.7	3.75	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Chromium, Total	1040		mg/kg	1.07	0.103	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Cobalt, Total	16.4		mg/kg	2.14	0.178	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Copper, Total	63.9		mg/kg	1.07	0.277	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Iron, Total	22200		mg/kg	5.36	0.968	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Lead, Total	220		mg/kg	5.36	0.287	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Magnesium, Total	7370		mg/kg	10.7	1.65	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Manganese, Total	505		mg/kg	1.07	0.170	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Mercury, Total	0.206		mg/kg	0.095	0.062	1	08/14/24 23:55	08/15/24 09:24	EPA 7471B	1,7471B	JWN
Nickel, Total	60.4		mg/kg	2.68	0.259	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Potassium, Total	4870		mg/kg	268	15.4	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Selenium, Total	0.487	J	mg/kg	2.14	0.277	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Silver, Total	0.433	J	mg/kg	0.536	0.303	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Sodium, Total	165	J	mg/kg	214	3.38	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	2.14	0.338	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Vanadium, Total	54.2		mg/kg	1.07	0.218	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF
Zinc, Total	352		mg/kg	5.36	0.314	2	08/14/24 22:56	08/15/24 21:35	EPA 3050B	1,6010D	JMF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-12
 Client ID: DEP51-W5-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 12:30
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	ND		ug/l	50.0	16.4	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Antimony, Total	ND		ug/l	20.00	2.145	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Arsenic, Total	1.310	J	ug/l	2.500	0.8250	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Barium, Total	69.37		ug/l	2.500	0.8650	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Beryllium, Total	ND		ug/l	2.500	0.5350	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Cadmium, Total	ND		ug/l	1.000	0.2995	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Calcium, Total	94600		ug/l	500.	197.	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Chromium, Total	23850		ug/l	500.0	89.00	500	08/14/24 22:30	08/16/24 09:41	EPA 3005A	1,6020B	EJF
Cobalt, Total	0.8738	J	ug/l	2.500	0.8150	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Copper, Total	2.974	J	ug/l	5.000	1.920	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Iron, Total	ND		ug/l	250	95.5	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Lead, Total	ND		ug/l	5.000	1.715	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Magnesium, Total	8980		ug/l	350.	121.	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Manganese, Total	ND		ug/l	5.000	2.200	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Mercury, Total	ND		ug/l	0.2000	0.0915	1	08/14/24 22:41	08/15/24 12:37	EPA 7470A	1,7470A	MJR
Nickel, Total	ND		ug/l	10.00	2.780	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Potassium, Total	14600		ug/l	500.	154.	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Selenium, Total	ND		ug/l	25.0	8.65	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Silver, Total	ND		ug/l	2.000	0.8150	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Sodium, Total	46400		ug/l	500.	146.	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Thallium, Total	1.018	J	ug/l	5.000	0.7150	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Vanadium, Total	ND		ug/l	25.00	7.850	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF
Zinc, Total	ND		ug/l	50.00	17.05	5	08/14/24 22:30	08/16/24 09:28	EPA 3005A	1,6020B	EJF



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-13
 Client ID: DEP51-W6-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 12:55
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	224.		ug/l	50.0	16.4	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Antimony, Total	ND		ug/l	20.00	2.145	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Arsenic, Total	4.636		ug/l	2.500	0.8250	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Barium, Total	57.45		ug/l	2.500	0.8650	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Beryllium, Total	ND		ug/l	2.500	0.5350	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Cadmium, Total	ND		ug/l	1.000	0.2995	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Calcium, Total	200000		ug/l	500.	197.	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Chromium, Total	33610		ug/l	500.0	89.00	500	08/14/24 22:30	08/16/24 09:46	EPA 3005A	1,6020B	EJF
Cobalt, Total	1.016	J	ug/l	2.500	0.8150	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Copper, Total	6.866		ug/l	5.000	1.920	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Iron, Total	ND		ug/l	250	95.5	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Lead, Total	ND		ug/l	5.000	1.715	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Magnesium, Total	4530		ug/l	350.	121.	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Manganese, Total	ND		ug/l	5.000	2.200	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Mercury, Total	0.0920	J	ug/l	0.2000	0.0915	1	08/14/24 22:41	08/15/24 12:47	EPA 7470A	1,7470A	MJR
Nickel, Total	ND		ug/l	10.00	2.780	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Potassium, Total	16100		ug/l	500.	154.	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Selenium, Total	ND		ug/l	25.0	8.65	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Silver, Total	ND		ug/l	2.000	0.8150	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Sodium, Total	60000		ug/l	500.	146.	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Thallium, Total	ND		ug/l	5.000	0.7150	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Vanadium, Total	15.50	J	ug/l	25.00	7.850	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF
Zinc, Total	ND		ug/l	50.00	17.05	5	08/14/24 22:30	08/16/24 09:32	EPA 3005A	1,6020B	EJF



Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-11 Batch: WG1959238-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Antimony, Total	ND		mg/kg	2.00	0.152	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Arsenic, Total	ND		mg/kg	0.400	0.083	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Barium, Total	ND		mg/kg	0.400	0.070	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Beryllium, Total	ND		mg/kg	0.200	0.013	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Cadmium, Total	ND		mg/kg	0.400	0.039	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Calcium, Total	ND		mg/kg	4.00	1.40	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Chromium, Total	ND		mg/kg	0.400	0.038	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Cobalt, Total	ND		mg/kg	0.800	0.066	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Copper, Total	ND		mg/kg	0.400	0.103	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Iron, Total	0.623	J	mg/kg	2.00	0.361	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Lead, Total	ND		mg/kg	2.00	0.107	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Magnesium, Total	ND		mg/kg	4.00	0.616	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Manganese, Total	ND		mg/kg	0.400	0.064	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Nickel, Total	ND		mg/kg	1.00	0.097	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Potassium, Total	ND		mg/kg	100	5.76	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Selenium, Total	ND		mg/kg	0.800	0.103	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Silver, Total	ND		mg/kg	0.200	0.113	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Sodium, Total	1.29	J	mg/kg	80.0	1.26	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Thallium, Total	ND		mg/kg	0.800	0.126	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Vanadium, Total	ND		mg/kg	0.400	0.081	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL
Zinc, Total	ND		mg/kg	2.00	0.117	1	08/14/24 22:56	08/15/24 10:18	1,6010D	DHL

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-11 Batch: WG1959240-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	08/14/24 23:55	08/15/24 08:07	1,7471B	JWN



Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 12-13 Batch: WG1959367-1									
Aluminum, Total	ND	ug/l	10.0	3.27	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Antimony, Total	ND	ug/l	4.000	0.4290	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Arsenic, Total	ND	ug/l	0.5000	0.1650	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Barium, Total	ND	ug/l	0.5000	0.1730	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Beryllium, Total	ND	ug/l	0.5000	0.1070	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Cadmium, Total	ND	ug/l	0.2000	0.0599	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Calcium, Total	ND	ug/l	100	39.4	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Chromium, Total	ND	ug/l	1.000	0.1780	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Cobalt, Total	ND	ug/l	0.5000	0.1630	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Copper, Total	ND	ug/l	1.000	0.3840	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Iron, Total	ND	ug/l	50.0	19.1	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Lead, Total	ND	ug/l	1.000	0.3430	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Magnesium, Total	ND	ug/l	70.0	24.2	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Manganese, Total	ND	ug/l	1.000	0.4400	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Nickel, Total	ND	ug/l	2.000	0.5560	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Potassium, Total	ND	ug/l	100	30.9	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Selenium, Total	ND	ug/l	5.00	1.73	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Silver, Total	ND	ug/l	0.4000	0.1630	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Sodium, Total	ND	ug/l	100	29.3	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Thallium, Total	ND	ug/l	1.000	0.1430	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Vanadium, Total	ND	ug/l	5.000	1.570	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF
Zinc, Total	ND	ug/l	10.00	3.410	1	08/14/24 22:30	08/16/24 07:44	1,6020B	EJF

Prep Information

Digestion Method: EPA 3005A



Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 12-13 Batch: WG1959372-1									
Mercury, Total	ND	ug/l	0.2000	0.0915	1	08/14/24 22:41	08/15/24 12:31	1,7470A	MJR

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 01-11 Batch: WG1959238-2								
Aluminum, Total	101		-		80-120	-		
Antimony, Total	105		-		80-120	-		
Arsenic, Total	100		-		80-120	-		
Barium, Total	102		-		80-120	-		
Beryllium, Total	104		-		80-120	-		
Cadmium, Total	104		-		80-120	-		
Calcium, Total	103		-		80-120	-		
Chromium, Total	100		-		80-120	-		
Cobalt, Total	103		-		80-120	-		
Copper, Total	104		-		80-120	-		
Iron, Total	106		-		80-120	-		
Lead, Total	100		-		80-120	-		
Magnesium, Total	101		-		80-120	-		
Manganese, Total	102		-		80-120	-		
Nickel, Total	101		-		80-120	-		
Potassium, Total	104		-		80-120	-		
Selenium, Total	103		-		80-120	-		
Silver, Total	105		-		80-120	-		
Sodium, Total	104		-		80-120	-		
Thallium, Total	103		-		80-120	-		
Vanadium, Total	102		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678

Lab Number: L2445674

Report Date: 08/16/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-11 Batch: WG1959238-2					
Zinc, Total	102	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01-11 Batch: WG1959240-2					
Mercury, Total	96	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 12-13 Batch: WG1959367-2					
Aluminum, Total	97	-	80-120	-	
Antimony, Total	84	-	80-120	-	
Arsenic, Total	105	-	80-120	-	
Barium, Total	98	-	80-120	-	
Beryllium, Total	102	-	80-120	-	
Cadmium, Total	101	-	80-120	-	
Calcium, Total	95	-	80-120	-	
Chromium, Total	115	-	80-120	-	
Cobalt, Total	113	-	80-120	-	
Copper, Total	111	-	80-120	-	
Iron, Total	118	-	80-120	-	
Lead, Total	102	-	80-120	-	
Magnesium, Total	105	-	80-120	-	
Manganese, Total	116	-	80-120	-	
Nickel, Total	114	-	80-120	-	
Potassium, Total	110	-	80-120	-	
Selenium, Total	103	-	80-120	-	
Silver, Total	110	-	80-120	-	
Sodium, Total	97	-	80-120	-	
Thallium, Total	106	-	80-120	-	
Vanadium, Total	110	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678

Lab Number: L2445674

Report Date: 08/16/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 12-13 Batch: WG1959367-2					
Zinc, Total	104	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 12-13 Batch: WG1959372-2					
Mercury, Total	104	-	80-120	-	

