PRELIMINARY AIR MONITORING SUMMARY

Jenkintown, PA

SPS Technologies Fire

February 22-23, 2025

Submitted February 24, 2025

1.0 INTRODUCTION

On February 19, 2025, CTEH was contacted to provide community air monitoring for SPS Technologies, LLC in conjunction with the United States Environmental Protection Agency (USEPA) and the Pennsylvania Department of Environmental Protection (PA DEP). CTEH established seven stationary real-time air monitoring locations in a perimeter around the SPS Technologies facility and adjacent residential areas on the morning of February 20, 2025. Real-time air monitoring performed by CTEH began at 1208 EST on February 20, 2025. At 1000 EST on February 22, 2025, CTEH established a Kestrel 6000 cellular weather station approximately 500 feet north of the facility. On the evening of February 22, 2025, CTEH established four additional stationary monitoring locations in community areas around the facility. Consistent with the updated Air Sampling and Analysis Plan (SAP) submitted on February 23, 2025, CTEH established two more stationary monitoring locations in community areas around the facility. An additional two stationary monitoring locations will be deployed on February 24, 2025, bringing the total number of stationary monitoring stations to fifteen.

This report summarizes real-time air monitoring data collected by CTEH personnel from 0600 EST on February 22, 2025 to approximately 0600 EST on February 23, 2025.

2.0 AIR MONITORING METHODS

Real-time air monitoring refers to the use of direct-reading instruments to provide a near-instantaneous readout of chemical concentrations in the air. On February 19, 2025, CTEH personnel developed an initial Air Sampling and Analysis Plan (SAP) to document and quantify the potential release of fugitive emissions from the incident. CTEH has continued to update the SAP and associated monitoring locations based on feedback from PA DEP. The analytes chosen for air monitoring were coordinated with representatives from USEPA and PA DEP for this incident based on the Tier II documentation for the SPS Technologies Facility.

Handheld real-time air monitoring refers to data collected by roaming CTEH personnel using handheld air monitoring instruments. Stationary real-time air monitoring refers to stationary instruments that record air monitoring data approximately every 15 seconds and send the data in real time to a centralized location via radio telemetry. Handheld and Stationary real-time air monitoring were conducted using RAE® Systems by Honeywell MultiRAE Pro and AreaRAE instruments equipped with 10.6 eV photoionization detectors and multiple electrochemical sensors, ChemLogic CLPx portable gas detectors, and Gastec GV-100 pumps equipped with chemical-specific, colorimetric detector tubes. These include volatile organic compounds (VOCs), hydrogen cyanide (HCN), hydrogen sulfide (H_2S), chlorine (Cl_2), carbon monoxide (CO), sulfuric acid, nitric acid, oxygen (O_2), and flammability as a percentage of the lower explosive limit (%LEL). Additionally, handheld and stationary real-time air monitoring for particulate

matter of 2.5 µm diameter or less ($PM_{2.5}$) was conducted using TSI SidePak AM520 instruments. Stationary real-time monitoring locations were established to encompass a 360° monitoring perimeter around the Facility and in the expanded community.

3.0 AIR MONITORING RESULTS

Maps of the incident location, real-time air monitoring results, and the locations of stationary real-time air monitoring are provided in **Attachment A**. The results of handheld real-time air monitoring are summarized in **Table 1**. The results of stationary real-time perimeter air monitoring are summarized in **Tables 2 and 3**. The results of the stationary real-time expanded community air monitoring are summarized in **Tables 5 and 6**. Visual depictions of the stationary real-time air monitoring data from the perimeter and locations are provided in **Attachment B**. Visual depictions of the stationary real-time air monitoring data from the expanded community locations are provided in **Attachment C**. A wind rose depicting wind direction and wind speed during this reporting period is provided in **Attachment D**. Meteorological data were acquired from both the PHILADELPHIA NE weather station in Philadelphia, PA, and a Kestrel 6000 cellular weather station located approximately 500 feet north of the facility.

3.1 Handheld Real-Time Air Monitoring Results

Table 1: Handheld Real-Time Perimeter and Expanded Community Air Monitoring Results †

Analyte	Instrument	Number of Readings	Number of Detections	Concentration Range*
Cl_2	Gastec 8La	117	0	< 0.05 ppm
	MultiRAE	3	0	< 0.1 ppm
CO	MultiRAE	61	0	< 1 ppm
H_2S	Gastec #4LL	16	0	< 0.1 ppm
	MultiRAE	3	0	< 0.1 ppm
HCN	Gastec #12L	20	0	< 0.1 ppm
	MultiRAE	63	0	< 1 ppm
%LEL	MultiRAE	63	0	< 1 %
Nitric Acid	Gastec #15L	100	0	< 0.05 ppm
O_2	MultiRAE	26	26	20.9 %
Sulfuric Acid	CLPx	42	0	< 23.3 ppb
	Gastec #35	72	0	< 0.2 mg/m3
VOCs	MultiRAE	67	0	< 0.1 ppm

†Note: This is a preliminary data summary, indicating that the data provided have not undergone full quality assurance and quality control (QAQC) process and should be considered preliminary at this time.
*If no detectable concentration was observed, the instrument detection limit is preceded by a "<" symbol.

There were no detections of any analyte evaluated during Handheld Perimeter Air Monitoring or Handheld Expanded Community Air Monitoring in this reporting period. All measurements of O_2 were within normal ambient conditions.

3.2 Stationary Real-Time Perimeter Air Monitoring Results

Table 2. Summary of Stationary Real-Time Perimeter Air Monitoring AreaRAE Results†

Unit	Analyte	Number of Readings	Number of Detections	Concentration Range*
Station 01	CO	5,120	4	3.0 - 5.0 ppm
	H_2S	5,120	0	< 0.1 ppm
	HCN	5,120	0	< 1.0 ppm
	%LEL	5,120	0	< 1.0 %
	VOCs	5,121	16	0.1 ppm
Station 02	CO	4,920	0	< 1.0 ppm
	H_2S	4,920	0	< 0.1 ppm

	HCN	4,920	0	< 1.0 ppm
	%LEL	4,912	0	< 1.0 %
	VOCs	4,920	546	0.1 ppm
Station 03	CO	5,383	0	< 1.0 ppm
	H_2S	5,378	0	< 0.1 ppm
	HCN	5,383	0	< 1.0 ppm
	%LEL	5,383	0	< 1.0 %
	VOCs	5,383	416	0.1 ppm
Station 04	CO	5,387	0	< 1.0 ppm
	H_2S	5,387	0	< 0.1 ppm
	HCN	5,387	0	< 1.0 ppm
	%LEL	5,387	0	< 1.0 %
	VOCs	5,387	182	0.1 ppm
Station 05	CO	4,884	0	< 1.0 ppm
	H_2S	4,884	0	< 0.1 ppm
	HCN	4,884	0	< 1.0 ppm
	%LEL	4,884	0	< 1.0 %
	VOCs	4,884	0	< 0.1 ppm
Station 06	CO	4,687	0	< 1.0 ppm
	H_2S	4,687	0	< 0.1 ppm
	HCN	4,687	0	< 1.0 ppm
	%LEL	4,687	0	< 1.0 %
	VOCs	4,687	0	< 0.1 ppm
Station 07	CO	5,004	0	< 1.0 ppm
	H_2S	5,004	0	< 0.1 ppm
	HCN	5,004	0	< 1.0 ppm
	%LEL	5,025	0	< 1.0 %
	VOCs	5,021	9	0.1 - 0.2 ppm

†Note: This is a preliminary data summary, indicating that the data provided have not undergone full quality assurance and quality control (QAQC) process and should be considered preliminary at this time. AreaRAE monitoring data contain drift events. Drift is defined as any interference in an instrument's photoionization detector (PID; 10.6 eV) or electrochemical sensor's ability to accurately report the concentration of a chemical in the atmosphere. Humidity, rapid temperature changes, and compromised instrument batteries are examples of common sources of drift.
* If no detection was observed, the instrument detection limit preceded by a "<" symbol is listed; ppm = parts per million

Table 3: Summary of Stationary Real-Time Perimeter Air Monitoring $PM_{2.5}$ Results†

Unit	Instrument	Average $PM_{2.5}$ Concentration (mg/m^3)
Station 1	AM520	0.023
Station 2	AM520	0.024
Station 3	AM520	0.020
Station 4	AM520	0.019
Station 5	AM520	0.024
Station 6	AM520	0.024
Station 7	AM520	0.025

†Note: This is a preliminary data summary, indicating that the data provided have not undergone full quality assurance and quality control (QAQC) process and should be considered preliminary at this time.

Stationary real-time monitoring at six locations around the perimeter of the facility and at one location outside Jenkintown Middle/High School indicated that there were no detections of H_2S, HCN, or % LEL during the reporting period. Transient low-level detections of CO were observed at Station 1. Based on wind direction at the time, these detections may be attributed to heavy equipment, generators, and vehicles that were operating in the nearby parking lot. Particulate matter monitoring indicated that average $PM_{2.5}$ concentrations were below the 24-hour National Ambient Air Quality Standards (NAAQS) of 0.035 mg/m^3 during this reporting period.

3.3 Stationary Real-Time Expanded Community Air Monitoring Results

Table 4. Summary of Stationary Real-Time Expanded Community Air Monitoring AreaRAE Results†

Unit	Analyte	Number of Readings	Number of Detections	Concentration Range*
Station 08	CO	2,276	0	< 1.0 ppm
	H_2S	2,276	0	< 0.1 ppm
	HCN	2,276	0	< 1.0 ppm
	%LEL	2,276	0	< 1.0 %
	O_2	2,276	2,276	20.8 - 21.5 %
	VOCs	2,276	910	0.1 ppm
Station 09	CO	2,115	0	< 1.0 ppm
	H_2S	2,115	0	< 0.1 ppm
	HCN	2,115	0	< 1.0 ppm
	%LEL	2,115	0	< 1.0 %
	O_2	2,115	2,115	20.9 %
	VOCs	2,115	321	0.1 ppm
Station 10	CO	2,222	0	< 1.0 ppm
	H_2S	2,222	0	< 0.1 ppm
	HCN	2,222	0	< 1.0 ppm
	%LEL	2,222	0	< 1.0 %
	O_2	2,222	2,222	20.9 %
	VOCs	2,222	0	< 0.1 ppm
Station 11	CO	2,128	2	1.0 - 8.0 ppm
	H_2S	2,128	0	< 0.1 ppm
	HCN	2,128	0	< 1.0 ppm
	%LEL	2,128	0	< 1.0 %
	O_2	2,128	2,128	20.9 - 21.5 %
	VOCs	2,128	188	0.1 - 0.2 ppm

†Note: This is a preliminary data summary, indicating that the data provided have not undergone full quality assurance and quality control (QAQC) process and should be considered preliminary at this time. AreaRAE monitoring data contain drift events. Drift is defined as any interference in an instrument's photoionization detector (PID; 10.6 eV) or electrochemical sensor's ability to accurately report the concentration of a chemical in the atmosphere. Humidity, rapid temperature changes, and compromised instrument batteries are examples of common sources of drift.
* If no detection was observed, the instrument detection limit preceded by a "<" symbol is listed; ppm = parts per million

Table 5: Summary of Stationary Real-Time Expanded Community Air Monitoring $PM_{2.5}$ Results †

Unit	Instrument	Average $PM_{2.5}$ Concentration (mg/m^3)
Station 8	AM520	0.026
Station 9	AM520	0.026
Station 10	AM520	0.027

†Note: This is a preliminary data summary, indicating that the data provided have not undergone full quality assurance and quality control (QAQC) process and should be considered preliminary at this time. Due to equipment failure, Station 11 did not record $PM_{2.5}$ data during this reporting period.

Stationary real-time monitoring at four locations in the neighborhoods surrounding the facility indicated that there were no detections of H_2S, HCN, or % LEL. Transient low-level detections of CO were observed at Station 11. Because there were no detections of CO observed at monitoring locations closer to the facility in the same timeframe, these detections were likely due to sources unrelated to the impacted facility. Particulate matter monitoring indicated that average $PM_{2.5}$ concentrations were below the 24-hour National Ambient Air Quality Standards (NAAQS) of 0.035 mg/m^3 during this reporting period.

4.0 METEOROLOGICAL CONDITIONS

Attachment D contains wind roses depicting wind speed and direction from station PHILADELPHIA NE, approximately 6.89 miles from the site, and a Kestrel 6000 cellular monitoring station located approximately 500 feet north of the facility.

