



**Soil and Surface Wipe  
Sampling Summary Report:  
Jenkintown and Abington  
Friends Schools**

**SPS Technologies  
Jenkintown**

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## 1.0 Executive Summary

On March 17, 2025, TRC Environmental Corporation (TRC) initiated soil and surface wipe sampling in accordance with “*Proposed Fire Response Dust and Soil Investigation Work Plan – Abington Friends School (March 14, 2025)* and *Proposed Fire Response Dust and Soil Investigation Workplan – Jenkintown School (March 14, 2025)*; collectively referred to in this document as Workplans). The sampling was conducted at the request of officials from Jenkintown School and Abington Friends School (Schools), which are in the vicinity of the fire that began at the SPS Jenkintown manufacturing facility on February 17, 2025.

Soil and surface wipe samples were collected from the Schools and from background areas not anticipated to have been affected by the fire. As noted in the Workplans, two discrete soil samples were collected from three different areas at each school from the top 1 inch of soil and bottom 1-6 inches of soil. Surficial wipe samples were also collected from three different pieces of playground equipment at each school.

Additionally, two discrete soil samples were collected from two background locations (Wall Park in Elkins, Park, PA and The Cheese Playground in Glenside, PA) from the top 1 inch of soil and bottom 1-6 inches of soil. Surface wipe samples were also collected from three different pieces of playground equipment at each background location.

Soil and surface wipe samples were analyzed for compounds that could potentially represent markers of combustion emissions and for certain additional compounds based on concerns expressed by school officials and the public. Soils were analyzed for polycyclic aromatic hydrocarbons (PAHs), various metals, total and free cyanide, and asbestos. Wipe samples were analyzed for PAHs.

The results of soil samples were compared to Pennsylvania Department of Environmental Protection (PADEP) Residential Direct Contact numerical values established under the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2). As discussed in Section 2.2, the Act 2 values are health-based that were criteria selected for screening purposes due to the conservative nature of the risk assumptions made by PADEP in establishing the numerical values. The background samples were collected to determine whether the constituents present represent background conditions. The results for surface wipe samples were compared to the Contaminants of Potential Concern (COPC) framework for indoor dust developed after the World Trade Center collapse, as modified for outdoor dust, as discussed in Section 3.2.5 below.

Soil results confirm the SPS fire did not distribute measurable amounts of PAHs, metals, cyanide or asbestos to the Schools. Cyanide and asbestos were not detected in any soil sample. PAHs and metals concentrations were below PADEP screening values except for arsenic, which was slightly elevated in some samples. Arsenic is present in soils throughout Pennsylvania due to naturally occurring minerals and/or to historical activities such as pesticide application or the use of pressure-treated wood. Based on the comparison of the concentrations detected at the

background sample locations and in the deeper soil samples, TRC concludes that the PAH and metals concentrations, including arsenic, are representative of background conditions.

Surface wipe sampling results also confirm that there is no discernible impact from the SPS fire at the Schools. PAH concentrations were uniformly below the limits of laboratory detection and below all relevant health-based screening levels.

## 2.0 Soil and Wipe Sampling

### 2.1 Sampling Program and Objectives

In accordance with the Workplans, soil samples were collected at two schools: Jenkintown School and Abington Friends School (Schools) and two background locations: Wall Park and The Cheese Playground. Background locations were selected outside of the affected area based on the prevailing wind direction during the fire and one of the background areas exhibits the same geology as the Schools.

Soil samples were collected at three areas at Jenkintown School and Abington Friends School, four locations at Wall Park, and three locations at The Cheese Playground. Samples were collected from the top 1 inch of soil and bottom 1-6 inches of soil.

In accordance with the Workplan, surface wipe samples were collected at three areas at Jenkintown School, Abington Friends School, Wall Park, and The Cheese Playground. Samples were collected from playground equipment and other community surfaces.

The locations of the four sites in relation to SPS are shown in **Figure 1**.

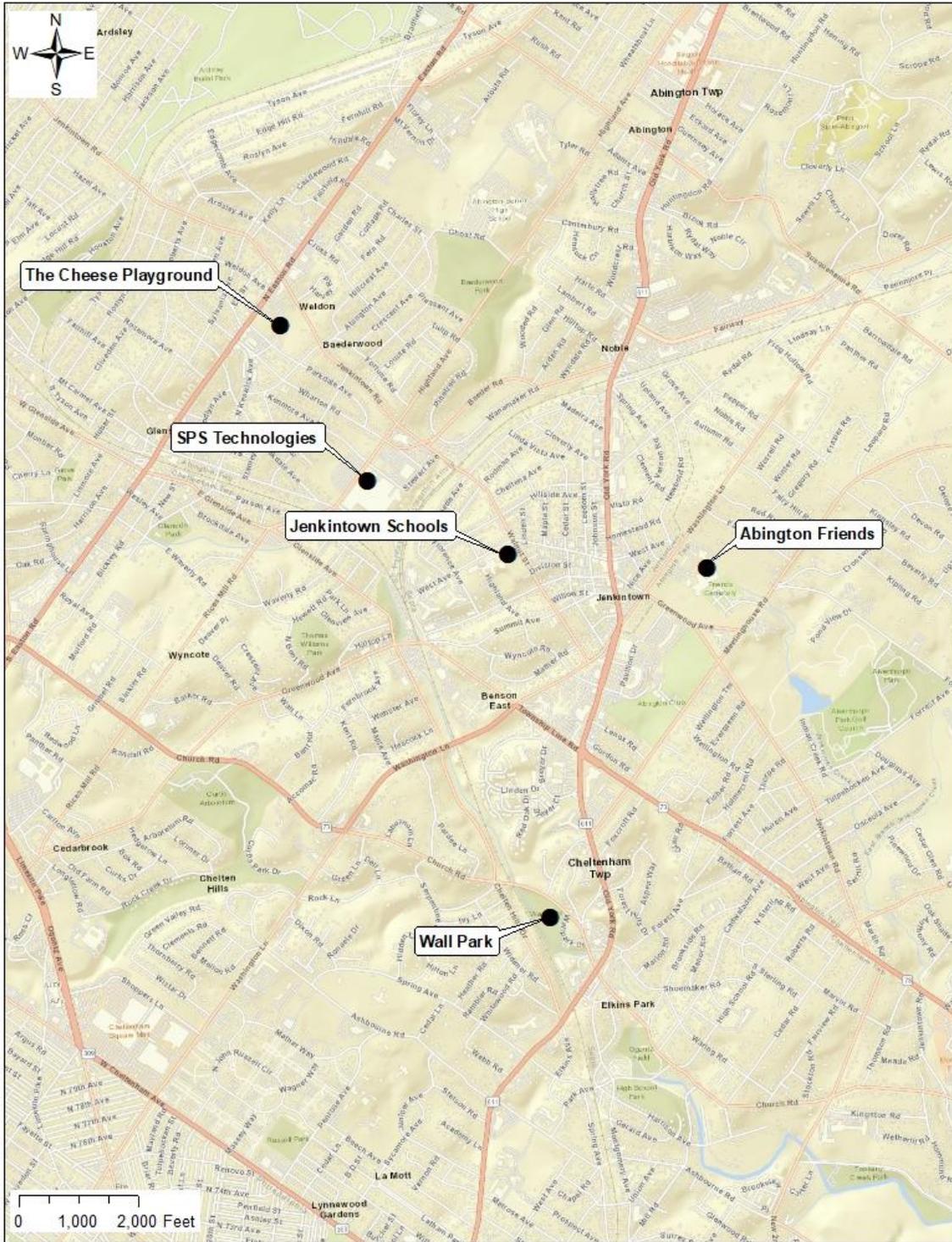


Figure 1: School and Background Sampling Locations

## 2.2 Soil Sampling and Analyses Means and Methods

### 2.2.1 Sample Collection

Soil samples were collected using a stainless-steel core sampler. The core sampler was cleaned before and after each sample collection. Cleaning was performed by using a laboratory-grade phosphate-free detergent solution followed by a tap water rinse and then followed by a distilled water rinse.

### 2.2.2 Sample Handling and Preservation

Soil samples were placed into laboratory-supplied containers. The sample containers were promptly placed in a cooler and preserved on ice. Samples were transported to the laboratory under Chain of Custody (COC).

Each sample was logged onto the COC and included sample identification (ID), date and time of sample collection, requested analytical parameters, sampler name and signature, and laboratory instructions as appropriate. The samples were transferred from field persons to laboratory personnel under signature of release and acceptance.

### 2.2.3 Quality Assurance

One duplicate sample was collected for the purpose of evaluating precision and accuracy. One Matrix Spike (MS) and one Matrix Spike Duplicate (MSD) with site-specific media, specifically the clayey soil found at the school sites, was collected for the purpose of assessing soil matrix effects.

Level 2 Data Validation was performed on all data. The data were all found to be usable.

### 2.2.4 Analytical Parameters

Each soil sample was analyzed for:

- Polycyclic Aromatic Hydrocarbons (PAHs) – EPA SW846 Method 8270E SIM
- Metals – EPA SW-846 Method 6020B/7471B (TAL Metals, which includes Mercury)
- Total Cyanide – EPA SW-846 Method 9012B
- Free Cyanide – Kelada-01 (via MJ Reider)
- Asbestos by EPA 600/R-93/116 (PLM for screening absence/presence)
- Asbestos by EPA ASTM D7521-16 method (TEM for asbestos concentration **only if asbestos detected by PLM**)\*

\*Since no detectable asbestos was above the target level of one percent (1%), no TEM analyses were performed.

### **2.2.5 PADEP Standards**

Soil sampling results were compared to Residential Direct Contact (0-15 feet) numerical values presented in Table 3a for organic constituents and Table 4a for inorganic constituents established as Medium Specific Concentrations established by Pennsylvania Department of Environmental Protection (PADEP) Land Recycling and Environmental Remediation Standards Act (Act 2).

