



# PRELIMINARY AIR MONITORING SUMMARY

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Jenkintown, PA  
SPS Technologies Fire  
February 21-22, 2025

Submitted February 22, 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 in a perimeter around the SPS Technologies 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. Beginning on the evening of February 21, 2025, additional CTEH personnel began performing roaming handheld air monitoring in communities adjacent to the SPS Technologies facility to supplement stationary real-time air monitoring.

This report summarizes real-time air monitoring data collected by CTEH personnel from 0600 EST on February 21, 2025 to approximately 0600 EST on February 22, 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 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 upon 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<sub>2</sub>S), chlorine (Cl<sub>2</sub>), carbon monoxide (CO), sulfuric acid, nitric acid, oxygen (O<sub>2</sub>), and flammability as a percentage of the lower explosive limit (%LEL). Additionally, stationary real-time air monitoring for particulate matter of 2.5 μm diameter or less (PM<sub>2.5</sub>) was conducted using TSI SidePak AM520 instruments. Stationary real-time monitoring locations were established to encompass a 360° monitoring perimeter around the Facility.

### 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 air monitoring are summarized in **Table 2**. Visual depictions of the AreaRAE data are provided in **Attachment B**. A wind rose depicting wind direction and wind speed during this reporting period is provided in **Attachment C**. Meteorological data were acquired from the PHILADELPHIA NE weather station in Philadelphia, PA.

#### 3.1 Handheld Real-Time Air Monitoring

**Table 1: Handheld Real-Time Community Monitoring Results\***

Analyte	Instrument	Number of Readings	Number of Detections	Concentration Range**
Cl <sub>2</sub>	Gastec 8La	29	0	< 0.05 ppm
CO	MultiRAE	17	0	< 1 ppm
H <sub>2</sub> S	MultiRAE	18	0	< 0.1 ppm
HCN	Gastec #12L	1	0	< 0.1 ppm
	MultiRAE	11	0	< 1 ppm
%LEL	MultiRAE	7	0	< 1 %
Nitric Acid	Gastec #15L	29	0	< 0.05 ppm
O <sub>2</sub>	MultiRAE	11	11	20.9 - 22.7 %
Sulfuric Acid	CLPx	45	0	< 23.3 ppb
	Gastec #35	15	0	< 0.2 mg/m <sup>3</sup>
VOCs	MultiRAE	11	0	< 0.1 ppm

\*Note: The data provided has not undergone the 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 Community Monitoring in this reporting period. All measurements of O<sub>2</sub> were within normal ambient conditions.

#### 3.2 Stationary Real-Time Air Monitoring

**Table 2. Summary of Stationary Real-Time Air Monitoring Results<sup>†</sup>**

Unit	Analyte	Number of Readings	Number of Detections	Concentration Range
Station 01	CO	4,595	0	< 1.0 ppm

	H <sub>2</sub> S	4,595	0	< 0.1 ppm
	HCN	5,075	0	< 1.0 ppm
	%LEL	4,595	0	< 1.0 %
	VOCs	9,500	0	< 0.1 ppm
Station 02	CO	3,397	0	< 1.0 ppm
	H <sub>2</sub> S	3,397	0	< 0.1 ppm
	HCN	3,945	0	< 1.0 ppm
	%LEL	3,397	0	< 1.0 %
	VOCs	6,975	271	0.1 - 0.2 ppm
Station 03	CO	4,163	0	< 1.0 ppm
	H <sub>2</sub> S	4,163	0	< 0.1 ppm
	HCN	5,058	0	< 1.0 ppm
	%LEL	4,163	0	< 1.0 %
	VOCs	8,490	0	< 0.1 ppm
Station 04	CO	4,250	0	< 1.0 ppm
	H <sub>2</sub> S	4,250	0	< 0.1 ppm
	HCN	5,073	0	< 1.0 ppm
	%LEL	4,250	0	< 1.0 %
	VOCs	8,879	5,312	0.1 - 1.4 ppm
Station 05	CO	589	0	< 1.0 ppm
	H <sub>2</sub> S	4,606	0	< 0.1 ppm
	HCN	4,937	0	< 1.0 ppm
	%LEL	4,606	0	< 1.0 %
	VOCs	8,953	4	0.1 ppm
Station 06	CO	4,219	0	< 1.0 ppm
	H <sub>2</sub> S	4,219	0	< 0.1 ppm
	HCN	5,009	0	< 1.0 ppm
	%LEL	4,219	0	< 1.0 %
	VOCs	9,146	320	0.1 ppm
Station 07	CO	3,743	0	< 1.0 ppm
	H <sub>2</sub> S	3,743	0	< 0.1 ppm
	HCN	5,070	0	< 1.0 ppm
	%LEL	3,743	0	< 1.0 %
	VOCs	8,542	0	< 0.1 ppm

† Note: This is a preliminary data summary, indicating that the data provided have not undergone the full quality assurance and quality control (QAQC) process and should be considered preliminary at this time. AreaRAE monitoring data may 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 Monitoring PM<sub>2.5</sub> Results\***

Unit	Instrument	Average PM <sub>2.5</sub> Concentration (mg/m <sup>3</sup> )
Station 1	AM520	0.004
Station 2	AM520	0.007
Station 3	AM520	0.005
Station 4	AM520	0.006
Station 5	AM520	0.006
Station 6	AM520	0.021
Station 7	AM520	0.012

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 CO, H<sub>2</sub>S, HCN or % LEL during the reporting period. Low-level detections of VOCs were observed at Station 4 during this reporting period. Based upon wind direction, these detections may be attributed to heavy equipment, generators, and vehicles that were operating in the adjacent parking lot. Particulate matter monitoring indicated that average PM<sub>2.5</sub> concentrations were below the 24-hour National Ambient Air Quality Standards (NAAQS) of 0.035 mg/m<sup>3</sup> during this reporting period.

#### **4.0 METEOROLOGICAL CONDITIONS**

**Attachment C** contains a wind rose depicting wind speed and direction from station PHILADELPHIA NE, which is approximately 6.89mi from site.

# Attachment A

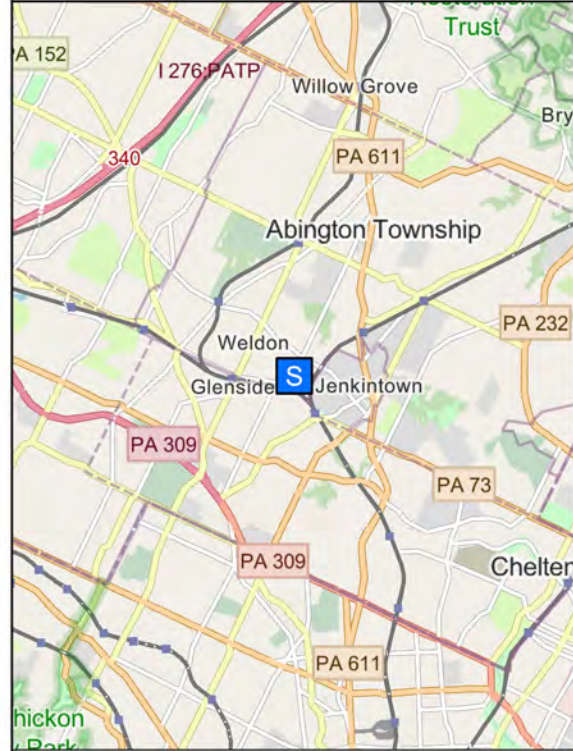
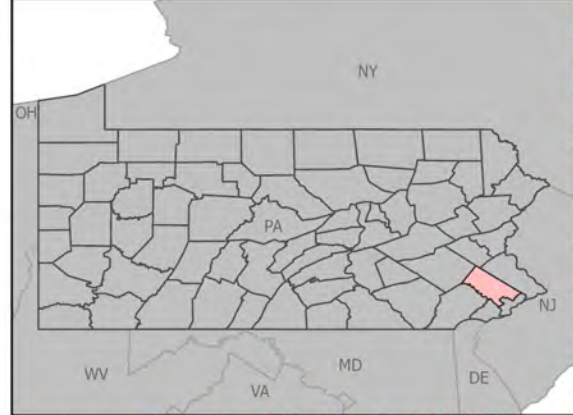
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## Maps