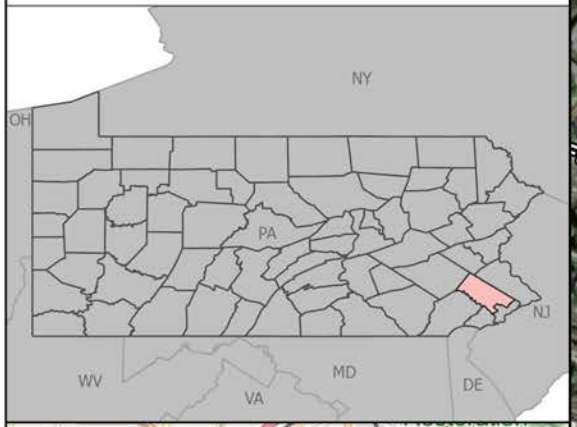
Attachment A

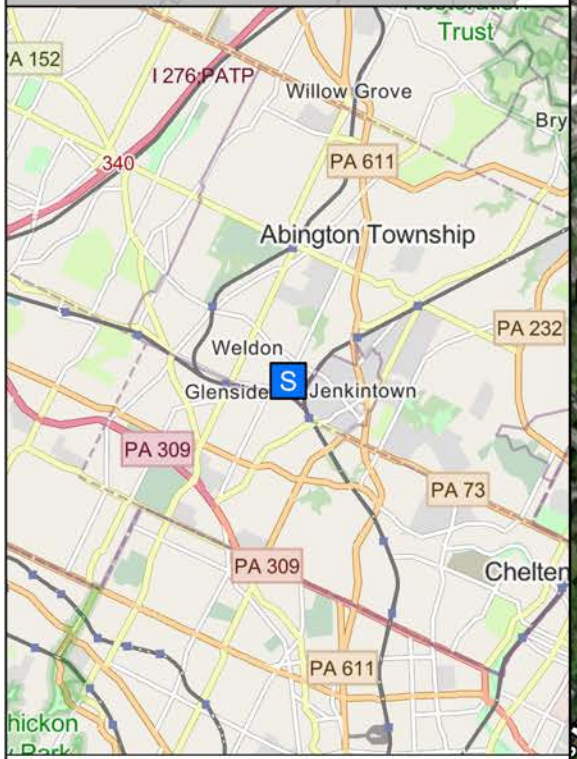
Maps

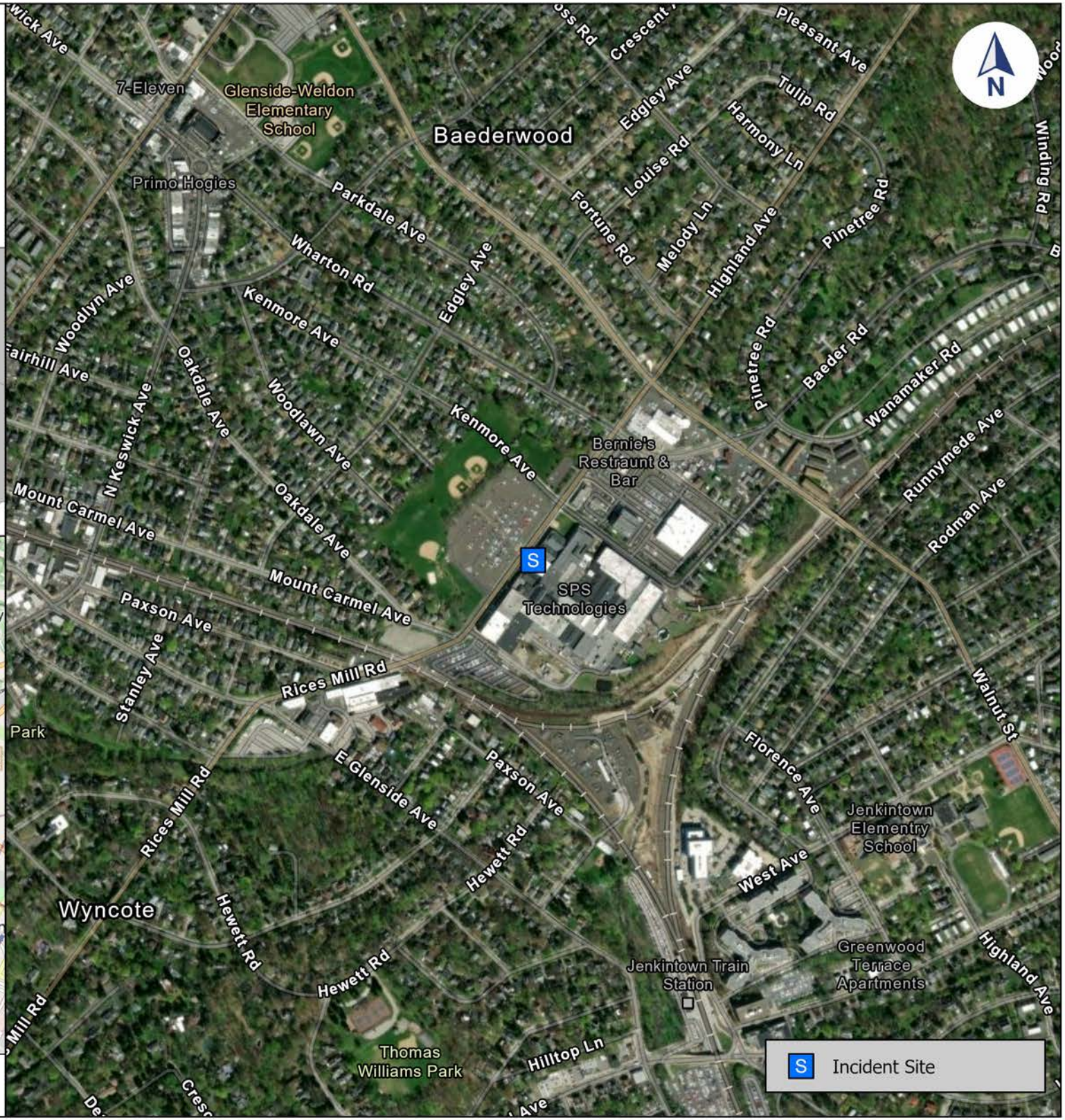
CTEH®

SPS Technologies Fire

Incident Location
Abington Township, PA | Montgomery County
PROJ-052216



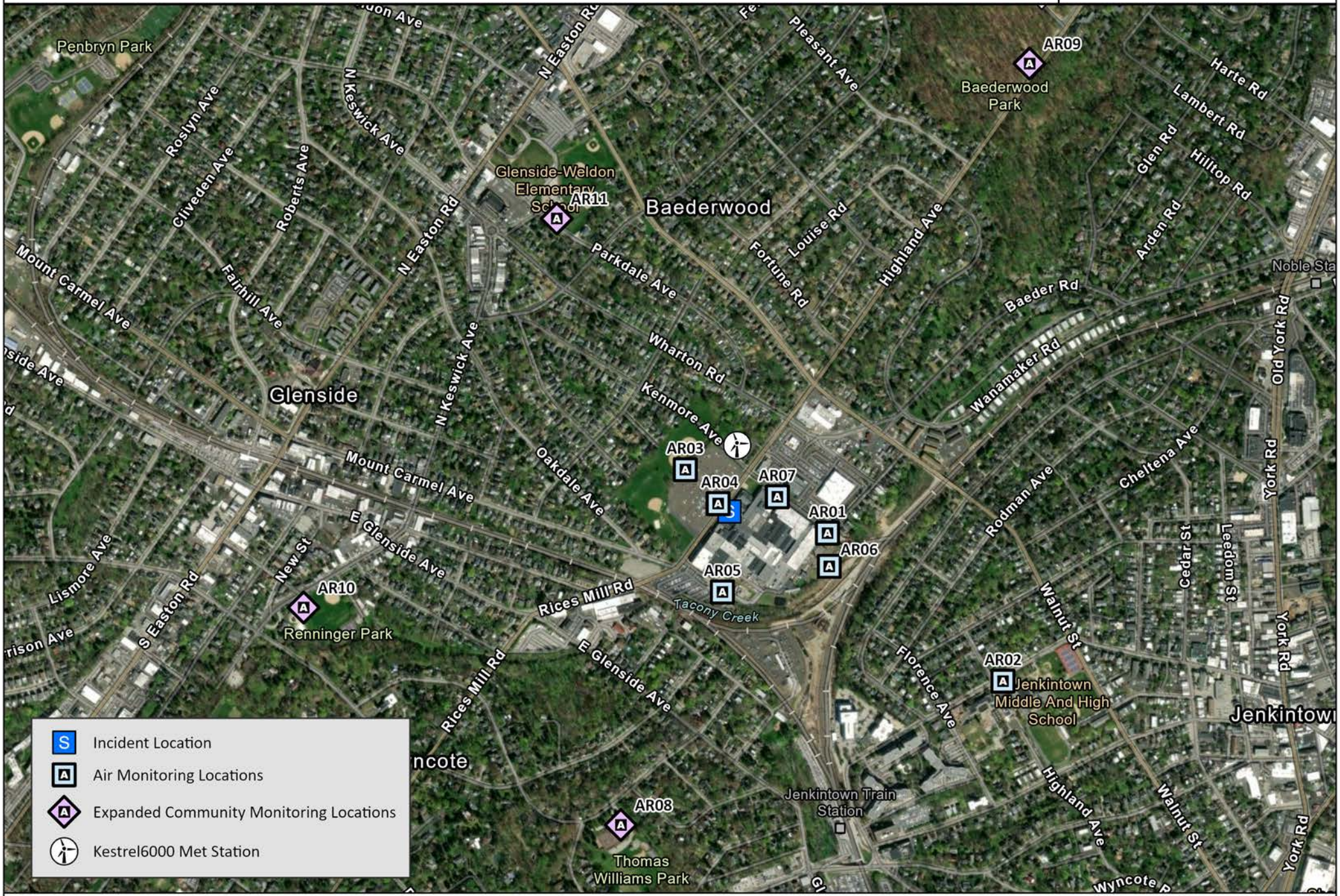




Updated At: 2/20/2025 4:59 PM
Projection: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702

CTEH® **Air Monitoring Locations**
SPS Technologies Fire

Project: PROJ-052216
City: Abington Township, PA
County: Montgomery



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Projection: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702 Ft US

0 1,000 Feet

Updated at 2025-02-22 20:36

CTEH® **Handheld Real-Time Air Monitoring Locations | Community Monitoring | %LEL**

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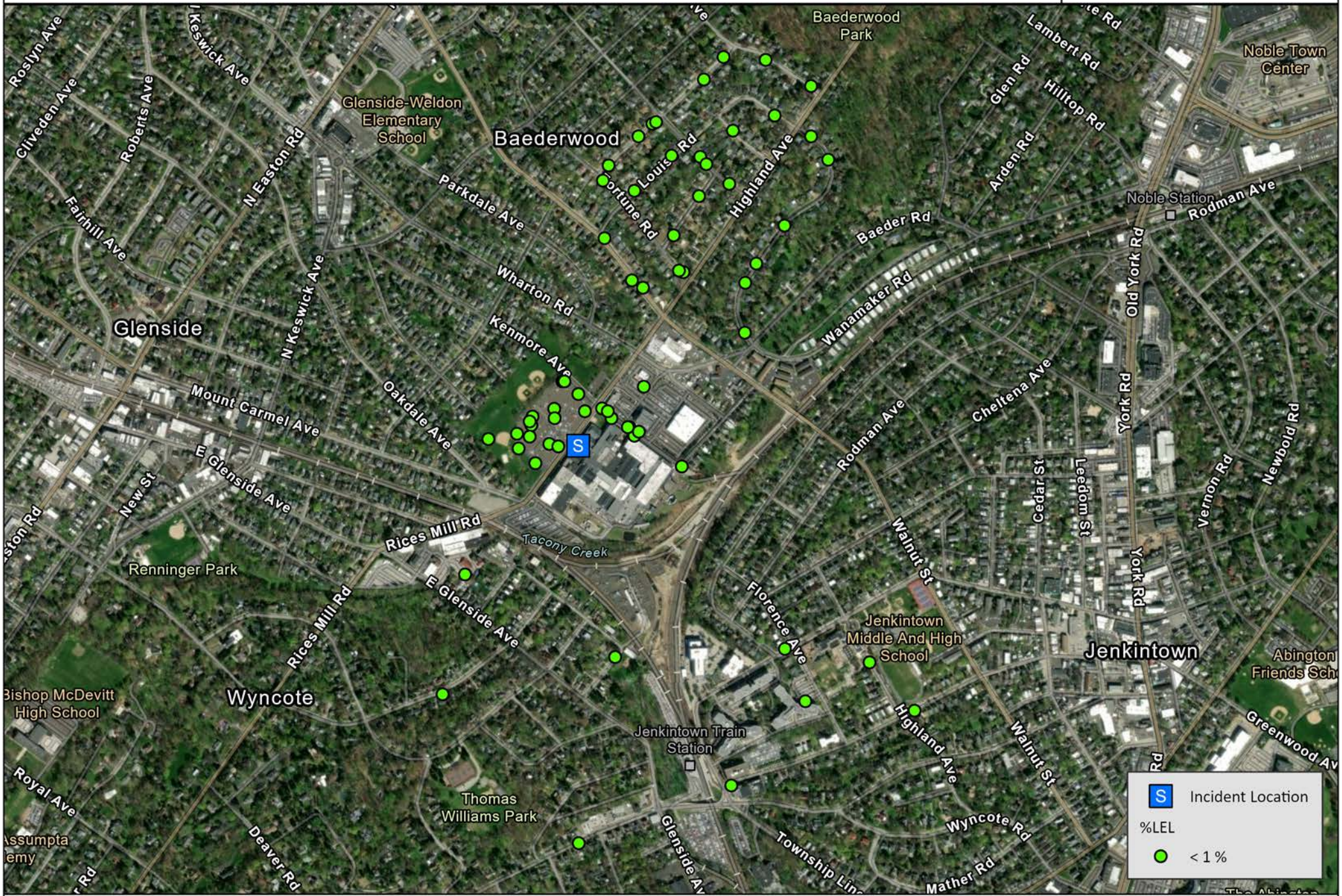
Project: PROJ-052216
City: Abington Township, PA
County: Montgomery



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0 1,000 Feet

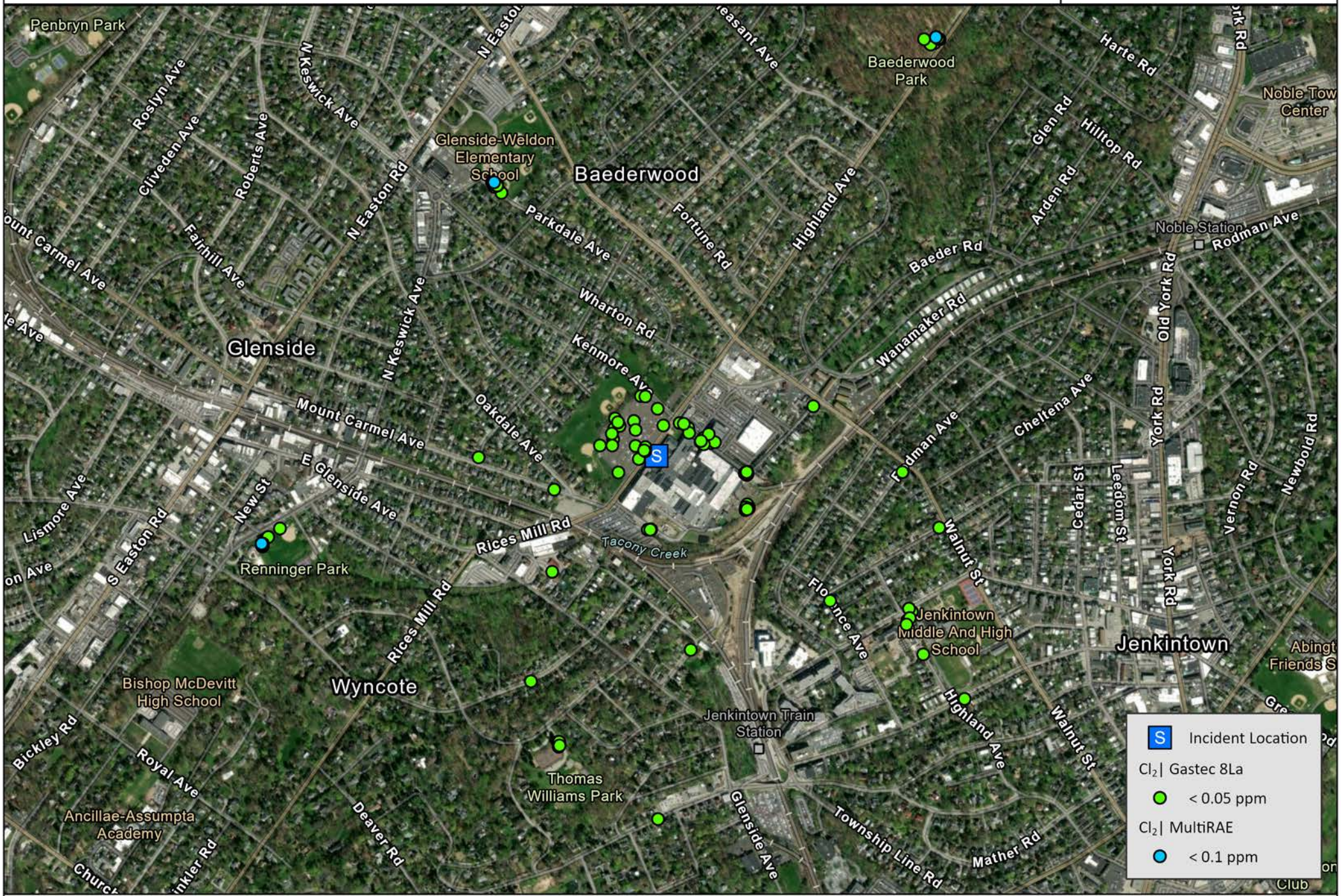
Updated at 2025-02-22 9:00

CTEH®

Handheld Real-Time Air Monitoring Locations | Community Monitoring | Cl_2

SPS Technologies Fire | 02/22/2025 06:00 to 02/23/2025 06:00 EST

Project: PROJ-052216
City: Abington Township, PA
County: Montgomery



Datum: NAD 1983 2011
Projection: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702

