

Trip Report

Ames Warehouse Fire Emergency Response

Parkersburg, Wood County, West Virginia



EPA Region III
START V - West
Superfund Technical Assessment and Response Team

Contract No: EP-S3-15-03
TDD No.: T501-17-10-001
DCN: 03088-3-01-FA-0757

December 21, 2017

Prepared for Deborah Lindsey, On-Scene Coordinator
U.S. Environmental Protection Agency, Region III
1060 Chapline St,
Wheeling, WV 26003

Trip Report
Ames Warehouse Fire Emergency Response
Parkersburg, Wood County, West Virginia

Prepared for:

U.S. Environmental Protection Agency
Region III
Wheeling, WV

EPA Contract No.: EP-S3-15-03
TDD No.: T501-17-10-001
EPA Work Assigner: Deborah Lindsey
Date Prepared: December 21, 2017
Prepared by: TechLaw, Inc.

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Contents	
1.0 INTRODUCTION	1
2.0 SITE DESCRIPTION	1
3.0 BACKGROUND	1
4.0 RESPONSE ACTIVITIES.....	2
4.1 Initial Response Activities	2
4.2 Initial Air Monitoring Locations – October 22, 2017 1:05 to 17:45 Hours.....	2
4.3 Air Monitoring Locations – October 22, 2017 17:45 to October 23, 2017 10:19 Hours ...	3
4.4 Air Monitoring Locations – October 24, 2017 09:15 to October 24, 2017 17:13 Hours ...	4
4.5 Air Monitoring Locations – October 24, 2017 18:00 to November 1, 2017 16:45 Hours .	4
5.0 WEATHER OBSERVATIONS.....	8
6.0 AIR MONITORING RESULTS.....	9
6.1 Particulate Monitoring	9
6.2 AreaRAE Monitoring.....	11
7.0 ANALYTICAL RESULTS FOR AIR SAMPLES FOR VOCs BY TO-15.....	13
8.0 REFERENCES	14

FIGURES

Figure 1 – Site Location Map

Figure 2 – Initial Air Monitoring Stations – 10/22/17 1:05 to 17:45 Hours

Figure 3 – Air Monitoring Stations – 10/22/17 17:45 to 10/23/17 10:19 Hours

Figure 4 – Air Monitoring Stations – 10/24/17 9:15 to 10/24/17 17:13 Hours

Figure 5 – Air Monitoring Stations – 10/24/17 18:00 to 11/1/17 16:45 Hours

Figure 6 – Air Sampling Locations

TABLES:

Table 1 – Particulate Data Summary

Table 1A - Particulate Data Summary - Sorted by Location

Table 2 – Air Monitoring Data Hand-Held Instruments

Table 3 – AreaRAE Monitoring Data Summary

Table 4 – Air Sampling Locations

Table 5 – Analytical Result Summary for VOCs in Air Samples

ATTACHMENTS:

Attachment 1 – Particulate Monitoring Data Graphs

Attachment 2 – AreaRAE Monitoring Data Graphs

Attachment 3 – Chain of Custody/Traffic Reports – Air Sampling October 25-26, 2017

Attachment 4 – Chain of Custody/Traffic Reports – Air Sampling November 2, 2017

Attachment 5 – Daily Weather Summaries

Attachment 6 – Final Data Report, DAS R35324, TO-15 Data

Attachment 7 – Photographic Documentation

1.0 INTRODUCTION

On October 21, 2017, EPA Region III Duty Officer On-Scene Coordinator (OSC) Deborah Lindsey contacted TechLaw, Inc. (TechLaw), the Superfund Technical Assessment and Response Team (START-West) contractor, and verbally tasked TechLaw to respond to a warehouse fire in Parkersburg, Wood County, West Virginia. Specific initial tasking involved conducting air monitoring for particulates in support of the West Virginia Department of Environmental Protection (WVDEP) air monitoring efforts. Subsequent tasking broadened the scope of air monitoring activities. The fire occurred at the former Ames Warehouse, located at 3800 Camden Avenue, Parkersburg, WV (Figure 1). This report provides a summary of response activities conducted at the Ames Warehouse Fire Emergency Response Site (Site) from October 22, 2017 through November 3, 2017. These activities were conducted under EPA START West contract EP-S3-15-03, Technical Direction Document (TDD) No. T501-17-10-001.