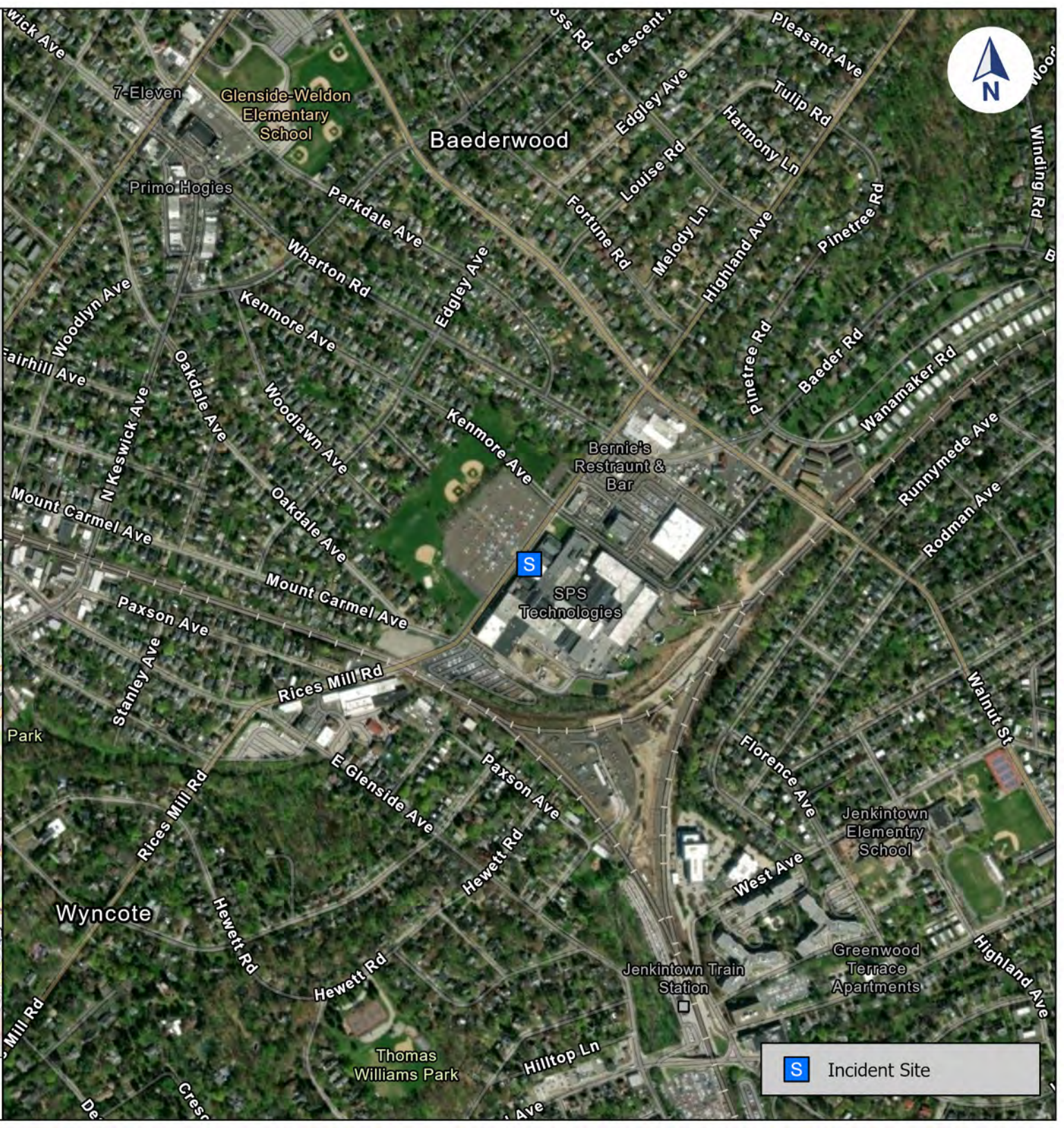
## SPS Technologies Fire


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

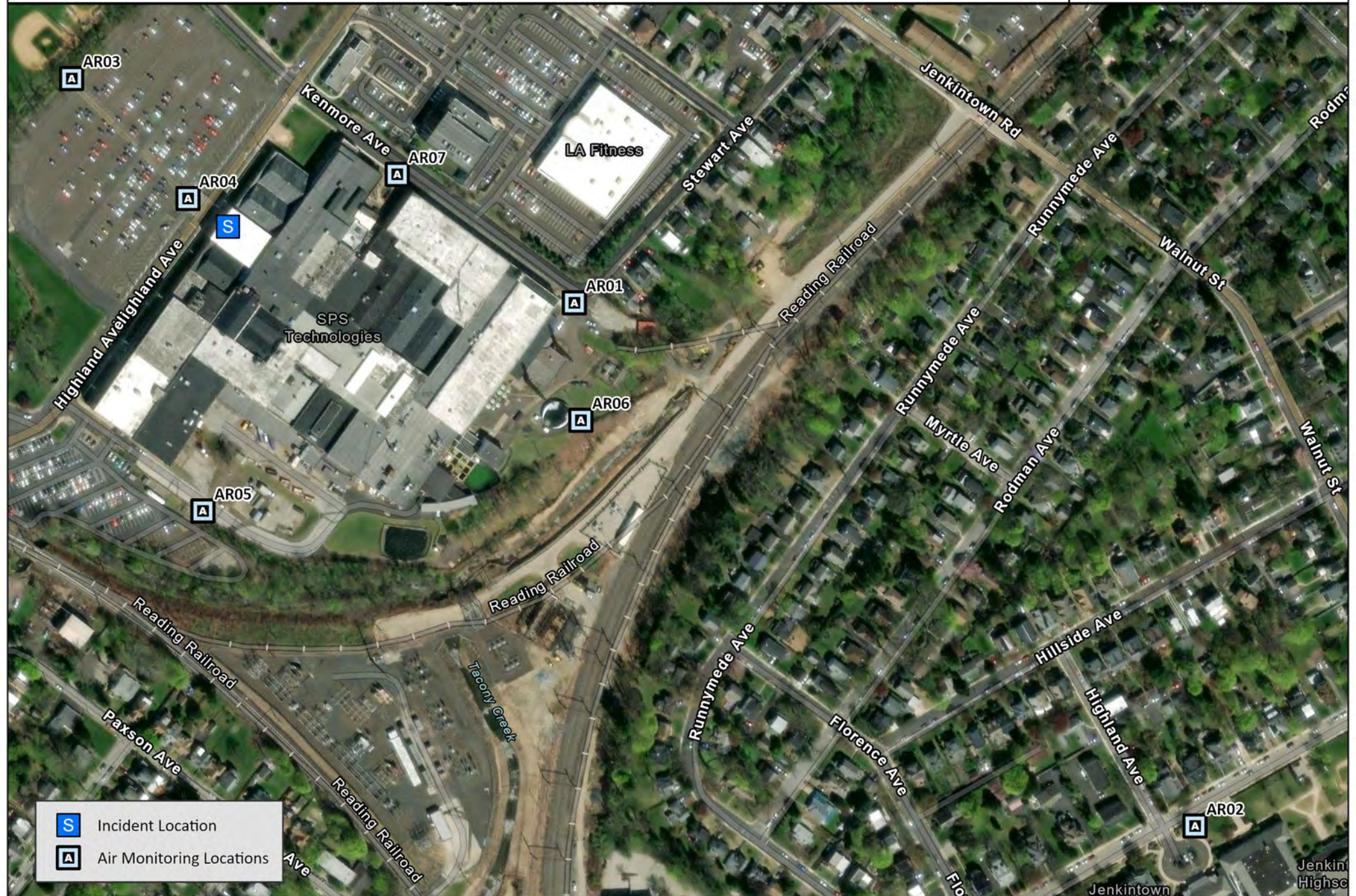


Updated At: 2/20/2025 4:59 PM

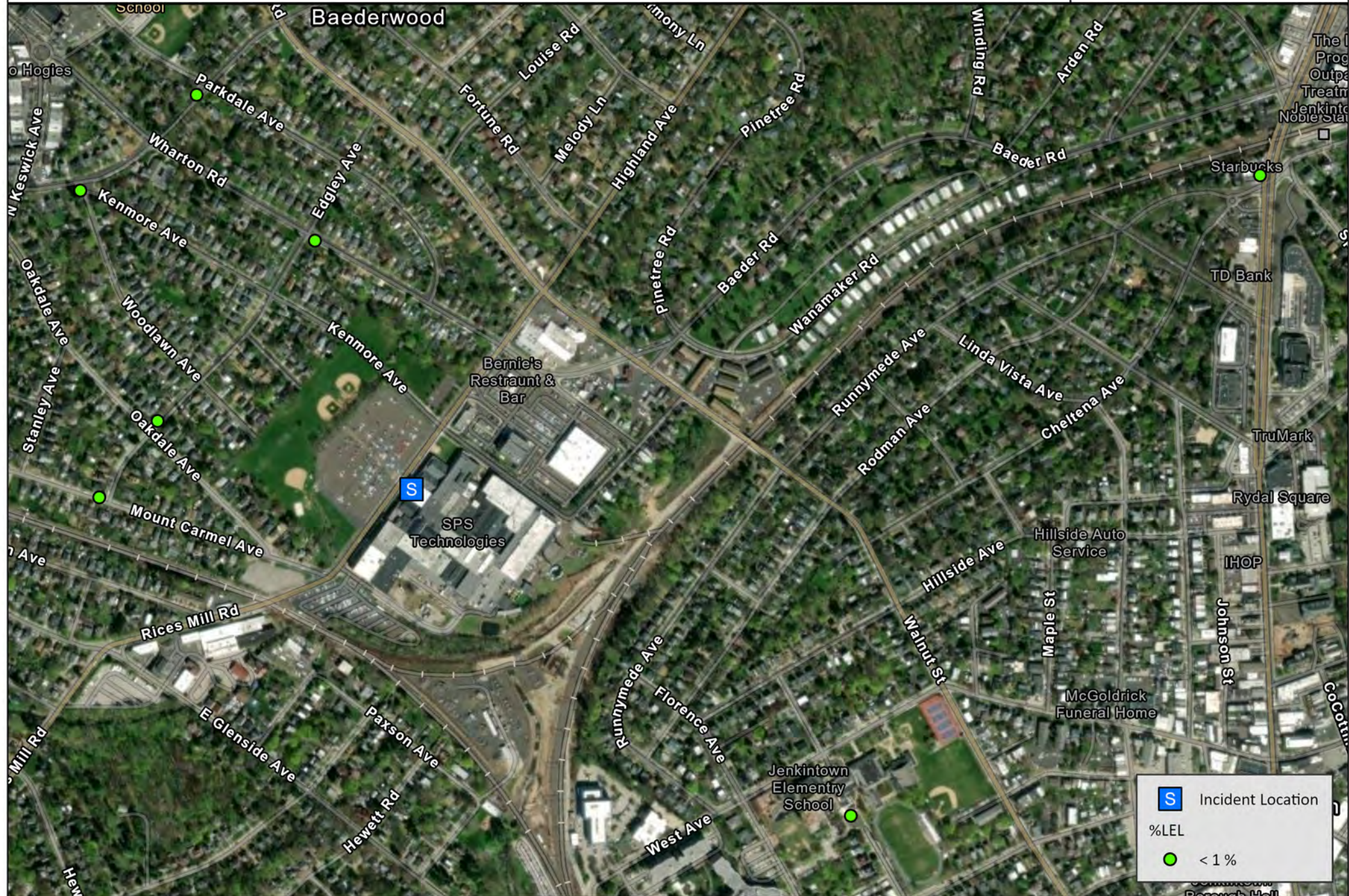
Projection: NAD 1983 2011 StatePlane Pennsylvania South  
FIPS 3702