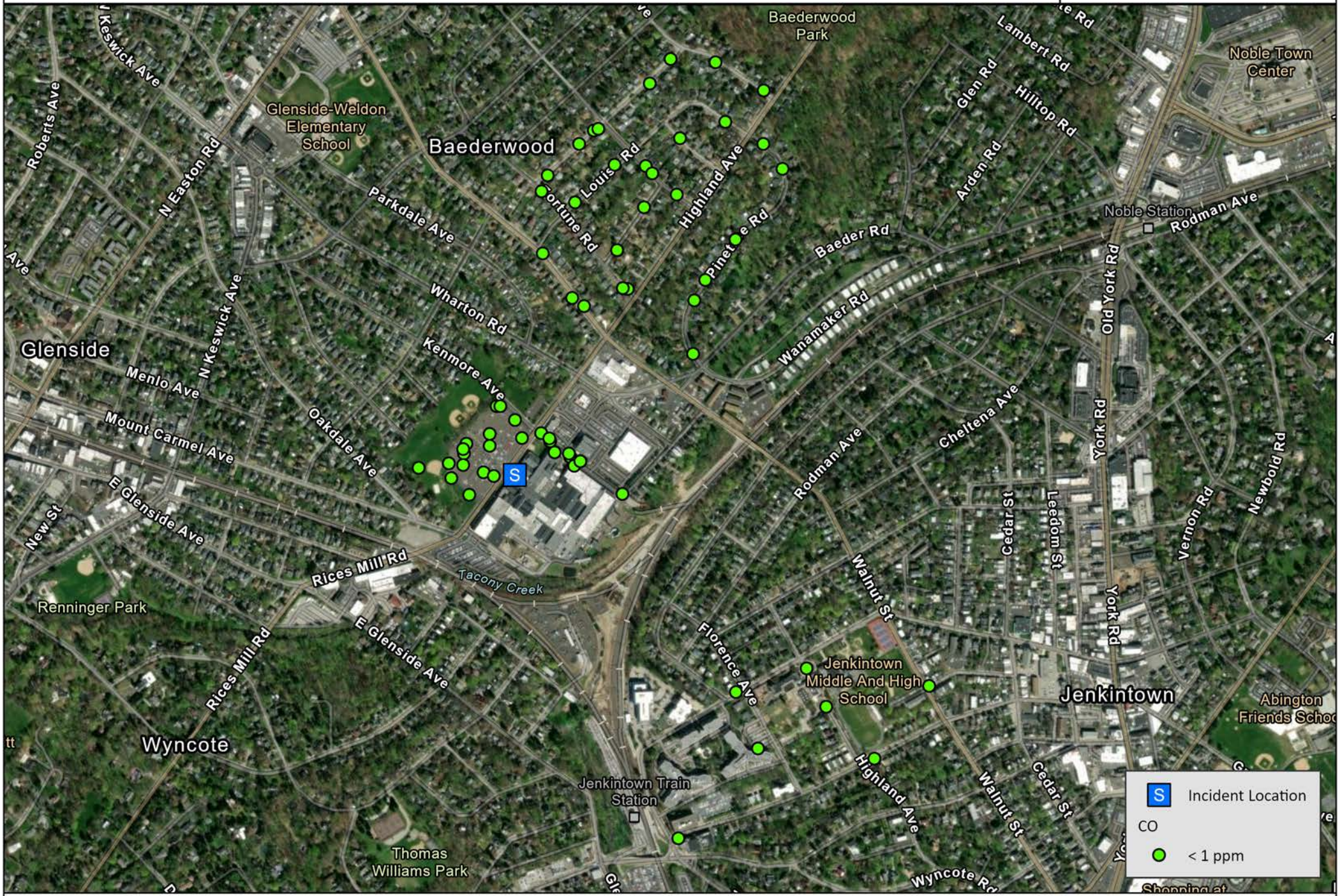
0 1,000 Feet

Updated at 2025-02-23 09:00

CTEH® **Handheld Real-Time Air Monitoring Locations | Community Monitoring | CO**

SPS Technologies Fire | 02/22/2025 06:00 to 02/23/2025 06:00 EST

Project: PROJ-052216
City: Abington Township, PA
County: Montgomery



Datum: NAD 1983 2011
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Updated at 2025-02-23 09:00

CTEH®

Handheld Real-Time Air Monitoring Locations | Community Monitoring | H_2S

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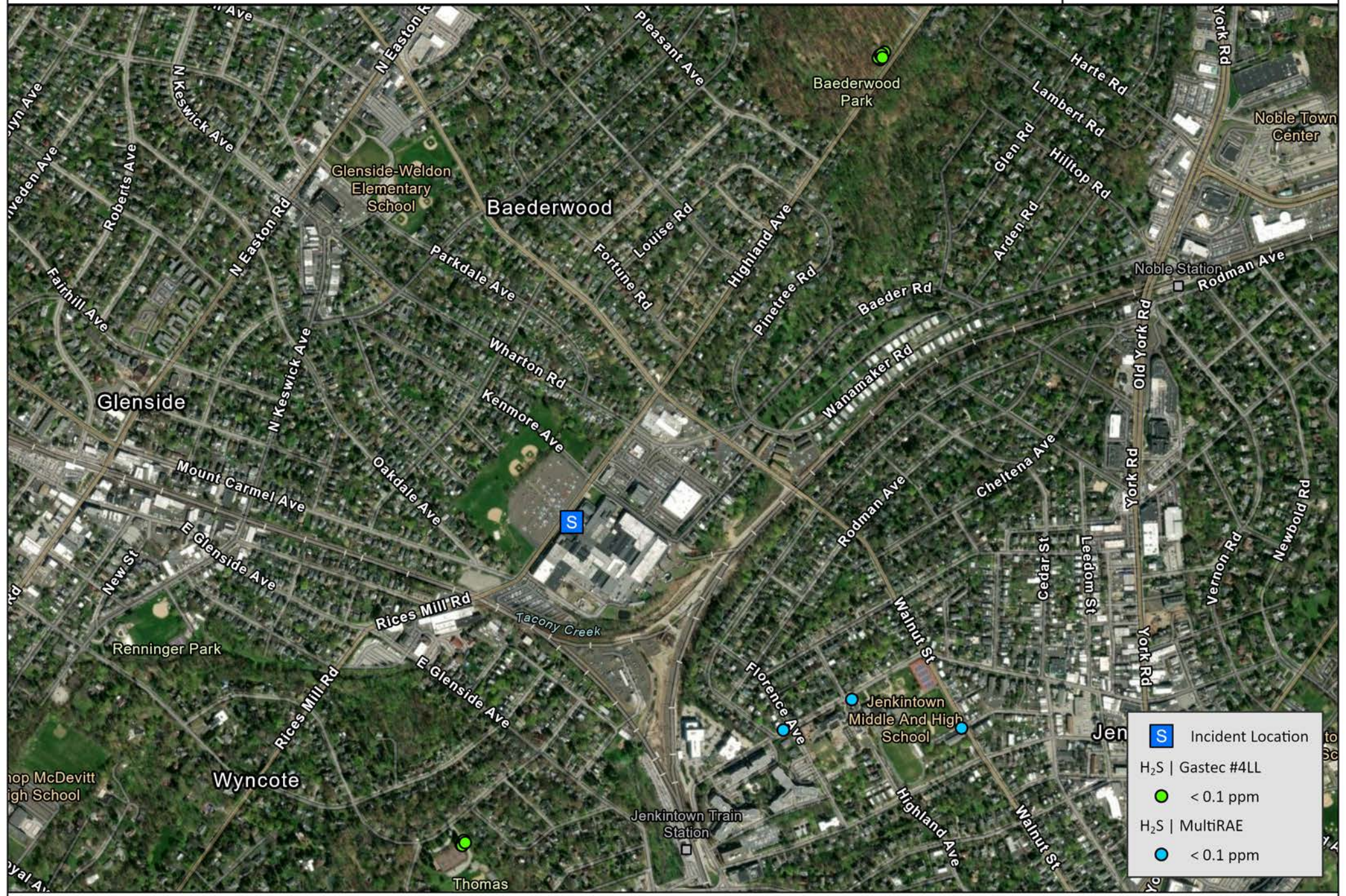
Project: PROJ-052216
City: Abington Township, PA
County: Montgomery