## **2.3 Wipe Sampling Means and Methods**

### **2.3.1 Sample Collection**

For each piece of playground or community equipment, a 200cm<sup>2</sup> area (marked by laboratory-provided template squares) was wiped with a prewet methanol wipe.

### **2.3.2 Sample Handling and Preservation**

Each area chosen for surface wipe sample collection was wiped horizontally to cover the entirety of the area, the wipe folded, then wiped vertically before being placed into the laboratory-supplied containers and labeled. The sample containers were promptly placed in a cooler and preserved on ice. Samples were transported to the laboratory under Chain of Custody (COC).

Each sample was logged onto the COC and included sample identification (ID), date and time of sample collection, requested analytical parameters, sampler name and signature, and laboratory instructions as appropriate. The samples were transferred from field persons to laboratory personnel under signature of release and acceptance.

### **2.3.3 Quality Assurance**

One blank sample that did not contact any surfaces, but was handled in the same manner as the other wipes was collected and analyzed.

Surrogate samples were run by the laboratory for the purpose of evaluating percent recoveries.

Level 2 Data Validation was performed on all data. The data were all found to be usable.

### **2.3.4 Analytical Parameters**

Each wipe sample was analyzed for:

- PAHs – EPA SW846 Method 8270E SIM

### **2.3.5 Selected Reference Standard(s)**

Following the collapse of the World Trade Center (WTC) in 2001, the U.S. Environmental Protection Agency (EPA) and collaborating agencies developed the COPC framework to assess

indoor settled dust contamination. These guidelines were designed with an emphasis on protecting children, the most sensitive population, due to their higher frequency of hand-to-mouth activity, lower body weight, and greater time spent indoors. The framework established risk-based screening levels for PAHs and other contaminants in indoor environments. PAH benchmark concentrations were established based on the most sensitive PAH, benzo[a]pyrene (BaP), at an estimated  $1 \times 10^{-6}$  lifetime excess cancer risk for consistent with the dose-response recommended by ATSDR and CalEPA/OEHHA (ATSDR 2022; EPA 2003).

On February 27, 2025, the Center for Toxicology and Environmental Health (CTEH) issued a summary of an environmental survey involving air monitoring and outdoor surface wipe samples to characterize the chemical composition of particulates on surfaces near the SPS fire. While the original WTC benchmark for PAHs was developed specifically for indoor surfaces, CTEH adapted this benchmark for outdoor settings by applying an exposure adjustment factor of 6, calculated as the product of a 2.4-fold reduction in exposure frequency and a 2.6-fold reduction in exposure duration. This approach aligns with the U.S. EPA's derivation of surface screening levels for contaminants of potential concern (COPCs), which are based on Reasonable Maximum Exposure (RME) scenarios and public health practices elsewhere — including, but not limited to, the California Department of Public Health (CDPH 2022).

The WTC/COPC framework and conservative CTEH modification remains the most directly applicable and protective model for interpreting wipe sampling data collected from outdoor community and school settings. The screening levels derived through this approach provide a robust, health-protective standard for evaluating potential exposure to PAHs, particularly in settings where children may come into contact with surfaces.

## 3.0 Soil and Surface Wipe Sample Collection Sites

### 3.1 Jenkintown Schools

At Jenkintown Schools (JS), soil samples were collected from two depths (0-1 inch and 1-6 inches) at three (3) locations (JS-1, JS-2, and JS-3). JS-1 samples were collected near the circle entrance on the north side of the school, JS-2 samples were collected near the playground area, and JS-3 samples were collected near a future garden area. Surface wipe samples were collected from a covered bench on the east side of the playground (JS-Meth1-1A), a covered bench on the west side of the playground (JS-Meth1-2A), and a platform at the top a playground slide (JS-Meth1-3A). These locations are identified in **Figure 2**.

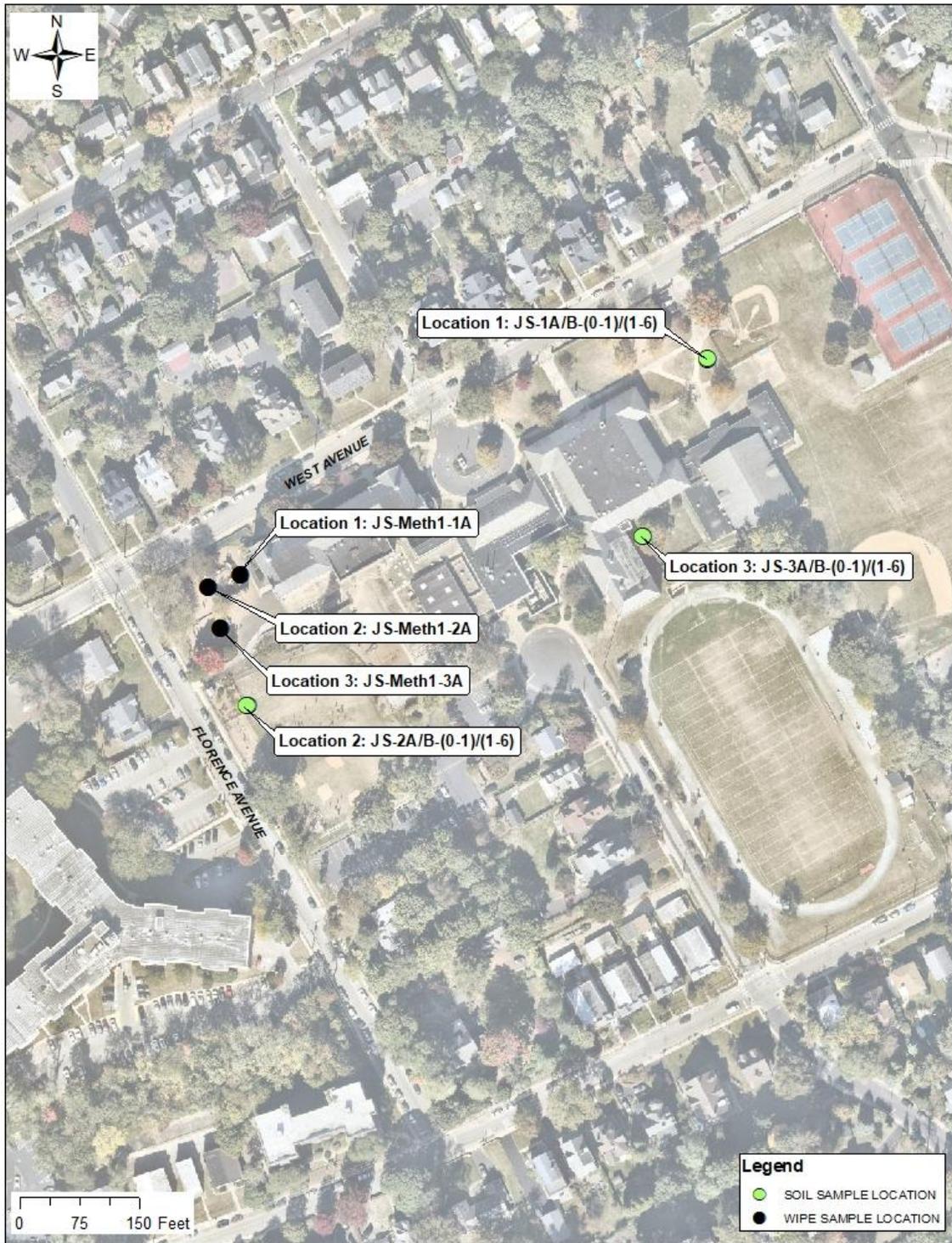


Figure 2: Jenkintown School Soil and Surface Wipe Sampling Locations

### 3.2 Abington Friends School

At Abington Friends School (AF), soil samples were collected from two depths (0-1 inch and 1-6 inches) at three (3) locations (AF-1, AF-2, and AF-3). AF-1 soil samples were collected near the baseball fields to the south, AF-2 soil samples were collected near the playground areas to the north, and AF-3 soil samples were collected near the garden area to the east of the school. Surface wipe samples were collected from an enclosed green tube in the main playground area (AF-Meth1-1A), a play structure platform in the preschool play area (AF-Meth1-2A), and the floor of a red wooden playhouse (AF-Meth1-3A). These locations are identified in **Figure 3**.