 Incident Site

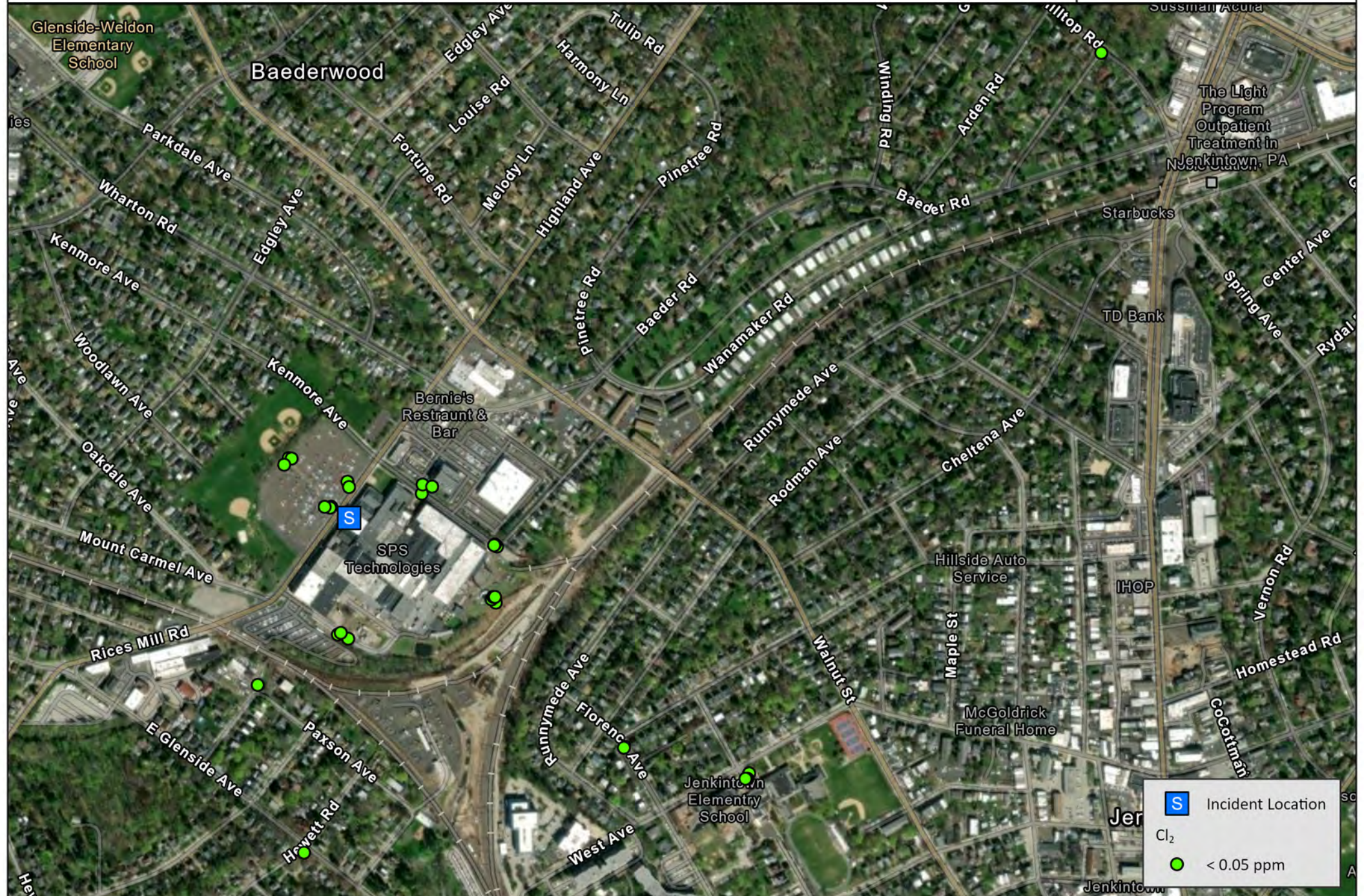


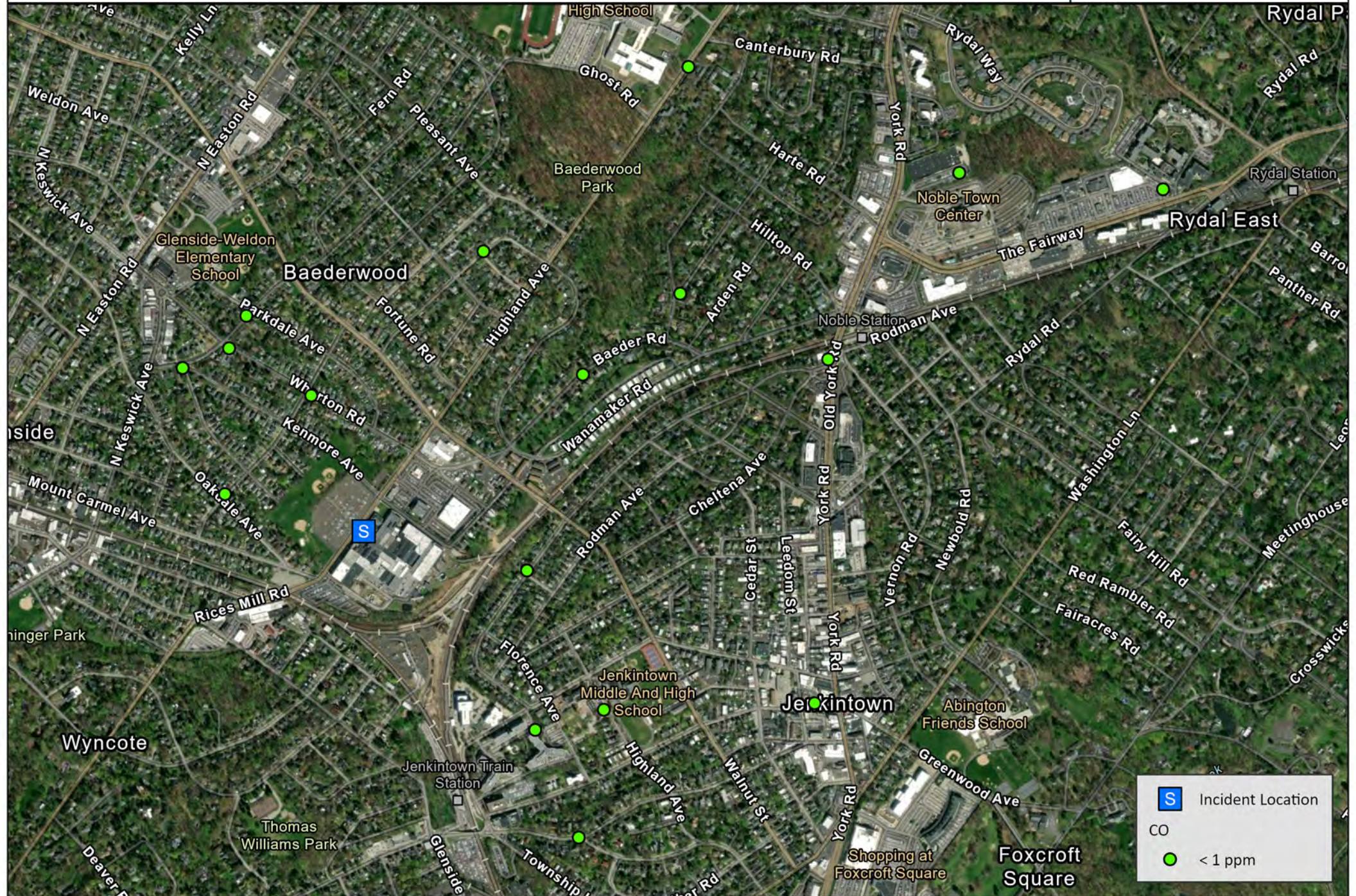


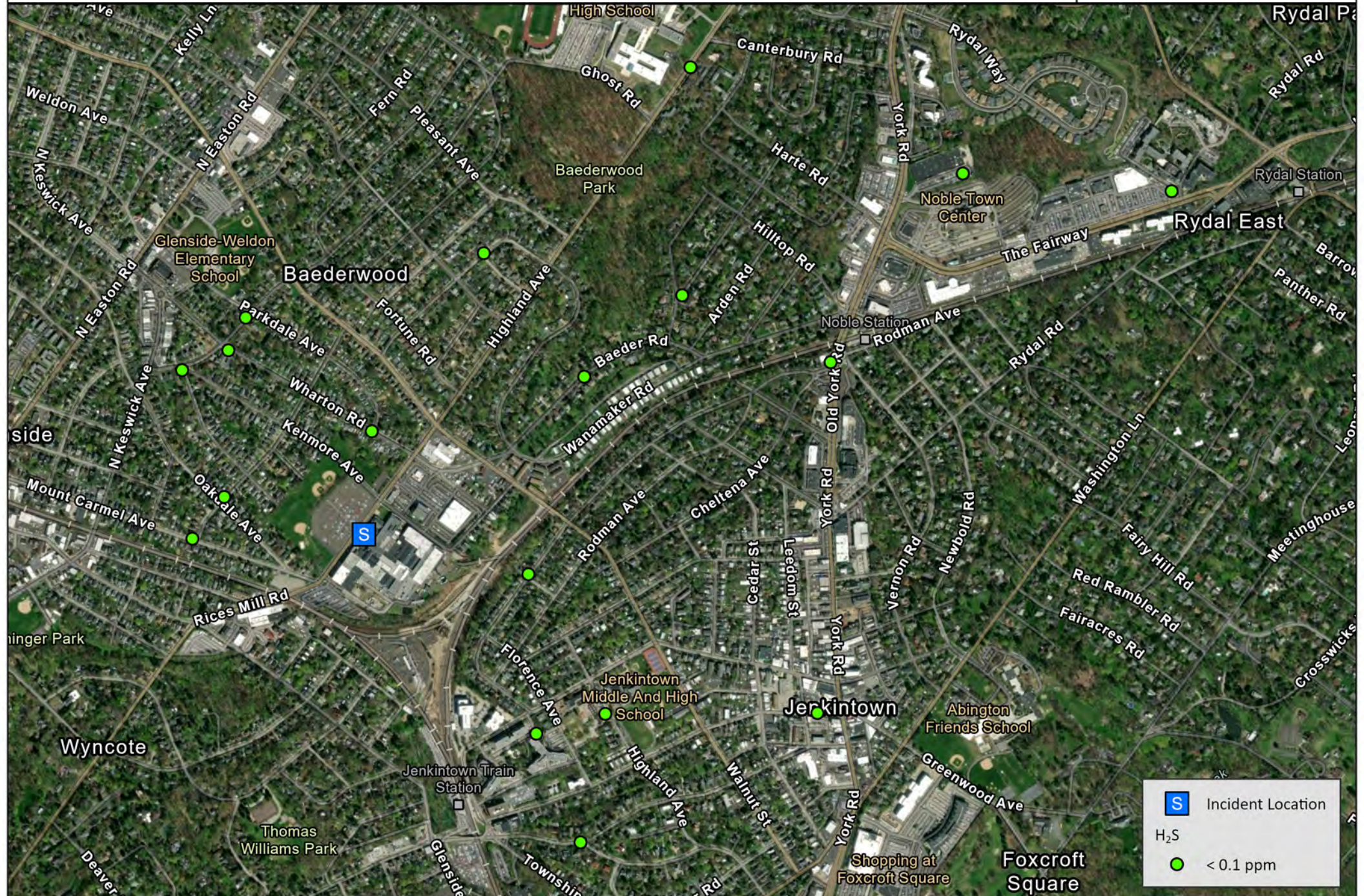


**S** Incident Location  
 %LEL  
 ● < 1 %