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0 1,000 Feet

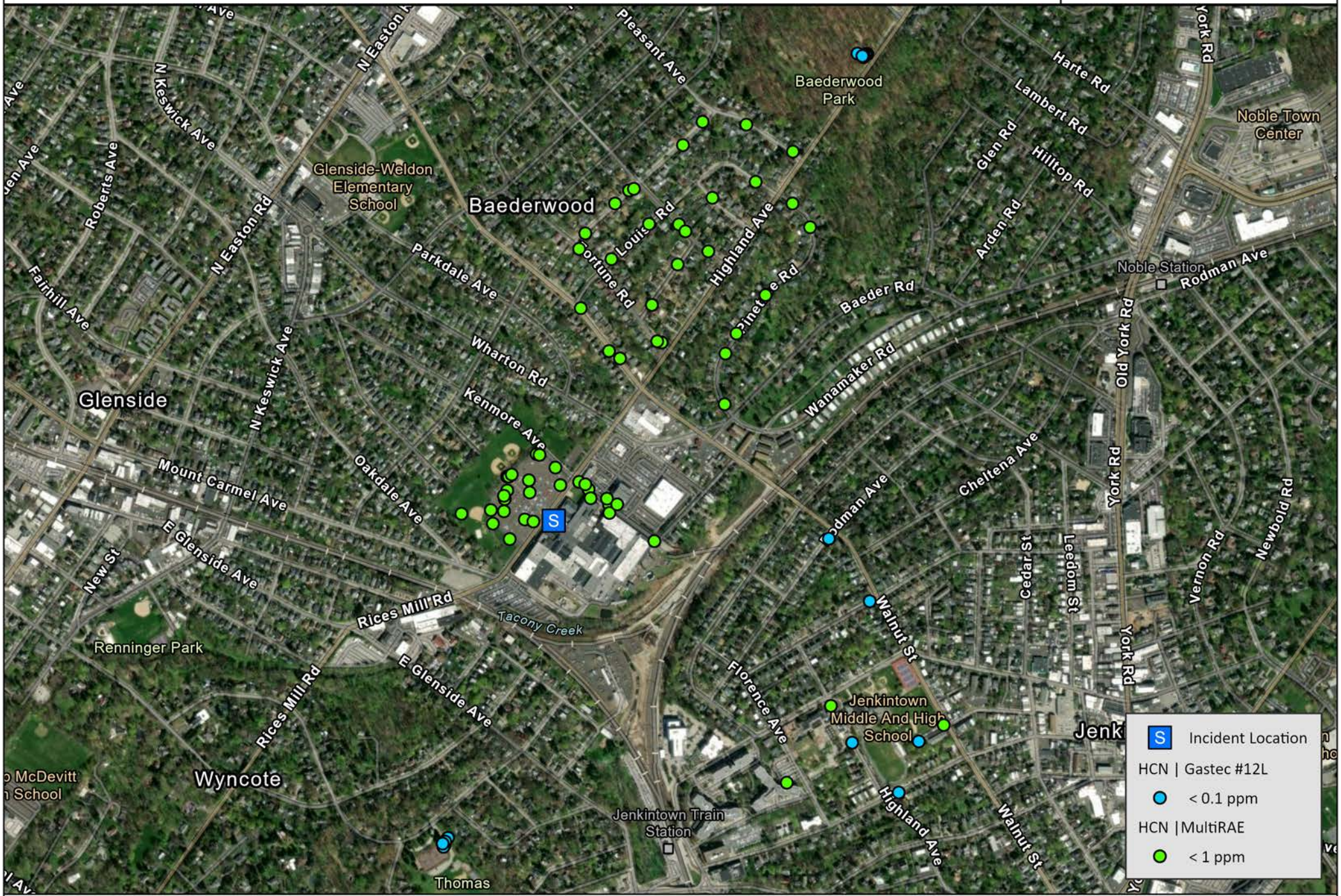
Updated at 2025-02-23 09:00

CTEH®

Handheld Real-Time Air Monitoring Locations | Community Monitoring | HCN

SPS Technologies Fire | 02/22/2025 06:00 to 02/23/2025 06:00 EST

Project: PROJ-052216
City: Abington Township, PA
County: Montgomery



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0 1,000 Feet

Updated at 2025-02-23 09:00

CTEH®

Handheld Real-Time Air Monitoring Locations | Community Monitoring | Nitric Acid

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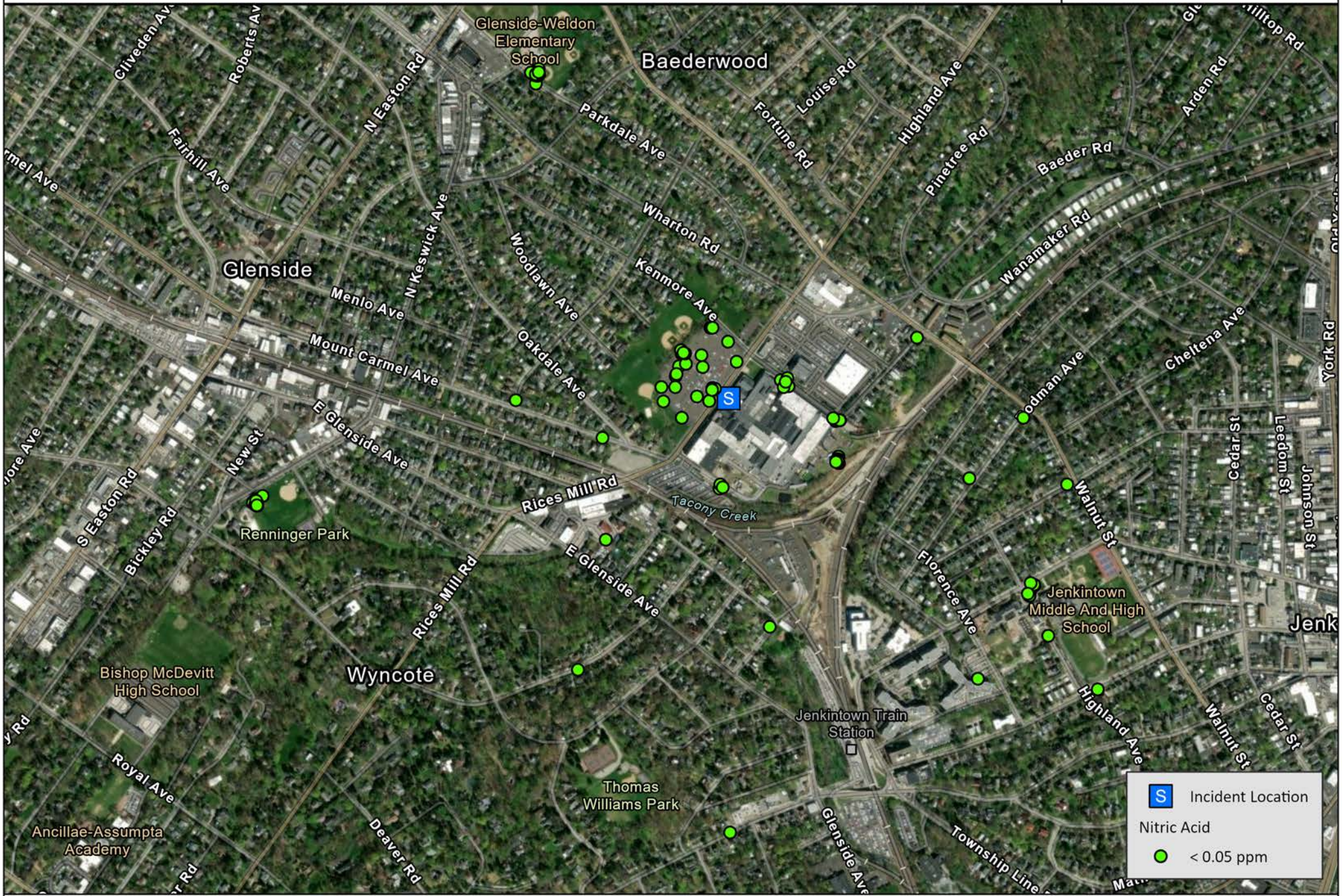
Project: PROJ-052216
City: Abington Township, PA
County: Montgomery



Datum: NAD 1983 2011
Projection: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702

0 1,000 Feet

Updated at 2025-02-22 09:00

CTEH®

Handheld Real-Time Air Monitoring Locations | Community Monitoring | O_2

SPS Technologies Fire | 02/22/2025 06:00 to 02/23/2025 06:00 EST

Project: PROJ-052216
City: Abington Township, PA
County: Montgomery

Datum: NAD 1983 2011
Projection: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702

0 1,000 Feet

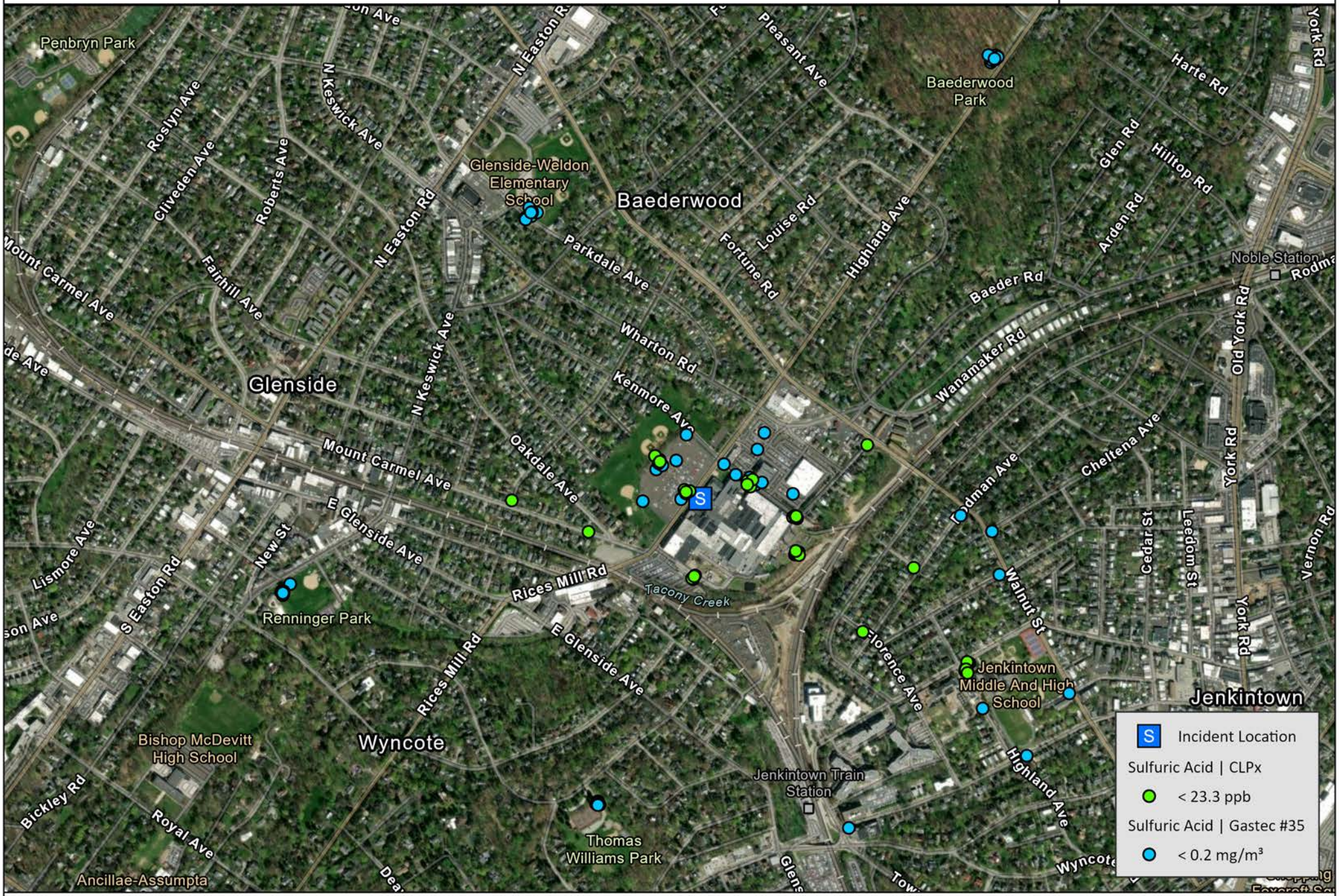
Updated at 2025-02-23 09:00

CTEH®

Handheld Real-Time Air Monitoring Locations | Community Monitoring | Sulfuric Acid

SPS Technologies Fire | 02/22/2025 06:00 to 02/23/2025 06:00 EST

Project: PROJ-052216
City: Abington Township, PA
County: Montgomery



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0 1,000 Feet

Updated at 2025-02-23 09:00

CTEH® **Handheld Real-Time Air Monitoring Locations | Community Monitoring | VOCs**

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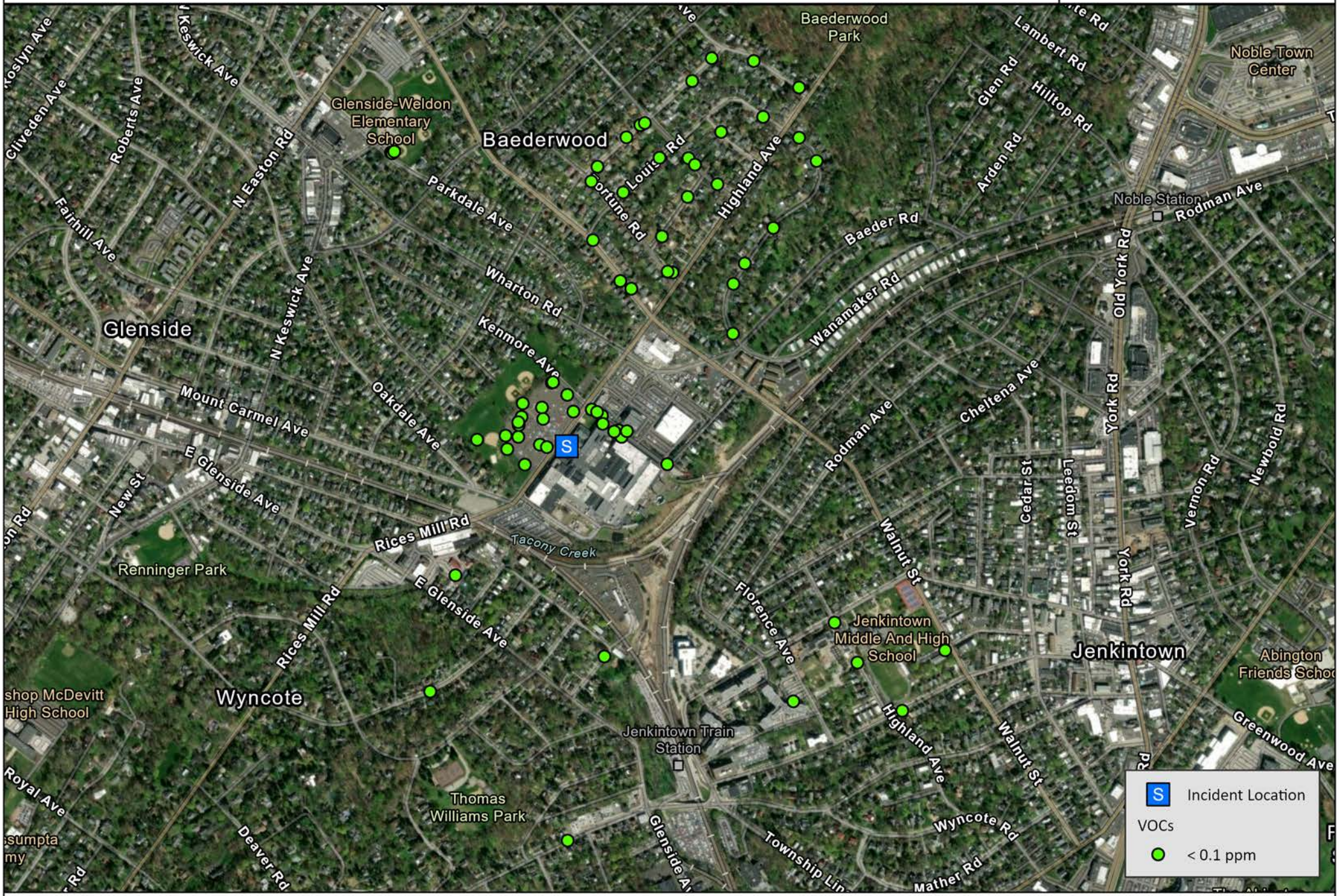
Project: PROJ-052216
City: Abington Township, PA
County: Montgomery



Datum: NAD 1983 2011
Projection: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702

0 1,000 Feet

Updated at 2025-02-23 09:00

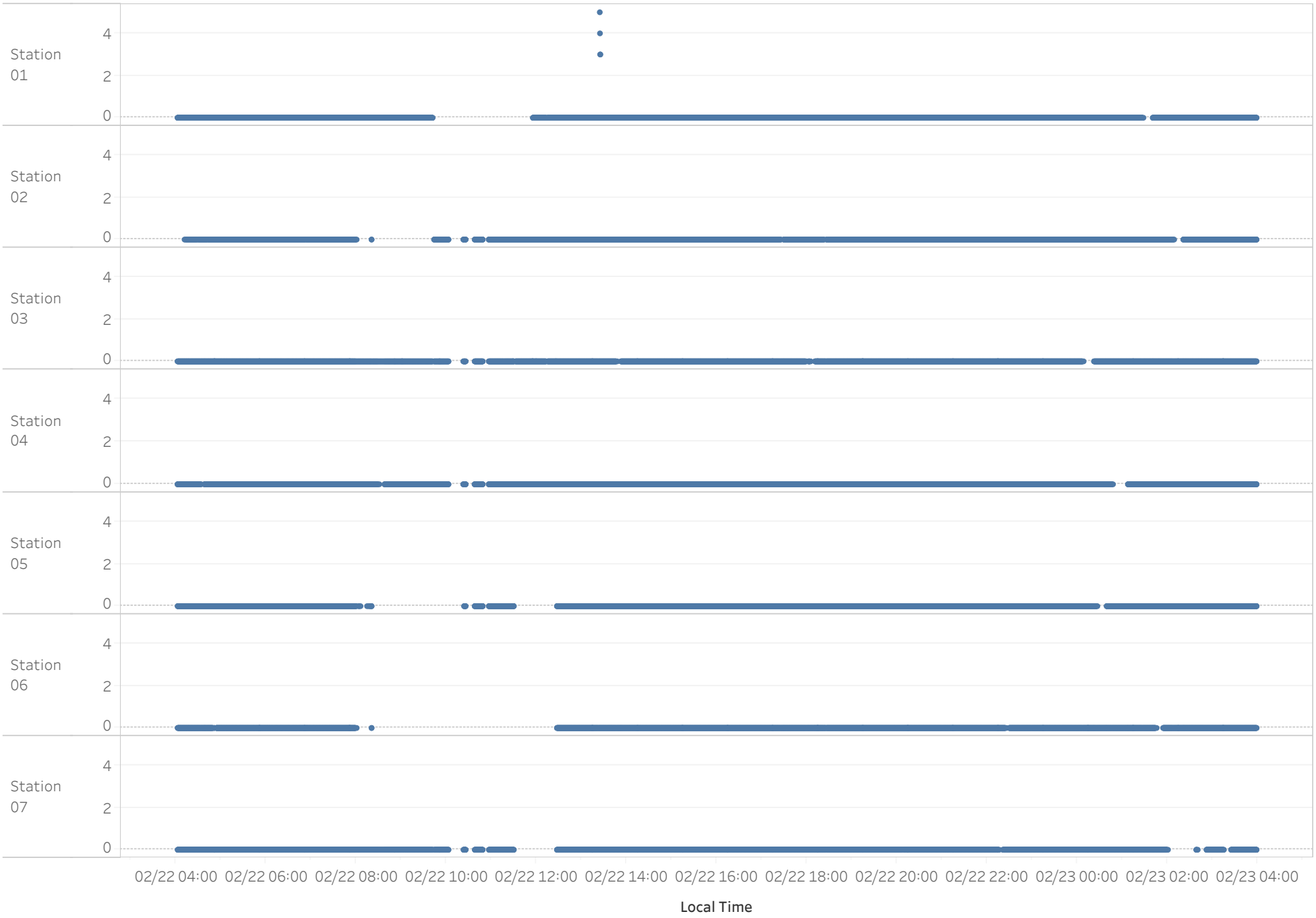
Attachment B

Stationary Real-Time Perimeter Monitoring Graphs

Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | SPS Technologies Fire | Abington Township, PA