2.0 SITE DESCRIPTION

The Ames Warehouse Fire Site is located at 3800 Camden Avenue, Parkersburg, Wood County, WV (Figure 1). The Site consisted of a conglomeration of buildings used as warehouse storage which was being operated by the Intercontinental Export and Import Company. The Site is situated at the northeastern corner of the intersection of Camden Avenue and Broadway Avenue, with an approximate 950-ft. frontage along Camden Avenue. The building was reported to be 500,000 square feet and occupied approximately 10 acres. The Site is located in a mixed residential, commercial, and light industrial area. Fairplains Elementary School is located approximately 0.1 mile west-southwest of the Site and a campground is located approximately 0.3 mile east of the Site. The Little Kanawha River flows northwestward extending through the area to the north and east of the Site and is located approximately 0.1 mile from the northeastern corner of the Site (Figure 1).

3.0 BACKGROUND

City fire crews responded to a fire at the Intercontinental Export and Import Company Plant #1 (formerly the Ames Warehouse), located on Camden Ave in Parkersburg, WV, at approximately 12:30 a.m. on Saturday, October 21, 2017. The facility was being operated as a warehouse and materials stored in the buildings were reported by the owner to include plastics-related materials and may have contained other unknown materials. EPA received a National Response Center report (NRC# 1193930) for the fire emergency at approximately 5:00 p.m. on October 21, 2017. WVDEP requested EPA assistance with air monitoring for particulate matter in ambient air

(EPA, 2017). The OSC tasked TechLaw, the EPA Region III – West START contractor to mobilize to the Site to provide air monitoring support to the WVDEP on October 21, 2017.

4.0 RESPONSE ACTIVITIES

4.1 Initial Response Activities

TechLaw mobilized two personnel and the Emergency Response Vehicle (ERV) to the Site, arriving at approximately 22:00 hours on October 21, 2017. TechLaw staged the ERV on the west side of Camden Avenue and met with WVDEP representatives. WVDEP selected four air monitoring locations for conducting air monitoring for particulates. TechLaw prepared particulate monitoring equipment for deployment at the air monitoring locations.

4.2 Initial Air Monitoring Locations – October 22, 2017 1:05 to 17:45 Hours

WVDEP provided TechLaw with coordinates for the four selected air monitoring locations. The initial air monitoring locations consisted of:

- Background: located 1.42 miles and 158.68° from the fire. This location is near the State Route (SR) 95 exit off Interstate 77 (I-77);
- Barker Lane: located 0.81 miles 352.66° from the fire. This location is off SR 47 (Staunton Turnpike) near its intersection with U.S. Highway (Hwy) 50;
- Parkersburg Catholic High School (PCHS): located 2.38 miles 8.33° from the fire. This location is at 3201 Fairview Avenue; and
- Onsite: located in at the northwestern corner approximately 280 feet east of Camden Avenue and inside the facility's northern driveway entrance near Myrtle Street. The location is in the small circular grass island directly inside the gate.

The onsite location was very near the fire, but at the time the winds were generally out of the south and the main smoke plume was blowing off site generally to the north. Refer to Figure 2 for a map of the initial air monitoring locations.

The initial air monitoring was conducted using two EPA-owned ThermoFisher Scientific DataRam 4000 particulate monitors (DataRam) equipped with PM 10 inlets and two ThermoFisher Scientific personal DataRam pDR 1000AN monitors, which monitor for total particulates. The DataRams were staged at the onsite and Barker Lane locations. The pDR 1000AN units were staged at the PCHS and background locations. The pDR 1000AN monitors were used after it was discovered that the internal batteries of the START DataRam 4000 units could not hold a sufficient charge on the internal batteries and because AC power was unavailable at the monitoring locations that would allow continuous operation of the DataRams.