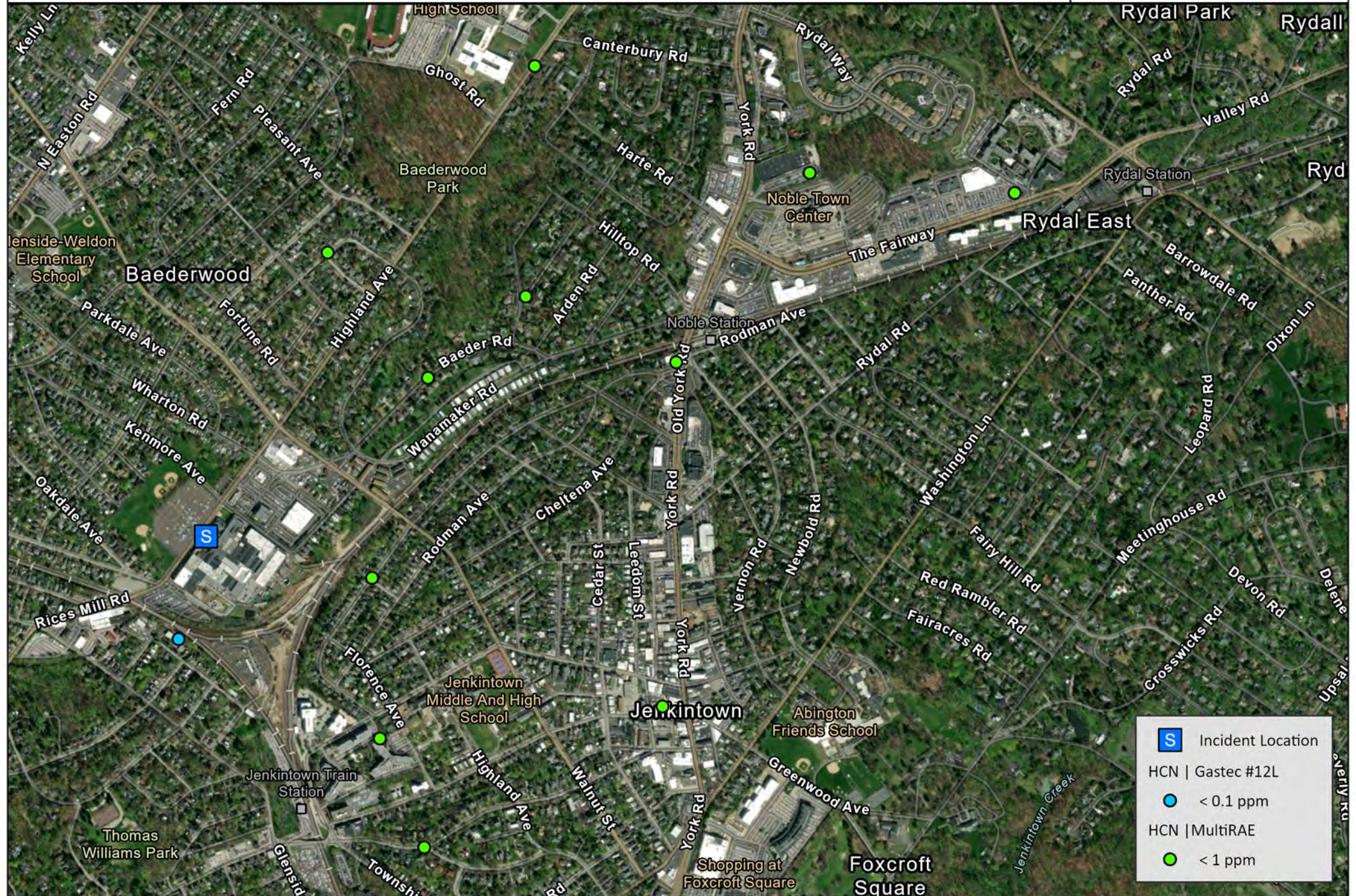




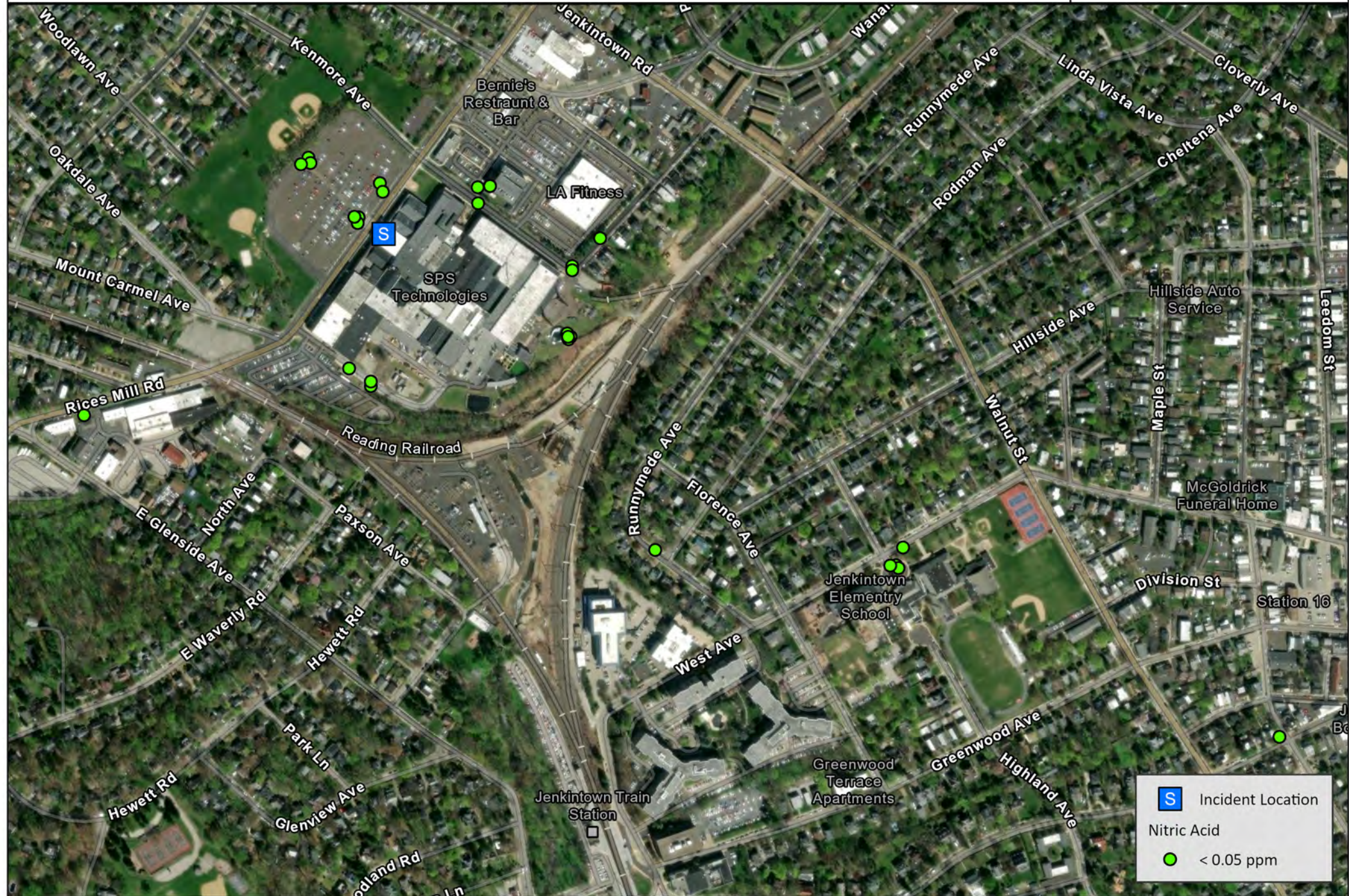






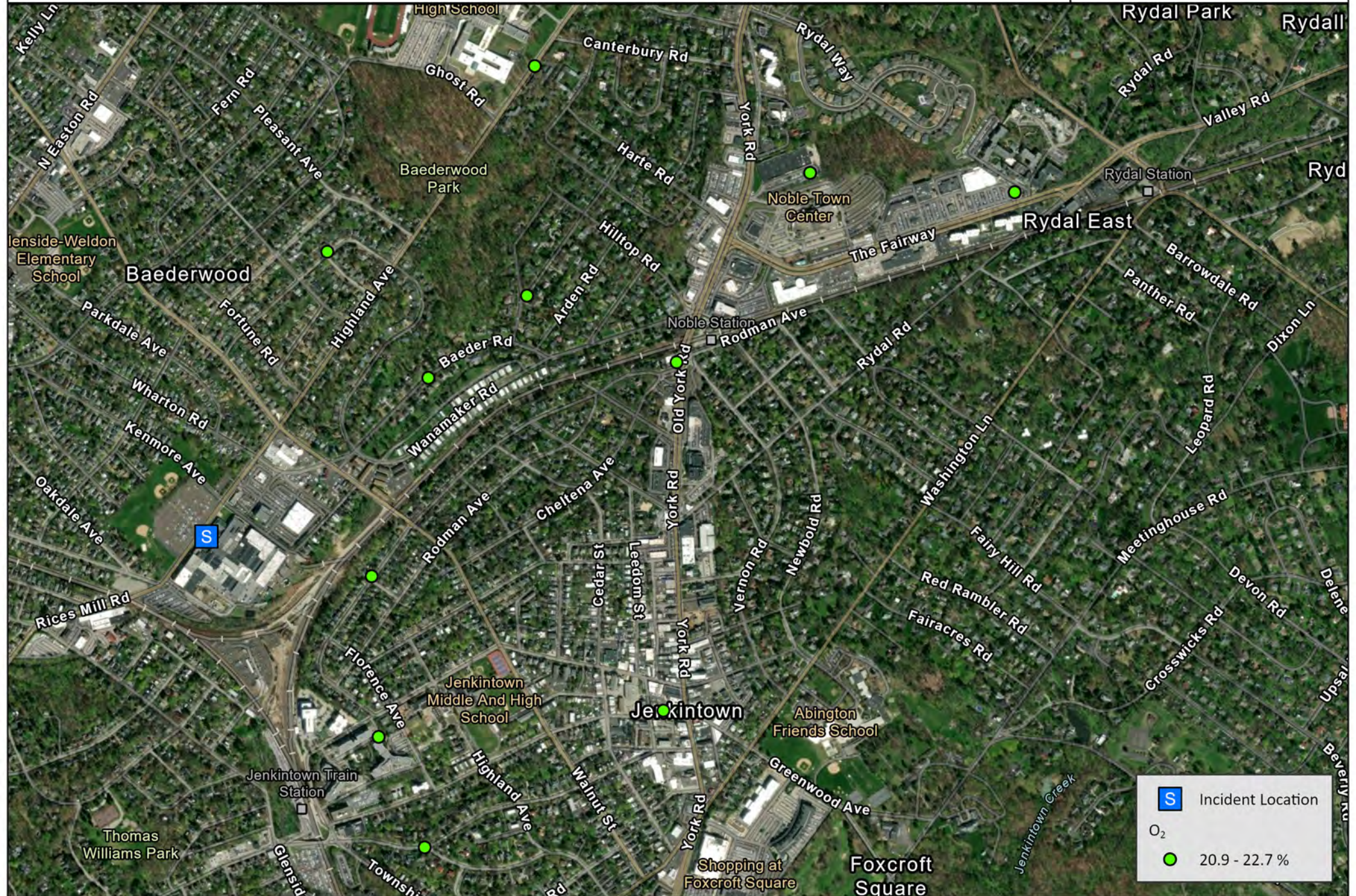
	Incident Location
H <sub>2</sub> S	
	< 0.1 ppm