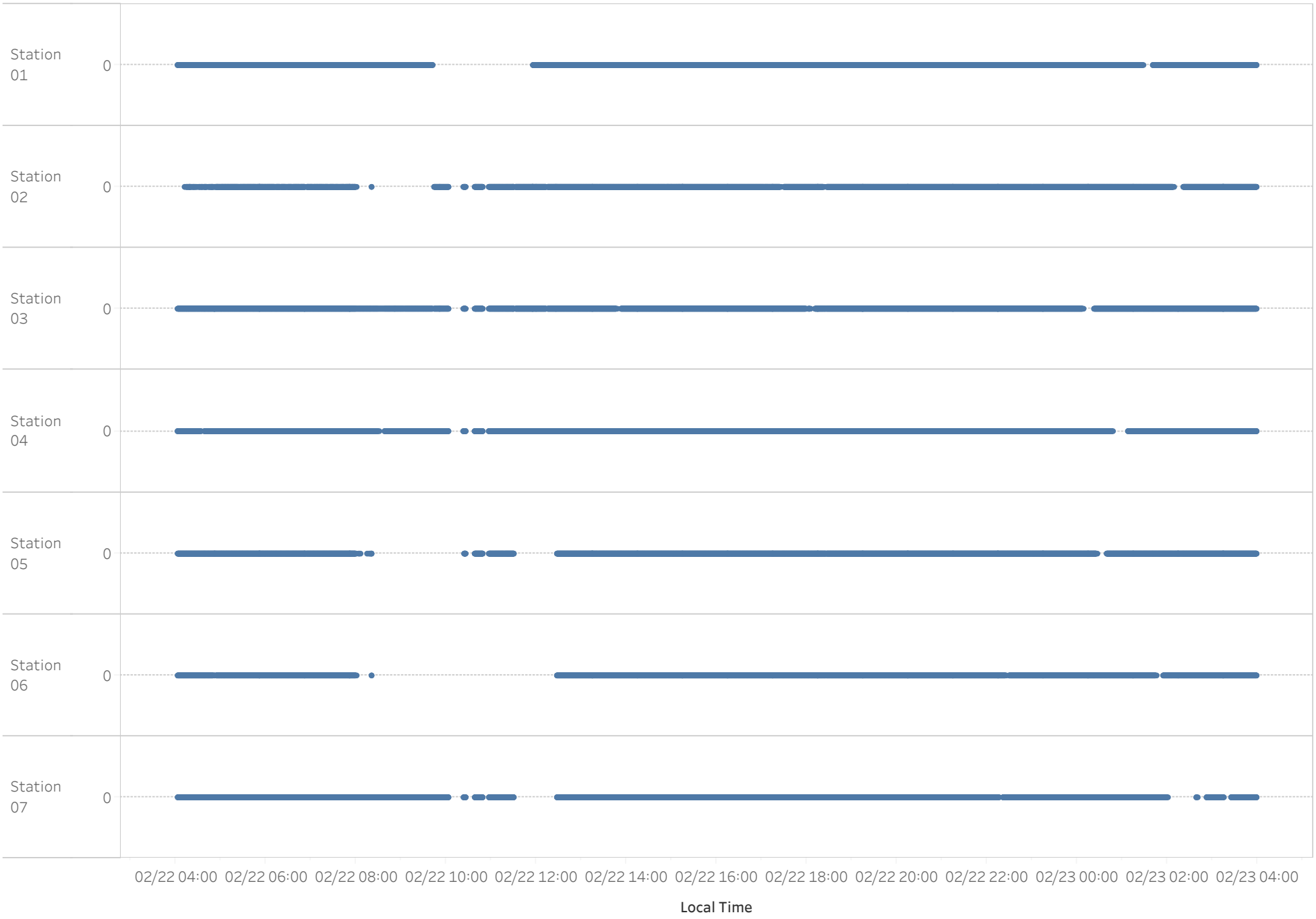
2/22/2025 4:01:32 AM to 2/23/2025 3:58:17 AM | **Analyte: CO (ppm)**



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | SPS Technologies Fire | Abington Township, PA

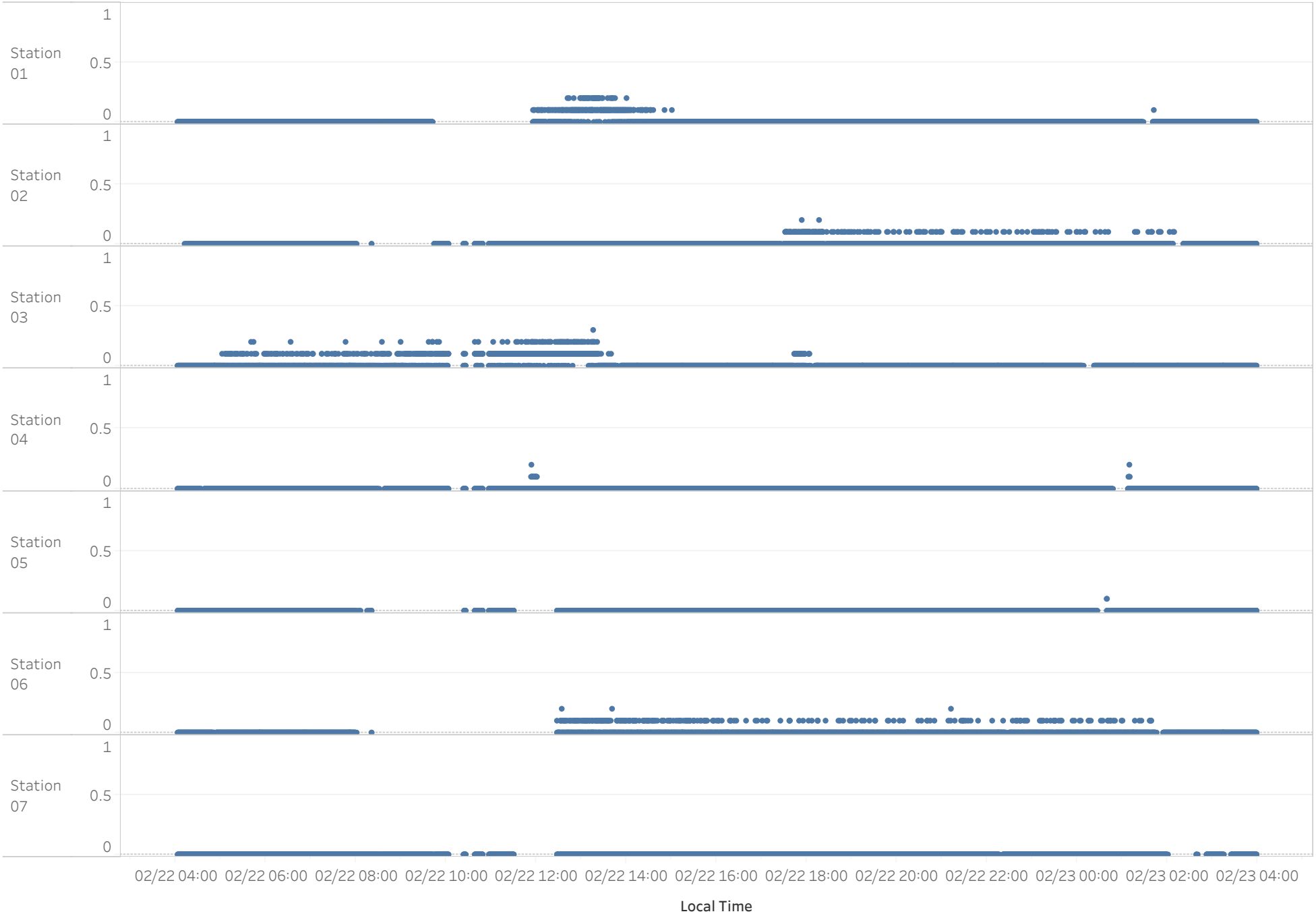
2/22/2025 4:01:32 AM to 2/23/2025 3:58:17 AM | **Analyte: H2S (ppm)**



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | SPS Technologies Fire | Abington Township, PA

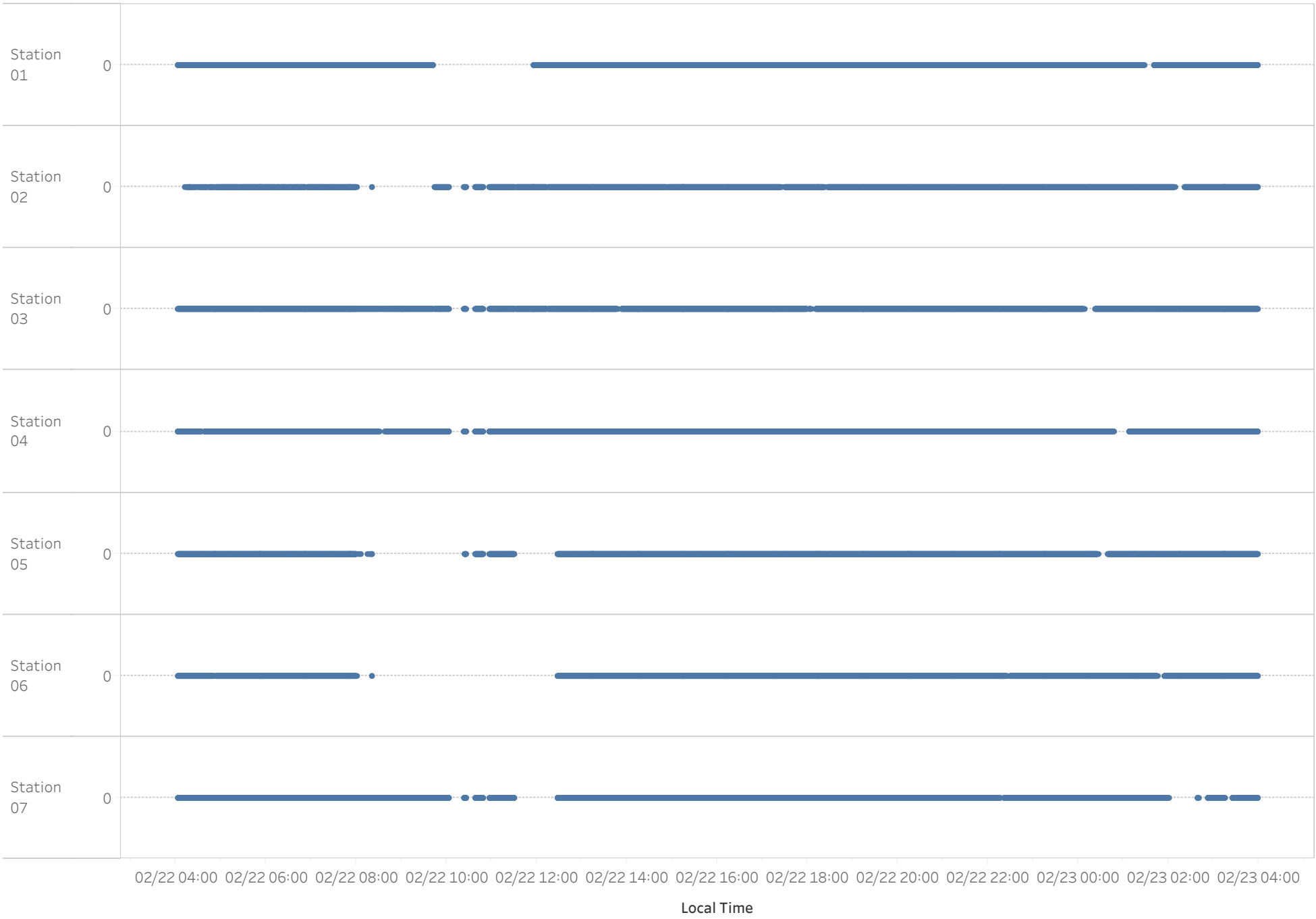
2/22/2025 4:01:32 AM to 2/23/2025 3:58:17 AM | **Analyte: HCN (ppm)**



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | SPS Technologies Fire | Abington Township, PA

