



Air Monitoring Report – SPS Technologies Emergency Response

U.S. EPA Mid-Atlantic Region

February 25, 2025

The Environmental Protection Agency Region (EPA) and its contractor, Tetra Tech, prepared this report of the air monitoring data collected as part of the EPA Region 3 response to the factory fire at SPS Technologies, located at 301 Highland Ave, Jenkintown, PA. The purpose of the air quality monitoring is to assist the EPA federal on-scene coordinator in determining whether air quality meets national air quality standards established by the agency and to confirm what, if any, elevated levels of common air contaminants and other chemicals exist in the air outside the facility.

The data collected in this report includes EPA monitoring recorded between February 18, 2025, and February 23, 2025, which was carried out by deploying a Viper wireless remote monitoring system at two fixed sites in the community. The system produced a continuous, 24-hour air monitoring feed and tested for combustion, including respirable particulate matter and volatile organic compounds (VOCs), and other potential chemicals stored at the site.

The air monitoring sensors are calibrated before being deployed into the field, and as needed after deployment. Calibration spikes resulting from standard calibration procedures are normal and expected. In this report, the lower and upper alarm levels are based on industry standards set by the EPA, Occupational Health and Safety Administration, and/or the National Institute for Occupational Safety and Health (NIOSH) and can be found on page 3 of this document. The data and report highlight where pollutants meet or exceed lower or upper alarm levels. EPA air monitoring has not detected respirable dust or any chemicals at levels of concern to date in the air outside of the facility.

Additional information and updates related to site activity can be found on the [PADEP Community Information](#) and [Township of Abington](#) website pages.



February 26, 2025

Mr. Kevin Heym
On-Scene Coordinator
U.S. Environmental Protection Agency, Region 3
Four Penn Center, 1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2029

**Subject: SPS Technologies Warehouse Fire ER
Summary of Air Monitoring Activities Conducted on 2/18/2025 to 2/23/2025
EPA Contract No.: 68HE0320D0003 (START VI, Region 3)
EPA Technical Direction No.: T601-25-02-001
Document Tracking Number: 1069**

Dear Mr. Heym:

Under emergency response (ER) instructions issued by the Environmental Protection Agency (EPA), the Superfund Technical Assessment and Response Team (START) deployed the instruments listed below at two stations (Station 1 and Station 2 described below) as a result of the fire at SPS Technologies located at 301 Highland Ave. Jenkintown, PA 19046. START arrived on site on Tuesday, February 18, 2025, at approximately 1:00 PM and proceeded to deploy air monitoring instruments as directed by EPA. After deploying air monitoring instruments they were connected to EPA's telemetry system, Viper. Alarm limits were programmed into Viper to alert EPA and START if the chemicals of concern being monitored for exceeded their respective screening levels described below.

Air Monitoring Station Locations

Station 1 was located southeast of SPS Technologies adjacent to west side of Southeast Pennsylvania Transit Authority (SEPTA) tracks north of Jenkintown-Wyncote station. Air monitoring instruments deployed at station 1 were connected to Viper at 6:00 PM on February 18, 2025.

Station 1 was moved to the coordinates 40.09787332353415, -75.1364029370481 on Runnymede Avenue at 17:05 on February 20, 2025.

Station 2 is located along fence in front of Jenkintown Middle/High School located at 250 West Ave., Jenkintown, PA 19046. Air monitoring instruments deployed at station 2 were connected to Viper at 8:15 PM on February 18, 2025.

Notes and Definitions

Chemical Monitoring

- The lower alarm levels for Hydrogen Sulfide, Chlorine Gas, Carbon Monoxide, volatile organic compounds (VOCs), and Hydrogen Cyanide, are based on either the Short-Term Exposure Limit (STEL) or Recommended Exposure Limits (RELs) set for that specific chemical by the Occupational Health and Safety Administration (OSHA).
- The upper alarm levels for Hydrogen Sulfide, Chlorine gas, and Hydrogen Cyanide are the Immediately Dangerous to Life and Health (IDLH) values set by The National Institute for Occupational Safety and Health (NIOSH) divided in half to provide a conservative estimate.
- The alarm level for the Lower Explosive Limit (LEL) sensor is based on the industry standard that was established by OSHA guidelines for confined space entries.

Particulate Monitoring

- The lower alarm levels for PM 2.5 and PM 4 (respirable) are based on Permissible Exposure Limits (PELs) set by OSHA.
- The lower alarm level for PM 10 is based on National Ambient Air Quality Standards (NAAQS) set by the Environmental Protection Agency (EPA).

References

- STEL, PEL, and REL :
 - <https://www.osha.gov/annotated-pels/table-z-1>
- IDLH:
 - <https://www.cdc.gov/niosh/idlh/intridl4.html>
- NAAQS
 - <https://www.epa.gov/criteria-air-pollutants/naaqs-table>
- LEL
 - <https://www.osha.gov/laws-regs/regulations/standardnumber/1915/1915SubpartBAppA>

Instruments Deployed at Air Monitoring Stations

At each station, an AreaRAE Pro was deployed with the following sensors: photoionization detector (PID) measuring volatile organic compounds (VOC), carbon monoxide (CO), lower explosive limit (LEL), hydrogen sulfide (H₂S), hydrogen cyanide (HCN), and chlorine (Cl₂). The lower alarm levels for H₂S, Cl₂, CO, VOC, and HCN, are based on either the Short-Term Exposure Limit (STEL) or Recommended Exposure Limits (RELS) set for that specific chemical by the Occupational Health and Safety Administration (OSHA). The alarm limit for the LEL sensor is based on the industry standard that was established by OSHA guidelines for confined space entries. Upper alarm levels for H₂S, Cl₂, and HCN are the Immediately Dangerous to Life and Health (IDLH) values set by The National Institute for Occupational Safety and Health (NIOSH) divided in half to provide a conservative estimate. The following alarms were programmed into Viper:

- VOC Low – 5 parts per million (ppm)
 High – 50 ppm
- Hydrogen cyanide Low – 1 ppm
 High – 2 ppm
- Hydrogen sulfide Low – 0.5 ppm
- Carbon monoxide Low – 12.5 ppm
- LEL Low – 10 percent
- Chlorine Low – 0.5 ppm
 High – 5 ppm