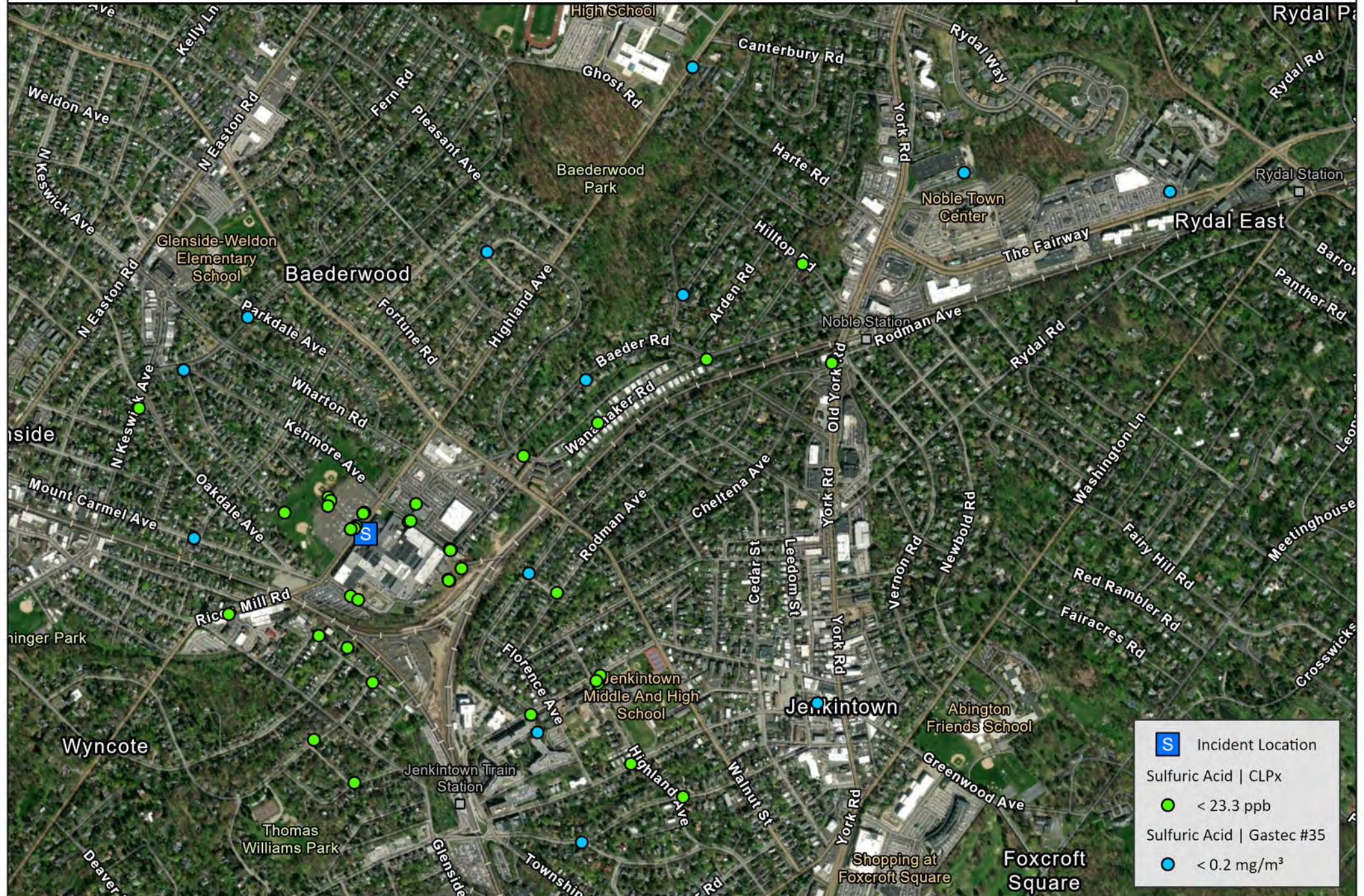


	Incident Location
	HCN   Gastec #12L < 0.1 ppm
	HCN   MultiRAE < 1 ppm



 Incident Location  
Nitric Acid  
 < 0.05 ppm





**S** Incident Location

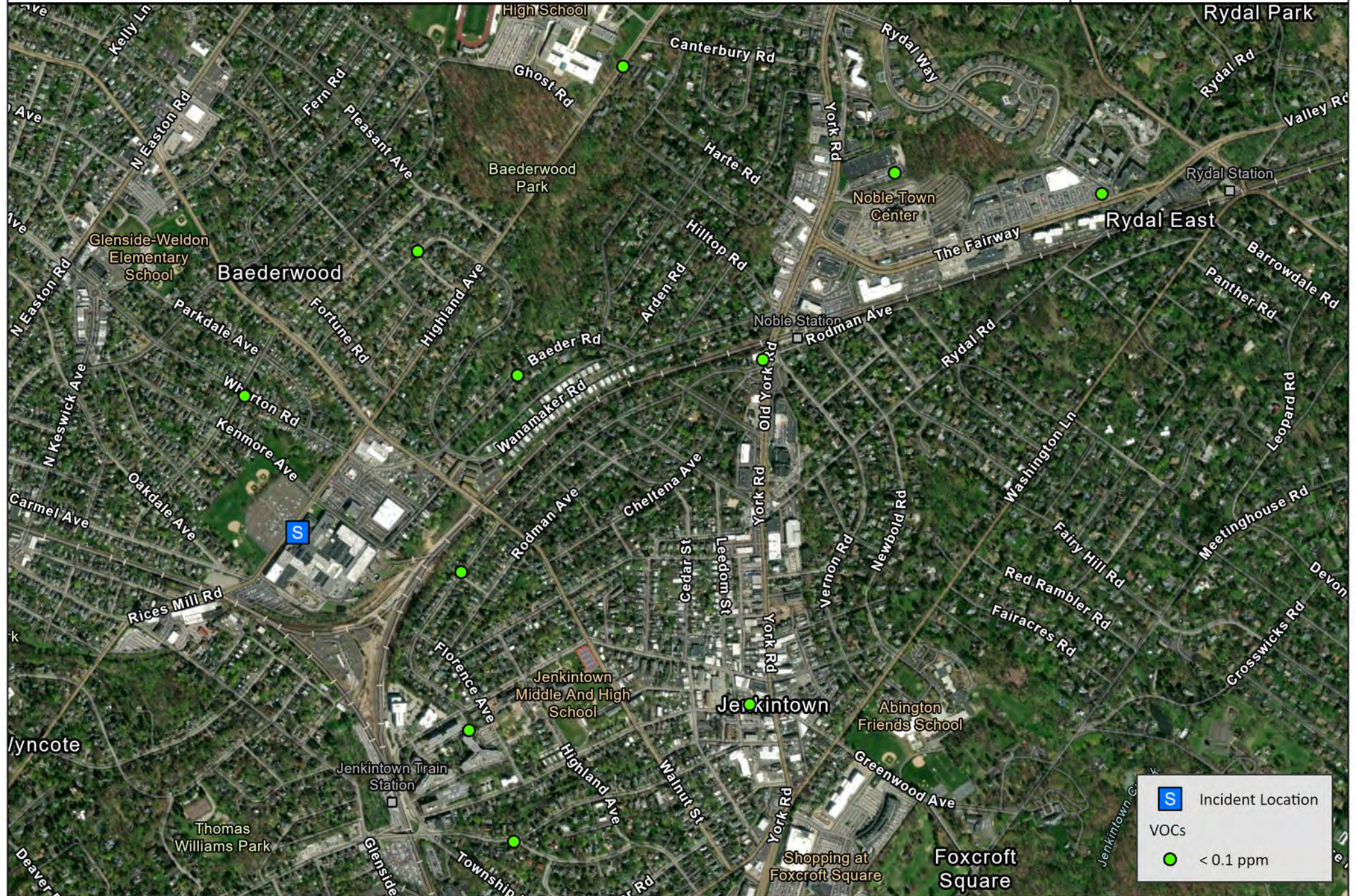
Sulfuric Acid | CLPx

● < 23.3 ppb

Sulfuric Acid | Gastec #35

● < 0.2 mg/m<sup>3</sup>





**S** Incident Location  
 VOCs  
 ● < 0.1 ppm