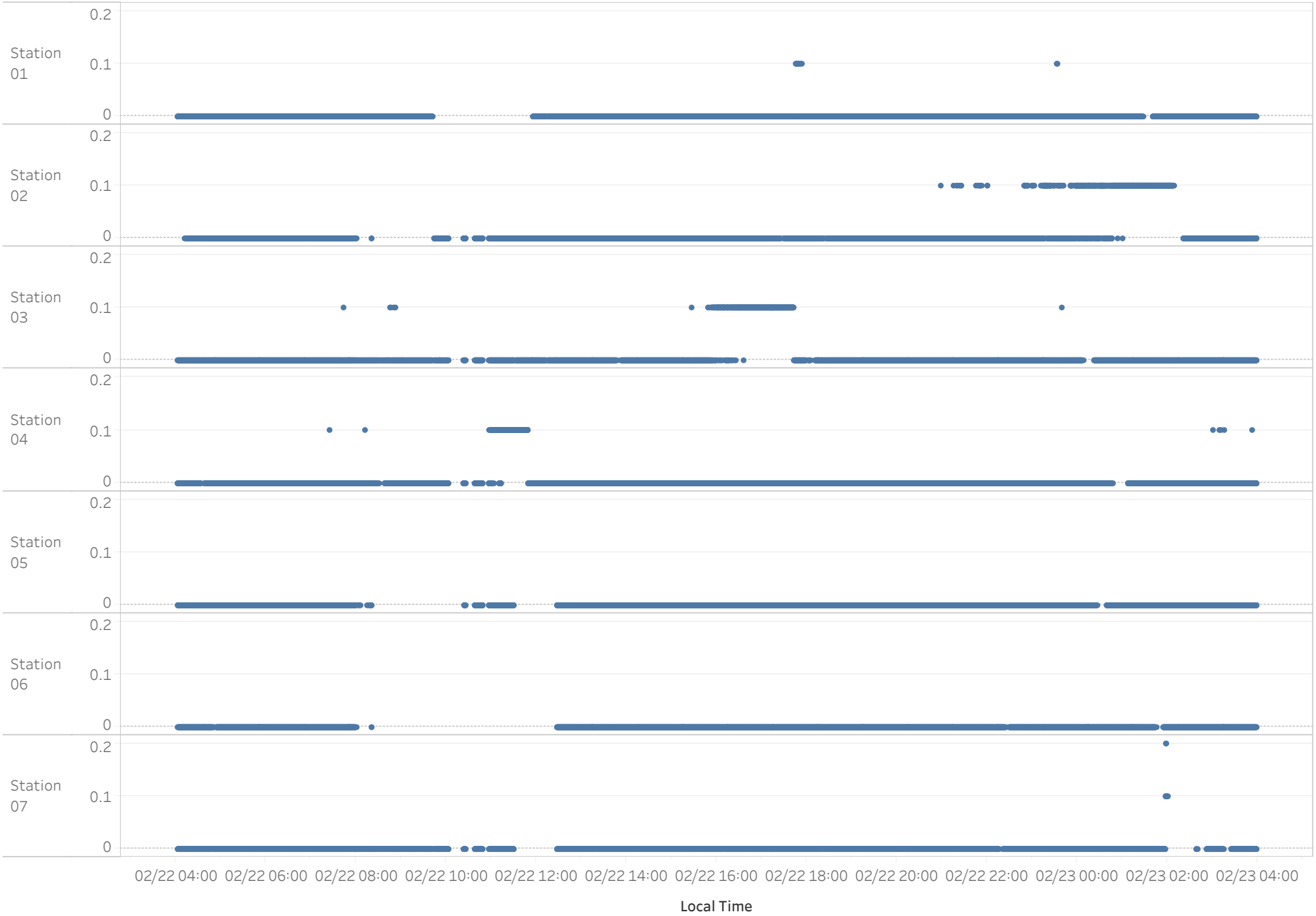
2/22/2025 4:01:32 AM to 2/23/2025 3:58:17 AM | **Analyte: LEL (%)**



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | SPS Technologies Fire | Abington Township, PA

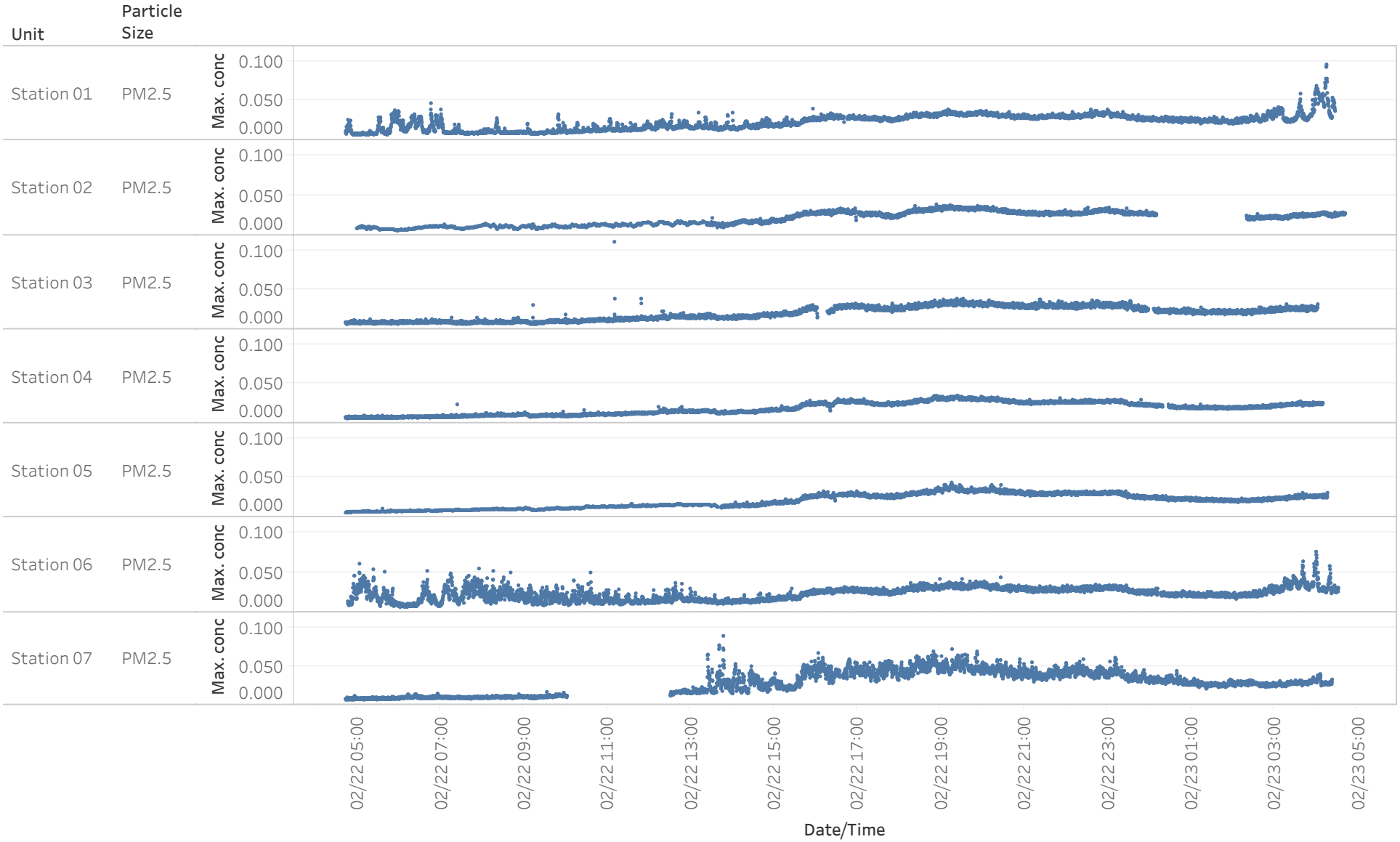
2/22/2025 4:01:32 AM to 2/23/2025 3:58:17 AM | **Analyte: VOCs (ppm)**



PROJ-052216 | PM2.5 Graph

SPS Technologies Fire | Abington Township, PA

02/22 04:43 to 02/23 04:41



PROJ-052216 Summary Table | PM2.5

Unit	Particle Size	Count of Records	Count of Detections	Min. concentration	Max. concentration	Avg. concentration
Station 01	PM2.5	5,677	5,677	0.007	0.096	0.023
Station 02	PM2.5	3,649	3,649	0.006	0.039	0.024
Station 03	PM2.5	5,524	5,524	0.007	0.111	0.020
Station 04	PM2.5	5,579	5,579	0.006	0.035	0.019
Station 05	PM2.5	4,014	4,014	0.006	0.044	0.024
Station 06	PM2.5	5,663	5,663	0.007	0.076	0.024
Station 07	PM2.5	6,345	6,345	0.007	0.089	0.025

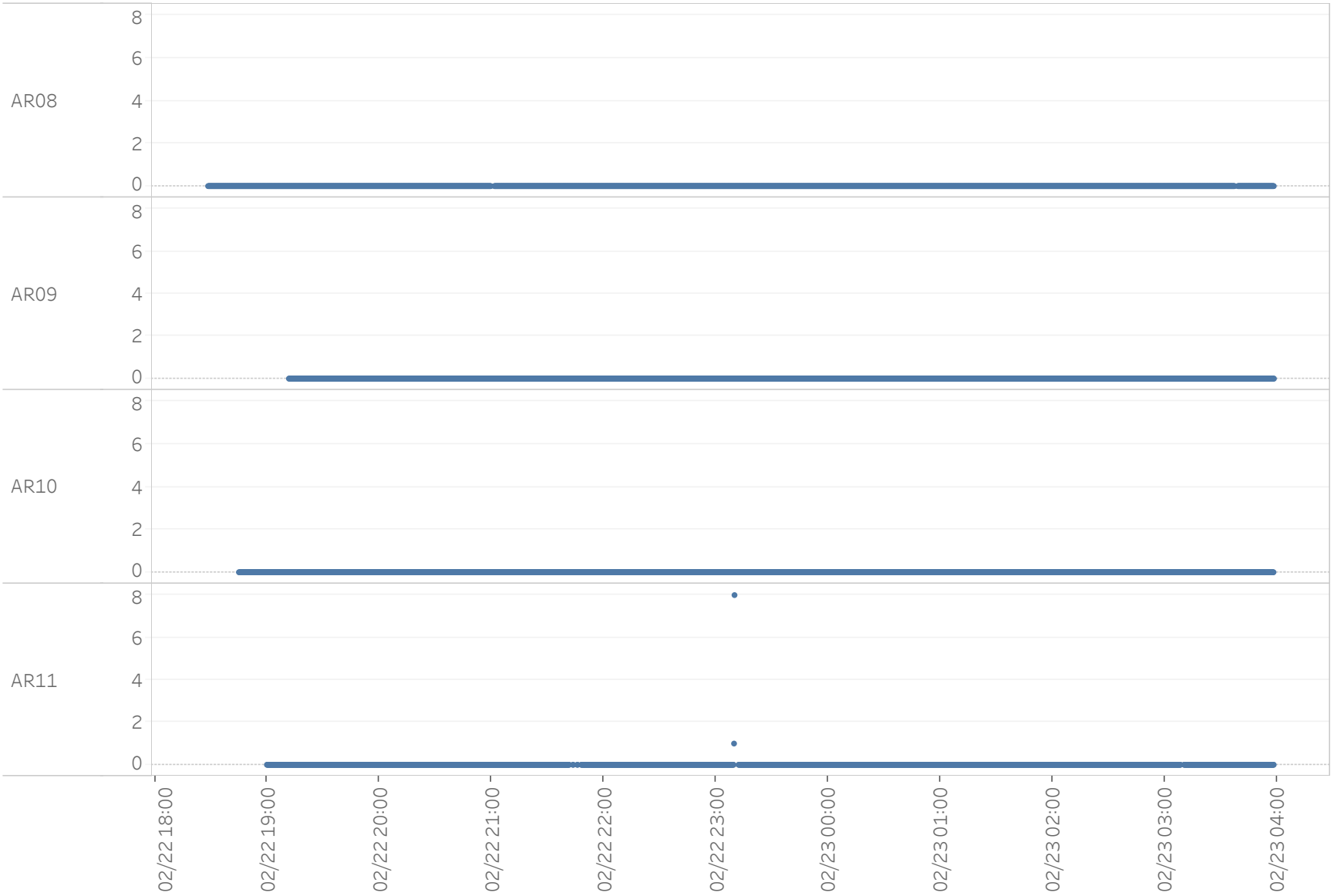
Attachment C

Stationary Real-Time Expanded Community Monitoring Graphs

Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | Expanded Community | SPS Technologies Fire | Abington Township, PA

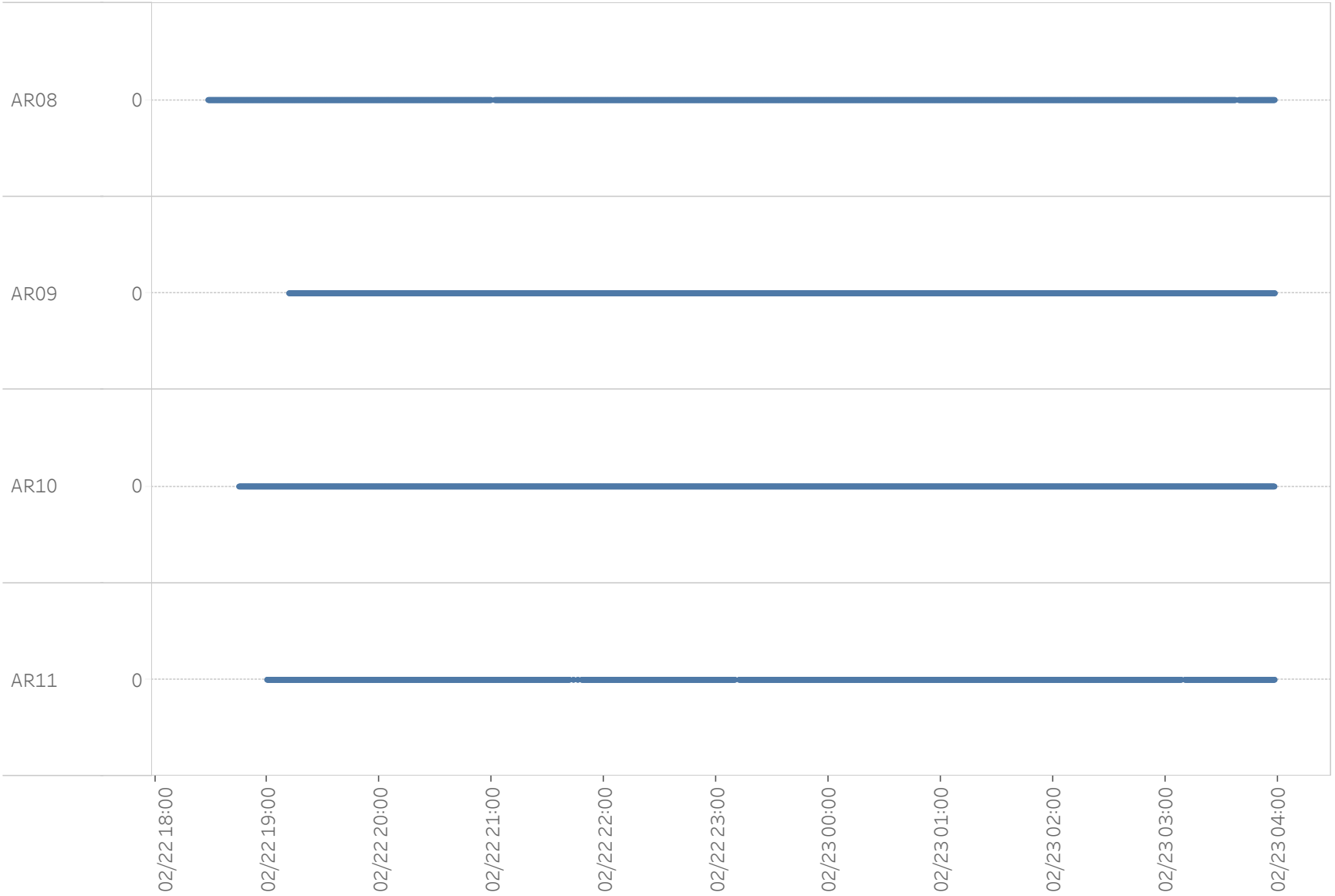
2/22/2025 6:28:03 PM to 2/23/2025 3:58:17 AM | **Analyte: CO (ppm)**