The first DataRam with PM₁₀ inlet was set up and started at the onsite location at 01:05 hours on October 22, 2017. The last unit, a pDR1000AN was set out and started at the background location at 05:32 hours, after it was determined that the DataRam set up at that location was not functioning properly (Figure 2). Graphical representations of the air monitoring data for particulates for each monitoring location are presented in Attachment 1. A summary of maximum readings recorded in particulate monitoring data is presented in Table 1. Data tables with the complete particulate results for each location can be found at the EPA OSC website for this Site: https://response.epa.gov/site/doc_list.aspx?site_id=12462.

TechLaw mobilized two additional personnel to the Site on October 22, 2017 due to anticipated 24-hour operations.

The OSC reached out to the Agency for Toxic Substances and Disease Registry (ATSDR) to request assistance on any public health standards for particulate monitoring. ATSDR responded that they use EPA's National Ambient Air Quality Standards (NAAQS) Air Quality Index (AQI) guidelines for hazardous levels of particulate matter in air for this type of emergency. ATSDR provided a copy of the Air Quality Index (AQI) in table format which was shared with WVDEP and START. The OSC and ATSDR discussed that the AQI guidelines use a PM_{2.5} level however the OSC was not sure which PM inlet was included with the DataRams to be used on-site.

4.3 Air Monitoring Locations – October 22, 2017 17:45 to October 23, 2017 10:19 Hours

The DataRam with PM₁₀ inlet staged onsite was moved approximately 220 feet west of the original monitoring location and approximately 150 feet from the north facility gate to a vacant lot across the street from the Site at 17:45 hours on October 22, 2017. The location is at the northwestern corner of the intersection of Camden Avenue and Myrtle Street. The location was changed due to a shift in the winds which caused the initial onsite monitoring location to be periodically enveloped in heavy smoke. TechLaw discussed the relocation of the monitoring station with representatives of the WVDEP and County Department of Health, and the OSC prior to moving the DataRam to the new location. The new Site area/perimeter monitoring location and the other monitoring locations, which remained unchanged, are depicted in Figure 3.

DataRams and pDRs were shut down and retrieved due to rain between 09:34 – 10:19 hours on October 23, 2017. The units remained off-line for the remainder of the day due to continued rain throughout the day.

On the afternoon of October 23rd, WVDEP requested additional air monitoring assistance from EPA. The EPA OSC made arrangements for an AreaRAE™ air monitoring system to be delivered to the site and set up by the EPA Environmental Response Team (ERT). The OSC also

submitted an Analytical Request Form (ARF) to the EPA Office of Analytical Services and Quality Assurance (OASQA) laboratory to arrange for analytical services for TO-15 air sampling/analysis. The OSC met with TechLaw to discuss finding additional potential air monitoring locations to provide better area coverage.

4.4 Air Monitoring Locations – October 24, 2017 09:15 to October 24, 2017 17:13 Hours

It continued to rain through the morning of October 24, 2017 which prevented the DataRams and pDR 1000AN units from being re-deployed. At 09:15 Hours, TechLaw resumed periodic air monitoring at the same air monitoring stations using hand-held monitoring instruments only. This air monitoring was conducted using a MultiRAE™ and a ThermoFisher Scientific pDR 1500. Parameters monitored with the MultiRAE™ included: carbon monoxide (CO); volatile organic compounds (VOCs); hydrogen sulfide (H₂S); and oxygen (O₂). The pDR 1500 was used to monitor for particulates (total).

Monitoring was also periodically conducted at three additional locations with the MultiRAE™ and pDR 1500 due to observed smoke/fog and smoke odors in the area. Additional locations included:

1. AutoZone Parking Lot: located at the intersection of SR 618/Fairview Avenue;
2. McDonalds Parking Lot: Located on SR 618, approximately 0.1 mi. west of the intersection with U.S. Hwy 50; and
3. Intersection of SR 47 (Staunton Turnpike) and Dixie Lane.