# Attachment B

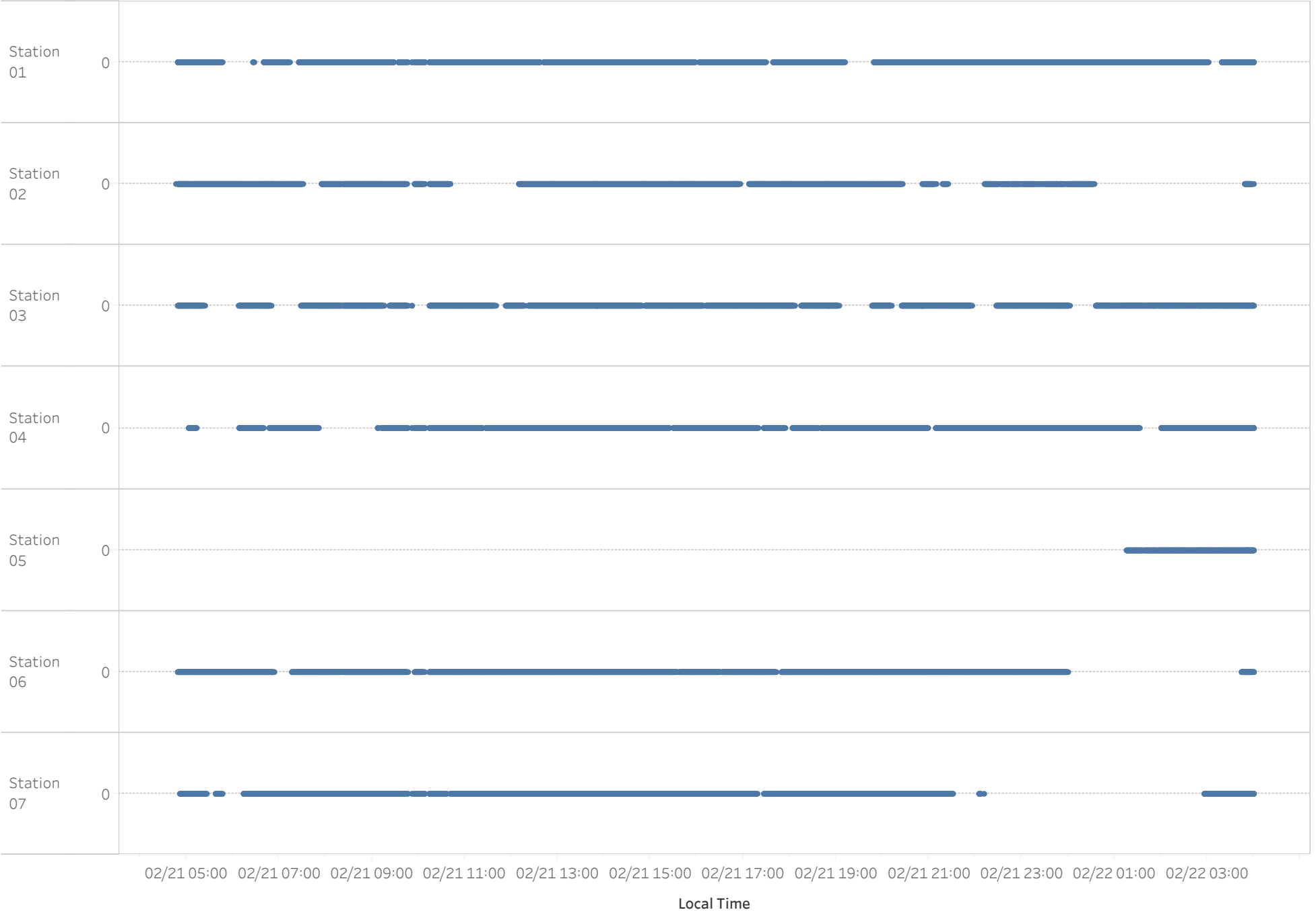
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## Stationary Real-Time Monitoring Graphs

# Preliminary Remote-telemetered Real-time Air Monitoring Readings

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

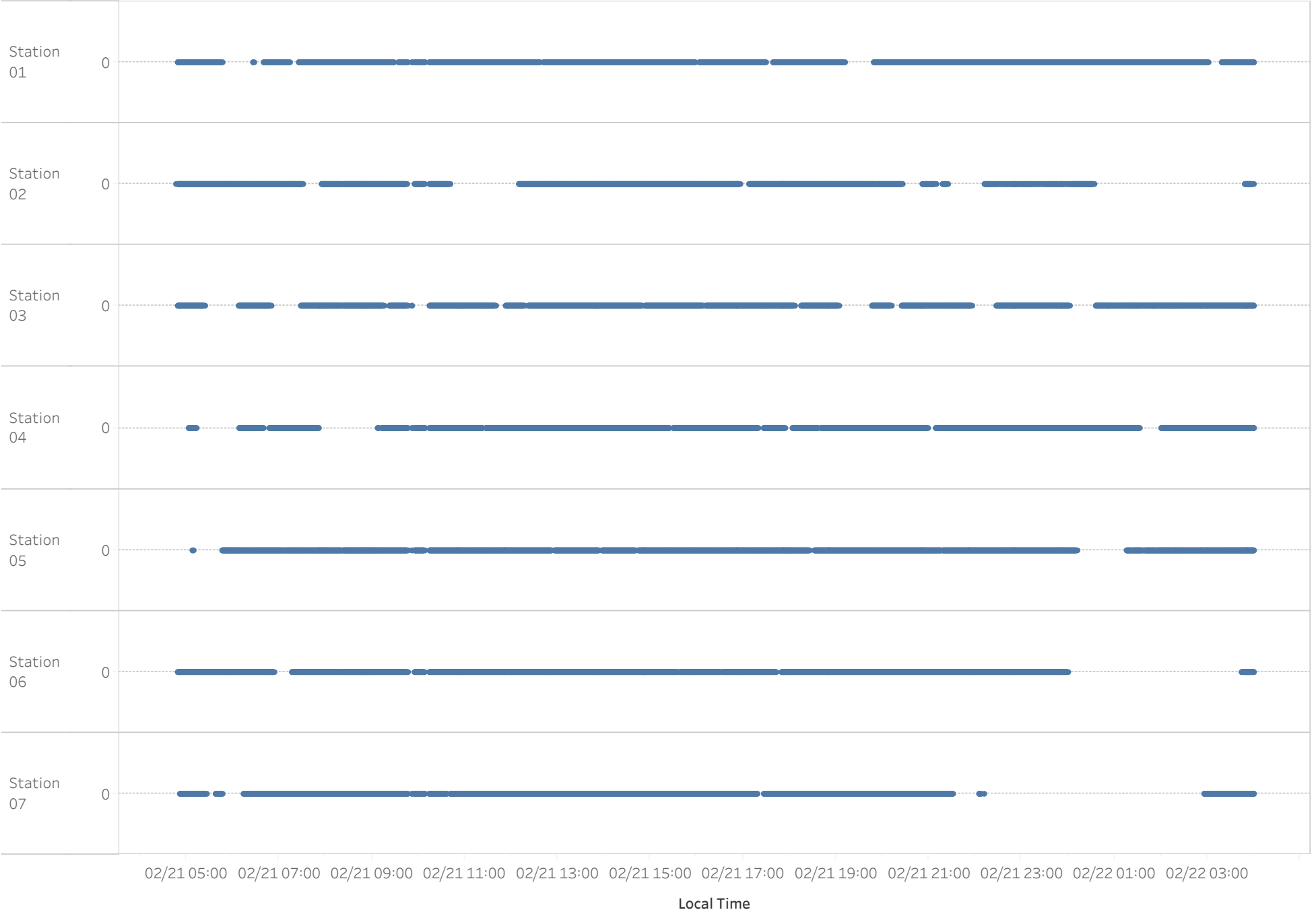
2/21/2025 4:45:57 AM to 2/22/2025 3:59:42 AM | **Analyte: CO (ppm)**



