



SPS Technologies Fire Update

March 7, 2025

This report has been prepared by TRC Environmental Corporation (TRC) on behalf of SPS Technologies (SPS) to assess impacts from their recent fire.

Immediately after the fire broke out, SPS employed emergency contractors, including Center for Toxicology and Environmental Health (CTEH) and WSP, to engage in environmental sampling and monitoring in and around the SPS facility.

Now that emergency response activities are concluding, TRC has been retained to review the available air monitoring data and evaluate the potential for human health risks based on the results of data that has been collected to date.

TRC's evaluation is separated into two sections. The first section discusses and analyzes SPS's data collected during the fire, between February 20, 2025, and February 23, 2025. The second section discusses data that was collected post-fire, beginning on February 24, 2025, through March 4, 2025.

As more data is gathered, this report will be updated.

**Monitoring Activities and Data:
Active Fire and Evacuation Period**

February 18, 2025 – February 23, 2025

Beginning on February 18, 2025, and continuing through February 23, 2025, EPA performed air monitoring at two fixed locations near the SPS facility, the results of which are summarized in EPA's Air Monitoring Report, dated February 25, 2025. [EPA's Report](#) concluded that "EPA air monitoring has not detected respirable dust or any chemical at levels of concern to date in the air outside of the facility."

On February 20, 2025, SPS deployed seven stationary air monitors along the perimeter of SPS's facility and in the community (**Figure 1**) to monitor for parameters that are common during fires and parameters that might be emitted based on SPS's operations. AR01, AR03, AR04, AR05, AR06, and AR07 were established along the perimeter of SPS and AR02 was established near Jenkintown Middle/High School to address potential offsite air quality-related impacts downwind of the fire.

In addition to stationary air monitors, SPS used air handheld monitors at various locations near SPS and in the community to detect parameters of concern during the fire. TRC reviewed summaries of handheld air monitoring data provided in daily update reports associated with the stationary air monitors.

Meteorological data confirms that throughout the fire, the winds were from the west and west northwest. Thus SPS's initial air sampling was appropriately focused downwind (following prevailing wind direction), which was established to the east and east southeast. Upwind concentrations (those without impact from the fire) would come from areas to the north, west and south of the release and would be considered "background" during the fire.



Figure 1: Initial Perimeter and Community Air Quality Monitoring Locations

Air Monitoring Data February 20 – 23, 2025

Carbon Monoxide (CO) Air Monitoring

Carbon monoxide (CO) is a chemical formed during combustion (including in the typical home environment).

From February 20-23, 2025, airborne CO concentrations were measured at the perimeter of the SPS facility and adjacent to Jenkintown Middle/High School (AR02, in the community southeast of the facility and downwind of the fire).

Although there were some detections of CO at stations around the perimeter of the SPS facility during the fire, the vast majority of CO air monitoring results were non-detect (<1 ppm).



There were no measurable concentrations of CO detected in the downwind neighborhood at AR02 (out of 1,770 readings on February 20-21, 3,977 readings on February 21-22, and 4,920 readings from February 22-23).

Additionally, there were no detections of CO at Jenkintown Middle/High School via handheld air monitoring devices.

The limit of detection for this monitor was 1 part per million (“ppm”). By comparison, EPA National Ambient Air Quality Standards (NAAQS) for CO are 9 ppm as an 8-hour average and 35 ppm as a peak 1-hour average not to be exceeded more than once per year.

The NAAQS are intended to protect persons in the public who are exposed up to 24 hrs/day for a lifetime. Thus, the available data indicate that there are no human health risks associated with CO as a result of the fire at AR02, which we view as representative of surrounding neighborhoods (downwind of the fire).

Hydrogen Cyanide (HCN) Air Monitoring

Cyanide salts were present in raw materials used by SPS for their manufacturing process and had the potential to be released in the form of Hydrogen Cyanide (HCN) in the event of a fire.

From February 20 – 23, 2025, airborne HCN concentrations were measured at the perimeter of SPS and adjacent to Jenkintown Middle/High School (AR02, in the community southeast of the facility and downwind of the fire).

The stationary monitors located at the perimeter of SPS consistently reported non-detects (<1 ppm) and there were zero measurable concentrations out of 2,772 readings at AR-02 on February 20-21, 3,945 readings from February 21-22, and 4,920 readings from February 22-23.

There were additionally no detections of this parameter at Jenkintown Middle/High School via handheld air monitoring devices.