DustTrak DRX Model 8533 instruments were deployed monitoring for particulate matter (PM) sizes: 1 micron, 2.5 micron, 4 micron, 10 micron, and total particulates. PM 2.5 and PM 4 (Respirable) lower alarm values are based on Permissible Exposure Limits (PELs) set by OSHA and are divided in half. The lower alarm limit for PM 10 is based on National Ambient Air Quality Standards (NAAQS) set by the EPA. The following alarms were programmed into Viper:

- PM2.5 and PM4 2.5 milligram per cubic meter of air (mg/m³)
- PM10 0.125 mg/m³

Honeywell Single Point Monitor (SPM) Flex with a mineral acid chemcassette programmed to detect sulfuric acid (H₂SO₄) were deployed. The SPM Flex was programmed to issue a low alarm warning at 25 parts per billion (ppb) and a high alarm warning at 50 ppb for sulfuric acid. These warning levels built into the instruments are more conservative than the Viper alarms set based on the NIOSH values below. The lower alarm limit for H₂SO₄ is based on the PEL and the REL. The upper alarm limit is half of the IDLH. The following alarms were programmed in Viper:



- Sulfuric acid Low – 1 ppm
 High – 7.5 ppm

Air Monitoring Results

The first day of air monitoring started in the evening of February 18, 2025, and concluded at 7:59 AM on February 19, 2025. The second day of air monitoring began at 8:00 AM February 19, 2025, and concluded at 7:59 AM on February 20, 2025. This schedule stayed consistent through day 5 which started at 8:00 AM on February 22, 2025, and concluded at 7:59 AM on February 23, 2025.

The Dust Traks and SPM Flex instruments were taken down in the afternoon of February 20 (day 3). They were not deployed on day 4 or day 5 at EPA direction due to sustained readings of zero ppm though the duration of the response, especially after the fire was contained and was no longer an active source of particulate matter

- Chlorine – no detections were recorded at Station 1. The maximum detection at Station 2 was 0.9 ppm and the daily average ranged from 0.074 ppm to 0.624 ppm.
- Carbon monoxide – The maximum detection at Station 1 was 5 ppm and the daily average ranged from 0 ppm to 0.005 ppm. The maximum detection at Station 2 was 6 ppm and the daily average ranged from 0 ppm to 0.813 ppm. There were no CO detections at either station on day 2. There were no CO detections at Station 1 day 3 through day 5.
- Hydrogen sulfide – no detections were recorded at Station 1 or 2.
- Hydrogen cyanide – The maximum detection at Station 1 was 4 ppm. The daily average at Station 1 ranged from 0 ppm to 0.371 ppm. The maximum detection at Station 2 was 3 ppm. The daily average at Station 2 ranged from 0 ppm to 0.006 ppm. There were no detections at Station 1 or Station 2 on day 2. There were no detections at Station 1 on day 4.
- Lower explosive limit – there were no detections at Station 1. The maximum detection at Station 2 was 9%. The daily average at Station 2 ranged from 0% to 0.058%. There were no detections at Station 2 on day 1, 2, or 5.
- Volatile organic compounds – the maximum detection at Station 1 was 803 ppb and the daily average ranged from 0 ppb to 7.95 ppb. The maximum detection at Station 2 was 220 ppb and the daily average ranged from 0.002 ppb to 0.962 ppb. There were no detections at Station 1 on day 3 or 4.
- PM 2.5 – the daily average ranged from 0.021 mg/m³ to 0.161 mg/m³ at Station 1 and the daily average ranged from 0.007 mg/m³ to 0.030 mg/m³ at Station 2.

- PM 4 – the daily average ranged from 0.021 mg/m³ to 0.161 mg/m³ at Station 1 and the daily average ranged from 0.007 mg/m³ to 0.031 mg/m³ at Station 2.
- PM 10 – the daily average ranged from 0.021 mg/m³ to 0.161 mg/m³ at Station 1 and the daily average ranged from 0.007 mg/m³ to 0.031 mg/m³ at Station 2.
- Sulfuric acid – there were no detections at Station 1 or 2.

It should be noted that the high spikes observed on chlorine gas, hydrogen cyanide, LEL, and VOCs were equal to the concentration of standard gases that were used for the calibration of those specific sensors. These calibrations were done before instruments were deployed in the field and as needed during the event.

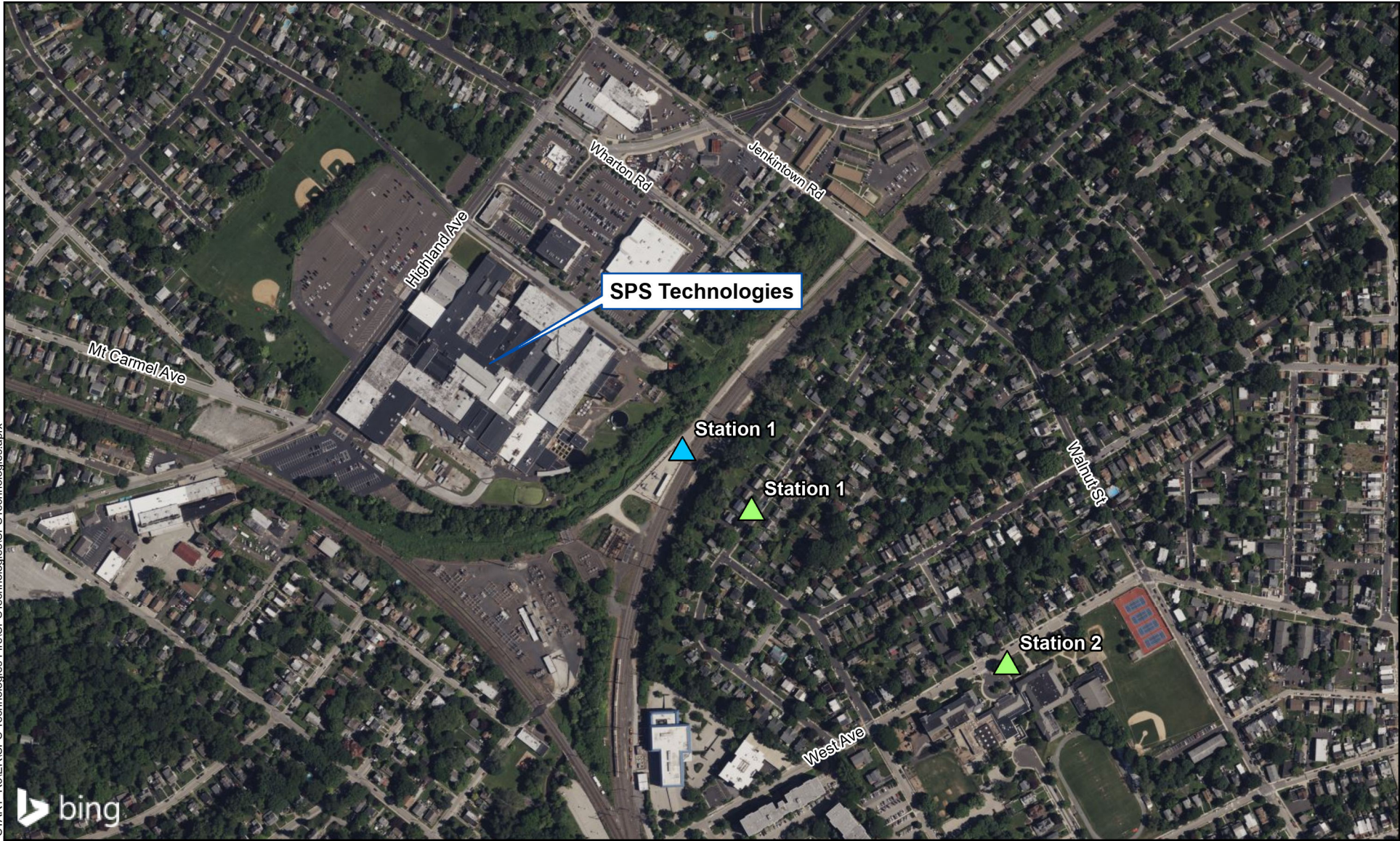
References:

Environmental Protection Agency (EPA). December 16, 2024. National Ambient Air Quality Standards Table. From <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

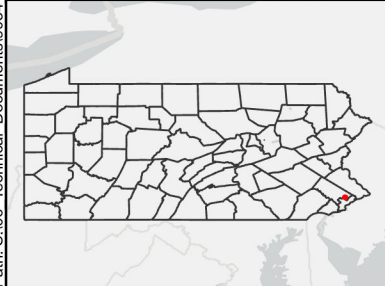
Occupational Safety and Health Administration (OSHA) 2025 a. Permissible Exposure Limits – Annotated Tables. Table Z-1. From <https://www.osha.gov/annotated-pels/table-z-1>

Occupational Safety and Health Administration (OSHA) July 8, 2011. Compliance Assistance Guidelines for Confined and Enclosed Spaces and Other Dangerous Atmospheres. Standard 1915 Subpart B App A. From <https://www.osha.gov/laws-regs/regulations/standardnumber/1915/1915SubpartBAppA>

The National Institute for Occupational Safety and Health (NIOSH) 2025. Immediately Dangerous To Life or Health (IDLH) Values. Table of IDLH values. From <https://www.cdc.gov/niosh/idlh/intridl4.html>

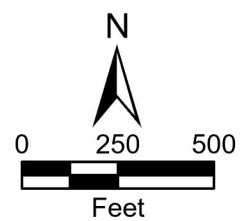


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- ▲ Air Monitoring Station
- ▲ Air Monitoring Station (Stopped 17:00 2/20/2025)

Monitoring Station 1 was relocated from original location (blue) to new location (green) at 17:00, 2/20/2025.



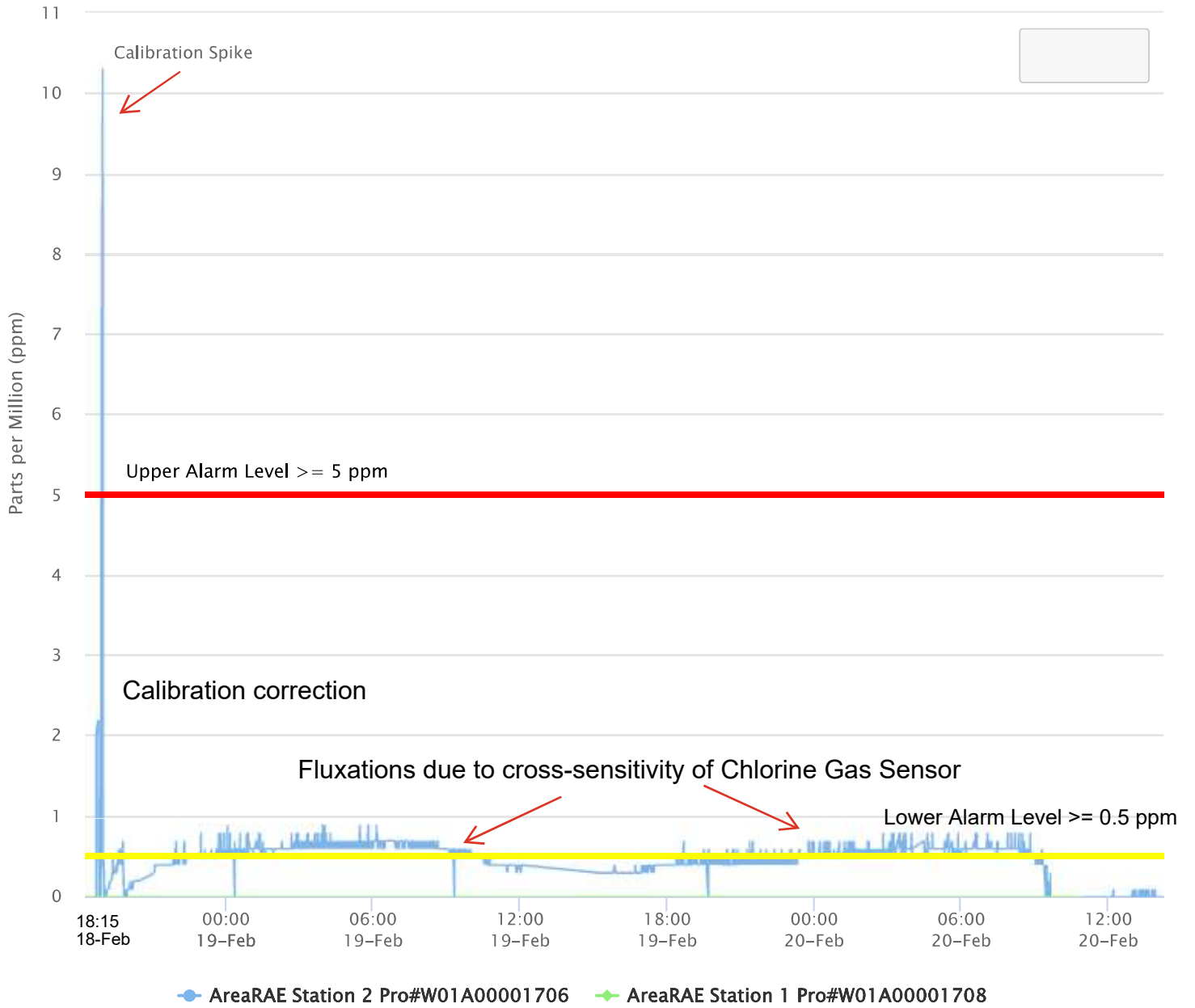
SPS Technologies Fire ER
Jenkintown, Montgomery County, Pennsylvania