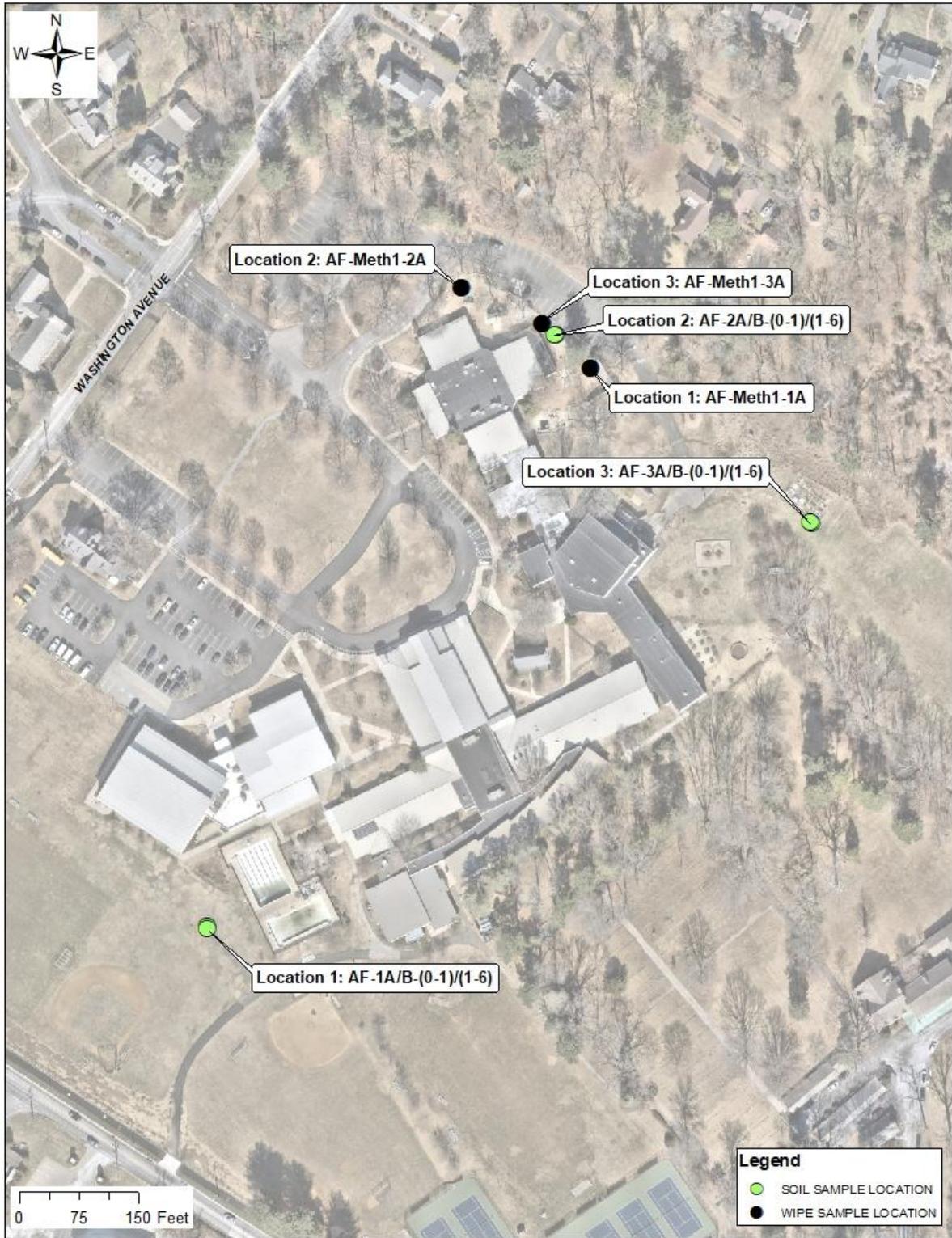


Figure 3: Abington Friends School (AF) Soil and Surface Wipe Sampling Locations

### 3.3 Wall Park

At Wall Park (Background A; BA), soil samples were collected from two depths (0-1 inch and 1-6 inches) at four (4) locations (BA-1, BA-2, BA-3, and BA-4). BA-1 soil samples were collected near the tennis courts on the southeast side of the park, BA-2 soil samples were collected from near the west playground and restrooms, BA-3 soil samples were collected on the north side of the park near the fields, and BA-4 soil samples were collected near the fields and the north end of the east playground. Surface wipe samples were collected from an enclosed green slide near the playground entrance (BA-Meth1-1A), a playground tower (BA-Meth1-2A), and a painted picnic table in the shelter house (BA-Meth1-3A). These locations are marked in **Figure 4**.

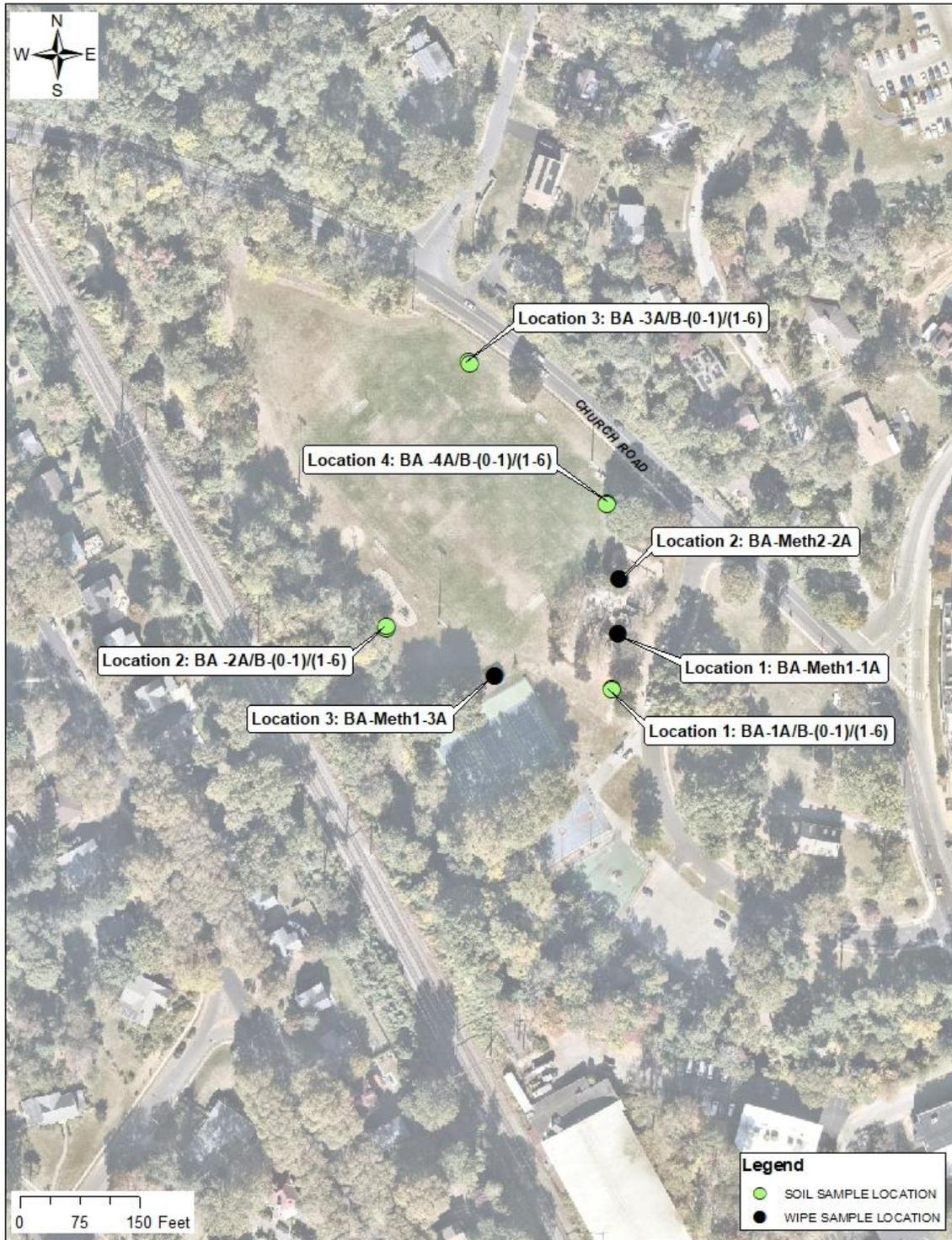


Figure 4: Wall Park (Background A; BA) Soil and Surface Wipe Sampling Locations

### 3.4 The Cheese Playground

At The Cheese Playground (Background B; BB), soil samples were collected from two depths (0-1 inch and 1-6 inches) at three (3) locations (BB-1, BB-2, and BB-3). BB-1 soil samples were collected near the playground area on the southwest side of the park, BB-2 soil samples were collected near the center of the park, and BB-3 samples were collected near the baseball fields on the north end of the park. Wipe samples were collected from a green tube near the middle of the main play structure (BB-Meth1-1A), tan slide at the edge of the main play structure (BB-Meth1-2A), and a green plastic merry-go-round near the edge of the playground (BB-Meth1-3A). These locations are marked in **Figure 5**.



Figure 5: The Cheese Playground (Background B; BB) Soil and Surface Wipe Sampling Locations

## 4.0 Analytical Results

### 4.1 Soil Sample Analytical Results

Soil samples were analyzed by Eurofins Laboratories of Lancaster, Pennsylvania.

**Table 1** presents a summary of all samples and the analytical parameters. **Table 2** presents the consolidated summary of all soil sampling results from Jenkintown School, Abington Friends School, Wall Park and The Cheese Playground.

The following methodology was used to evaluate the soil sampling results:

1. Soil sampling results were compared to numerical values established by Pennsylvania Department of Environmental Protection (PADEP) Land Recycling and Environmental Remediation Standards Act (Act 2). Data was compared with the Residential Direct Contact (0-15 feet) numerical values presented in Act 2 Statewide Health Standard Table 3a for organic constituents and Table 4a for inorganic constituents established by PADEP as Medium Specific Concentrations.
2. Background soil sample results from Wall Park and The Cheese Playground were also considered in the data analysis.
3. An evaluation of results from 0 to 1-inch samples versus the 1 to 6-inch sample results was conducted. Collecting soil samples from two depth intervals allows for a better understanding of the potential impacts from airborne materials from the fire (reflected in the upper 1-inch of the soil column) versus non-fire conditions (reflected in the lower 1-inch to 6-inch soil column). Hence the 1 to 6-inch sample represents background conditions for the analytical results from the 0 to 1-inch samples.

Act 2 has no established values for asbestos. United States Environmental Protection Agency (USEPA) defines “Asbestos Containing Materials” as “any material or product which contains more than one percent asbestos” (USEPA Asbestos Hazard and Emergency Response Act (AHERA) – Glossary of Asbestos Hazard and Emergency Response Act Terms). The initial screening of data considered if any asbestos was present in the soil samples via Polarized Light Microscopy (PLM).

Full soil sampling results are presented in the Appendices of this report. **Appendices A – D** respectively present soil sampling results from Jenkintown School, Abington Friends School, Wall Park (Background Location A), and The Cheese Playground (Background Location B) compared to applicable Act 2 standards.