Thus, the available data indicate that there are no human health risks associated with hydrogen cyanide as a result of the fire at AR02, which we view as representative of surrounding neighborhoods (downwind of the fire).

Hydrogen Sulfide (H₂S) Air Monitoring

Hydrogen sulfide (H₂S) is sometimes found in the combustion products of a fire.

From February 20-23, airborne H₂S concentrations were measured near Jenkintown Middle/High School (AR02, in the community southeast of the facility and downwind of the fire) as well as the perimeter of the SPS facility.



All of the H₂S air monitoring data collected during the fire were non-detect (<0.1 ppm) at stations located on the perimeter of SPS and at AR02. There were no measurable concentrations reported out of 1,770 readings on February 20-21, 3,977 on February 21-22, and 4,920 on February 22-23 in the community.

Additionally, there were no detections of H₂S at Jenkintown Middle/High School via handheld air monitoring devices.

Thus, the available data indicate that there are no human health risks associated with hydrogen sulfide as a result of the fire at AR02, which we view as representative of surrounding neighborhoods (downwind of the fire).

Particulate Matter (PM_{2.5}) Air Monitoring

PM_{2.5} includes all fine particulate matter less than 2.5 microns in diameter and is regulated nationally by EPA as a criteria pollutant subject to National Ambient Air Quality Standards (NAAQS). From February 20-23, 2025, airborne PM_{2.5} concentrations were measured near Jenkintown Middle/High School (AR02, in the community southeast of the facility and downwind of the fire) as well as the perimeter of the SPS facility.

Specifically, the 24-hour average concentrations at AR02 were 0.029 mg/m³ from February 20-21, 0.007 mg/m³ from February 21-22, and 0.029 mg/m³ from February 22-23.

The EPA 24-hour average National Ambient Air Quality Standard (NAAQS) for PM_{2.5} is 0.035 mg/m³. Average concentrations at seven stations located around the perimeter of SPS and at AR02 were all below this 24-hr standard.

As noted above, the NAAQS are intended to protect persons in the public who are exposed up to 24 hrs/day for a lifetime. Thus, the available data indicate that there are no human health risks associated with PM_{2.5} as a result of the fire at AR02, which we view as representative of surrounding neighborhoods (downwind of the fire).

Volatile Organic Compounds (VOCs) Air Monitoring

Volatile organic compounds (VOCs) are a large class of chemicals that are present in the community and in our homes from a diverse range of sources, including many household products and building materials. VOCs were also stored and used at the SPS facility.

From February 20-23, 2025, the concentration of Total Airborne VOCs was measured near Jenkintown Middle/High School (AR02, in the community SE of the facility and downwind of the fire) as well as the perimeter of the SPS facility.

The vast majority of VOC air monitoring data were non-detect for Total Airborne VOCs.



While there were 103 measurable concentrations out of 4,543 readings on February 20-21, 271 measurable concentrations out of 6,975 readings from February 21-22, and 546 measurable concentrations out of 4,920 readings from February 22-23 at AR02, all these detections were recorded at concentrations of 0.1 ppm or less.

A detection at or below 0.1 ppm is very small, equal to or less than one-tenth of a part of a substance per million parts of a mixture. No individual VOC measured by these monitors would be considered a health hazard at these concentrations.

There were additionally no detections of Total Airborne VOCs at Jenkintown Middle/High School via handheld air monitoring devices.

Thus, the available data indicate that there are no human health risks associated with Total VOCs as a result of the fire at AR02, which we view as representative of surrounding neighborhoods (which were downwind of the fire).

Subsequent monitoring at these locations and eight additional locations that were part of an expanded air monitoring program in the community supports the initial data. This information is presented in detail in the next section of this report.

**Monitoring Activities and Data:
Post-Fire Period
February 24, 2025 - March 4, 2025**

Air Monitoring Data February 26 – March 4, 2025 (Post Fire Period)

During this period, SPS added eight additional stationary monitors in the neighborhoods surrounding the facility in order to expand the area of active air monitoring.

Additional community air monitoring locations were added on February 22, 2025 (AR08, AR09, AR10, and AR11), February 23, 2025 (AR12, AR13) and February 24, 2025 (AR14, AR15) (**Figure 2**).