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG1959238-3 QC Sample: L2445543-14 Client ID: MS Sample												
Aluminum, Total	6530	196	6660	66	Q	-	-		75-125	-		20
Antimony, Total	ND	49	44.9	92		-	-		75-125	-		20
Arsenic, Total	2.69	11.8	13.7	94		-	-		75-125	-		20
Barium, Total	32.6	196	211	91		-	-		75-125	-		20
Beryllium, Total	0.349J	4.9	5.13	105		-	-		75-125	-		20
Cadmium, Total	28.1	5.2	21.9	0	Q	-	-		75-125	-		20
Calcium, Total	4120	980	4530	42	Q	-	-		75-125	-		20
Chromium, Total	102	19.6	81.9	0	Q	-	-		75-125	-		20
Cobalt, Total	29.1	49	69.0	81		-	-		75-125	-		20
Copper, Total	137	24.5	119	0	Q	-	-		75-125	-		20
Iron, Total	13800	98	14000	204	Q	-	-		75-125	-		20
Lead, Total	40.6	52	78.8	74	Q	-	-		75-125	-		20
Magnesium, Total	2710	980	3390	69	Q	-	-		75-125	-		20
Manganese, Total	331	49	378	96		-	-		75-125	-		20
Nickel, Total	93.4	49	100	13	Q	-	-		75-125	-		20
Potassium, Total	305	980	1190	90		-	-		75-125	-		20
Selenium, Total	3.06	11.8	14.3	96		-	-		75-125	-		20
Silver, Total	3.24	4.9	7.21	81		-	-		75-125	-		20
Sodium, Total	279	980	1230	97		-	-		75-125	-		20
Thallium, Total	0.492J	11.8	11.1	94		-	-		75-125	-		20
Vanadium, Total	25.5	49	77.1	105		-	-		75-125	-		20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG1959238-3 QC Sample: L2445543-14 Client ID: MS Sample									
Zinc, Total	111	49	125	28	Q	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG1959240-3 QC Sample: L2445674-01 Client ID: DEP51-S3-240813									
Mercury, Total	0.089	1.5	1.53	96	-	-	80-120	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 12-13 QC Batch ID: WG1959367-3 QC Sample: L2445642-01 Client ID: MS Sample									
Aluminum, Total	64.2	2000	2100	102	-	-	75-125	-	20
Antimony, Total	1.753J	500	497.5	100	-	-	75-125	-	20
Arsenic, Total	2.093	120	133.2	109	-	-	75-125	-	20
Barium, Total	114.4	2000	2149	102	-	-	75-125	-	20
Beryllium, Total	ND	50	52.37	105	-	-	75-125	-	20
Cadmium, Total	0.1884J	53	55.26	104	-	-	75-125	-	20
Calcium, Total	8940	10000	18300	94	-	-	75-125	-	20
Chromium, Total	14.46	200	244.3	115	-	-	75-125	-	20
Cobalt, Total	3.631	500	578.5	115	-	-	75-125	-	20
Copper, Total	90.24	250	374.7	114	-	-	75-125	-	20
Iron, Total	6640	1000	7720	108	-	-	75-125	-	20
Lead, Total	11.33	530	576.9	107	-	-	75-125	-	20
Magnesium, Total	2980	10000	14200	112	-	-	75-125	-	20
Manganese, Total	668.0	500	1292	125	-	-	75-125	-	20
Nickel, Total	40.21	500	612.4	114	-	-	75-125	-	20
Potassium, Total	14300	10000	26700	124	-	-	75-125	-	20
Selenium, Total	ND	120	122	102	-	-	75-125	-	20
Silver, Total	ND	50	56.10	112	-	-	75-125	-	20
Sodium, Total	6880	10000	18200	113	-	-	75-125	-	20
Thallium, Total	ND	120	134.1	112	-	-	75-125	-	20
Vanadium, Total	2.160J	500	558.6	112	-	-	75-125	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 12-13 QC Batch ID: WG1959367-3 QC Sample: L2445642-01 Client ID: MS Sample									
Zinc, Total	187.3	500	738.2	110	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 12-13 QC Batch ID: WG1959372-3 QC Sample: L2445674-12 Client ID: DEP51-W5-240813									
Mercury, Total	ND	5	4.907	98	-	-	75-125	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678

Lab Number: L2445674

Report Date: 08/16/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG1959238-4 QC Sample: L2445543-14 Client ID: DUP Sample						
Cobalt, Total	29.1	26.2	mg/kg	10		20
Total Metals - Mansfield Lab Associated sample(s): 01-11 QC Batch ID: WG1959240-4 QC Sample: L2445674-01 Client ID: DEP51-S3-240813						
Mercury, Total	0.089	0.074J	mg/kg	NC		20
Total Metals - Mansfield Lab Associated sample(s): 12-13 QC Batch ID: WG1959367-4 QC Sample: L2445642-01 Client ID: DUP Sample						
Iron, Total	6640	6470	ug/l	3		20
Lead, Total	11.33	11.12	ug/l	2		20
Nickel, Total	40.21	39.88	ug/l	1		20
Zinc, Total	187.3	187.0	ug/l	0		20
Total Metals - Mansfield Lab Associated sample(s): 12-13 QC Batch ID: WG1959372-4 QC Sample: L2445674-12 Client ID: DEP51-W5-240813						
Mercury, Total	ND	0.1040J	ug/l	NC		20

**Lab Serial Dilution
Analysis
Batch Quality Control**

Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 12-13 QC Batch ID: WG1959367-6 QC Sample: L2445642-01 Client ID: DUP Sample						
Iron, Total	6640	6520	ug/l	2		20

INORGANICS & MISCELLANEOUS

Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-01
 Client ID: DEP51-S3-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 10:45
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.1		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	4.27		mg/kg	0.908	0.182	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST

Project Number: 30108678

Lab Number: L2445674

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-02

Client ID: DEP51-S5-240813

Sample Location: PHILA, PA

Date Collected: 08/13/24 11:10

Date Received: 08/13/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.0		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	7.06		mg/kg	1.00	0.200	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-03

Date Collected: 08/13/24 11:20

Client ID: DEP51-S6-240813

Date Received: 08/13/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.5		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	5.04		mg/kg	0.894	0.179	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-04

Date Collected: 08/13/24 11:30

Client ID: DEP51-S8A-240813

Date Received: 08/13/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	64.0		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	7.30		mg/kg	1.25	0.250	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-05

Date Collected: 08/13/24 11:35

Client ID: DEP51-S10A-240813

Date Received: 08/13/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	71.9		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.11	0.222	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-06

Date Collected: 08/13/24 10:51

Client ID: DEP51-S12-240813

Date Received: 08/13/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.4		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.09	0.218	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-07
 Client ID: DEP51-S13-240813
 Sample Location: PHILA, PA

Date Collected: 08/13/24 11:05
 Date Received: 08/13/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	97.6		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	18.8		mg/kg	0.820	0.164	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-08

Date Collected: 08/13/24 11:45

Client ID: DEP51-S14-240813

Date Received: 08/13/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	61.9		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	1.13	J	mg/kg	1.29	0.258	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-09

Date Collected: 08/13/24 11:55

Client ID: DEP51-S15-240813

Date Received: 08/13/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	70.8		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.13	0.226	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST

Project Number: 30108678

Lab Number: L2445674

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-10

Client ID: DEP51-S7-240813

Sample Location: PHILA, PA

Date Collected: 08/13/24 11:25

Date Received: 08/13/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.4		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	0.466	J	mg/kg	1.01	0.202	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS



Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-11
Client ID: DUP-S 240813
Sample Location: PHILA, PA

Date Collected: 08/13/24 00:00
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	74.2		%	0.100	NA	1	-	08/14/24 08:25	121,2540G	ROI
Chromium, Hexavalent	ND		mg/kg	1.08	0.216	1	08/14/24 13:12	08/15/24 15:44	1,7196A	RDS



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-12

Date Collected: 08/13/24 12:30

Client ID: DEP51-W5-240813

Date Received: 08/13/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	19600		ug/l	500	150.	50	08/14/24 09:00	08/14/24 09:25	1,7196A	JBB



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445674-13

Date Collected: 08/13/24 12:55

Client ID: DEP51-W6-240813

Date Received: 08/13/24

Sample Location: PHILA, PA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	28000		ug/l	1000	300.	100	08/14/24 09:00	08/14/24 09:26	1,7196A	JBB



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 12-13 Batch: WG1959146-1									
Chromium, Hexavalent	ND	ug/l	10.0	3.00	1	08/14/24 09:00	08/14/24 09:21	1,7196A	JBB
General Chemistry - Westborough Lab for sample(s): 11 Batch: WG1959251-1									
Chromium, Hexavalent	ND	mg/kg	0.800	0.160	1	08/14/24 13:12	08/15/24 15:44	1,7196A	RDS
General Chemistry - Westborough Lab for sample(s): 01-10 Batch: WG1959316-1									
Chromium, Hexavalent	ND	mg/kg	0.800	0.160	1	08/14/24 14:45	08/15/24 13:10	1,7196A	RDS

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678

Lab Number: L2445674

Report Date: 08/16/24

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 12-13 Batch: WG1959146-2								
Chromium, Hexavalent	97		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 11 Batch: WG1959251-2								
Chromium, Hexavalent	82		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-10 Batch: WG1959316-2								
Chromium, Hexavalent	86		-		80-120	-		20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 12-13 QC Batch ID: WG1959146-4 QC Sample: L2445674-13 Client ID: DEP51-W6-240813												
Chromium, Hexavalent	28000	100000	37200	92	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 11 QC Batch ID: WG1959251-4 QC Sample: L2445674-11 Client ID: DUP-S 240813												
Chromium, Hexavalent	ND	1490	1140	77	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1959316-4 QC Sample: L2445674-01 Client ID: DEP51-S3-240813												
Chromium, Hexavalent	4.27	1300	1100	84	-	-	-	-	75-125	-	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: ALLIANCE 51ST

Project Number: 30108678

Lab Number: L2445674

Report Date: 08/16/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-11 QC Batch ID: WG1959075-1 QC Sample: L2445674-01 Client ID: DEP51-S3-240813						
Solids, Total	88.1	88.4	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 12-13 QC Batch ID: WG1959146-3 QC Sample: L2445674-12 Client ID: DEP51-W5-240813						
Chromium, Hexavalent	19600	19700	ug/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 11 QC Batch ID: WG1959251-6 QC Sample: L2445674-11 Client ID: DUP-S 240813						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1959316-6 QC Sample: L2445674-01 Client ID: DEP51-S3-240813						
Chromium, Hexavalent	4.27	5.53	mg/kg	26	Q	20