### 4.2 Soil Sampling Data Evaluation

As shown in **Table 2**, PAHs and metals soil sampling results are below the selected Act 2 screening values except for arsenic. Asbestos and cyanide were not detected.

PAH and metals constituents are ubiquitous in urban areas. The PAH and metals concentrations are similar between the school locations and background locations. This confirms that the fire did not transport significant amounts of PAH or metals to properties in the down-wind direction. Although the small sample size between background and target property sample size prohibits rigorous statistical evaluation, the data indicate that soil analytical concentrations represent background conditions.

Since arsenic concentrations exceeded screening values at background and target locations, this data evaluation is directed toward the arsenic distribution. The following is noted for arsenic in soil in this evaluation:

- Concentrations of arsenic at Abington Friends School ranged from 5.9 to 13 mg/kg in the 0 to 1 inch interval and from 9.1 to 15 mg/kg in the 1 to 6-inch interval. Concentrations of arsenic at the Jenkintown School ranged from 4.9 to 19 mg/kg in the 0 to 1 inch interval and 7.9 to 16 mg/kg in the 1 to 6-inch interval.
- Background soil sample concentrations of arsenic ranged from 4.5 to 11 mg/kg in the 0 to 1-inch interval and from 4.6 to 12 mg/kg in the 1 to 6-inch interval.

These arsenic detections are not a result of fire deposition. The concentrations of arsenic detected in the shallow soil samples are consistent with the concentrations detected in the deeper soil samples and at the background locations and are also typical of this geographical region. An evaluation of background concentrations of arsenic in Pennsylvania (AECOM, 2002) showed that arsenic was detected in 405 of 408 samples collected at a median concentration of 10.3 mg/kg and at a 95<sup>th</sup> percentile concentration of 23.4 mg/kg. Finally, the absence of any fire related markers in soil sampling results (i.e., no PAHs), further support the conclusion that the arsenic concentrations are background to the geographic area.

### 4.3 Wipe Sample Analytical Results

Wipe samples were analyzed by Eurofins Laboratories of Lancaster, Pennsylvania. **Table 2** presents a consolidated summary of the wipe sampling results from background Location A (Wall Park), background location (B) The Cheese Playground, Jenkintown Schools, and Abington Friends School. **Appendix E – H**, respectively, present surface wipe sampling results from Jenkintown School, Abington Friends School, Wall Park (Background Location A), and The Cheese Playground (Background Location B) compared to numerical values established by the Contaminants of Potential Concern (COPC) framework.

### 4.4 Wipe Sampling Data Evaluation

All outdoor surface wipe results collected from the Schools and background locations were below laboratory detection limits and below all relevant health-based screening guidelines. This includes the COPC/WTC indoor benchmark (1.45 ng/cm<sup>2</sup>) and the CTEH-adapted outdoor benchmark (8.7 ng/cm<sup>2</sup>). These findings indicate that there is no discernible impact from the fire at the Schools and no human health risk associated with potential PAH exposure at any sampling location.

## References

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- AECOM (2002). Background Versus Risk-Based Screening Levels - An Examination of Arsenic Background Soil Concentrations in Seven States. <https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1093&context=soilsproceedings?>

# Tables

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Table 1 -Sample Summary Table									
Location	Sample ID	Matrix	Depth Interval (inches)	Location	LAB SAMPLE ID	Asbestos PLM	TAL Metals w/ Mercury	PAHS	Cyanide (Total and Free)
<b>Abington Friends School</b>									
AF-1A	AF-1A (0-1)	Soil	0-1	Between Baseball Field and Pool	410-212494-1		x	x	x
AF-1A	AF-1A (1-6)	Soil	1-6	Between Baseball Field and Pool	410-212494-3		x	x	x
AF-1B	AF-1B (0-1)	Soil	0-1	Between Baseball Field and Pool	410-212494-2	x			
AF-1B	AF-1B (1-6)	Soil	1-6	Between Baseball Field and Pool	410-212494-4	x			
AF-2A	AF-2A (0-1)	Soil	0-1	Small Playground Near Parking	410-212494-5		x	x	x
AF-2A	AF-2A (1-6)	Soil	1-6	Small Playground Near Parking	410-212494-7		x	x	x
AF-2B	AF-2B (0-1)	Soil	0-1	Small Playground Near Parking	410-212494-6	x			
AF-2B	AF-2B (1-6)	Soil	1-6	Small Playground Near Parking	410-212494-8	x			
AF-3A	AF-3A (0-1)	Soil	0-1	Garden Area	410-212494-9		x	x	x
AF-3A	AF-3A (1-6)	Soil	1-6	Garden Area	410-212494-11		x	x	x
AF-3B	AF-3B (0-1)	Soil	0-1	Garden Area	410-212494-10	x			
AF-3B	AF-3B (1-6)	Soil	1-6	Garden Area	410-212494-12	x			
AF-Meth1-1A	AF-Meth1-1A	Wipe	N/A	Green Slide Playground	410-212480-1			x	
AF-Meth1-2A	AF-METH1-2A	Wipe	N/A	Structure Playground	410-212480-5			x	
AF-Meth1-3A	AF-Meth1-3A	Wipe	N/A	Red Dog House Playground	410-212480-9			x	
<b>Jenkintown School</b>									
JS-1A	JS-1A (0-1)	Soil	0-1	Circle Entrance	410-212495-1		x	x	x
JS-1A	JS-1A (1-6)	Soil	1-6	Circle Entrance	410-212495-3		x	x	x
JS-1B	JS-1B (0-1)	Soil	0-1	Circle Entrance	410-212495-2	x			
JS-1B	JS-1B (1-6)	Soil	1-6	Circle Entrance	410-212495-4	x			
JS-2A	JS-2A (0-1)	Soil	0-1	Playground Area	410-212495-5		x	x	x
JS-2A	JS-2A (1-6)	Soil	1-6	Playground Area	410-212495-7		x	x	x
JS-2B	JS-2B (0-1)	Soil	0-1	Playground Area	410-212495-6	x			
JS-2B	JS-2B (1-6)	Soil	1-6	Playground Area	410-212495-8	x			
JS-3A	JS-3A (0-1)	Soil	0-1	New Garden	410-212495-9		x	x	x
JS-3A	JS-3A (1-6)	Soil	1-6	New Garden	410-212495-11		x	x	x
JS-3B	JS-3B (0-1)	Soil	0-1	Playground Area	410-212495-10	x			
JS-3B	JS-3B (1-6)	Soil	1-6	Playground Area	410-212495-12	x			
JS-METH1-1A	JS-METH1-1A	Wipe	N/A	Covered Bench On Playground	410-212483-1			x	
JS-METH1-2A	JS-METH1-2A	Wipe	N/A	Covered Bench Near West Avenue	410-212483-7			x	
JS-METH1-3A	JS-METH1-3A	Wipe	N/A	Playground Slide Entrance	410-212483-13			x	

Table 1 -Sample Summary Table									
Location	Sample ID	Matrix	Depth Interval (inches)	Location	LAB SAMPLE ID	Asbestos PLM	TAL Metals w/ Mercury	PAHS	Cyanide (Total and Free)
<b>Wall Park</b>									
BA-1A	BA-1A (0-1)	Soil	0-1	Playground/Tennis	410-212493-1		x	x	x
BA-1A	BA-1A (1-6)	Soil	1-6	Playground/Tennis	410-212493-3		x	x	x
BA-1B	BA-1B (0-1)	Soil	0-1	Playground/Tennis	410-212493-2	x			
BA-1B	BA-1B (1-6)	Soil	1-6	Playground/Tennis	410-212493-4	x			
BA-2A	BA-2A (0-1)	Soil	0-1	Playground/Bathroom	410-212493-5		x	x	x
BA-2A	BA-2A (1-6)	Soil	1-6	Playground/Bathroom	410-212493-7		x	x	x
BA-2B	BA-2B (0-1)	Soil	0-1	Playground/Bathroom	410-212493-6	x			
BA-2B	BA-2B (1-6)	Soil	1-6	Playground/Bathroom	410-212493-8	x			
BA-3A	BA-3A (0-1)	Soil	0-1	Field North	410-212493-9		x	x	x
BA-3A	BA-3A (1-6)	Soil	1-6	Field North	410-212493-11		x	x	x
BA-3B	BA-3B (0-1)	Soil	0-1	Field North	410-212493-10	x			
BA-3B	BA-3B (1-6)	Soil	1-6	Field North	410-212493-12	x			
BA-4A	BA-4A (0-1)	Soil	0-1	Field East	410-212493-13		x	x	x
BA-4A	BA-4A (1-6)	Soil	1-6	Field East	410-212493-15		x	x	x
BA-4B	BA-4B (0-1)	Soil	0-1	Field East	410-212493-14	x			
BA-4B	BA-4B (1-6)	Soil	1-6	Field East	410-212493-16	x			
BA-METH1-1A	BA-METH1-1A	Wipe	N/A	Green Slide	410-212484-2			x	
BA-METH2-2A	BA-METH2-2A	Wipe	N/A	Playground Tower	410-212484-9			x	
BA-METH1-3A	BA-METH1-3A	Wipe	N/A	Picnic Tables	410-212484-17			x	
<b>Cheese Park</b>									
BB-1A	BB-1A (0-1)	Soil	0-1	Playground	410-214425-7		x	x	x
BB-1A	BB-1A (1-6)	Soil	1-6	Playground	410-214425-9		x	x	x
BB-1B	BB-1B (0-1)	Soil	0-1	Playground	410-214425-8	x			
BB-1B	BB-1B (1-6)	Soil	1-6	Playground	410-214425-10	x			
BB-2A	BB-2A (0-1)	Soil	0-1	Near Tree	410-214425-11		x	x	x
BB-2A	BB-2A (1-6)	Soil	1-6	Near Tree	410-214425-13		x	x	x
BB-2B	BB-2B (0-1)	Soil	0-1	Near Tree	410-214425-12	x			
BB-2B	BB-2B (1-6)	Soil	1-6	Near Tree	410-214425-14	x			
BB-3A	BB-3A (0-1)	Soil	0-1	Baseball Field North	410-214425-15		x	x	x
BB-3A	BB-3A (1-6)	Soil	1-6	Baseball Field North	410-214425-17		x	x	x
BB-3B	BB-3B (0-1)	Soil	0-1	Baseball Field North	410-214425-16	x			
BB-3B	BB-3B (1-6)	Soil	1-6	Baseball Field North	410-214425-18	x			
BB-METH1-1A	BB-METH1-1A	Wipe	N/A	Green Tube	410-213171-3			x	
BB-METH1-2A	BB-METH1-2A	Wipe	N/A	Beige Slide	410-213171-9			x	
BB-METH1-3A	BB-METH1-3A	Wipe	N/A	Green Spinner	410-213171-17			x	