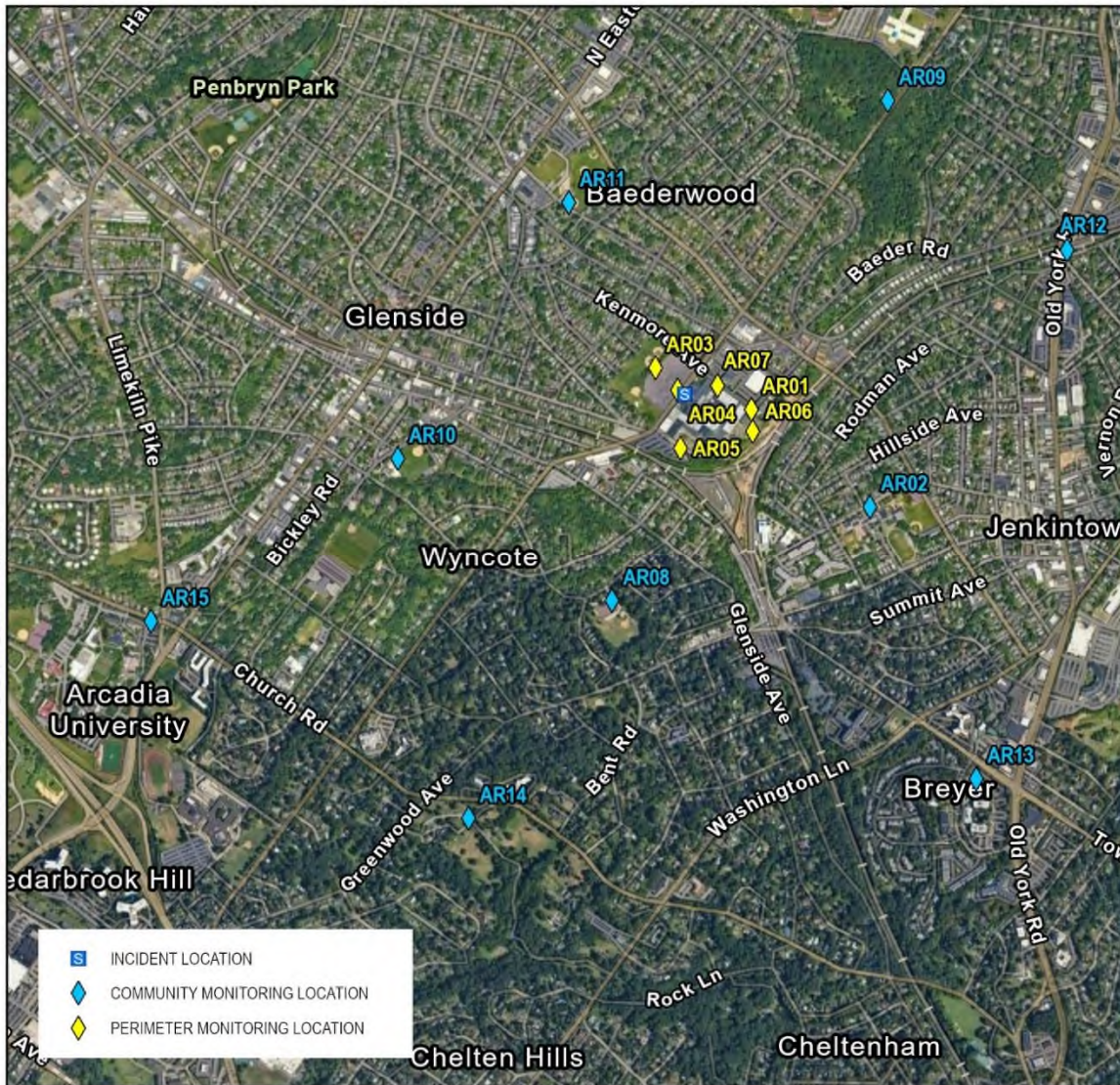


Figure 2: Locations of Expanded Perimeter and Community Air Monitoring Locations



Reports of these data were issued on February 26, February 28, and March 1, 2, and 3, 2025.

CO, PM_{2.5}, and Total Airborne VOCs were the only parameters that were detected at measurable concentrations at any of these monitoring locations during this time frame.

Between February 26 and March 3, 2025, only 8 detections out of over 45,000 readings for CO took place in the community (approximately 0.02% detection rate).

In the report drafted on March 4, 2025, 62 detections out of approximately 45,000 CO readings (approximately 0.1% detection rate) indicated measurable concentrations. None of the CO detections in the community from February 25 – March 4, 2025, exceeded the peak 1-hour exposure limit established by National Ambient Air Quality Standards (NAAQS).