Project Name: ALLIANCE 51ST
Project Number: 30108678

Serial_No:08162412:28
Lab Number: L2445674
Report Date: 08/16/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler **Custody Seal**
A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445674-01A	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),CR-TI(180),TL-TI(180),AL-TI(180),SE-TI(180),PB-TI(180),ZN-TI(180),SB-TI(180),CU-TI(180),V-TI(180),CO-TI(180),FE-TI(180),MN-TI(180),MG-TI(180),HG-T(28),NA-TI(180),K-TI(180),CD-TI(180),CA-TI(180)
L2445674-01B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)
L2445674-02A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),AL-TI(180),TL-TI(180),NI-TI(180),CU-TI(180),ZN-TI(180),PB-TI(180),SE-TI(180),SB-TI(180),CO-TI(180),V-TI(180),HG-T(28),MG-TI(180),FE-TI(180),MN-TI(180),CD-TI(180),K-TI(180),NA-TI(180),CA-TI(180)
L2445674-02B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)
L2445674-03A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TL-TI(180),NI-TI(180),AL-TI(180),CU-TI(180),SB-TI(180),SE-TI(180),PB-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),FE-TI(180),MN-TI(180),HG-T(28),MG-TI(180),K-TI(180),NA-TI(180),CA-TI(180),CD-TI(180)
L2445674-03B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)
L2445674-04A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),TL-TI(180),NI-TI(180),AL-TI(180),CU-TI(180),PB-TI(180),ZN-TI(180),SE-TI(180),SB-TI(180),V-TI(180),CO-TI(180),HG-T(28),MN-TI(180),FE-TI(180),MG-TI(180),CA-TI(180),NA-TI(180),K-TI(180),CD-TI(180)
L2445674-04B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)
L2445674-05A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),AL-TI(180),NI-TI(180),CR-TI(180),TL-TI(180),ZN-TI(180),SE-TI(180),SB-TI(180),CU-TI(180),PB-TI(180),CO-TI(180),V-TI(180),FE-TI(180),MG-TI(180),HG-T(28),MN-TI(180),K-TI(180),CD-TI(180),CA-TI(180),NA-TI(180)
L2445674-05B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)

*Values in parentheses indicate holding time in days



Project Name: ALLIANCE 51ST

Lab Number: L2445674

Project Number: 30108678

Report Date: 08/16/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445674-06A	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),TL-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),ZN-TI(180),SE-TI(180),SB-TI(180),PB-TI(180),CO-TI(180),V-TI(180),HG-T(28),FE-TI(180),MG-TI(180),MN-TI(180),K-TI(180),CA-TI(180),NA-TI(180),CD-TI(180)
L2445674-06B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)
L2445674-07A	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),TL-TI(180),AL-TI(180),NI-TI(180),CR-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),SB-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),HG-T(28),MN-TI(180),FE-TI(180),MG-TI(180),CA-TI(180),NA-TI(180),K-TI(180),CD-TI(180)
L2445674-07B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)
L2445674-08A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),CR-TI(180),SB-TI(180),ZN-TI(180),PB-TI(180),SE-TI(180),CU-TI(180),CO-TI(180),V-TI(180),MN-TI(180),MG-TI(180),HG-T(28),FE-TI(180),CD-TI(180),K-TI(180),CA-TI(180),NA-TI(180)
L2445674-08B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)
L2445674-09A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),AL-TI(180),TL-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),ZN-TI(180),SB-TI(180),SE-TI(180),V-TI(180),CO-TI(180),FE-TI(180),HG-T(28),MN-TI(180),MG-TI(180),CD-TI(180),NA-TI(180),CA-TI(180),K-TI(180)
L2445674-09B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)
L2445674-10A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),TL-TI(180),CR-TI(180),NI-TI(180),PB-TI(180),SE-TI(180),CU-TI(180),SB-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),HG-T(28),MG-TI(180),MN-TI(180),FE-TI(180),CD-TI(180),NA-TI(180),CA-TI(180),K-TI(180)
L2445674-10B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)
L2445674-11A	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),NI-TI(180),TL-TI(180),CR-TI(180),ZN-TI(180),CU-TI(180),SB-TI(180),PB-TI(180),SE-TI(180),V-TI(180),CO-TI(180),MG-TI(180),MN-TI(180),FE-TI(180),HG-T(28),K-TI(180),NA-TI(180),CA-TI(180),CD-TI(180)
L2445674-11B	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		TS(7),HEXCR-7196(30)

Project Name: ALLIANCE 51ST
Project Number: 30108678

Serial_No:08162412:28
Lab Number: L2445674
Report Date: 08/16/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445674-12A	Plastic 250ml HNO3 preserved	A	<2	<2	2.2	Y	Absent		AL-6020T-PPB(180),CO-6020T-PPB(180),SB-6020T-PPB(180),BE-6020T-PPB(180),CR-6020T-PPB(180),CD-6020T-PPB(180),HG-T-PPB(28),CA-6020T-PPB(180),CU-6020T-PPB(180),TL-6020T-PPB(180),BA-6020T-PPB(180),K-6020T-PPB(180),AG-6020T-PPB(180),PB-6020T-PPB(180),AS-6020T-PPB(180),FE-6020T-PPB(180),NI-6020T-PPB(180),NA-6020T-PPB(180),MG-6020T-PPB(180),ZN-6020T-PPB(180),MN-6020T-PPB(180),SE-6020T-PPB(180),V-6020T-PPB(180)
L2445674-12B	Plastic 250ml unpreserved	A	7	7	2.2	Y	Absent		HEXCR-7196-PPB(1)
L2445674-13A	Plastic 250ml HNO3 preserved	A	<2	<2	2.2	Y	Absent		CO-6020T-PPB(180),AL-6020T-PPB(180),CD-6020T-PPB(180),SB-6020T-PPB(180),BE-6020T-PPB(180),CR-6020T-PPB(180),HG-T-PPB(28),CU-6020T-PPB(180),CA-6020T-PPB(180),TL-6020T-PPB(180),BA-6020T-PPB(180),AG-6020T-PPB(180),K-6020T-PPB(180),AS-6020T-PPB(180),PB-6020T-PPB(180),FE-6020T-PPB(180),NA-6020T-PPB(180),NI-6020T-PPB(180),MG-6020T-PPB(180),ZN-6020T-PPB(180),V-6020T-PPB(180),SE-6020T-PPB(180),MN-6020T-PPB(180)
L2445674-13B	Plastic 250ml unpreserved	A	7	7	2.2	Y	Absent		HEXCR-7196-PPB(1)

*Values in parentheses indicate holding time in days



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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: ALLIANCE 51ST
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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: ALLIANCE 51ST
Project Number: 30108678

Lab Number: L2445674
Report Date: 08/16/24

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: EPA RSK-175 Dissolved Gases

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

 ALPHA <small>LABORATORY</small>	NEW JERSEY CHAIN OF CUSTODY	Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105	Page 1 of 2	Date Rec'd in Lab <i>8/14/2024</i>	ALPHA Job # <i>22445674</i>
		Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		
Client Information Client: <i>Arradi</i> Address: <i>1 Howard Way Ste 5</i> <i>Killbuck, NY</i> Phone: <i>955-561-1000</i> Fax: Email: <i>Larry.Bunt@arradi.com</i>		Project Information Project Name: <i>Allyce 51st St</i> Project Location: <i>Phila, PA</i> Project # <i>30106679</i> (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> NJ Full / Reduced <input type="checkbox"/> EQuIS (1 File) <input type="checkbox"/> EQuIS (4 File) <input type="checkbox"/> Other	
Project Manager: <i>Larry Bunt</i> ALPHAQuote #:		Turn-Around Time Standard <input type="checkbox"/> Due Date: Rush (only if pre approved) <input checked="" type="checkbox"/> # of Days: <i>3 Day</i>		Regulatory Requirement <input type="checkbox"/> SRS Residential/Non Residential <input type="checkbox"/> SRS Impact to Groundwater <input type="checkbox"/> NJ Ground Water Quality Standards <input type="checkbox"/> NJ IGW SPLP Leachate Criteria <input type="checkbox"/> Other	
These samples have been previously analyzed by Alpha <input type="checkbox"/>		Other project specific requirements/comments: Please specify Metals or TAL.		ANALYSIS	
For EPH, selection is REQUIRED: <input type="checkbox"/> Category 1 <input type="checkbox"/> Category 2		For VOC, selection is REQUIRED: <input type="checkbox"/> 1,4-Dioxane <input type="checkbox"/> 8011		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)	
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date Time	Sample Matrix	Sampler's Initials	Sample Specific Comments
<i>45674-01</i>	<i>DEPAI-93-240613</i>	<i>8/13/24</i> <i>1040</i>	<i>Soil</i>	<i>M.P.</i>	<i>2</i>
<i>-02</i>	<i>DEPAI-95-240617</i>				
<i>-03</i>	<i>DEPAI-96-240617</i>				
<i>-04</i>	<i>DEPAI-58A-240613</i>				
<i>-05</i>	<i>DEPAI-910A-240617</i>				
<i>-06</i>	<i>DEPAI-912A-240617</i>				
<i>-07</i>	<i>DEPAI-913-240613</i>				
<i>-08</i>	<i>DEPAI-914-240613</i>				
<i>-09</i>	<i>DEPAI-915-240613</i>				
<i>-10</i>	<i>DEPAI-97-240617</i>				
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015	
Container Type: <i>A A</i>		Preservative: <i>A A</i>		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)	
Relinquished By: <i>Matt Hillman</i>		Date/Time: <i>8/13/24 1500</i>		Received By: <i>M.S. MAHAN</i>	
Date/Time: <i>8/13/24 1800</i>		Date/Time: <i>8/13/24 1545</i>		Date/Time: <i>8/13/24 1000</i>	
Date/Time: <i>8/13/24 1800</i>		Date/Time: <i>8/13/24 1900</i>		Date/Time: <i>8/13/24 2300</i>	

TOTAL BOTTLES

8/24 Ho
8/14 0140

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Matt Hilinski
Arcadis U.S., Inc.
17-17 Route 208 North
Suite 200 West
Fair Lawn, New Jersey 07410

Generated 9/27/2024 9:39:56 AM

JOB DESCRIPTION

Alliance 51st Street

JOB NUMBER

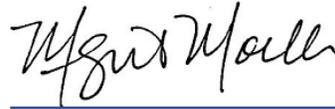
410-188472-1

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
Megan Moeller, Client Services Manager
Megan.Moeller@et.eurofinsus.com
(717)556-7261

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Definitions/Glossary

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Arcadis U.S., Inc.
Project: Alliance 51st Street

Job ID: 410-188472-1

Job ID: 410-188472-1

Eurofins Lancaster Laboratories Environment

Job Narrative 410-188472-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 9/17/2024 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received. The COC is missing the sample state, the sample preservation, and the number of containers per sample (2nd page only). This does not meet regulatory requirements.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method 7196A: The following samples were diluted due to the nature of the sample matrix: S-18 (410-188472-3) and S-20 (410-188472-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-8A

Lab Sample ID: 410-188472-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	560		3.1	1.5	mg/Kg	10	✳	6020B	Total/NA
Cr (VI)	16		3.4	1.1	mg/Kg	5	✳	7196A	Total/NA
Cr (III)	550		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: S-16