Air Monitoring Locations

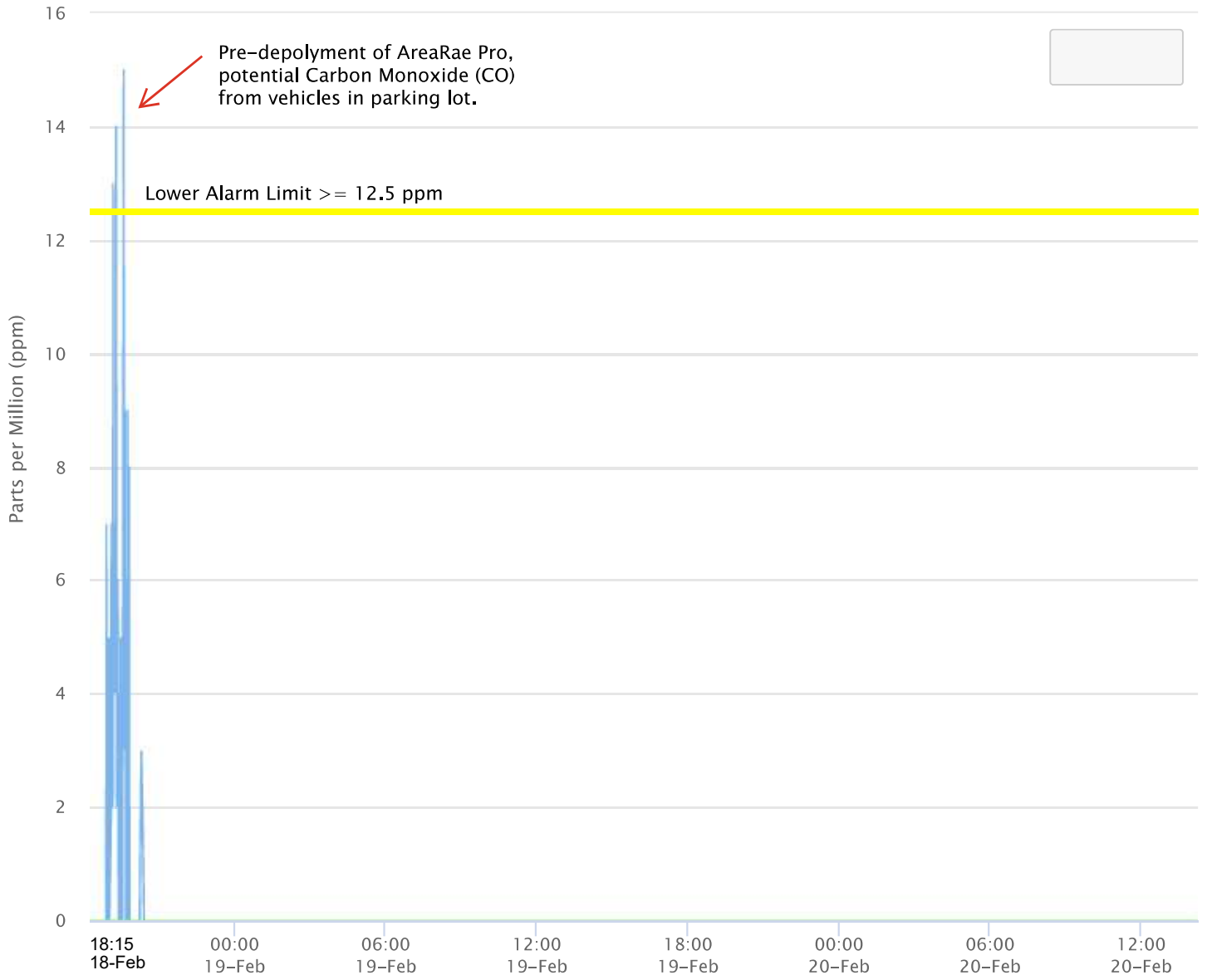


Prepared For: EPA R3 START VI | Prepared By: K. Orzada

Chlorine Gas (Cl₂)



Carbon Monoxide(CO)