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | Expanded Community | SPS Technologies Fire | Abington Township, PA

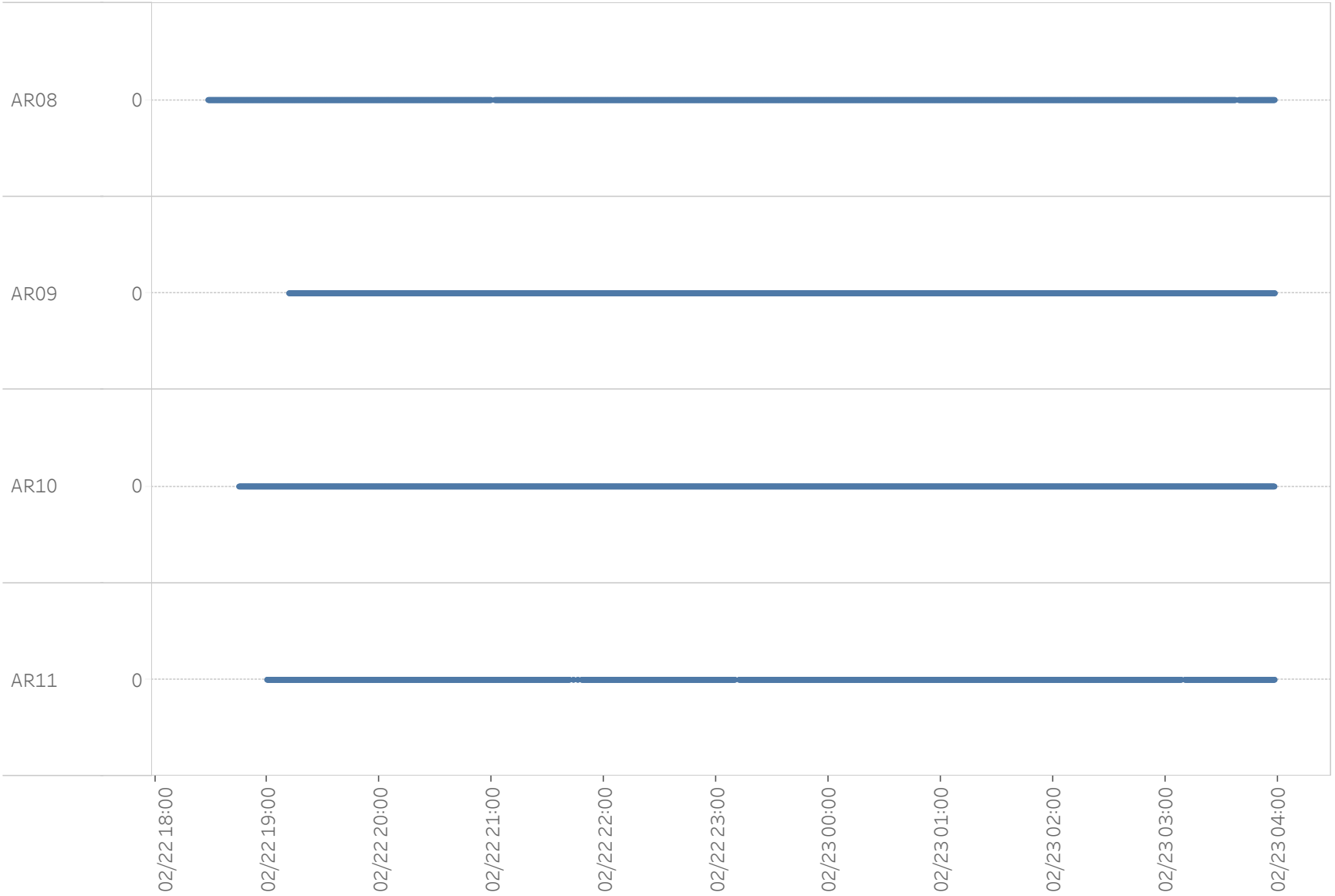
2/22/2025 6:28:03 PM to 2/23/2025 3:58:17 AM | **Analyte: H2S (ppm)**



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | Expanded Community | SPS Technologies Fire | Abington Township, PA

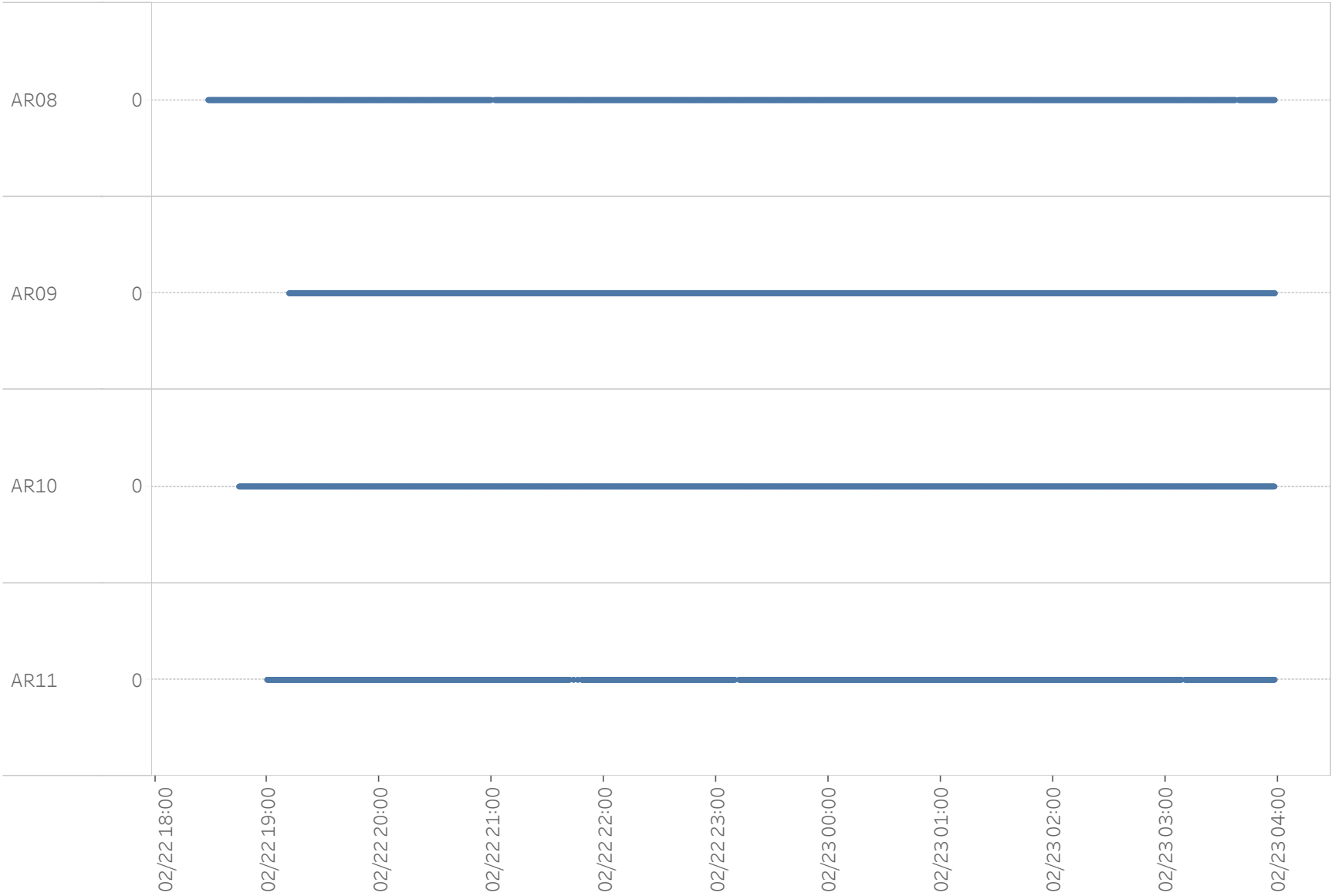
2/22/2025 6:28:03 PM to 2/23/2025 3:58:17 AM | **Analyte: HCN (ppm)**



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | Expanded Community | SPS Technologies Fire | Abington Township, PA

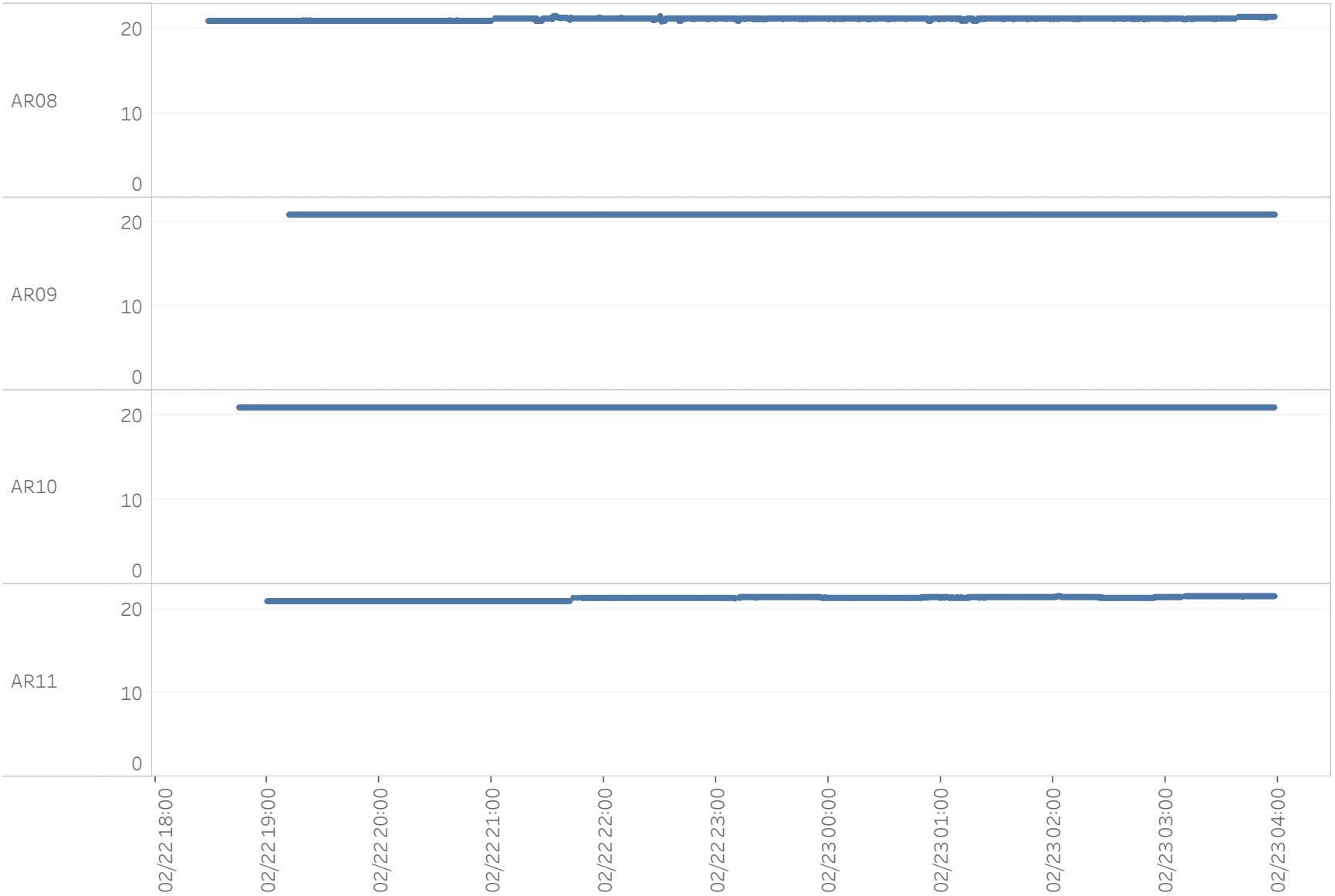
2/22/2025 6:28:03 PM to 2/23/2025 3:58:17 AM | **Analyte: LEL (%)**



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | Expanded Community | SPS Technologies Fire | Abington Township, PA