Lab Sample ID: 410-188472-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	79		0.32	0.15	mg/Kg	2	✳	6020B	Total/NA
Cr (III)	79		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: S-18

Lab Sample ID: 410-188472-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	60		0.40	0.19	mg/Kg	2	✳	6020B	Total/NA
Cr (VI)	0.86	J cn	2.2	0.74	mg/Kg	5	✳	7196A	Total/NA
Cr (III)	59		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: S-19

Lab Sample ID: 410-188472-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	56		0.38	0.18	mg/Kg	2	✳	6020B	Total/NA
Cr (III)	56		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: S-20

Lab Sample ID: 410-188472-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	41		0.38	0.18	mg/Kg	2	✳	6020B	Total/NA
Cr (III)	41		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: S-21

Lab Sample ID: 410-188472-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	980		16	7.6	mg/Kg	100	✳	6020B	Total/NA
Cr (VI)	32		0.44	0.15	mg/Kg	1	✳	7196A	Total/NA
Cr (III)	940		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: S-22

Lab Sample ID: 410-188472-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	160		0.42	0.20	mg/Kg	2	✳	6020B	Total/NA
Cr (VI)	3.9		0.43	0.14	mg/Kg	1	✳	7196A	Total/NA
Cr (III)	150		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: S-23

Lab Sample ID: 410-188472-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	56		0.38	0.18	mg/Kg	2	✳	6020B	Total/NA
Cr (III)	56		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 410-188472-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	980		19	9.2	mg/Kg	100	✳	6020B	Total/NA
Cr (VI)	7.7		0.45	0.15	mg/Kg	1	✳	7196A	Total/NA
Cr (III)	970		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-3

Lab Sample ID: 410-188472-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	310		2.0	0.95	mg/Kg	10	✳	6020B	Total/NA
Cr (III)	310		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: S-5

Lab Sample ID: 410-188472-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	300		2.2	1.0	mg/Kg	10	✳	6020B	Total/NA
Cr (VI)	24		0.55	0.18	mg/Kg	1	✳	7196A	Total/NA
Cr (III)	270		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

Client Sample ID: S-6

Lab Sample ID: 410-188472-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	250		1.9	0.90	mg/Kg	10	✳	6020B	Total/NA
Cr (VI)	5.8		0.48	0.16	mg/Kg	1	✳	7196A	Total/NA
Cr (III)	250		0.011	0.0035	mg/Kg	1	✳	7196A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-8A

Lab Sample ID: 410-188472-1

Date Collected: 09/16/24 10:40

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	550		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	39.8		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-8A

Lab Sample ID: 410-188472-1

Date Collected: 09/16/24 10:40

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 60.2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	560		3.1	1.5	mg/Kg	☼	09/19/24 21:00	09/26/24 12:23	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	16		3.4	1.1	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	5

Client Sample ID: S-16

Lab Sample ID: 410-188472-2

Date Collected: 09/16/24 10:55

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	79		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	2.0		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-16

Lab Sample ID: 410-188472-2

Date Collected: 09/16/24 10:55

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 98.0

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	79		0.32	0.15	mg/Kg	☼	09/19/24 21:00	09/26/24 12:25	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	ND		0.42	0.14	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	1

Client Sample ID: S-18

Lab Sample ID: 410-188472-3

Date Collected: 09/16/24 11:00

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	59		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	7.0		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-18

Lab Sample ID: 410-188472-3

Date Collected: 09/16/24 11:00

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 93.0

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	60		0.40	0.19	mg/Kg	☼	09/19/24 21:00	09/26/24 12:29	2

Client Sample Results

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-18

Lab Sample ID: 410-188472-3

Date Collected: 09/16/24 11:00

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 93.0

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	0.86	J cn	2.2	0.74	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	5

Client Sample ID: S-19

Lab Sample ID: 410-188472-4

Date Collected: 09/16/24 11:03

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	56		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	4.5		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-19

Lab Sample ID: 410-188472-4

Date Collected: 09/16/24 11:03

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 95.5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	56		0.38	0.18	mg/Kg	☼	09/19/24 21:00	09/26/24 12:33	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	ND		0.42	0.14	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	1

Client Sample ID: S-20

Lab Sample ID: 410-188472-5

Date Collected: 09/16/24 11:05

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	41		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	7.2		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-20

Lab Sample ID: 410-188472-5

Date Collected: 09/16/24 11:05

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 92.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	41		0.38	0.18	mg/Kg	☼	09/19/24 21:00	09/26/24 12:43	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	ND	cn	2.2	0.75	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	5

Client Sample ID: S-21

Lab Sample ID: 410-188472-6

Date Collected: 09/16/24 11:10

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	940		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	7.6		1.0	1.0	%			09/19/24 13:34	1

Client Sample Results

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-21

Lab Sample ID: 410-188472-6

Date Collected: 09/16/24 11:10

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 92.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	980		16	7.6	mg/Kg	☼	09/19/24 21:00	09/26/24 18:45	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	32		0.44	0.15	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	1

Client Sample ID: S-22

Lab Sample ID: 410-188472-7

Date Collected: 09/16/24 11:15

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	150		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	4.8		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-22

Lab Sample ID: 410-188472-7

Date Collected: 09/16/24 11:15

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 95.2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	160		0.42	0.20	mg/Kg	☼	09/19/24 21:00	09/26/24 12:47	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	3.9		0.43	0.14	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	1

Client Sample ID: S-23

Lab Sample ID: 410-188472-8

Date Collected: 09/16/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	56		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	3.1		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-23

Lab Sample ID: 410-188472-8

Date Collected: 09/16/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 96.9

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	56		0.38	0.18	mg/Kg	☼	09/19/24 21:00	09/26/24 12:51	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	ND		0.43	0.14	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	1

Client Sample Results

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: DUP-1

Lab Sample ID: 410-188472-9

Date Collected: 09/16/24 00:00

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	970		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	7.3		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: DUP-1

Lab Sample ID: 410-188472-9

Date Collected: 09/16/24 00:00

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 92.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	980		19	9.2	mg/Kg	☼	09/19/24 21:00	09/26/24 18:47	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	7.7		0.45	0.15	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	1

Client Sample ID: S-3

Lab Sample ID: 410-188472-10

Date Collected: 09/17/24 11:15

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	310		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	5.0		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-3

Lab Sample ID: 410-188472-10

Date Collected: 09/17/24 11:15

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 95.0

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	310		2.0	0.95	mg/Kg	☼	09/19/24 21:00	09/26/24 13:07	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	ND		0.43	0.14	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	1

Client Sample ID: S-5

Lab Sample ID: 410-188472-11

Date Collected: 09/17/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	270		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	23.6		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-5

Lab Sample ID: 410-188472-11

Date Collected: 09/17/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 76.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	300		2.2	1.0	mg/Kg	☼	09/19/24 21:00	09/26/24 13:11	10

Client Sample Results

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-5

Lab Sample ID: 410-188472-11

Date Collected: 09/17/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 76.4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	24		0.55	0.18	mg/Kg	☼	09/20/24 10:51	09/23/24 18:45	1

Client Sample ID: S-6

Lab Sample ID: 410-188472-12

Date Collected: 09/17/24 11:25

Matrix: Soil

Date Received: 09/17/24 16:20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III) (SW846 7196A)	250		0.011	0.0035	mg/Kg	☼		09/20/24 09:31	1
Percent Moisture (EPA Moisture)	13.1		1.0	1.0	%			09/19/24 13:34	1

Client Sample ID: S-6

Lab Sample ID: 410-188472-12

Date Collected: 09/17/24 11:25

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 86.9

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	250		1.9	0.90	mg/Kg	☼	09/19/24 21:00	09/26/24 12:09	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI) (SW846 7196A)	5.8		0.48	0.16	mg/Kg	☼	09/20/24 10:09	09/23/24 18:45	1

QC Sample Results

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-553465/1-A ^2
Matrix: Solid
Analysis Batch: 556131

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 553465

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.40	0.19	mg/Kg		09/19/24 21:00	09/26/24 11:16	2

Lab Sample ID: LCS 410-553465/2-A ^2
Matrix: Solid
Analysis Batch: 556131

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 553465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	50.0	50.7		mg/Kg		101	86 - 116

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 410-553700/1-A
Matrix: Solid
Analysis Batch: 554639

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 553700

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.42	0.14	mg/Kg		09/20/24 10:09	09/23/24 18:45	1

Lab Sample ID: LCS 410-553700/2-A
Matrix: Solid
Analysis Batch: 554639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 553700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	5.00	4.66		mg/Kg		93	80 - 120

Lab Sample ID: LCS 410-553700/3-A
Matrix: Solid
Analysis Batch: 554639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 553700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	701	721		mg/Kg		103	80 - 120

Lab Sample ID: 410-188472-12 MSI
Matrix: Soil
Analysis Batch: 554639

Client Sample ID: S-6
Prep Type: Total/NA
Prep Batch: 553700

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	5.8		829	807		mg/Kg	✱	97	75 - 125

Lab Sample ID: 410-188472-12 MSS
Matrix: Soil
Analysis Batch: 554639

Client Sample ID: S-6
Prep Type: Total/NA
Prep Batch: 553700

Analyte	Sample Result	Sample Qualifier	Spike Added	MSS Result	MSS Qualifier	Unit	D	%Rec	%Rec Limits
Cr (VI)	5.8		45.8	44.2		mg/Kg	✱	84	75 - 125

QC Sample Results

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 410-188472-12 DU

Matrix: Soil

Analysis Batch: 554639

Client Sample ID: S-6

Prep Type: Total/NA

Prep Batch: 553700

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Cr (VI)	5.8		6.41		mg/Kg	✱	10	20

- 1
- 2
- 3
- 4
- 5
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- 13
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QC Association Summary

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Metals

Prep Batch: 553465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-188472-1	S-8A	Total/NA	Soil	3050B	
410-188472-2	S-16	Total/NA	Soil	3050B	
410-188472-3	S-18	Total/NA	Soil	3050B	
410-188472-4	S-19	Total/NA	Soil	3050B	
410-188472-5	S-20	Total/NA	Soil	3050B	
410-188472-6	S-21	Total/NA	Soil	3050B	
410-188472-7	S-22	Total/NA	Soil	3050B	
410-188472-8	S-23	Total/NA	Soil	3050B	
410-188472-9	DUP-1	Total/NA	Soil	3050B	
410-188472-10	S-3	Total/NA	Soil	3050B	
410-188472-11	S-5	Total/NA	Soil	3050B	
410-188472-12	S-6	Total/NA	Soil	3050B	
MB 410-553465/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 410-553465/2-A ^2	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 556131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-188472-1	S-8A	Total/NA	Soil	6020B	553465
410-188472-2	S-16	Total/NA	Soil	6020B	553465
410-188472-3	S-18	Total/NA	Soil	6020B	553465
410-188472-4	S-19	Total/NA	Soil	6020B	553465
410-188472-5	S-20	Total/NA	Soil	6020B	553465
410-188472-7	S-22	Total/NA	Soil	6020B	553465
410-188472-8	S-23	Total/NA	Soil	6020B	553465
410-188472-10	S-3	Total/NA	Soil	6020B	553465
410-188472-11	S-5	Total/NA	Soil	6020B	553465
410-188472-12	S-6	Total/NA	Soil	6020B	553465
MB 410-553465/1-A ^2	Method Blank	Total/NA	Solid	6020B	553465
LCS 410-553465/2-A ^2	Lab Control Sample	Total/NA	Solid	6020B	553465