TABLE 2 Soil Sampling Consolidated Results - Results Above PADEP Act 2 Standards for Residential Direct Contact			
Parameter	PA DEP Act 2 Direct Contact for Residential Soils 0-15 feet	Results	Locations
PAHs	Various	Not detected or below Act 2 Standards	N/A
Arsenic	12 mg/kg	At or above Act 2 Standards (Representative of Background)	AF-1A (1-6 inches): 15 mg/kg AF-3A (0-1 inch): 13 mg/kg AF-3A (1-6 inches): 12 mg/kg JS-2A (0-1 inch): 16 mg/kg JS-2A (1-6 inches): 16 mg/kg JS-3A (0-1 inch): 19 mg/kg BA-3A (1-6 inch): 12 mg/kg
All Other Metals	Various	Below Act 2 Standards	N/A
Cyanide Total	N/A	No Detections	N/A
Cyanide Free	130 mg/kg	No Detections	N/A
PLM*	N/A	No Detections	N/A

*\*The Workplans indicated that if asbestos was detected by PLM, then additional speciation of the asbestos would be performed via Transmission Electron Microscopy (TEM) to further assess asbestos risk. Since no asbestos was detected by PLM and detection limits were at or less than 1%, no further evaluation of the data was conducted.*

# Appendices

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**APPENDIX A: SOIL SAMPLING RESULTS FROM JENKINTOWN SCHOOL**

Field Sample ID	PA DEP Act 2 Direct Contact Standard for Residential Soils 0-15 feet	JS-1A (0-1)			JS-1A (1-6)			JS-2A (0-1)			JS-2A (1-6)			JS-3A (0-1)			JS-3A (1-6)			
		Lab Sample ID	410-212495-1	410-212495-1	410-212495-3	410-212495-3	410-212495-5	410-212495-5	410-212495-7	410-212495-7	410-212495-9	410-212495-9	410-212495-11	410-212495-11						
Description		Soil; 0-1 inch Circle Entrance			Soil; 1-6 in Circle Entrance			Soil; 0-1 in Playground Area			Soil; 1-6 in. Playground Area			Soil; 0-1 in. New Garden			Soil; 1-6 in. New Garden			
Sampling Date		3/14/2025			3/14/2025			3/14/2025			3/14/2025			3/14/2025			3/14/2025			
Parameter	Units	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	
<b>Semivolatiles - 8270E SIM</b>																				
Acenaphthene	ug/Kg	13000000	28	J	9.2	240	J	1.9	61	J	10	13	J	10	57	J	12	24	J	2.0
Acenaphthylene	ug/Kg	13000000	22	J	9.2	19	J	1.9	32	J	10	19	J	10	14	J	12	8.4	J	2.0
Anthracene	ug/Kg	66000000	100		9.2	410		19	110		10	42		10	84		12	43		2.0
Benzo[a]anthracene	ug/Kg	6100	380		9.2	1000		19	450		10	260		10	290		12	180		2.0
Benzo[a]pyrene	ug/Kg	4200	380		9.2	930		19	440		10	270		10	270		12	160		2.0
Benzo[b]fluoranthene	ug/Kg	3500	540		9.2	1300		1.9	590		10	340		10	380		12	220		2.0
Benzo[g,h,i]perylene	ug/Kg	13000000	230		9.2	540		19	240		10	160		10	150		12	87		2.0
Benzo[k]fluoranthene	ug/Kg	3500	180		9.2	370		1.9	220		10	150		10	140		12	77		2.0
Chrysene	ug/Kg	35000	390		9.2	940		19	420		10	250		10	270		12	160		2.0
Dibenz[a,h]anthracene	ug/Kg	1000	69		9.2	140		1.9	76		10	46		10	49		12	28		2.0
Fluoranthene	ug/Kg	8800000	860		9.2	2300		19	950		10	530		10	620		12	350		2.0
Fluorene	ug/Kg	8800000	26		9.2	190		1.9	34		10	9.5	J	10	29		12	12		2.0
Indeno[1,2,3-cd]pyrene	ug/Kg	3500	280		9.2	670		19	310		10	200		10	190		12	110		2.0
Naphthalene	ug/Kg	13000	<7.4		18	42	J	3.8	13	J	20	<8.4	J	21	<9.9		25	2.3	J	3.9
Phenanthrene	ug/Kg	66000000	410		13	1600		26	440		14	190		15	340		17	170		2.8
Pyrene	ug/Kg	6600000	600		3.7	1500		19	710		10	410		10	440		12	250		2.0
2-Methylnaphthalene	ug/Kg	57000	<7.4	J	18	23	J	3.8	<8.2	J	20	<8.4	J	21	<9.9	J	25	1.7	J	3.9
<b>Metals - 6020B and 7471B (Mercury)</b>																				
Aluminum	mg/kg	190000	16000		22	15000		23	19000		23	20000		25	35000		29	16000		24
Antimony	mg/kg	88	0.34		0.22	0.48		0.23	0.68		0.23	0.84	J	1.2	0.34		0.29	0.10	J	0.24
Arsenic	mg/kg	12	4.9		0.43	7.9		0.45	16		0.47	16		0.49	19		0.58	8.7		0.48
Barium	mg/kg	44000	110		0.43	82		0.45	150		0.47	170		0.49	110		0.58	50		0.48
Beryllium	mg/kg	440	0.80		0.11	0.88		0.11	1.1		0.12	1.5		0.12	1.5		0.14	0.63		0.12
Cadmium	mg/kg	110	0.14		0.11	0.18		0.11	0.50		0.12	0.58	J	0.62	0.20		0.14	0.092	J	0.12
Calcium	mg/kg	N/A	4300		43	1600		45	2000		47	1900		49	2100		58	840		48
Chromium	mg/kg	190000(1)	33		0.43	24		0.45	25		0.47	31		0.49	27		0.58	9.4		0.48
Cobalt	mg/kg	66	12		0.22	6.8		0.23	13		0.23	33		0.25	17		0.29	6.5		0.24
Copper	mg/kg	7200	22		0.43	18		0.45	45		0.47	41		0.49	51		0.58	16		0.48
Iron	mg/kg	150000	23000		22	19000		23	22000		23	29000		25	27000		29	9800		24
Lead	mg/kg	500	47		0.22	38		0.23	190		0.23	180		0.25	95		0.29	38		0.24
Magnesium	mg/kg	N/A	5200		11	3100		11	2900		12	3800		12	4500		14	1500		12
Manganese	mg/kg	31000	470		0.43	590		0.45	650		0.47	1100		0.49	550		0.58	200		0.48
Nickel	mg/kg	4400	28		0.43	13		0.45	28		0.47	29		0.49	28		0.58	15		0.48
Potassium	mg/kg	N/A	3100		43	2000		45	2800		47	3400		49	4000		58	1400		48
Selenium	mg/kg	1100	0.39	J	0.43	0.34	J	0.45	0.65		0.47	0.69		0.49	0.36	J	0.58	0.13	J	0.48
Silver	mg/kg	1100	0.063	J	0.11	0.059	J	0.11	0.15		0.12	0.14		0.12	0.18		0.14	0.070	J	0.12
Sodium	mg/kg	N/A	160		54	110		57	92		58	63		62	79		72	29	J	60
Thallium	mg/kg	2.2	0.21		0.11	0.17		0.11	0.36		0.12	0.45		0.12	0.40		0.14	0.14		0.12
Vanadium	mg/kg	1100	41		0.86	33		0.9	33		0.93	44		0.99	38		1.2	14		0.95
Zinc	mg/kg	66000	85		32	65		34	150		35	170		37	150		43	45		36
Mercury	mg/kg	35	0.072		0.066	0.082		0.063	0.21		0.063	0.24		0.074	0.26		0.087	0.18		0.068
<b>Cyanide Total- 9012B and Cyanide Free - Kelada-01 Rev 1.2</b>																				
Cyanide - Total	mg/kg	N/A	<0.20		0.55	<0.19		0.54	<0.22		0.61	<0.22		0.62	<0.26		0.73	<0.19		0.54
Cyanide - Free	mg/kg	130	<1.19		1.19	<1.18		1.18	<1.29		1.29	<1.20		1.2	<1.48		1.48	<1.38		1.38
<b>Asbestos</b>																				
PLM	%	N/A	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)
TEM	%	N/A	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
J Results is less than the RL but greater than or equal to the MDL and the concentration is an approximate value RL Reporting Limit (1) Most chromium in soil is in the III valence state. PADEP has two screening values for chromium - the value shown is for Chromium III.																				