The monitoring locations for this time period are depicted in Figure 4. Results for air monitoring conducted with the hand-held instruments are presented in Table 2.

4.5 Air Monitoring Locations – October 24, 2017 18:00 to November 1, 2017 16:45 Hours

October 24, 2017

On October 24, 2017, ATSDR requested that EPA provide PM_{2.5} particulate data instead of the PM₁₀, if the appropriate equipment was available. TechLaw installed PM_{2.5} inlets on the two EPA DataRams and also on two additional DataRams that were received from the EPA warehouse in Philadelphia, PA prior to re-deploying the units after the rain cleared the area.

EPA ERT personnel arrived at approximately 11:40 hours on October 24, 2017 to deliver and set up an AreaRAE monitoring system. The ERT set up the individual AreaRAE units and the control and monitoring system. The monitoring system included the VIPER wireless network-

based communications system designed to enable real time transmission of data from field sensors to local and remote computer monitoring systems. The monitoring and control system were set up inside a vehicle staged in a parking lot located southwest of the Site at the corner of Camden Avenue and Broadway Avenue. The AreaRAE units were set up with the following sensors:

- Ammonia (NH₃), VOCs and O₂ – these sensors were on all of the AreaRAE units;
- HCN – this sensor was on four units;
- Chlorine (Cl₂) – this sensor was on two units

Note: LEL sensors were also installed on all of the AreaRAE units however only one AreaRAE unit could be calibrated for Lower Explosive Limit (LEL). All other units indicated an LEL fault when calibration gas was applied during pre-deployment testing. ERT disabled the LEL sensor on one of the six units prior to deployment of the units at the monitoring stations. Any LEL data received from the AreaRAEs was deemed likely unusable.

After scattered afternoon showers cleared the area, TechLaw deployed the AreaRAE units and the DataRams with PM_{2.5} inlets to the air monitoring stations. The units were deployed to the previous air monitoring stations between 18:11 – 19:59 hours on October 24th, except for the Barker Lane location, which was changed to a field adjacent to the Park and Ride located at the intersection of U.S. Hwy 50 and SR 47. The Barker Lane location was changed due to extremely wet conditions at that location after the rain and because the Park and Ride location was deemed a better location, located due north of the Site on a knoll. A pDR 1000AN particulate monitor was also re-deployed at the PCHS monitoring station. Refer to Figure 5 for air monitoring station locations and the types of monitoring units at each location. Two co-located AreaRAE units were deployed at the Site perimeter and Park and Ride monitoring stations. This was done to obtain monitoring data for both HCN and CL₂ at these locations.

In order to provide better area coverage for the area east of the fire, a new air monitoring location was identified along SR 47 at the fence at the entrance gate to a mine outfall (Figure 5). TechLaw requested authorization from EPA and WVDEP to deploy AreaRAE and DataRam units at this location.

Graphical representations of the air monitoring data for particulates for each monitoring location are presented in Attachment 1. Graphical representations of the air monitoring data for the AreaRAE units are presented in Attachment 2. A summary of particulate monitoring data is presented in Table 1 and a summary of AreaRAE monitoring data is presented in Table 3. Data tables with the complete particulate results for each location can be found at the EPA OSC website for this Site: https://response.epa.gov/site/doc_list.aspx?site_id=12462.

TechLaw began conducting limited radiation screening at air monitoring stations and in the vicinity of the Site at approximately 18:30 hours on October 24th. This screening was initiated at the request of the OSC as a precautionary evaluation in case radioactive materials may have historically been stored at the Site. Screening was conducted using a Ludlum Model 14C with 44-2 NaI gamma detector. Radiation screening results are presented along with other hand-held instrument monitoring results in Table 2. Radiation screening/monitoring was subsequently discontinued after no significant readings were observed at monitoring locations and along the Site perimeter.