Analysis Batch: 556295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-188472-6	S-21	Total/NA	Soil	6020B	553465
410-188472-9	DUP-1	Total/NA	Soil	6020B	553465

General Chemistry

Analysis Batch: 551732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-188472-1	S-8A	Total/NA	Soil	7196A	
410-188472-2	S-16	Total/NA	Soil	7196A	
410-188472-3	S-18	Total/NA	Soil	7196A	
410-188472-4	S-19	Total/NA	Soil	7196A	
410-188472-5	S-20	Total/NA	Soil	7196A	
410-188472-6	S-21	Total/NA	Soil	7196A	
410-188472-7	S-22	Total/NA	Soil	7196A	
410-188472-8	S-23	Total/NA	Soil	7196A	
410-188472-9	DUP-1	Total/NA	Soil	7196A	
410-188472-10	S-3	Total/NA	Soil	7196A	
410-188472-11	S-5	Total/NA	Soil	7196A	
410-188472-12	S-6	Total/NA	Soil	7196A	

QC Association Summary

Client: Arcadis U.S., Inc.
 Project/Site: Alliance 51st Street

Job ID: 410-188472-1

General Chemistry

Analysis Batch: 553323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-188472-1	S-8A	Total/NA	Soil	Moisture	
410-188472-2	S-16	Total/NA	Soil	Moisture	
410-188472-3	S-18	Total/NA	Soil	Moisture	
410-188472-4	S-19	Total/NA	Soil	Moisture	
410-188472-5	S-20	Total/NA	Soil	Moisture	
410-188472-6	S-21	Total/NA	Soil	Moisture	
410-188472-7	S-22	Total/NA	Soil	Moisture	
410-188472-8	S-23	Total/NA	Soil	Moisture	
410-188472-9	DUP-1	Total/NA	Soil	Moisture	
410-188472-10	S-3	Total/NA	Soil	Moisture	
410-188472-11	S-5	Total/NA	Soil	Moisture	
410-188472-12	S-6	Total/NA	Soil	Moisture	

Prep Batch: 553700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-188472-1	S-8A	Total/NA	Soil	3060A	
410-188472-2	S-16	Total/NA	Soil	3060A	
410-188472-3	S-18	Total/NA	Soil	3060A	
410-188472-4	S-19	Total/NA	Soil	3060A	
410-188472-5	S-20	Total/NA	Soil	3060A	
410-188472-6	S-21	Total/NA	Soil	3060A	
410-188472-7	S-22	Total/NA	Soil	3060A	
410-188472-8	S-23	Total/NA	Soil	3060A	
410-188472-9	DUP-1	Total/NA	Soil	3060A	
410-188472-10	S-3	Total/NA	Soil	3060A	
410-188472-11	S-5	Total/NA	Soil	3060A	
410-188472-12	S-6	Total/NA	Soil	3060A	
MB 410-553700/1-A	Method Blank	Total/NA	Solid	3060A	
LCS 410-553700/2-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSI 410-553700/3-A	Lab Control Sample	Total/NA	Solid	3060A	
410-188472-12 MSI	S-6	Total/NA	Soil	3060A	
410-188472-12 MSS	S-6	Total/NA	Soil	3060A	
410-188472-12 DU	S-6	Total/NA	Soil	3060A	

Analysis Batch: 554639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-188472-1	S-8A	Total/NA	Soil	7196A	553700
410-188472-2	S-16	Total/NA	Soil	7196A	553700
410-188472-3	S-18	Total/NA	Soil	7196A	553700
410-188472-4	S-19	Total/NA	Soil	7196A	553700
410-188472-5	S-20	Total/NA	Soil	7196A	553700
410-188472-6	S-21	Total/NA	Soil	7196A	553700
410-188472-7	S-22	Total/NA	Soil	7196A	553700
410-188472-8	S-23	Total/NA	Soil	7196A	553700
410-188472-9	DUP-1	Total/NA	Soil	7196A	553700
410-188472-10	S-3	Total/NA	Soil	7196A	553700
410-188472-11	S-5	Total/NA	Soil	7196A	553700
410-188472-12	S-6	Total/NA	Soil	7196A	553700
MB 410-553700/1-A	Method Blank	Total/NA	Solid	7196A	553700
LCS 410-553700/2-A	Lab Control Sample	Total/NA	Solid	7196A	553700
LCSI 410-553700/3-A	Lab Control Sample	Total/NA	Solid	7196A	553700

QC Association Summary

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

General Chemistry (Continued)

Analysis Batch: 554639 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-188472-12 MSI	S-6	Total/NA	Soil	7196A	553700
410-188472-12 MSS	S-6	Total/NA	Soil	7196A	553700
410-188472-12 DU	S-6	Total/NA	Soil	7196A	553700

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Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-8A

Lab Sample ID: 410-188472-1

Date Collected: 09/16/24 10:40

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-8A

Lab Sample ID: 410-188472-1

Date Collected: 09/16/24 10:40

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 60.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		10	556131	F7JF	ELLE	09/26/24 12:23
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		5	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-16

Lab Sample ID: 410-188472-2

Date Collected: 09/16/24 10:55

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-16

Lab Sample ID: 410-188472-2

Date Collected: 09/16/24 10:55

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		2	556131	F7JF	ELLE	09/26/24 12:25
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		1	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-18

Lab Sample ID: 410-188472-3

Date Collected: 09/16/24 11:00

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-18

Lab Sample ID: 410-188472-3

Date Collected: 09/16/24 11:00

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		2	556131	F7JF	ELLE	09/26/24 12:29

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-18

Lab Sample ID: 410-188472-3

Date Collected: 09/16/24 11:00

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		5	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-19

Lab Sample ID: 410-188472-4

Date Collected: 09/16/24 11:03

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-19

Lab Sample ID: 410-188472-4

Date Collected: 09/16/24 11:03

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		2	556131	F7JF	ELLE	09/26/24 12:33
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		1	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-20

Lab Sample ID: 410-188472-5

Date Collected: 09/16/24 11:05

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-20

Lab Sample ID: 410-188472-5

Date Collected: 09/16/24 11:05

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 92.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		2	556131	F7JF	ELLE	09/26/24 12:43
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		5	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-21

Lab Sample ID: 410-188472-6

Date Collected: 09/16/24 11:10

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-21

Lab Sample ID: 410-188472-6

Date Collected: 09/16/24 11:10

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		100	556295	T8CQ	ELLE	09/26/24 18:45
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		1	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-22

Lab Sample ID: 410-188472-7

Date Collected: 09/16/24 11:15

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-22

Lab Sample ID: 410-188472-7

Date Collected: 09/16/24 11:15

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		2	556131	F7JF	ELLE	09/26/24 12:47
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		1	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-23

Lab Sample ID: 410-188472-8

Date Collected: 09/16/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-23

Lab Sample ID: 410-188472-8

Date Collected: 09/16/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		2	556131	F7JF	ELLE	09/26/24 12:51
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		1	554639	UDS7	ELLE	09/23/24 18:45

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: DUP-1

Lab Sample ID: 410-188472-9

Date Collected: 09/16/24 00:00

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: DUP-1

Lab Sample ID: 410-188472-9

Date Collected: 09/16/24 00:00

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		100	556295	T8CQ	ELLE	09/26/24 18:47
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		1	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-3

Lab Sample ID: 410-188472-10

Date Collected: 09/17/24 11:15

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-3

Lab Sample ID: 410-188472-10

Date Collected: 09/17/24 11:15

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		10	556131	F7JF	ELLE	09/26/24 13:07
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		1	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-5

Lab Sample ID: 410-188472-11

Date Collected: 09/17/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-5

Lab Sample ID: 410-188472-11

Date Collected: 09/17/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 76.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		10	556131	F7JF	ELLE	09/26/24 13:11

Lab Chronicle

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Client Sample ID: S-5

Lab Sample ID: 410-188472-11

Date Collected: 09/17/24 11:20

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 76.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:51
Total/NA	Analysis	7196A		1	554639	UDS7	ELLE	09/23/24 18:45

Client Sample ID: S-6

Lab Sample ID: 410-188472-12

Date Collected: 09/17/24 11:25

Matrix: Soil

Date Received: 09/17/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	7196A		1	551732	MRD6	ELLE	09/20/24 09:31
Total/NA	Analysis	Moisture		1	553323	UVJN	ELLE	09/19/24 13:34

Client Sample ID: S-6

Lab Sample ID: 410-188472-12

Date Collected: 09/17/24 11:25

Matrix: Soil

Date Received: 09/17/24 16:20

Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			553465	UAMX	ELLE	09/19/24 21:00
Total/NA	Analysis	6020B		10	556131	F7JF	ELLE	09/26/24 12:09
Total/NA	Prep	3060A			553700	W2JF	ELLE	09/20/24 10:09
Total/NA	Analysis	7196A		1	554639	UDS7	ELLE	09/23/24 18:45

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Arcadis U.S., Inc.
 Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alabama	State	43200	01-31-25
Alaska	State	PA00009	06-30-25
Alaska (UST)	State	17-027	02-28-25
Arizona	State	AZ0780	03-12-25
Arkansas DEQ	State	88-00660	08-09-25
California	State	2792	11-30-24
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-25
Delaware (DW)	State	N/A	01-31-25
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-25
Hawaii	State	N/A	01-31-25
Illinois	NELAP	200027	01-31-25
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-24
Kentucky (DW)	State	KY90088	12-31-24
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-24
Louisiana (All)	NELAP	02055	06-30-25
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-25
Michigan	State	9930	01-31-25
Minnesota	NELAP	042-999-487	12-31-24
Mississippi	State	023	01-31-25
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-25
Nebraska	State	NE-OS-32-17	01-31-25
New Hampshire	NELAP	2730	01-10-25
New Jersey	NELAP	PA011	06-30-25
New York	NELAP	10670	04-01-25
North Carolina (DW)	State	42705	07-31-25
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-24 *
Oregon	NELAP	PA200001	09-11-25
Pennsylvania	NELAP	36-00037	01-31-25
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-24
South Carolina	State	89002	01-31-25
Tennessee	State	02838	01-31-25
Texas	NELAP	T104704194-23-46	08-31-25
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-24
Virginia	NELAP	460182	06-14-25
Washington	State	C457	04-11-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Lancaster Laboratories Environment Testing, LLC