# Preliminary Remote-telemetered Real-time Air Monitoring Readings

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

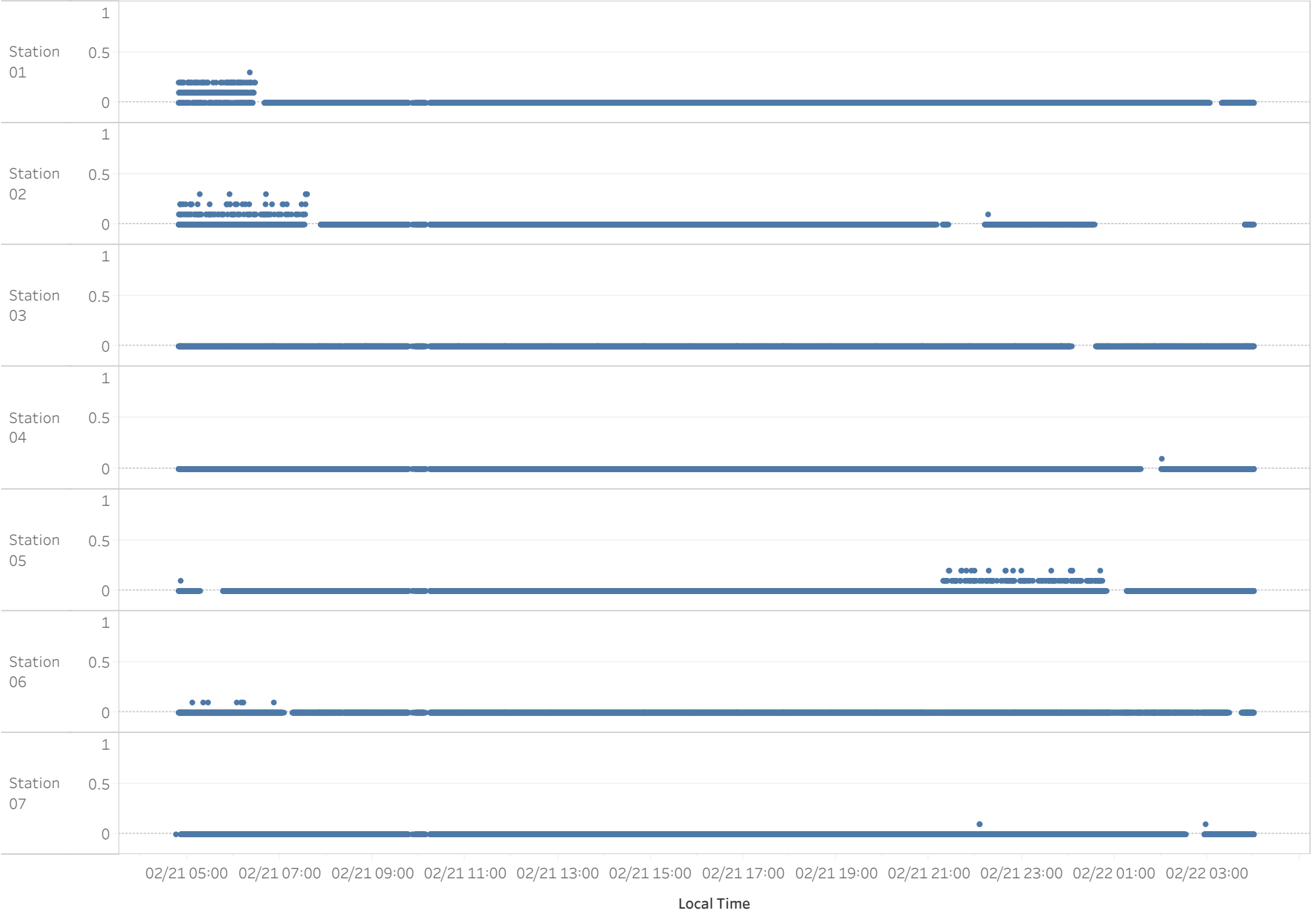
2/21/2025 4:45:57 AM to 2/22/2025 3:59:42 AM | **Analyte: H2S (ppm)**



# Preliminary Remote-telemetered Real-time Air Monitoring Readings

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

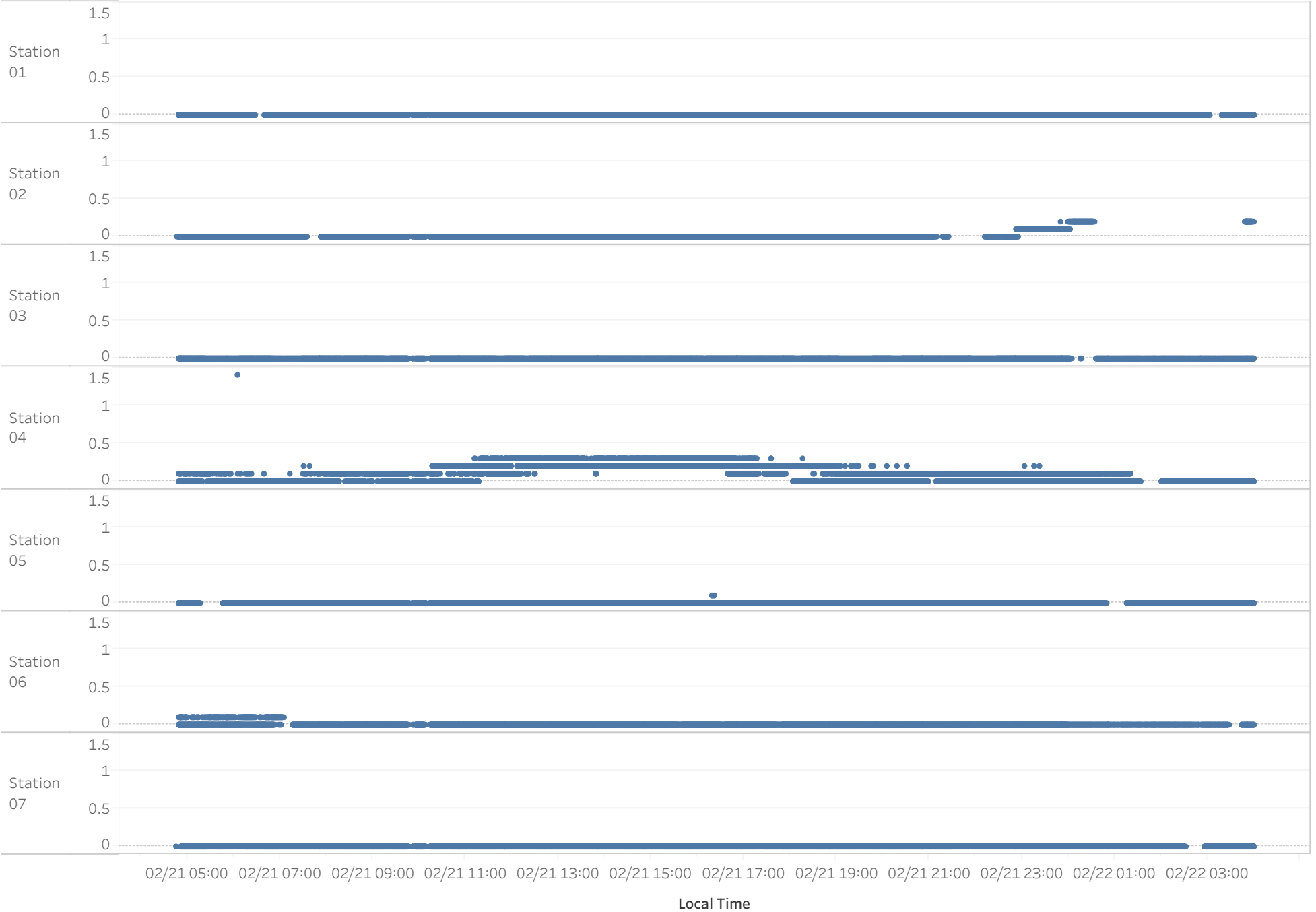
2/21/2025 4:44:52 AM to 2/22/2025 3:59:42 AM | Analyte: HCN (ppm)