APPENDIX B: SOIL SAMPLING RESULTS FROM ABINGTON FRIENDS SCHOOL																				
Field Sample ID	PA DEP Act 2 Direct Contact Standard for Residential Soils 0-15 feet	AF-1A (0-1)			AF-1A (1-6)			AF-2A (0-1)			AF-2A (1-6)			AF-3A (0-1)			AF-3A (1-6)			
Lab Sample ID		410-212494-1			410-212494-3			410-212494-5			410-212494-7			410-212494-9			410-212494-11			
Description		Soil; 0-1 inch Between Baseball Field and Pool			Soil; 1-6 in Between Baseball Field and Pool			Soil; 0-1 in Small Playground Near Parking			Soil; 1-6 in. Small Playground Near Parking			Soil; 0-1 in. Garden Area			Soil; 1-6 in. Garden Area			
Sampling Date		3/14/2025			3/14/2025			3/14/2025			3/14/2025			3/14/2025			3/14/2025			
Parameter	Units	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	
<b>Semivolatiles - 8270E SIM</b>																				
Acenaphthene	ug/Kg	13000000	36	J	11	4.3	J	9.5	<4.0		10	0.95	J	2.3	2.0	J	1.7	2.4	J	2.1
Acenaphthylene	ug/Kg	13000000	23	J	11	12	J	9.5	5.1	J	10	6.9	J	2.3	10	J	1.7	5.5	J	2.1
Anthracene	ug/Kg	66000000	100		11	16		9.5	4.1	J	10	6.6		2.3	12		1.7	11		2.1
Benzo[a]anthracene	ug/Kg	6100	360		11	82		9.5	16		10	30		2.3	68		1.7	41		2.1
Benzo[a]pyrene	ug/Kg	4200	360		11	88		9.5	18		10	34		2.3	72		1.7	41		2.1
Benzo[b]fluoranthene	ug/Kg	3500	540		11	120		9.5	28		10	48		2.3	100		1.7	57		2.1
Benzo[g,h,i]perylene	ug/Kg	13000000	250		11	59		9.5	14		10	22		2.3	45		1.7	25		2.1
Benzo[k]fluoranthene	ug/Kg	3500	170		11	40		9.5	8.0	J	10	15		2.3	35		1.7	20		2.1
Chrysene	ug/Kg	35000	370		11	85		9.5	18		10	31		2.3	70		1.7	41		2.1
Dibenz(a,h)anthracene	ug/Kg	1000	72		11	18		9.5	<4.0		10	6.7		2.3	14		1.7	8.1		2.1
Fluoranthene	ug/Kg	8800000	810		11	160		9.5	30		10	54		2.3	140		1.7	80		2.1
Fluorene	ug/Kg	8800000	42		11	5.0	J	9.5	<4.0		10	1.4	J	2.3	2.6		1.7	3.3		2.1
Indeno[1,2,3-cd]pyrene	ug/Kg	3500	290		11	71		9.5	15		10	25		2.3	55		1.7	31		2.1
Naphthalene	ug/Kg	13000	22	J	21	<7.6		19	<8.0		20	7.4	J	4.7	1.5	J	3.4	2.7	J	4.1
Phenanthrene	ug/Kg	66000000	480		15	67		13	12	J	14	17		3.3	46		2.4	37		2.9
Pyrene	ug/Kg	6600000	590		11	130		9.5	24		10	42		2.3	100		1.7	58		2.1
2-Methylnaphthalene	ug/Kg	57000	12	J	21	<7.6	J	19	<8.0	J	20	<1.9	J	4.7	1.6	J	3.4	2.6	J	4.1
<b>Metals - 6020B and 7471B (Mercury)</b>																				
Aluminum	mg/kg	190000	21000		23	23000		80	29000	J	98	26000		25	23000		20	22000		25
Antimony	mg/kg	88	0.34		0.23	0.23		0.16	0.12		0.20	0.19	J	0.25	0.29		0.20	0.25		0.25
<b>Arsenic</b>	mg/kg	12	11		0.47	<b>15</b>		0.32	5.9		0.39	9.1		0.50	<b>13</b>		0.40	<b>12</b>		0.49
Barium	mg/kg	44000	130		0.47	120		0.320	160		0.39	190		0.50	110		0.40	96		0.49
Beryllium	mg/kg	440	1.5		0.12	1.8		0.080	1.5		0.098	1.4		0.13	1.2		0.099	1.1		0.12
Cadmium	mg/kg	110	0.30		0.12	0.23		0.080	0.11		0.098	0.20		0.13	0.34		0.099	0.31		0.12
Calcium	mg/kg	N/A	3900		47	5400		160	2600		200	10000		50	1900		40	1500		49
Chromium	mg/kg	190000(1)	39		0.47	51		0.32	50		0.39	310		0.50	41		0.40	43		0.49
Cobalt	mg/kg	66	15		0.23	16		0.16	19		0.20	15		0.25	11		0.20	9.7		0.25
Copper	mg/kg	7200	44		0.47	38		0.32	45		0.39	53		0.50	20		0.40	18		0.49
Iron	mg/kg	150000	30000		23	32000		80	35000		98	47000		130	25000		91	26000		20
Lead	mg/kg	500	71		0.23	57		0.16	30		0.20	40		0.25	63		0.20	51		0.25
Magnesium	mg/kg	N/A	5400		12	7500		8.0	8000		9.8	8600		13	3000		9.9	2800		12
Manganese	mg/kg	31000	590		0.47	640		0.32	630		0.39	2800		2.5	570		0.40	480		0.49
Nickel	mg/kg	4400	27		0.47	27		0.32	32		0.39	30		0.50	21		0.40	19		0.49
Potassium	mg/kg	N/A	3400		47	3700		32	6100		39	5000		50	1800		40	1700		49
Selenium	mg/kg	1100	0.37	J	0.47	0.43		0.32	0.34	J	0.39	0.37	J	63	0.58		0.40	0.51		0.49
Silver	mg/kg	1100	0.13		0.12	0.11		0.080	0.053	J	0.098	0.085	J	0.50	0.15		0.099	0.17		0.12
Sodium	mg/kg	N/A	150		59	190		40	140		49	160		0.13	90		50	81		61
Thallium	mg/kg	2.2	0.32		0.12	0.42		0.080	0.39		0.098	0.37		63	0.23		0.099	0.23		0.12
Vanadium	mg/kg	1100	51		0.94	65		0.64	70		0.78	99		1.0	45		0.80	44		0.98
Zinc	mg/kg	66000	120		35	110		24	100		29	120		38	82		30	68		37
Mercury	mg/kg	35	0.27		0.077	0.46		0.067	0.14		0.071	0.35		0.083	0.26		0.057	0.19		0.075
<b>Cyanide Total - 9012B and Cyanide Free - Kelada-01 Rev 1.2</b>																				
Cyanide - Total	mg/kg	N/A	<0.22		0.62	<0.19		0.53	<0.21		0.60	<0.25		0.69	<0.18		0.49	<0.22		0.60
Cyanide - Free	mg/kg	130	<1.21		1.21	<1.19		1.19	<1.16		1.16	<1.32		1.32	<1.06		1.06	<1.23		1.23
<b>Asbestos</b>																				
PLM	%	N/A	ND		(B sample)	ND		(B sample)	ND		(B sample)	ND		(B sample)	ND		(B sample)	ND		(B sample)
TEM	%	N/A	N/A		N/A	N/A		N/A	N/A		N/A	N/A		N/A	N/A		N/A	N/A		N/A
<p>J Results is less than the RL but greater than or equal to the MDL and the concentration is an approximate value</p> <p>RL Reporting Limit</p> <p>(1) Most chromium in soil is in the III valence state. PADEP has two screening values for chromium - the value shown is for Chromium III.</p>																				