Accreditation/Certification Summary

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
West Virginia (DW)	State	9906 C	01-31-25
West Virginia DEP	State	055	07-31-25
Wyoming	State	8TMS-L	01-31-25
Wyoming (UST)	A2LA	0001.01	11-30-24

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- 13
- 14

Method Summary

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	ELLE
7196A	Chromium, Hexavalent	SW846	ELLE
7196A	Chromium, Trivalent (Colorimetric)	SW846	ELLE
Moisture	Percent Moisture	EPA	ELLE
3050B	Preparation, Metals	SW846	ELLE
3060A	Alkaline Digestion (Chromium, Hexavalent)	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Arcadis U.S., Inc.
Project/Site: Alliance 51st Street

Job ID: 410-188472-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-188472-1	S-8A	Soil	09/16/24 10:40	09/17/24 16:20
410-188472-2	S-16	Soil	09/16/24 10:55	09/17/24 16:20
410-188472-3	S-18	Soil	09/16/24 11:00	09/17/24 16:20
410-188472-4	S-19	Soil	09/16/24 11:03	09/17/24 16:20
410-188472-5	S-20	Soil	09/16/24 11:05	09/17/24 16:20
410-188472-6	S-21	Soil	09/16/24 11:10	09/17/24 16:20
410-188472-7	S-22	Soil	09/16/24 11:15	09/17/24 16:20
410-188472-8	S-23	Soil	09/16/24 11:20	09/17/24 16:20
410-188472-9	DUP-1	Soil	09/16/24 00:00	09/17/24 16:20
410-188472-10	S-3	Soil	09/17/24 11:15	09/17/24 16:20
410-188472-11	S-5	Soil	09/17/24 11:20	09/17/24 16:20
410-188472-12	S-6	Soil	09/17/24 11:25	09/17/24 16:20





vironme

Chain of Custody Record

euromins | Environment Testing

410-188472 Chain of Custody

Sampler: Matt Hilinski	Lab PM: Megan Maeller	Carrier Tracking No(s)	COC No: 410-131322-37160.1
Phone: 267-772-9341	E-Mail:	State of Origin:	Page: Page 1 of 2

Client Contact: Matt Hilinski	PWSID:	Analysis Requested	Job #:
Company: Arcadis U.S., Inc.			

Address: 1 Harvard Way Suite # 5	Due Date Requested:	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6010D, 7196A, 7196A_CR3 (GC) 20B, 7196A, 7199 CR3 (GC)	Total Number of Containers	Preservation Codes: N - None
City: Hillsborough	TAT Requested (days): 5 days			Other:
State, Zip: NJ, 08844	Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Phone: 267-772-9341	PO #: 301086 78.06			
Email: matt.hilinski@arcadis.com	WO #:			
Project Name: Alligare 5/22 R	Project #:			
Site	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, B=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D	7196A	7199 CR3 (GC)	Special Instructions/Note:
						N				
S-17	9/16/24	1047	G	(soil)	X	X	X	X	X	As Sample
S-19	9/16/24	1055	G	(soil)	X	X	X	X	X	
S-20	9/16/24	1100	G	(soil)	X	X	X	X	X	
S-21	9/16/24	1103	G	(soil)	X	X	X	X	X	
S-22	9/16/24	1105	G	(soil)	X	X	X	X	X	
S-23	9/16/24	1120	G	(soil)	X	X	X	X	X	
S-24	9/16/24	1125	G	(soil)	X	X	X	X	X	
S-25	9/16/24	1130	G	(soil)	X	X	X	X	X	
S-26	9/16/24	1135	G	(soil)	X	X	X	X	X	
S-27	9/16/24	1140	G	(soil)	X	X	X	X	X	
S-28	9/16/24	1145	G	(soil)	X	X	X	X	X	
S-29	9/16/24	1150	G	(soil)	X	X	X	X	X	
S-30	9/17/24	1115	G	(soil)	X	X	X	X	X	

Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Matt Hilinski	Date/Time: 9/17/24 1325	Company: Arcadis	Received by: Cash Date/Time: 9/17/24 1419 Company: EtE
Relinquished by: Cash	Date/Time: 9/17/24 1620	Company: EtE	Received by: EtE Date/Time: 9/17/24 1620 Company: EtE
Relinquished by: John M.	Date/Time: 9/17/24 1620	Company: EtE	Received by: John M. Date/Time: 9/17/24 1620 Company: EtE

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 24.1 C 4.1
--	-------------------	---

Login Sample Receipt Checklist

Client: Arcadis U.S., Inc.

Job Number: 410-188472-1

Login Number: 188472

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Kanagy, Nicholas

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	



Appendix B

Ecological Screening

National Wetlands Inventory



U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

November 15, 2024

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

PNDI and Correspondences

1. PROJECT INFORMATION

Project Name: **Former 51st Street Terminal - Philadelphia, Pa**

Date of Review: **12/10/2024 12:11:43 AM**

Project Category: **Hazardous Waste Clean-up, Site Remediation, and Reclamation, Voluntary cleanup (Act 2 and Chapter 250)**

Project Area: **11.56 acres**

County(s): **Philadelphia**

Township/Municipality(s): **Philadelphia City**

ZIP Code:

Quadrangle Name(s): **PHILADELPHIA**

Watersheds HUC 8: **Schuylkill**

Watersheds HUC 12: **City of Philadelphia-Schuylkill River**

Decimal Degrees: **39.935420, -75.209397**

Degrees Minutes Seconds: **39° 56' 7.5131" N, 75° 12' 33.8277" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Former 51st Street Terminal - Philadelphia, Pa

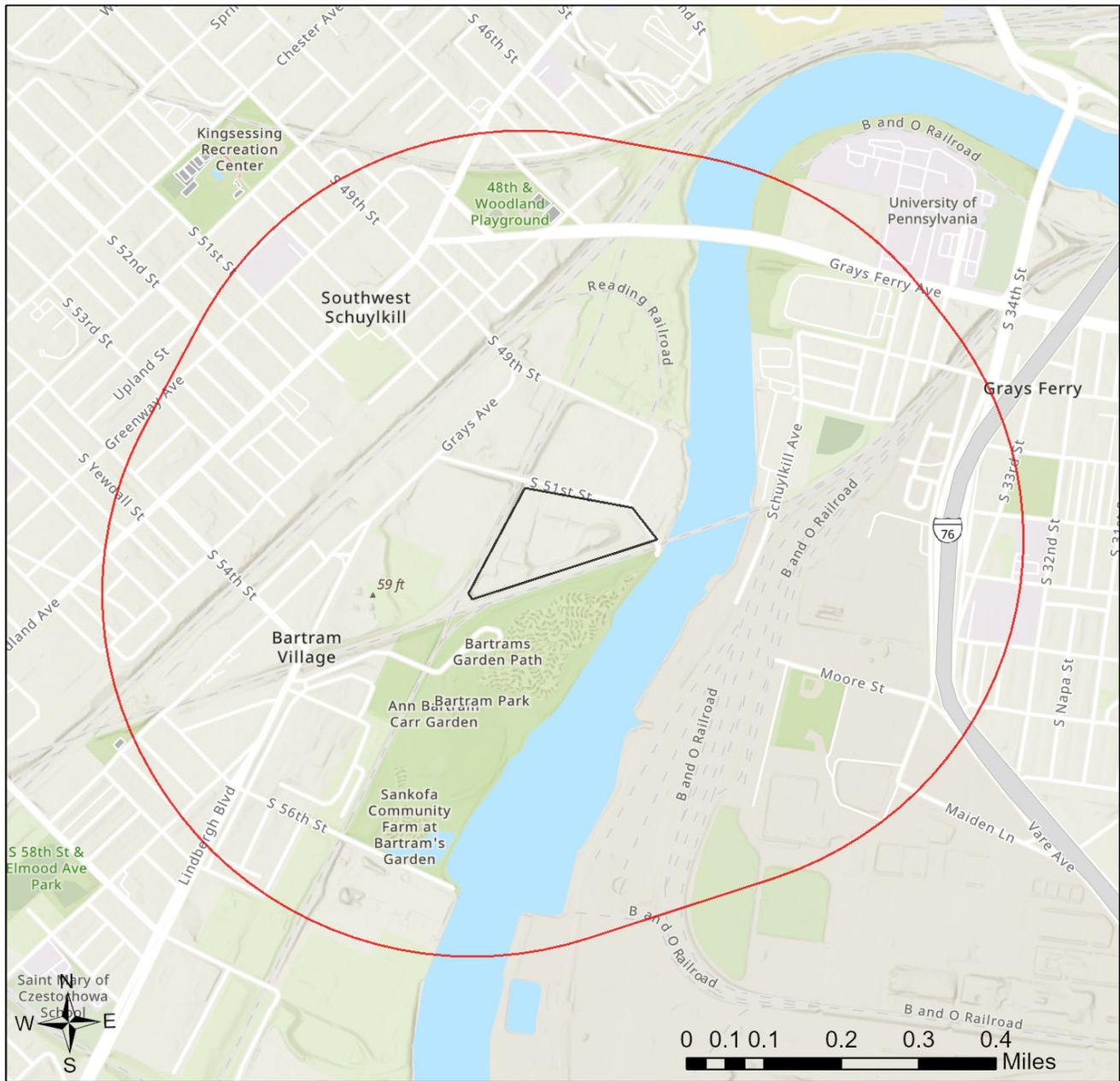


-  Buffered Project Boundary
-  Project Boundary



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Former 51st Street Terminal - Philadelphia, Pa



-  Buffered Project Boundary
-  Project Boundary



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

RESPONSE TO QUESTION(S) ASKED

Q1: Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: The project area (or land parcel) has not been investigated by someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience), or it is currently unknown if the project or project activities will affect wetlands.

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

DCNR Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here:

<https://conservationexplorer.dcnr.pa.gov/content/survey-protocols>)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
<i>Amaranthus cannabinus</i>	Waterhemp Ragweed	Special Concern Species*	Special Concern Species*	Flowers July - September
<i>Bolboschoenus fluviatilis</i>	River Bulrush	Special Concern Species*	Special Concern Species*	Fruits June - August

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Endangered
Sensitive Species**		Endangered
Sensitive Species**		Threatened

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).

*If information was requested by USFWS, applicants must email, or mail, project information to IR1_ESPenn@fws.gov to initiate a review. USFWS will not accept uploaded project materials.

Check-list of Minimum Materials to be submitted:

Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

In addition to the materials listed above, USFWS REQUIRES the following

SIGNED copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.

Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.