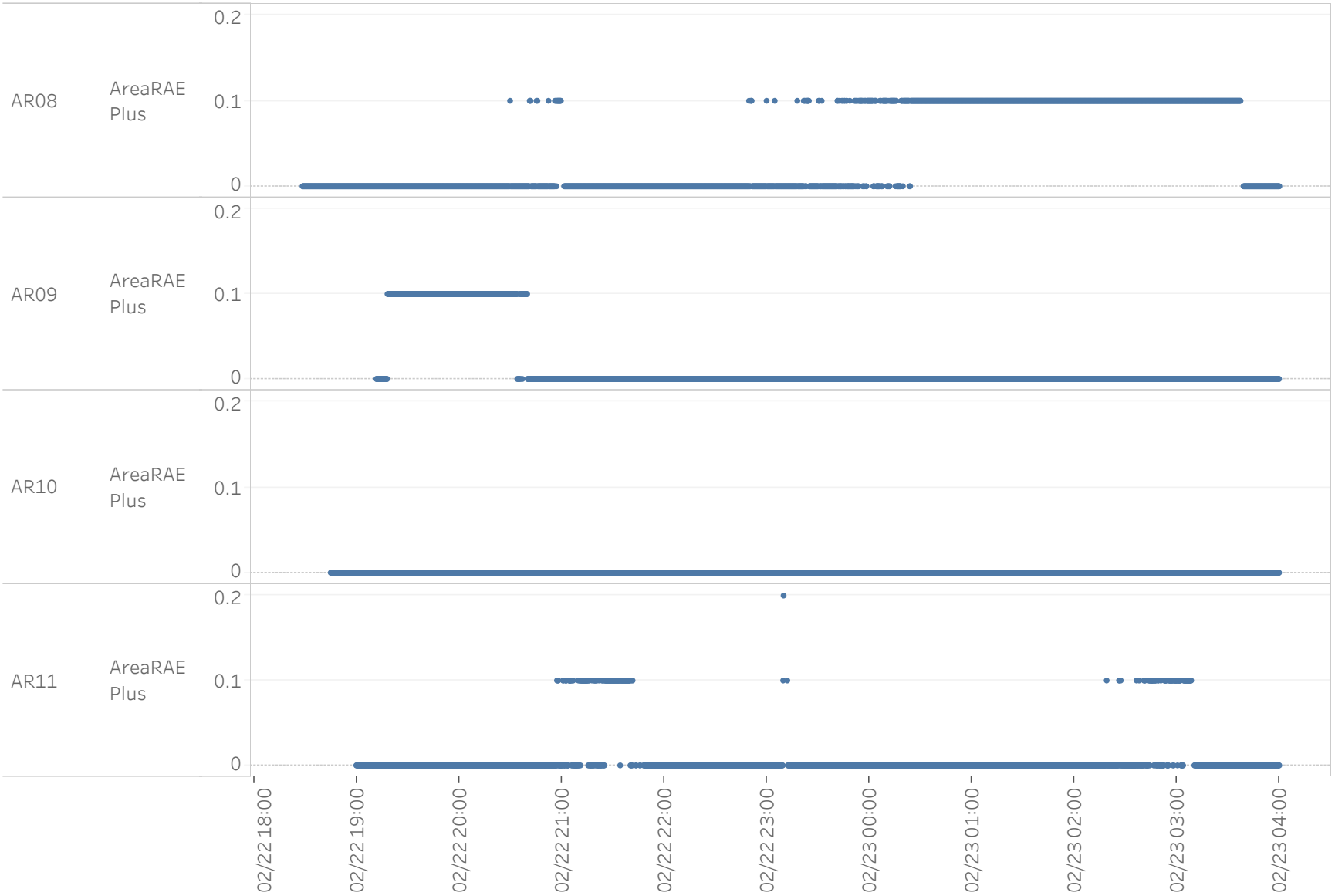
2/22/2025 6:28:03 PM to 2/23/2025 3:58:17 AM | **Analyte: OXY (%)**



Preliminary Remote-telemetered Real-time Air Monitoring Readings

PROJ-052216 | Expanded Community | SPS Technologies Fire | Abington Township, PA

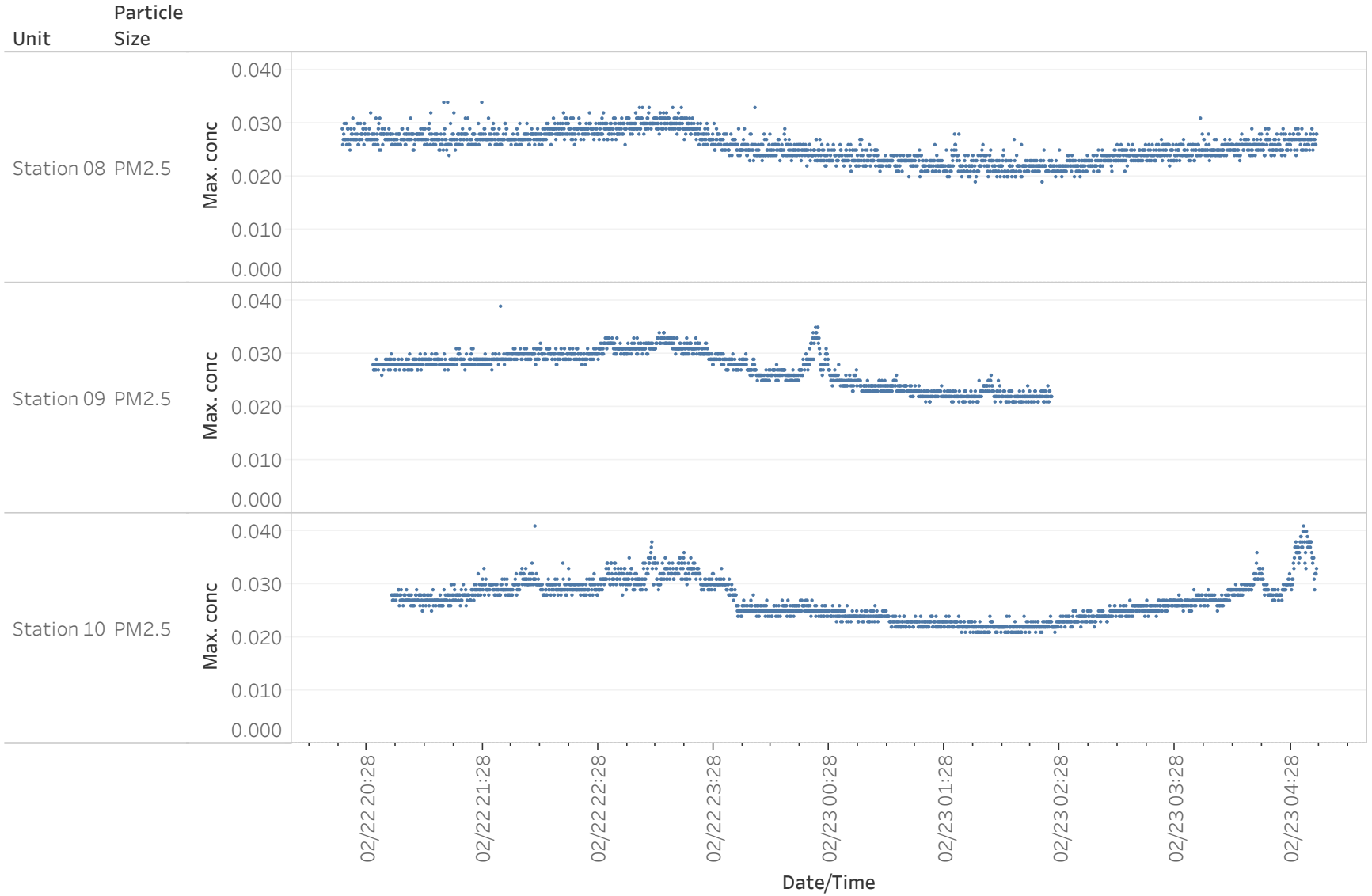
2/22/2025 6:28:03 PM to 2/23/2025 3:59:57 AM | **Analyte: VOCs (ppm)**



PROJ-052216 | PM2.5 Graph | Expanded Community

SPS Technologies Fire | Abington Township, PA

02/22 20:14 to 02/23 04:41



PROJ-052216 Summary Table | PM2.5 | Expanded Community

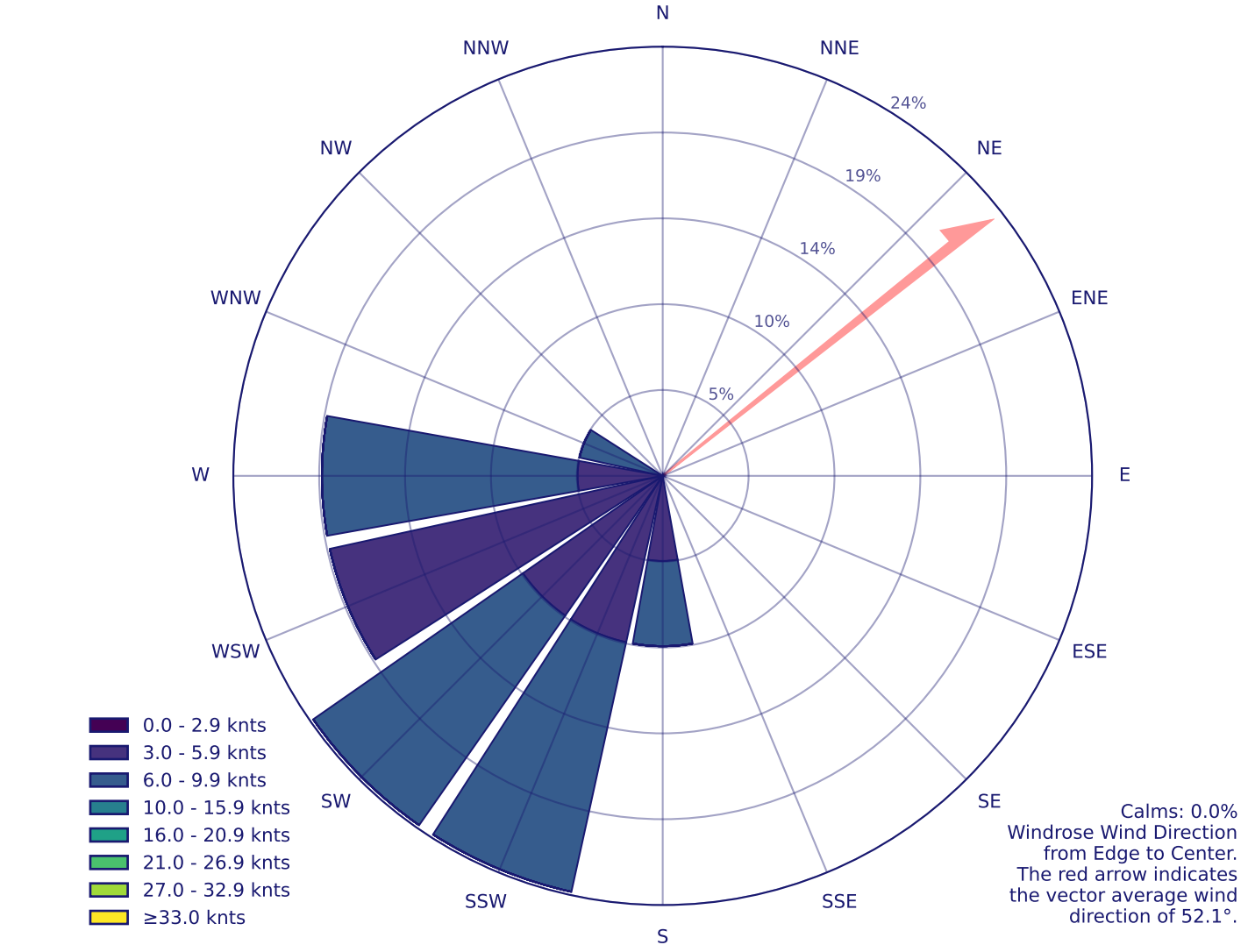
Unit	Particle Size	Count of Records	Count of Detections	Min. concentration	Max. concentration	Avg. concentration
Station 08	PM2.5	2,027	2,027	0.019	0.034	0.026
Station 09	PM2.5	1,412	1,412	0.021	0.039	0.027
Station 10	PM2.5	1,924	1,924	0.021	0.041	0.027

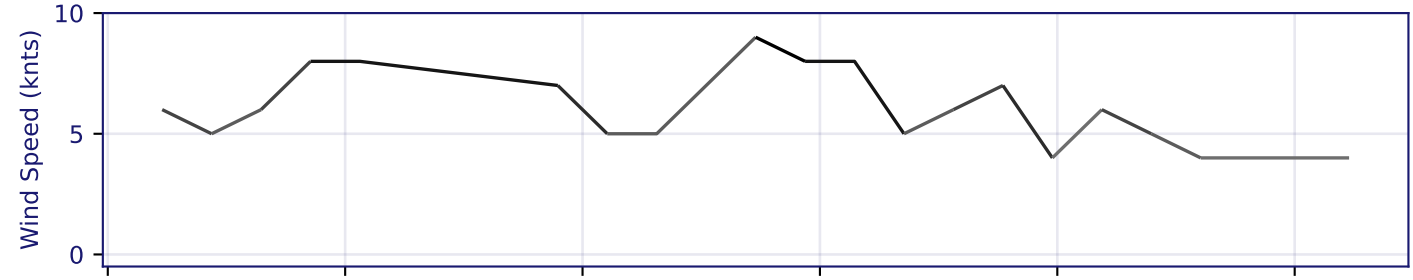
Attachment D

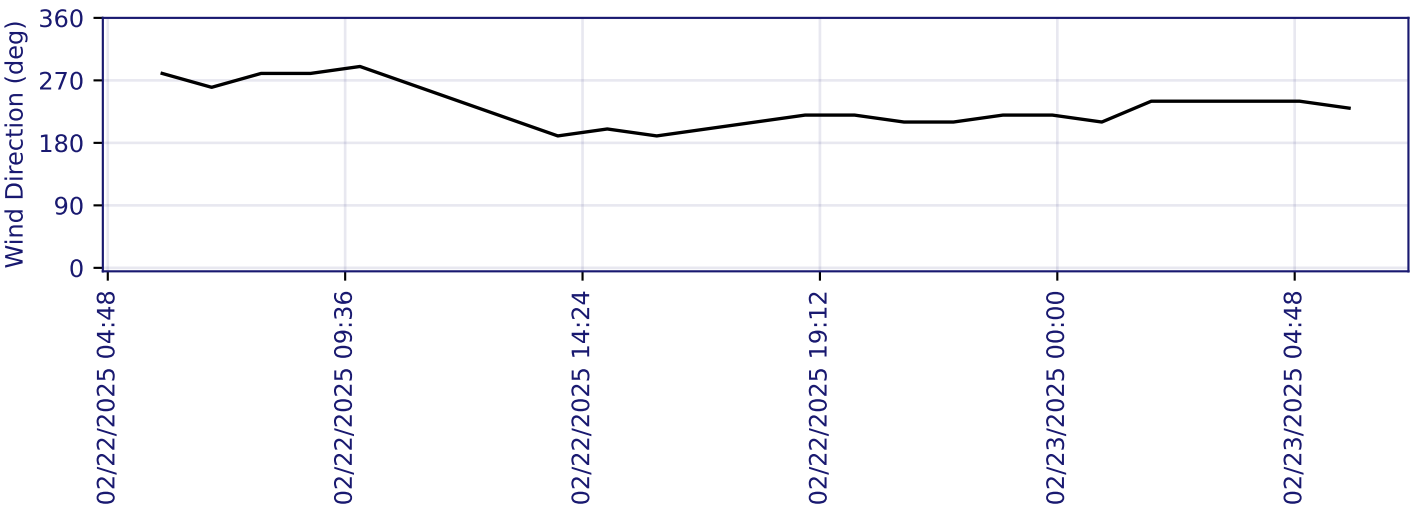
Meteorological Conditions

CTEH

Weather Station: PHILADELPHIA NE
02/22/2025 05:54 TO 02/23/2025 05:54







CTEH

Weather Station: KESTREL (MET 3)- PA
02/22/2025 10:04 TO 02/23/2025 05:44