APPENDIX C: SOIL SAMPLING RESULTS FOR WALL PARK (Background Location A)																											
Field Sample ID		PA DEP Act 2 Direct Contact Standard for Residential Soils 0-15 feet	BA-1A (0-1)			BA-1A (1-6)			BA-2A (0-1)			BA-2A (1-6)			BA-3A (0-1)			BA-3A (1-6)			BA-4A (0-1)			BA-4A (1-6)			
Lab Sample ID			410-212493-1			410-212493-3			410-212493-5			410-212493-7			410-212493-9			410-212493-11			410-212493-13			410-212493-15			
Description			Soil; 0-1 inch Playground/Tennis			Soil; 1-6 in Playground/Tennis			Soil; 0-1 in Playground/Bathroom			Soil; 1-6 in. Playground/Bathroom			Soil; 0-1 in. Field North			Soil; 1-6 in. Field North			Soil; 0-1 in. Field East			Soil; 1-6 in. Field East			
Sampling Date			3/15/2025			3/15/2025			3/15/2025			3/15/2025			3/15/2025			3/15/2025			3/15/2025			3/15/2025			
Parameter	Units	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL		
<b>Semivolatiles - 8270E SIM</b>																											
Acenaphthene	ug/Kg	13000000	8.9	J	21	5.6		1.9	<9.8		24	17	J	22	72	J	11	67	J	11	59	J	11	63	J	11	
Acenaphthylene	ug/Kg	13000000	43		21	58		1.9	19	J	24	22		22	450	J	11	310	J	11	370	J	11	290	J	11	
Anthracene	ug/Kg	66000000	39		21	33		1.9	19	J	24	42		22	360		11	300		11	360		11	430		11	
Benzo[a]anthracene	ug/Kg	6100	230		21	200		1.9	93		24	210		22	2000		11	1700		11	2200		11	2400		54	
Benzo[a]pyrene	ug/Kg	4200	240		21	220		1.9	100		24	210		22	2000		11	1700		11	2500		57	2400		54	
Benzo[b]fluoranthene	ug/Kg	3500	320		21	290		1.9	140		24	280		22	2900		57	2400		11	3200		57	3000		11	
Benzo[g,h,i]perylene	ug/Kg	13000000	150		21	150		1.9	70		24	120		22	1300		11	1000		11	1500		11	1300		11	
Benzo[k]fluoranthene	ug/Kg	3500	110		21	100		1.9	48.0		24	86		22	970		11	780		11	1100		11	980		54	
Chrysene	ug/Kg	35000	210		21	190		1.9	96		24	180		22	1900		11	1600		11	1900		11	1900		11	
Dibenz[a,h]anthracene	ug/Kg	1000	46		21	45		1.9	25		24	41		22	400		11	310		11	430		11	400		11	
Fluoranthene	ug/Kg	8800000	410		21	300		1.9	180		24	380		22	77		57	3300		54	3300		57	3700		54	
Fluorene	ug/Kg	8800000	11	J	21	7.0		1.9	<9.8		24	11	J	22	3700		11	70		11	58		11	66		11	
Indeno[1,2,3-cd]pyrene	ug/Kg	3500	180		21	170		1.9	87		24	150		22	1500		11	1200		11	1700		11	1600		11	
Naphthalene	ug/Kg	13000	<17		41	6.6		3.8	<20		49	<18		44	46	J	23	28	J	22	57		23	46	J	22	
Phenanthrene	ug/Kg	66000000	150		29	98		2.7	63		34	170		31	1200		16	1100		15	830		16	1200		15	
Pyrene	ug/Kg	6600000	330		21	280		1.9	140		24	300		22	2800		57	2500		54	2900		57	3000		54	
2-Methylnaphthalene	ug/Kg	57000	<17		41	5.4		1.9	<20		49	<18		44	32	J	23	20	J	22	29		23	23	J	22	
<b>Metals - 6020B and 7471B (Mercury)</b>																											
Aluminum	mg/kg	190000	24000		21	26000		22	28000		26	27000		24	35000		23	30000		24	30000		23	29000		21	
Antimony	mg/kg	88	0.25		0.21	0.23		0.22	0.53		0.26	0.52		0.24	0.83		0.23	0.91		0.24	0.59		0.23	0.65		0.21	
Arsenic	mg/kg	12	5.4		0.41	5.2		0.45	6.1		0.52	7.1		0.48	10		0.46	12		0.48	11		0.46	11		0.42	
Barium	mg/kg	44000	120		0.41	130		0.45	180		0.52	260		0.48	190		0.46	190		0.48	200		0.46	190		0.42	
Beryllium	mg/kg	440	1.1		0.10	1.2		0.11	1.4		0.13	1.5		0.12	1.7		0.12	2		0.12	1.7		0.11	1.7		0.11	
Cadmium	mg/kg	110	0.17		0.10	0.20		0.11	0.61		0.13	1.10		0.12	1.3		0.12	1.300		0.12	0.33		0.11	0.23		0.11	
Calcium	mg/kg	N/A	1500		41	1300		45	3400		52	3100		48	6900		46	3700		48	5100		46	3000		42	
Chromium	mg/kg	190000(1)	33		0.41	35		0.45	36		0.52	37		0.48	47		0.46	47		0.48	50		0.46	52		0.42	
Cobalt	mg/kg	66	14		0.21	15		0.22	17		0.26	16		0.24	17		0.23	16		0.24	18		0.23	17		0.21	
Copper	mg/kg	7200	35		0.41	36		0.45	61		0.52	94		0.48	82		0.46	79		0.48	56		0.46	54		0.42	
Iron	mg/kg	150000	26000		98	32000		91	28000		100	32000		93	29000		120	34000		120	37000		110	36000		110	
Lead	mg/kg	500	56		0.21	48		0.22	250		0.26	330		0.24	290		0.23	320		0.24	110		0.23	110		0.21	
Magnesium	mg/kg	N/A	7800		10	8300		11.0	7400		13	6900		12	7900		12	7600		12	8000		11	7800		11	
Manganese	mg/kg	31000	530		0.41	560		0.45	740		0.52	690		0.48	730		0.46	690		0.48	660		0.46	650		0.42	
Nickel	mg/kg	4400	27		0.41	29		0.45	36		0.52	33		0.48	34		0.46	34		0.48	33		0.46	33		0.42	
Potassium	mg/kg	N/A	6300		41	6400		45	5900		52	6000		48	4700		46	3900		48	5400		46	5100		42	
Selenium	mg/kg	1100	0.37	J	0.41	0.46		0.45	0.61		0.52	0.65		0.48	0.85		0.46	0.88		0.48	0.77		0.46	0.86		0.42	
Silver	mg/kg	1100	0.088	J	0.10	0.083	J	0.11	0.57		0.13	1.1		0.12	0.19		0.12	0.180		0.12	0.12		0.11	0.12		0.11	
Sodium	mg/kg	N/A	160		52	170		56	140		64	180		60	290		58	230		61	300		57	300		53	
Thallium	mg/kg	2.2	0.43		0.10	0.45		0.11	0.47		0.13	0.48		0.12	0.40		0.12	0.42		0.12	0.47		0.11	0.44		0.11	
Vanadium	mg/kg	1100	48		0.83	50		0.89	49		1.0	54		0.96	81		0.92	82		0.97	76		0.91	79		0.85	
Zinc	mg/kg	66000	210		31	230		33	320		39	540		180	260		35	250		36	170		34	150		32	
Mercury	mg/kg	35	0.062	J	0.071	0.069		0.064	0.41		0.089	0.33		0.074	0.17		0.080	0.18		0.075	0.16		0.083	0.16		0.073	
<b>Cyanide Total- 9012B and Cyanide Free - Kelada-01 Rev 1.2</b>																											
Cyanide - Total	mg/kg	N/A	<0.22		0.62	<0.20		0.56	<0.25		0.70	<0.23		0.65	<0.24		0.66	<0.23		0.63	<0.24		0.67	<0.22		0.61	
Cyanide - Free	mg/kg	130	<1.28		1.28	<1.12		1.12	<1.60		1.60	<1.39		1.39	<1.47		1.47	<1.31		1.31	<1.31		1.31	<1.26		1.26	
<b>Asbestos</b>																											
PLM	%	N/A			ND	(B sample)		ND	(B sample)		ND	(B sample)		ND	(B sample)		ND	(B sample)		ND	(B sample)		ND	(B sample)		ND	(B sample)
TEM	%	N/A			N/A			N/A			N/A			N/A			N/A			N/A			N/A			N/A	
J Results is less than the RL but greater than or equal to the MDL and the concentration is an approximate value																											
RL Reporting Limit																											
(1) Most chromium in soil is in the III valence state. PADEP has two screening values for chromium - the value shown is for Chromium III.																											