5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

PA Fish and Boat Commission

Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

U.S. Fish and Wildlife Service

Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Game Commission

Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Brynn Hanna
Company/Business Name: Arcadis U.S, Inc
Address: 2100 Georgetown Drive, Suite 402
City, State, Zip: Sewickley, PA 15143
Phone: (267) 356 3735 Fax: ()
Email: brynn.hanna@arcadis.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.



applicant/project proponent signature

12/10/2024

date

Via PNDI electronic submission

PA Department of Conservation and Natural Resources
Bureau of Forestry
Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17105

PA Fish and Boat Commission
1601 Elmerton Avenue
PO Box 67000
Harrisburg, PA 17106-7000
717-705-7800

Arcadis U.S., Inc.
2100 Georgetown Drive
Suite 402
Sewickley
Pennsylvania 15143
Phone: 724 742 9180
Fax: 724 742 9189
www.arcadis.com

Date: December 10, 2024

Our Ref: 30108678

Subject: Rare, Threatened, and Endangered Species Consultation – PNDI-827417

Dear PA Department of Conservation and Natural Resources and PA Fish and Boat Commission,

On behalf of Alliance 51st Street LLC (Alliance), Arcadis U.S., Inc. (Arcadis) conducted an online project environmental review for the Former 51st Street Terminal Site located at 1630-1646 South 51st Street in Philadelphia, Pennsylvania (Site; see Figure 1). The results of the Pennsylvania Natural Diversity Inventory Environmental Review Tool (PNDI ER Tool) on November 24, 2024 indicated that further review of the project by the PA Department of Conservation and Natural Resources (DCNR) and the PA Fish and Boat Commission (PFBC) is necessary to resolve potential impacts.

A Species Impact Review (SIR) of the Project was previously issued by the PFBC on June 14, 2022 (SIR #56265) stating that no adverse impacts are expected to the sensitive species (Attached). The SIR (#56265) expired on June 14, 2024 and Arcadis is seeking an updated determination from the PFBC.

DCNR issued a clearance letter for the project on June 7, 2022 (PNDI Receipt # 761020(Final_1)) stating that no impacts are anticipated (Attached). This clearance letter expired on June 7, 2024 and Arcadis is seeking an updated determination from the DCNR.

This letter and the attached documents provide project specific information to assist the DCNR and the PFBC in your review of the project area to assess the potential impacts to the identified species.

The following documents are attached to this letter:

- Figure 1 - Site Plan
- Photograph Log of Site
- June 14, 2022 PFBC Clearance Letter

- June 7, 2022 DCNR Clearance Letter

Project Narrative

The Site is currently under review by the Pennsylvania Department of Environmental Protection (PADEP) through the Land Recycling and Environmental Remediation Standards Act Program (Act 2) and the Aboveground Storage Tank (AST) Program. In 2021, PBF Logistics Products Terminals LLC (PBF Logistics), the former property owner, closed the fifteen ASTs with notice to PADEP. The ASTs, loading racks, and associated piping were removed as part of the AST closure activities and the tank foundations, concrete and soil containment berms, and miscellaneous building structures, have been removed as part of redevelopment activities.

Alliance 51st Street LLC acquired the Site from PFB Logistics in December 2021. In 2024, Alliance submitted a revised Notice of Intent to Remediate (NIR) to obtain a relief of liability (ROL) for the constituents of concern (COCs) associated with the Act 2 Program. Remedial activities pertaining to the former ASTs and the petroleum products that were stored in the tanks were conducted at the Site by Arcadis (on behalf of Alliance).

Organic compounds and metals are present in site media. Soil borings in the former AST and piping area identified exceedances of PADEP soil Medium Specific Concentrations (MSCs) for volatile organic compounds, semivolatile organic compounds, and lead. Groundwater samples from monitoring wells have exceedances of groundwater MSCs for benzene and lead associated with the former terminal operations. Hexavalent chromium also is present in soil and groundwater due to the historic placement of fill onsite in the early 1900s.

The Site, including the area where the former ASTs were located, occupies an approximately 12-acre parcel located south of 51st Street in an industrial/commercial section of Philadelphia. The northwestern portion of the Site previously contained three buildings and a canopy area, which have been demolished. The areas around the buildings are paved with asphalt. The remainder of the Site consists of gravel areas where the former ASTs were located, with very minimal grassy areas present onsite. The Site is entirely fenced in. It appears that the 500-year floodplain encroaches slightly onto the northeastern and eastern portions of the Site (Environmental Data Resources Inc. [EDR] 2021). The eastern portion of the small parcel to the north of the Site also appears to be within the 500-year floodplain. As shown on **Figure 1**, the Schuylkill River is located approximately 100 feet to the east of the northeastern portion of the Site and the property is bordered to the south by railroad tracks, beyond which is Bartram's Garden, a public park. The Site will remain as non-residential property and future plans for the site include redevelopment and the addition of a building and paved/landscaped areas.

No impacts to the Schuylkill River or Bartram's Garden are proposed. A portion of Bartram's Garden trail is currently closed while stormwater management and sampling occur.

If you have any questions regarding this additional project information, please do not hesitate to contact me.

DCNR and PFBC
December 10, 2024

Sincerely,
Arcadis U.S., Inc.



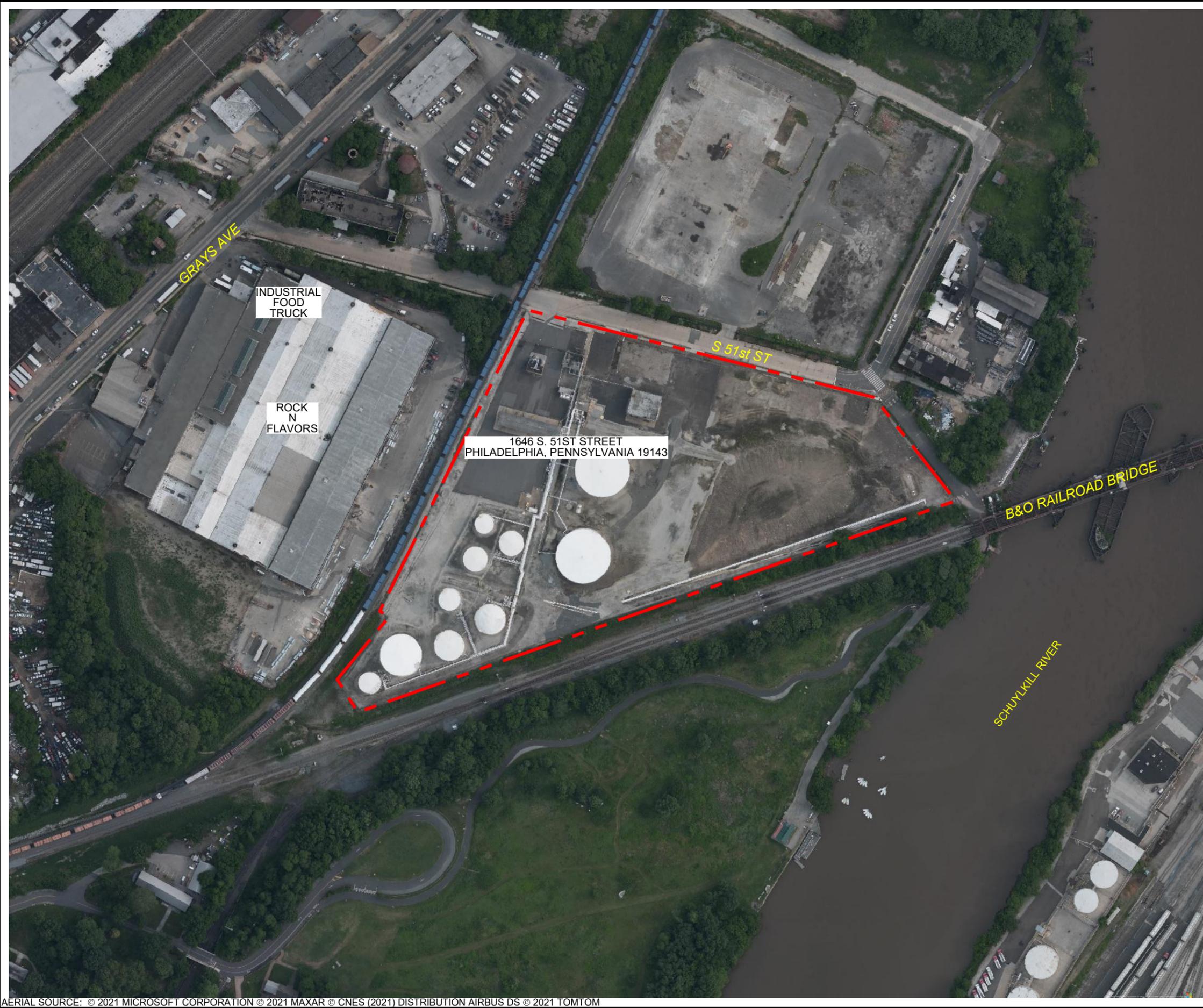
Nikki Wiefling
Principal Ecologist

Email: nicole.wiefling@arcadis.com
Direct Line: 724 934 9560

CC. Crystal Foster (Arcadis, Senior Geologist)

Enclosures:

Figure 1 - Site Plan
Photograph Log of Site
June 14, 2022 PFBC Clearance Letter
June 7, 2022 DCNR Clearance Letter



LEGEND:

-  PROPERTY BOUNDARY
-  Aboveground storage tanks have been removed.



ALLIANCE HP INVESTMENTS, LLC
1646 S. 51ST STREET
PHILADELPHIA, PENNSYLVANIA

SITE PLAN

Project Photographs

Alliance 51st Street LLC
Former 51st Street Terminal
1630-1646 South 51st Street in Philadelphia, Pennsylvania

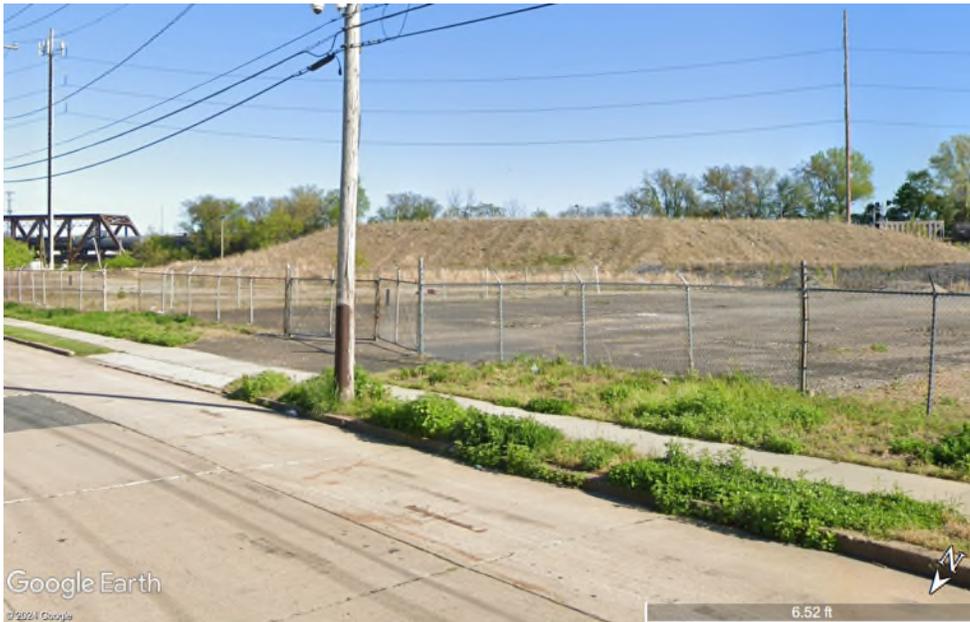


Photo: 1

Date:
04/2024

Description:
Google earth street view
from northern-most
portion of site facing
southwest.