# Preliminary Remote-telemetered Real-time Air Monitoring Readings

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

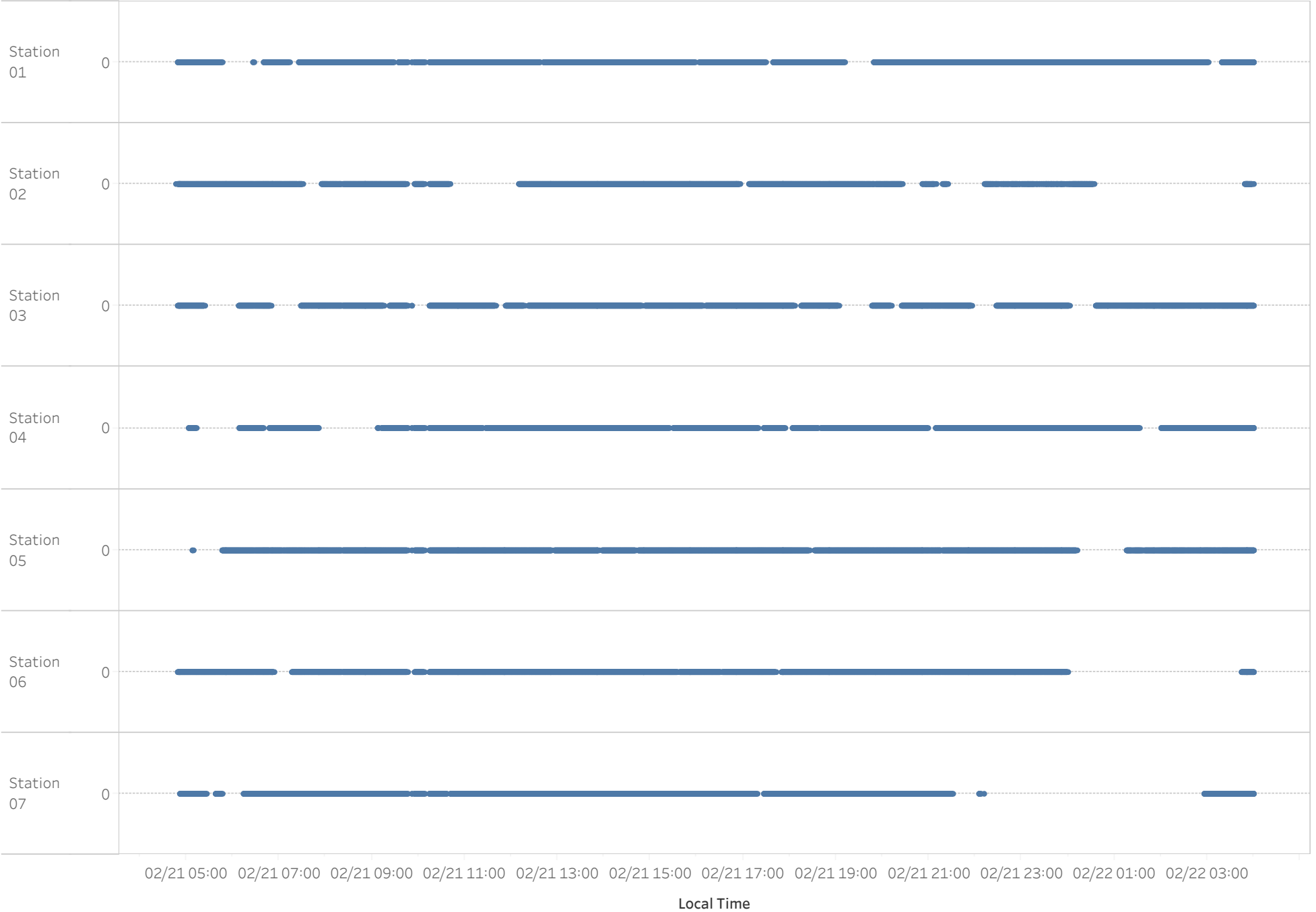
2/21/2025 4:44:52 AM to 2/22/2025 3:59:42 AM | Analyte: VOCs (ppm)



# Preliminary Remote-telemetered Real-time Air Monitoring Readings

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

2/21/2025 4:45:57 AM to 2/22/2025 3:59:42 AM | **Analyte: LEL (%)**



## Summary Table

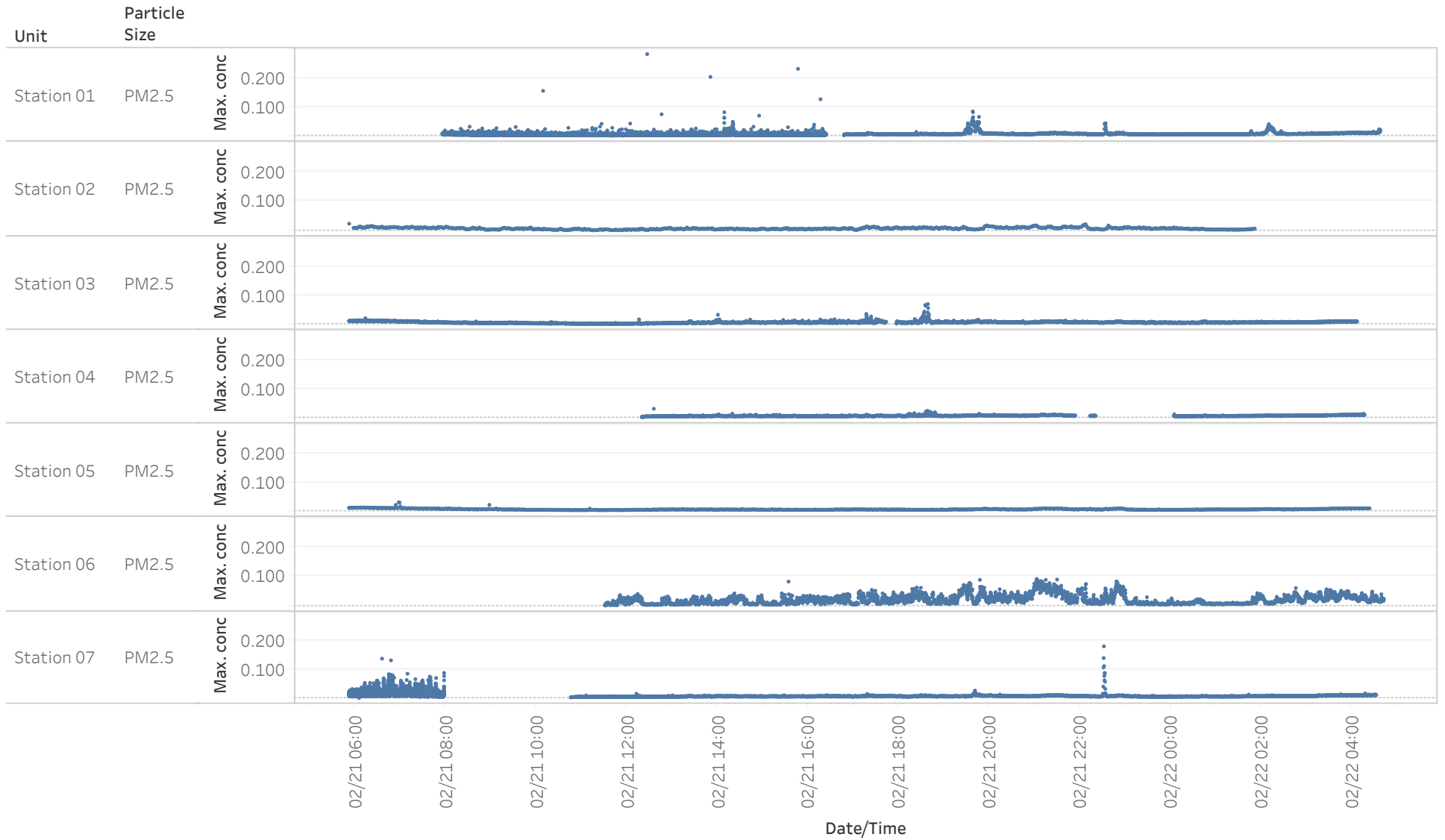
Unit ID	Analyte	Count of Readings	Count of Detections	Range of Detections
Station 01	CO	4,595	0	< 1.0 ppm
	H2S	4,595	0	< 0.1 ppm
	HCN	5,075	0	< 1.0 ppm
	LEL	4,595	0	< 1.0 %
	VOCs	9,500	0	< 0.1 ppm
Station 02	CO	3,397	0	< 1.0 ppm
	H2S	3,397	0	< 0.1 ppm
	HCN	3,945	0	< 1.0 ppm
	LEL	3,397	0	< 1.0 %
	VOCs	6,975	271	0.1 - 0.2 ppm
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	HCN	5,058	0	< 1.0 ppm
	LEL	4,163	0	< 1.0 %
	VOCs	8,490	0	< 0.1 ppm
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	H2S	4,606	0	< 0.1 ppm
	HCN	4,937	0	< 1.0 ppm
	LEL	4,606	0	< 1.0 %
	VOCs	8,953	4	0.1 ppm
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	VOCs	9,146	320	0.1 ppm
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	H2S	3,743	0	< 0.1 ppm
	HCN	5,070	0	< 1.0 ppm
	LEL	3,743	0	< 1.0 %
	VOCs	8,542	0	< 0.1 ppm



# PROJ-052216 | PM2.5 Graph

SPS Technologies Fire | Abington Township, PA

02/21 05:51 to 02/22 04:42



## Summary Table

Unit	Particle Size	Count of Records	Count of Detections	Min. concentration	Max. concentration	Avg. concentration
Station 01	PM2.5	33,331	33,329	0.000	0.282	0.004
Station 02	PM2.5	1,196	1,195	0.000	0.023	0.007
Station 03	PM2.5	8,136	8,136	0.001	0.069	0.005
Station 04	PM2.5	3,341	3,341	0.001	0.030	0.006
Station 05	PM2.5	1,353	1,353	0.003	0.030	0.006
Station 06	PM2.5	4,130	4,130	0.001	0.091	0.021
Station 07	PM2.5	11,848	11,847	0.000	0.181	0.012

# Attachment C

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## Meteorological Conditions