APPENDIX D: SOIL SAMPLING RESULTS FOR THE CHEESE PLAYGROUND (Background Location B)																				
Field Sample ID	PA DEP Act 2 Direct Contact Standard for Residential Soils 0-15 feet	BB-1A (0-1)			BB-1A (1-6)			BB-2A (0-1)			BB-2A (1-6)			BB-3A (0-1)			BB-3A (1-6)			
Lab Sample ID		410-214425-7			410-214425-9			410-214425-11			410-214425-13			410-214425-15			410-214425-17			
Description		Soil; 0-1 inch Playground			Soil; 1-6 in Playground			Soil; 0-1 in Near Tree			Soil; 1-6 in. Near Tree			Soil; 0-1 in. Baseball Field North			Soil; 1-6 in. Baseball Field North			
Sampling Date		3/17/2025			3/17/2025			3/17/2025			3/17/2025			3/17/2025			3/17/2025			
Parameter	Units	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Playground	Q	RL	
<b>Semivolatiles - 8270E SIM</b>																				
Acenaphthene	ug/Kg	13000000	6.7	2.7	8.6	J	11	4.5	2.8	11	11	4.1	3.1	13		11				
Acenaphthylene	ug/Kg	13000000	4.7	2.7	9.8	J	11	5.4	2.8	12	11	6.4	3.1	27		11				
Anthracene	ug/Kg	66000000	20	2.7	28		11	15	2.8	33	11	16	3.1	48		11				
Benzo[a]anthracene	ug/Kg	6100	100	2.7	160		11	100	2.8	190	11	120	3.1	360		11				
Benzo[a]pyrene	ug/Kg	4200	100	2.7	160		11	110	2.8	210	11	140	3.1	410		11				
Benzo[b]fluoranthene	ug/Kg	3500	140	2.7	220		11	150	2.8	300	11	200	3.1	610		11				
Benzo[g,h,i]perylene	ug/Kg	13000000	61	2.7	93		11	73	2.8	130	11	88	3.1	260		11				
Benzo[k]fluoranthene	ug/Kg	3500	49	2.7	74		11	55.0	2.8	97	11	65	3.1	200		11				
Chrysene	ug/Kg	35000	100	2.7	160		11	110	2.8	200	11	130	3.1	390		11				
Dibenz[a,h]anthracene	ug/Kg	1000	20	2.7	26		11	22	2.8	35	11	22	3.1	68		11				
Fluoranthene	ug/Kg	8800000	210	2.7	350		11	190	2.8	380	11	270	3.1	740		11				
Fluorene	ug/Kg	8800000	5.8	2.7	8.4	J	11	4.1	2.8	9.9	J	11	4.3	11		11				
Indeno[1,2,3-cd]pyrene	ug/Kg	3500	77	2.7	120		11	87	2.8	160	11	110	3.1	320		11				
Naphthalene	ug/Kg	13000	<2.1	5.3	<8.9		22	2.8	J	5.6		23	<2.5	6.2		<8.9				
Phenanthrene	ug/Kg	66000000	97	3.7	150		16	69	3.9	150	16	88	4.3	210		16				
Pyrene	ug/Kg	6600000	160	2.7	260		11	160	2.8	300	11	190	3.1	570		11				
2-Methylnaphthalene	ug/Kg	57000	<2.1	2.1	<8.4		8.4	<2.2		2.2		<9.2	9.2	<2.5		2.5		<8.9		
<b>Metals - 6020B and 7471B (Mercury)</b>																				
Aluminum	mg/kg	190000	19000	26	17000		18	27000		29	25000	20	33000	35	37000		26			
Antimony	mg/kg	88	0.45	0.26	0.48		0.18	0.52		0.29	0.43	0.20	0.5	0.35	0.43		0.26			
Arsenic	mg/kg	12	4.5	0.52	4.6		0.37	5.7		0.58	5.7	0.40	4.6	0.71	5		0.53			
Barium	mg/kg	44000	130	0.52	100		0.370	140		0.58	120	0.40	200	0.71	200		0.53			
Beryllium	mg/kg	440	0.64	0.13	0.62		0.092	1.0		0.14	0.93	0.10	1.1	0.18	1.0		0.13			
Cadmium	mg/kg	110	0.32	J+	0.13	0.27	J+	0.092	0.26	J+	0.14	0.28	J+	0.10	0.34	J+	0.18	0.28	0.13	
Calcium	mg/kg	N/A	2200	52	1400		37	6200		58	26000	40	3200	71	2200		53			
Chromium	mg/kg	190000(1)	27	0.52	28		0.37	41		0.58	40	0.40	51	0.71	63		0.53			
Cobalt	mg/kg	66	8.8	0.26	8.2		0.18	12		0.29	11	0.2	13	0.35	11.0		0.26			
Copper	mg/kg	7200	20	0.52	18		0.37	28		0.58	22	0.40	35	0.71	32		0.53			
Iron	mg/kg	150000	19000	26	17000		18	27000		29	25000	20	34000	35	35000		26			
Lead	mg/kg	500	53	0.26	57		0.18	41		0.29	35	0.20	55	0.35	64		0.26			
Magnesium	mg/kg	N/A	3900	13	3400		9.2	6500		14	19000	10	7200	18	6300		13			
Manganese	mg/kg	31000	440	0.52	420		0.37	500		0.58	480	0.40	480	0.71	440		0.53			
Nickel	mg/kg	4400	15	0.52	13		0.37	22		0.58	21	0.40	24	0.71	26		0.53			
Potassium	mg/kg	N/A	3100	52	2400		37	4100		58	2800	40	5400	71.00	4400		53			
Selenium	mg/kg	1100	0.29	J	0.52	0.34	J	0.37	0.46	J	0.58	0.35	J	0.40	0.53	J	0.71	0.60	0.53	
Silver	mg/kg	1100	0.099	J	0.13	0.099	0.092	0.079	J	0.14	0.071	J	0.10	0.12	J	0.18	0.10	J	0.13	
Sodium	mg/kg	N/A	89	65	62		46	99		72	90	50	110	88	76		66			
Thallium	mg/kg	2.2	0.23	0.13	0.20		0.092	0.29		0.14	0.24	0.10	0.36	0.18	0.41		0.13			
Vanadium	mg/kg	1100	35	1.0	33		0.74	52		1.2	49	30.0	64	1.40	70		1.1			
Zinc	mg/kg	66000	90	39	84		28	110		43	91	0.80	140	53	140		40			
Mercury	mg/kg	35	0.0079	J	0.096	0.092	0.076	0.091	J	0.095	0.093	0.079	0.14	0.11	0.12		0.074			
<b>Cyanide Total- 9012B and Cyanide Free - Kelada-01 Rev 1.2</b>																				
Cyanide - Total	mg/kg	N/A	<0.26	0.73	<0.24		0.66	<0.29	N/A	0.80	<0.24	0.67	<0.32	0.89	<0.22		0.62			
Cyanide - Free	mg/kg	130	<1.51	1.51	<1.32		1.32	<1.61	1.61	<1.39	1.39	<1.86	1.86	<1.52		1.52				
<b>Asbestos</b>																				
PLM	%	N/A	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)	ND	(B sample)
TEM	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<p>J Results is less than the RL but greater than or equal to the MDL and the concentration is an approximate value</p> <p>J+ Estimated with a potential high bias</p> <p>RL Reporting Limit</p> <p>(1) Most chromium in soil is in the III valence state. PADEP has two screening values for chromium - the value shown is for Chromium III.</p>																				

**APPENDIX E: SURFACE WIPE SAMPLING RESULTS FOR JENKINTOWN SCHOOL**

Field Sample ID		WTC PAH Indoor Screening	CTEH PA Outdoor Screening	JS-Meth1-1A			JS-Meth1-2A			JS-Meth1-3A		
Lab Sample ID				410-212483-1			410-212483-7			410-212483-13		
Description				Wipe Covered Bench on Playground			Wipe Covered Bench Near West Avenue			Wipe Playground Slide Entrance		
Sampling Date				3/14/2025			3/14/2025			3/14/2025		
Parameter	Units			Result	Q	RL	Result	Q	RL	Result	Q	RL
<b>Semivolatiles - 8270E SIM</b>												
Acenaphthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Acenaphthylene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Anthracene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[a]anthracene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[a]pyrene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[b]fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[g,h,i]perylene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[k]fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Chrysene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Dibenz(a,h)anthracene	ug/wipe	1.45	8.7	<0.20		0.50	<0.20		0.50	<0.20		0.50
Fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Fluorene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Indeno[1,2,3-cd]pyrene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Naphthalene	ug/wipe	1.45	8.7	<0.20		0.50	<0.20		0.50	<0.20		0.50
Phenanthrene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Pyrene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
2-Methylnaphthalene	ug/wipe	1.45	8.7	<0.15		0.50	<0.15		0.50	<0.15		0.50

**APPENDIX F: SURFACE WIPE SAMPLING RESULTS FOR ABINGTON FRIENDS SCHOOL**

Field Sample ID	WTC PAH Indoor Screening	CTEH PAH Outdoor Screening	AF-Meth1-1A			AF-Meth1-2A			AF-Meth1-3A			
Lab Sample ID			410-212480-1			410-212480-5			410-212480-9			
Description			Wipe Green Slide on Playground			Wipe Structure on Playground			Wipe Red Dog House on Playground			
Sampling Date			3/14/2025			3/14/2025			3/14/2025			
Parameter	Units			Result	Q	RL	Result	Q	RL	Result	Q	RL
<b>Semivolatiles - 8270E SIM</b>												
Acenaphthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Acenaphthylene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Anthracene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[a]anthracene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[a]pyrene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[b]fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[g,h,i]perylene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[k]fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Chrysene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Dibenz(a,h)anthracene	ug/wipe	1.45	8.7	<0.20		0.50	<0.20		0.50	<0.20		0.50
Fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Fluorene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Indeno[1,2,3-cd]pyrene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Naphthalene	ug/wipe	1.45	8.7	<0.20		0.50	<0.20		0.50	<0.20		0.50
Phenanthrene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Pyrene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
2-Methylnaphthalene	ug/wipe	1.45	8.7	<0.15		0.50	<0.15		0.50	<0.15		0.50

**APPENDIX G: SURFACE WIPE SAMPLING RESULTS FOR WALL PARK (BACKGROUND LOCATION A)**

Field Sample ID		WTC PAH Indoor Screening	CTEH PAH Outdoor Screening	BA-Meth1-1A			BA-Meth1-2A			BA -Meth1-3A		
Lab Sample ID				410-212284-2			410-212284-9			410-212284-17		
Description				Wipe Green Slide			Wipe Playground Tower			Wipe Picnic Tables		
Sampling Date				3/15/2025			3/15/2025			3/15/2025		
Parameter	Units			Result	Q	RL	Result	Q	RL	Result	Q	RL
<b>Semivolatiles - 8270E SIM</b>												
Acenaphthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Acenaphthylene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Anthracene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[a]anthracene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[a]pyrene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[b]fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[g,h,i]perylene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[k]fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Chrysene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Dibenz(a,h)anthracene	ug/wipe	1.45	8.7	<0.20		0.50	<0.20		0.50	<0.20		0.50
Fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Fluorene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Indeno[1,2,3-cd]pyrene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Naphthalene	ug/wipe	1.45	8.7	<0.20		0.50	<0.20		0.50	<0.20		0.50
Phenanthrene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Pyrene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
2-Methylnaphthalene	ug/wipe	1.45	8.7	<0.15		0.50	<0.15		0.50	<0.15		0.50

**APPENDIX H: SURFACE WIPE RESULTS FOR THE CHEESE PLAYGROUND (BACKGROUND LOCATION B)**

Field Sample ID		WTC PAH Indoor Screening	CTEH PAH Outdoor Screening	BB-Meth1-1A			BB-Meth1-2A			BB -Meth1-3A		
Lab Sample ID				410-213171-3			410-212284-9			410-212284-17		
Description				Wipe Green Tube			Wipe Beige Slide			Wipe Green Spinner		
Sampling Date				3/15/2025			3/15/2025			3/15/2025		
Parameter	Units			Result	Q	RL	Result	Q	RL	Result	Q	RL
<b>Semivolatiles - 8270E SIM</b>												
Acenaphthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Acenaphthylene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Anthracene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[a]anthracene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[a]pyrene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[b]fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[g,h,i]perylene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Benzo[k]fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Chrysene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Dibenz(a,h)anthracene	ug/wipe	1.45	8.7	<0.20		0.50	<0.20		0.50	<0.20		0.50
Fluoranthene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Fluorene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
Indeno[1,2,3-cd]pyrene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Naphthalene	ug/wipe	1.45	8.7	<0.20		0.50	<0.20		0.50	<0.20		0.50
Phenanthrene	ug/wipe	1.45	8.7	<0.12		0.50	<0.12		0.50	<0.12		0.50
Pyrene	ug/wipe	1.45	8.7	<0.10		0.50	<0.10		0.50	<0.10		0.50
2-Methylnaphthalene	ug/wipe	1.45	8.7	<0.15		0.50	<0.15		0.50	<0.15		0.50