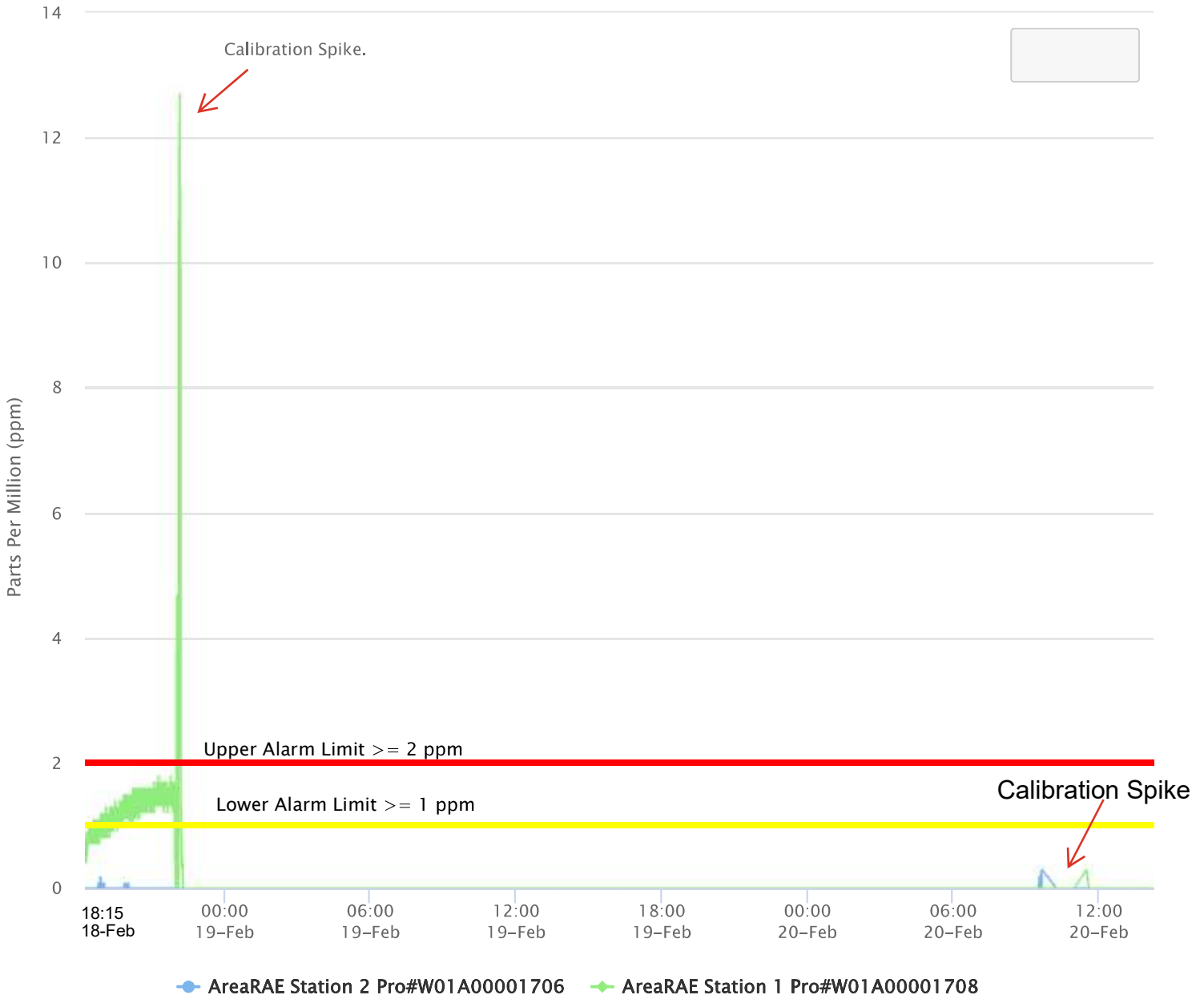
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Hydrogen Sulfide (H₂S)