October 25, 2017

After approval was obtained from WVDEP representatives, TechLaw deployed a DataRam with a PM_{2.5} inlet and an AreaRAE unit at the fence outside the gate at the mine outfall road location at 00:55 hours on October 25th (Figure 5). TechLaw continued making periodic rounds to check for proper operation and document readings of the AreaRAE units and DataRams, conduct air monitoring with hand-held instruments, and change out batteries on AreaRAE units as necessary. At 10:22 hours on October 25th, TechLaw began retrieving all DataRams and pDRs due to rain. AreaRAEs remained up and running at the respective air monitoring stations.

After the rain had subsided, TechLaw deployed five certified-clean summa canisters at the air monitoring stations to collect 12-hour ambient air samples. The summa canisters and 12-hour flow controllers were provided by the EPA Region III OASQA laboratory. The summa canisters were set out at four of the air monitoring stations: Site perimeter (sample identifier (ID) AA-01; the Park and Ride (AA-02/AA-03 [co-located]); fence at mine outfall road (AA-04); and the background location (AA-05). The air samplers were set out and began sampling between 22:26 – 23:22 hours on October 26th. A description of air sampling locations, including geographical coordinates, is presented in Table 4. Figure 6 depicts air sampling locations.

October 26, 2017

The four DataRams with PM_{2.5} inlets were re-deployed at the same air monitoring stations between 08:42 - 09:47 hours on October 26th (Figure 5). Per direction received from the EPA OSC, TechLaw would subsequently begin alternating the four particulate monitors, with two on and two off line for recharging batteries and downloading data until additional DataRams were received from the EPA Philadelphia, PA warehouse. TechLaw continued periodic monitoring with the MultiRAE and pDR 1500.

TechLaw allowed air sampling with the summa canisters to continue at each location until the remaining vacuum pressure dropped to -10 inches mercury (“ Hg) or below, with the exception of the sample collected at the Site perimeter (AA-01), which had a final pressure of -11” Hg.

Air sample collection was secured at all locations between 11:11 – 13:24 hours on October 26th. The samples were shipped to the EPA Region III OASQA laboratory to be analyzed for VOCs by TO-15 under DAS #R35254. Regional copies of the chain of custody documents are enclosed in Attachment 3.

October 27, 2017

Routine air monitoring activities continued with DataRams, pDR 1000AN, AreaRAEs, and handheld monitoring equipment. At 11:56 hours, the pDR 1000AN unit was retrieved from the PCHS for troubleshooting, due to apparent errant readings (higher than expected, with no visible smoke or odors in the vicinity). The readings were verified to be errant by comparing with the pDR 1500.

October 28, 2017

All the DataRams were retrieved between 03:30 – 04:30 hours on October 28th due to a rain event. The AreaRAEs remained operating at air monitoring stations and TechLaw continued periodic monitoring with the hand-held MultiRAE and pDR 1500.

October 29 - 31, 2017

TechLaw redeployed the DataRams w/ PM_{2.5} inlets between 06:30 – 07:30 hours on October 29th. TechLaw also continued periodic monitoring with the hand-held MultiRAE and pDR 1500. TechLaw demobilized two personnel on the morning of October 29th, reducing staffing provided to three personnel, with one person on day shift and two on night shift.

At approximately 11:00 hours on October 29th, it was observed that all the AreaRAE units were off line and no data was being received on the VIPER monitoring system. Through troubleshooting of the system, the problem was determined to be related to a problem with the inverter used to power the system. The problem was subsequently rectified and the system was returned to proper operation.

At approximately 12:00 hours on October 29th, the Incident Commander declared that the fire was out. EPA directed TechLaw to continue air monitoring activities during the post-fire phase until the afternoon of October 31, 2017. The DataRam at the Park and Ride location was shut down at 10:22 hours on October 31st due to the battery at 0%. The remaining DataRams and the AreaRAEs were retrieved between 15:06 - 16:54 hours on October 31, 2017. A final round of air sampling for VOCs was planned for next day, November 1st. The OSC and TechLaw scouted for suitable potential air sampling locations at a local business property across the road from the Site.