The average PM_{2.5} concentrations in the community from each of the reports issued between February 26 – March 4, 2024, continued to be below the EPA 24-hour average NAAQS of 0.035 mg/m³.

Total Airborne VOCs were detected in a small portion of readings from February 26 – March 4, 2025. The maximum concentration reported in any of these detections was 0.4 ppm. No individual VOC measured by these monitors represents a health hazard at these concentrations.

Thus, the available data indicate that there are no human health risks associated with CO, PM_{2.5}, or Total Airborne VOCs as a result of the fire for the persons living in surrounding neighborhoods (downwind of the fire).

Wipe Sample Assessment (Collected February 27, 2025)

Wipe samples collect the dust which has settled on outdoor surfaces (historical and recent). The purpose of collecting such data is to determine if particulate matter including dusts and soot from the SPS fire were present in measurable amounts on surfaces.

Wipe samples from four locations WS01, WS02, WS04, and WS06 (**Figure 3**) were analyzed for various parameters as described below. WS03 was collected but held for analysis because it was determined to be outside of the area identified for sampling. SPS placed immediate focus and attention on samples closest to the evacuation zone. WS05 was a field blank for quality assurance purposes.



Figure 3: Locations of Surface Wipe Sampling (February 27, 2025)

Cyanide

Cyanide containing salts were present in raw materials used by SPS for their manufacturing process. Therefore, SPS chose to conduct wipe sampling for cyanide. Four wipe samples were collected on February 27, 2025, on outdoor surfaces in the neighborhoods surrounding SPS downwind of the fire (WS02, WS04, and WS06) and the perimeter of SPS (WS01) indicated that cyanide levels were below the limit of detection ($<0.23 \mu\text{g}/100 \text{ cm}^2$).

This data indicate that no further studies are warranted.

Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons (PAHs) are commonly formed as products of combustion during a fire. Therefore, SPS chose to conduct wipe sampling for PAHs. Three wipe samples were collected on February 27, 2025, on outdoor surfaces in the neighborhoods surrounding SPS downwind of the fire (WS02, WS04, and WS06). Concentrations of PAHs ranging between 0.3 and $0.5 \mu\text{g}/100 \text{ cm}^2$ were found in these wipe samples.

These concentrations are well below the indoor surface screening level for PAH's established by EPA's Contaminants of Potential Concern Committee (COPC) as part of the World Trade Center Indoor Air Task Force Working Group (which would be stricter than any outdoor guideline). Interestingly, the second highest identified off-site concentration was in the opposite direction that the winds transported the fire plume, suggesting these concentrations in the community were likely no different from pre-fire concentrations.

The wipe sample collected on the perimeter of SPS (WS01) had a concentration of 1.3 $\mu\text{g}/100\text{ cm}^2$, which is also less than EPA's indoor screening levels.

This data indicate that no further studies are warranted.

Arsenic and other Metals

Various metals were used in SPS manufacturing processes. Although it was not used in the SPS manufacturing process, concerns were also raised about arsenic. Therefore, SPS chose to conduct wipe sampling for arsenic and other metals. Four wipe samples were collected on February 27, 2025, on outdoor surfaces in the neighborhoods surrounding SPS (WS02, WS04, and WS06) and the perimeter of SPS Technologies (WS01) and were analyzed for metals.

Specifically, three wipe samples on February 27, 2025, of outdoor surfaces in neighborhoods surrounding SPS technologies (WS02, WS04, and WS06) indicated that arsenic levels, were below the limit of detection ($<0.216\ \mu\text{g}/100\text{ cm}^2$). These concentrations are well below the indoor surface screening level for Arsenic and other Metals established by EPA's Contaminants of Potential Concern Committee (COPC) as part of the World Trade Center Indoor Air Task Force Working Group (which would be stricter than any outdoor guideline).

This data indicate that no further studies are warranted.

Collectively, TRC has concluded that based on the available wipe sampling data, there are no human health risks associated with community exposure to outdoor surfaces containing dust or soot associated with the fire.

Debris Field and SPS Sampling for Asbestos

In the immediate aftermath of the fire, SPS received reports of apparent fire-related debris in yards surrounding the community. In response, SPS dispatched its emergency response contractors to survey neighboring properties and to collect, bag and tag debris for temporary storage at a secure location at the SPS facility. **Figure 4**, prepared by the CTEH emergency response team, identifies the locations where debris was collected as of March 3, 2025. As can be seen in the figure, the pattern of debris consistent with the east and east southeast wind direction during and in the immediate aftermath of the fire.