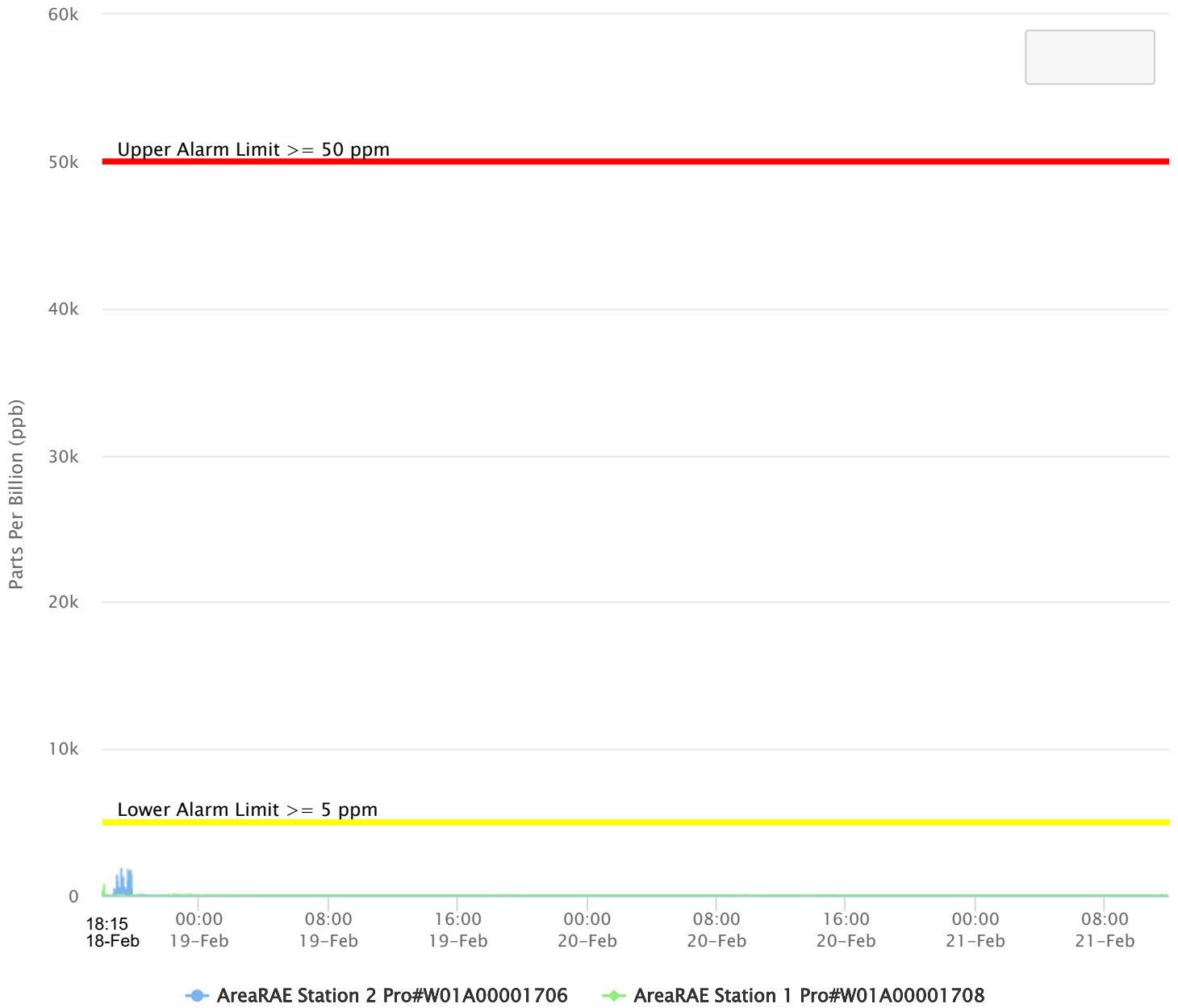


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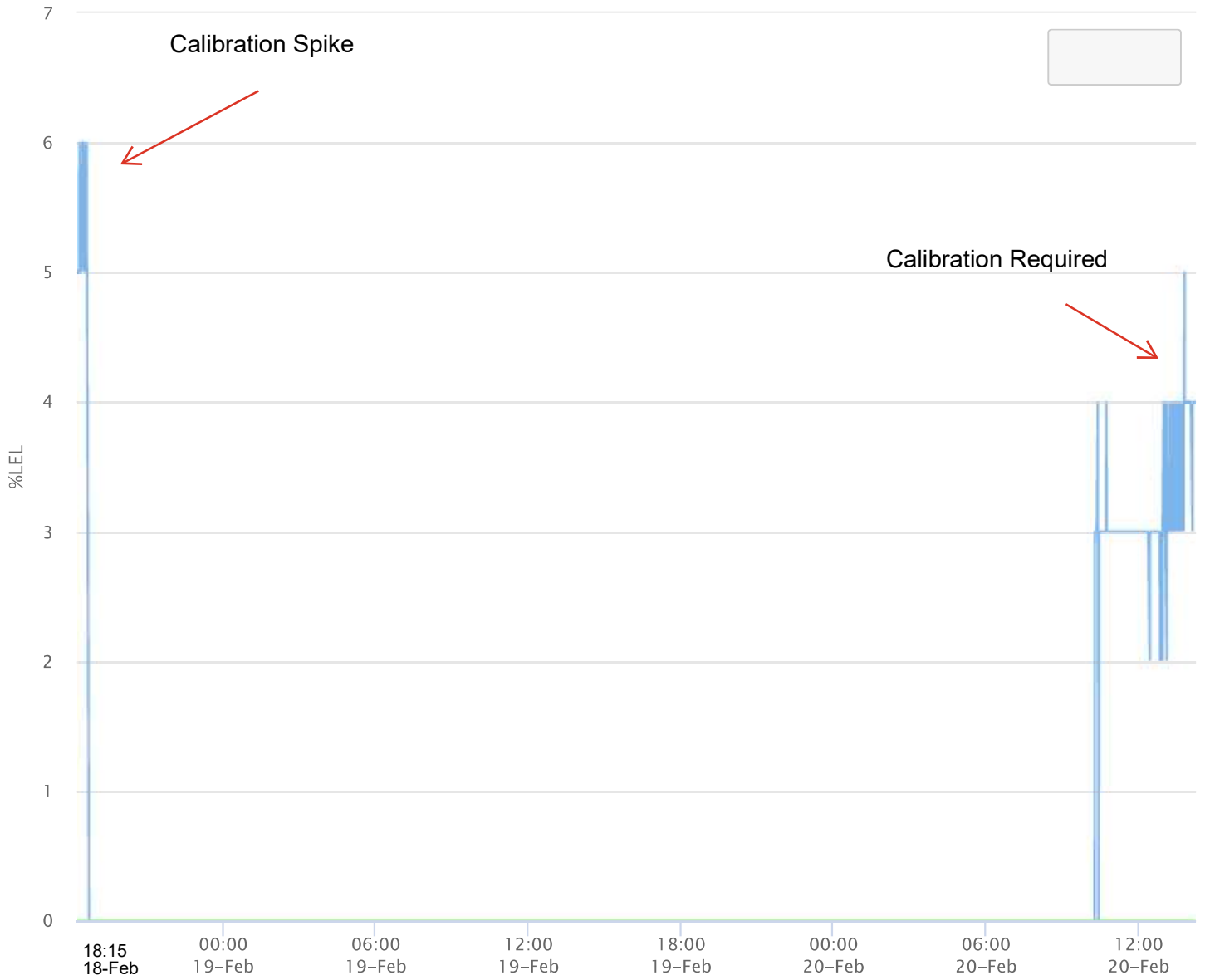
Hydrogen Cyanide (HCN)



Volatile Organic Compounds (VOC)

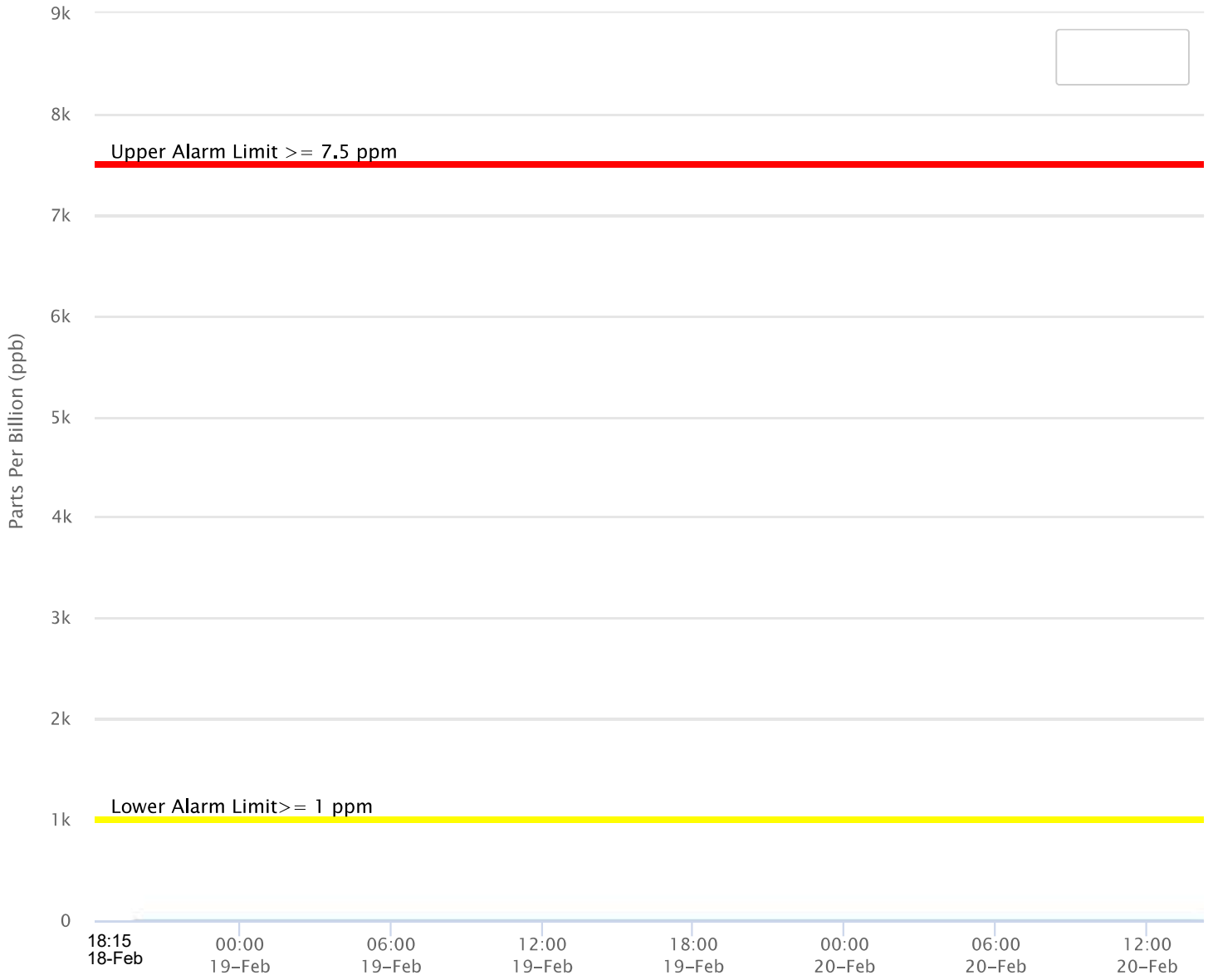


Lower Explosive Limit (LEL)