Photo: 2

Date:
04/2024

Description:
Google earth street view
from northern-most
portion of site facing
southeast.

Project Photographs

Alliance 51st Street LLC
Former 51st Street Terminal
1630-1646 South 51st Street in Philadelphia, Pennsylvania



Photo: 3

Date:

09/2019, before removal of
ASTs

Description:

Google earth street view
from southeastern portion
of site facing southeast.



Photo: 4

Date:

04/2024

Description:

Google earth street view
from northeastern portion
of site. Facing northeast
down South 51st Street.

Project Photographs

Alliance 51st Street LLC
Former 51st Street Terminal
1630-1646 South 51st Street in Philadelphia, Pennsylvania



Photo: 5

Date:
04/2024

Description:
Google earth street view of railroad at northern-most portion of site facing southeast.



Pennsylvania Fish & Boat Commission

Division of Environmental Services
Natural Diversity Section
595 E Rolling Ridge Dr.
Bellefonte, PA 16823
814-359-5237

June 14, 2022

IN REPLY REFER TO
SIR# 56265

Bohler Engineering, Inc.
Jordyn Strnad
1515 Market Street
Philadelphia, Pennsylvania 19102

RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search No. 761020_1
Proposed Industrial Development
PHILADELPHIA County: Philadelphia City

Dear Jordyn Strnad:

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search “potential conflict” or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code.

An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.

This response represents the most up-to-date summary of the PNDI data and our files and is valid for two (2) years from the date of this letter. An absence of recorded species information does not necessarily imply species absence. Our data files and the PNDI system are continuously being updated with species occurrence information. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered, and consultation shall be re-initiated.

Our Mission:

www.fish.state.pa.us

To protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities.

If you have any questions regarding this review, please contact Josh Brown at 814-359-5129 and refer to the SIR # 56265. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

Sincerely,

A handwritten signature in black ink that reads "Christopher A. Urban". The signature is written in a cursive style with a large, prominent initial "C".

Christopher A. Urban, Chief
Natural Diversity Section

CAU/JRB/dn

June 7, 2022

PNDI Number: 761020

Version: Final_1; 6/2/22

Jordyn Strnad
Bohler Engineering
1515 Market Street, Suite 920
Philadelphia, PA 19102
Email: jstrnad@bohlereng.com (hard copy will not follow)

Re: Proposed Industrial Development
Philadelphia Township, Philadelphia County, PA

Dear Jordyn Strnad,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number **761020 (Final_1)** for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only.

No Impact Anticipated

PNDI records indicate species or resources under DCNR's jurisdiction are located in the vicinity of the project. However, based on the information you submitted concerning the nature of the project, the immediate location, and our detailed resource information, DCNR has determined that no impact is likely. No further coordination with our agency is needed for this project.

Recommended Best Management Practices:

- Use a conservative approach to project design that minimizes permanent and temporary disturbances to soil and native vegetation. This will conserve habitat and limit opportunities for invasive plants.
- Clean boot treads, tools, construction equipment, and vehicles thoroughly (especially the undercarriage and wheels) before they are brought on site. This will remove invasive plant seeds and invasive earthworms/cocoons that may have been picked up at other worksites.
- Use clean project materials (e.g., weed-free straw) or materials native to the worksite to avoid introducing invasive species from contaminated sources.
- Revegetate or cover disturbed soil and stockpiles quickly to discourage the germination of invasive plants. Implement proper erosion control practices to stabilize soil and reduce runoff.
- Do not use seed mixes that include invasive species. More information about invasive plants in Pennsylvania can be found at the following link: <http://www.dcnr.pa.gov/Conservation/WildPlants/InvasivePlants/Pages/default.aspx>
- Use habitat appropriate seed mixes. For example, use a riparian seed mix when reseeding along a waterway. The Bureau of Forestry Planting & Seeding Guidelines can be found at the following link for recommendations: http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_20031083.pdf
- Use native plants for landscaping, revegetation, and stormwater management. Do not use nonnative invasive species. Reduce the area of lawn and impermeable surfaces to the fullest extent practicable in favor of native gardens or habitat

conserve sustain enjoy

P.O. Box 8552, Harrisburg, PA 17015-8552 717-787-3444 (fax) 717-772-0271

restoration (e.g., forest, meadow, wetland, etc.). More information about lawn conversion can be found at the following link: <https://www.dcnr.pa.gov/Conservation/Water/LawnConversion/Pages/default.aspx>

This response represents the most up-to-date review of the PNDI data files and is valid for two (2) years only. If project plans change or more information on listed or proposed species becomes available, our determination may be reconsidered. Should the proposed work continue beyond the period covered by this letter and a permit has not been acquired, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative, description of project changes and accurate map). As a reminder, this finding applies to potential impacts under DCNR's jurisdiction only. Visit the PNHP website for directions on contacting the Commonwealth's other resource agencies for environmental review.

Should you have any questions or concerns, please contact Alexander Dogonniuck, Ecological Information Specialist, by phone (717-783-3913) or via email (c-adogonni@pa.gov).

Sincerely,



Greg Podnieszinski, Section Chief
Natural Heritage Section



12/16/2024

PNDI Number: PNDI-827417
Version: FINAL_1; 12/09/2024

Brynn Hanna

Arcadis

2100 Georgetown Dr

Sewickley, PA 15213

Email: brynn.hanna@arcadis.com (hard copy will not follow)

**Re: Former 51st Street Terminal - Philadelphia, Pa
City Of Philadelphia, Philadelphia County, PA**

Dear Brynn Hanna,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number **PNDI-827417 (FINAL_1)** for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only.

No Impact Anticipated

PNDI records indicate species or resources under DCNR's jurisdiction are located in the vicinity of the project. However, based on the information you submitted concerning the nature of the project, the immediate location, and our detailed resource information, DCNR has determined that no impact is likely. No further coordination with our agency is needed for this project.

Recommended Best Management Practices:

- Use a conservative approach to project design that minimizes permanent and temporary disturbances to soil and native vegetation. This will conserve habitat and limit opportunities for invasive plants.
- Clean boot treads, tools, construction equipment, watercraft, and vehicles thoroughly (especially the undercarriage and wheels) before they are brought on site. This will remove invasive plant seeds and invasive earthworms/cocoons that may have been picked up at other worksites.
- Use clean project materials (e.g., weed-free straw, topsoil, rock fill, etc.) or materials native to the worksite to avoid introducing invasive species from contaminated sources.
- Do not use seed mixes that include invasive species. More information about invasive plants in Pennsylvania can be found at the following link:
<http://www.dcnr.pa.gov/Conservation/WildPlants/InvasivePlants/Pages/default.aspx>.
- Use habitat appropriate seed mixes, and when available use PA ecotypes. For example, use a riparian seed mix when reseeding along a waterway. The Bureau of Forestry Planting & Seeding Guidelines can be found at the following link for recommendations:

http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_20031083.pdf

- Use native plants for landscaping, revegetation, and stormwater management. Do not use nonnative invasive species. Reduce the area of lawn and impermeable surfaces to the fullest extent practicable in favor of native gardens or habitat restoration (e.g., forest, meadow, wetland, etc.). More information about lawn conversion can be found at the following link:
<https://www.dcnr.pa.gov/Conservation/Water/LawnConversion/Pages/default.aspx>
- Plant forest buffers where trees were historically present along streams, wetlands, and bodies of water. Buffers should be a minimum of 35 feet in width (ideally at least 100 feet in width). Where trees are not appropriate (e.g., powerline rights-of-way), buffer with native shrubs and herbaceous plants. More information about riparian buffers can be found at the following link:
<https://www.dcnr.pa.gov/Conservation/Water/RiparianBuffers/Pages/default.aspx>
- Manage road/utility rights-of-way, median strips, edges, and other green spaces for diverse native plant communities and wildlife (e.g., common and swamp milkweed for monarch butterfly). In seed mixes, include PA native wildflowers that have overlapping bloom periods and provide forage for pollinators throughout the growing season.
- Avoid blanket herbicide applications; instead, spot-treat undesirable tall woody vegetation and invasive weeds. Where mowing is necessary, reduce frequency to once every few years during the dormant season (i.e., after first frost in late fall and before bird nesting in early spring), leaving some refugia for overwintering wildlife.
- Monitor for invasive plants before, during, and after project activities and promptly control any identified infestations. Frequent monitoring allows for early detection and rapid response.

This response represents the most up-to-date review of the PNDI data files and is valid for two (2) years only. If project plans change or more information on listed or proposed species becomes available, our determination may be reconsidered. Should the proposed work continue beyond the period covered by this letter and a permit has not been acquired, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative, description of project changes and accurate map). As a reminder, this finding applies to potential impacts under DCNR's jurisdiction only. Visit the PNHP website for directions on contacting the Commonwealth's other resource agencies for environmental review.

Should you have any questions or concerns, please contact Hope Brooks, Ecological Information Specialist, by phone (717-705-2819) or via email (c-hobrooks@pa.gov).

Sincerely,



Greg Podniesinski, Section Chief
Natural Heritage Section



December 31, 2024

IN REPLY REFER TO

SIR# 60717

Arcadis
Brynn Hanna
2100 Georgetown Drive
Sewickley, Pennsylvania 15143

**RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search No. 827417_1
Former 51st Street Terminal - Philadelphia, Pa
Philadelphia City: PHILADELPHIA County**

Dear Brynn Hanna:

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search “potential conflict” or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish and Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish and Boat Code (Chapter 75), or the Wildlife Code.

An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.

This response represents the most up-to-date summary of the PNDI data and our files and is valid for two (2) years from the date of this letter. An absence of recorded species information does not necessarily imply species absence. Our data files and the PNDI system are continuously being updated with species occurrence information. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered, and consultation shall be re-initiated.

If you have any questions regarding this review, please contact Josh Brown at 814-359-5129 or joshbrown@pa.gov and refer to the SIR # 60717. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

Sincerely,

A handwritten signature in black ink that reads "Christopher A. Urban". The signature is written in a cursive style with a large, prominent initial "C".

Christopher A. Urban, Chief
Natural Diversity Section

CAU/JRB/dn

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