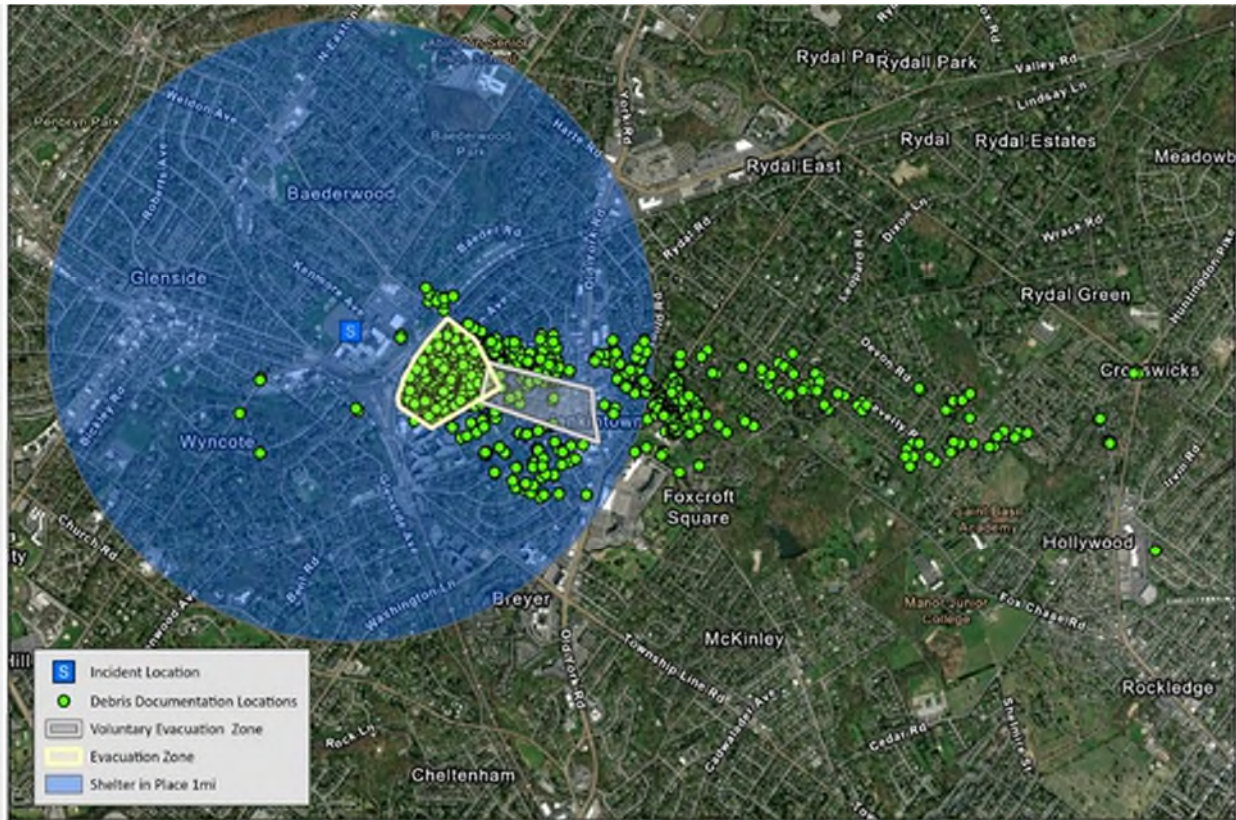


Figure 4: Locations of Fire-Related Debris

The debris identified in the community has been reported to consist primarily of roofing material. This same material was also identified throughout the exterior of the SPS facility.

On February 20 and 23, 2025, 15 representative samples of the debris were collected for testing to determine whether the material contained asbestos, which was commonly used in building materials prior to 1970. EPA and the U.S. Occupational Safety and Health Administration (OSHA) define asbestos-containing material as any material that contains more than 1% asbestos by weight. None of the material sampled met this definition. In fact, of the 15 samples collected, 14 had no detectable asbestos fibers at all. The percent of asbestos fibers in the remaining sample was 0.7% by weight, below the EPA and OSHA threshold.

TRC has evaluated the debris sampling results and has concluded that based on the available data which demonstrates compliance with both EPA and OSHA thresholds, there is no reason to expect that exposure to asbestos as a result of the fire poses a health hazard to the community.