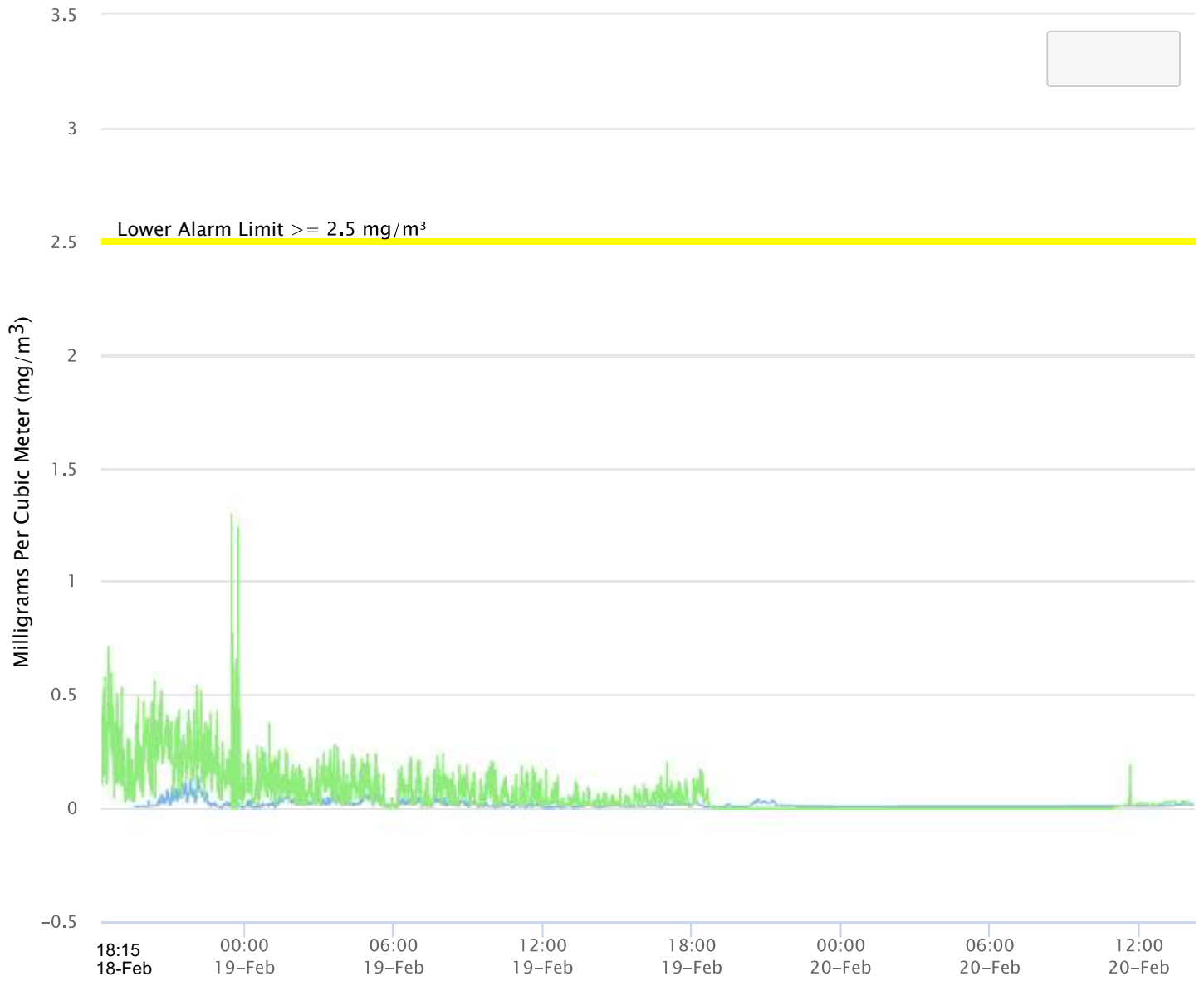
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Sulfuric Acid (H₂SO₄)



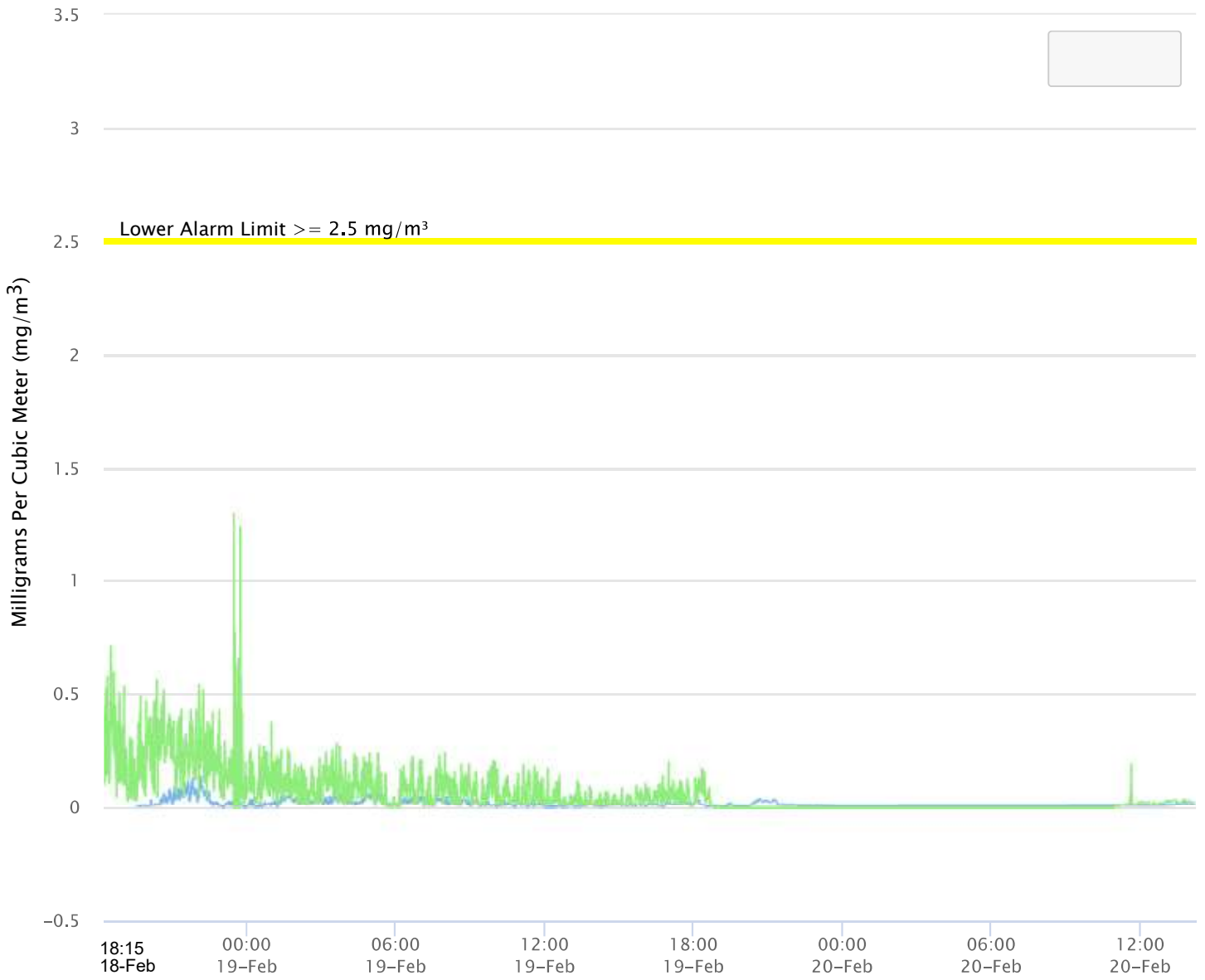
— R03-SPMflex130-Station 2

Particulate Matter (PM) 2.5 micron particle size



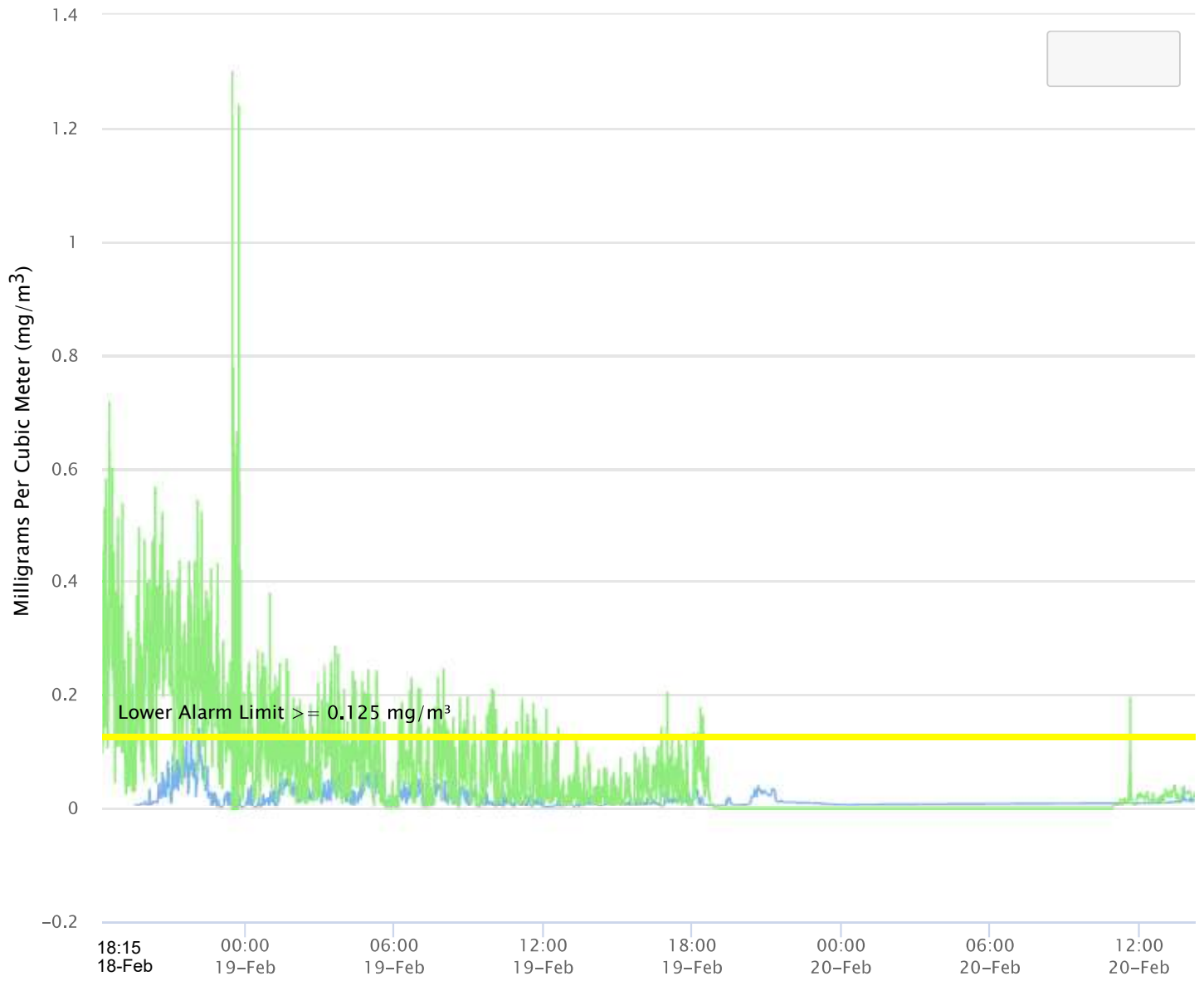
● R03-DuskTrak15814-Station 2 ◆ R03-DuskTrak15817-Station 1

Particulate Matter (PM) 4 micron particle size (Respirable)



● R03-DuskTrak15814-Station 2 ◆ R03-DuskTrak15817-Station1

Particulate Matter (PM) 10 micron particle size



● R03-DuskTrak15814-Station 2 ◆ R03-DuskTrak15817-Station1