November 1, 2017

At 07:05 on November 1st, the OSC made the decision to re-schedule air sampling to November 2nd due to rain and forecast rain throughout the day. The OSC and TechLaw scouted for other suitable air sampling locations at a local campground area and at two elementary schools.

November 2 - 3, 2017

On the morning of November 2nd, TechLaw deployed certified-clean summa canisters at five air monitoring stations to collect 12-hour ambient air samples to assess the air quality after the fire emergency was deemed over. The summa canisters and 12-hour flow controllers were provided by the EPA Region III OASQA laboratory. The summa canisters were set out at the following sample locations: Jefferson Elementary School (sample ID AA-06); Fairplains Elementary School (AA-07); Broadway Campground (AA-08); the ResCare facility located across Camden Avenue from the Site (AA-09); and the Park and Ride (AA-10). Sample collection was initiated at all the locations between 07:26 – 08:43 hours. TechLaw allowed air sampling with the summa canisters to continue at each location until the remaining vacuum pressure dropped to -10" Hg or below. Air sample collection was secured at all locations between 19:40 – 22:10 hours on November 2nd. Descriptions of air sampling locations and information, including geographical coordinates, are presented in Table 4. Air sampling locations are depicted in Figure 6. Air monitoring was also conducted at the ResCare facility location with an AreaRAE unit during the air sampling. The AreaRAE unit was co-located with the summa canister sampler (AA-09); however, the VIPER monitoring system was not used during the monitoring. When the AreaRAE was retrieved, TechLaw documented the following information from the unit: current readings for all sensors (ammonia, VOCs, HCN, and oxygen); peak concentrations (all sensors); minimum readings (all sensors); short term exposure limits (STEL) (all sensors except oxygen); and TWA (all sensors except oxygen). The AreaRAE data collected during air sampling at the ResCare facility is presented in Section 6.2.

TechLaw shipped the summa canister air samples to the EPA Region III OASQA laboratory to be analyzed for VOCs by TO-15 under DAS #R35254 and demobilized from the Site on November 3, 2017. Regional copies of the chain of custody documents are enclosed in Attachment 4.

5.0 WEATHER OBSERVATIONS

Winds were generally southerly (from the southeast, south, or southwest) for most of the response period, which resulted in the smoke plume from the Site moving in a generally northerly direction, away from the immediate mixed commercial/residential areas to the south

and west of the Site. Exceptions to this were on October 28th (west-northwesterly winds), October 29th (westerly winds), and October 31st (west-southwesterly winds). However, periods with calm winds, shifting wind conditions, and occasional fog resulted in stagnation of the smoke in the local area, allowing the smoke to migrate into nearby residential/commercial areas.

Substantial rain precipitation events occurred on October 23rd (1.19") and October 28th (0.5"). Light rainfall occurred on October 24-25, October 29, and November 1-2, with rainfall amounts ranging from 0.03" – 0.14" for these periods

Daily low temperatures during the response period ranged from 32 – 55 degrees Fahrenheit (°F) and high temperatures ranged from 41 – 78 °F. Historical weather data for the response period is presented in Attachment 5. The historical data was obtained from the WeatherUnderground website (<https://www.wunderground.com/history/>) and is based on weather observations recorded at the Mid-Ohio Valley Regional Airport (Wood County Airport), International Civil Aviation Organization (ICAO) identifier KPKB.

6.0 AIR MONITORING RESULTS

6.1 Particulate Monitoring

Graphical representations of the air monitoring data for particulates for each monitoring location are presented in Attachment 1. A summary of particulate monitoring data is presented in Table 1. Data tables with the complete particulate results for each location can be found at the EPA OSC website for this Site: https://response.epa.gov/site/doc_list.aspx?site_id=12462. Monitoring results for total particulates collected with a hand-held pDR 1500 are presented in Table 2. Air monitoring station locations are depicted in Figures 2 through 5.

Elevated/high readings observed at the individual air monitoring stations were a result of intensity of the fire/smoke at the time, proximity of the air monitoring station to the fire, wind direction, wind speed, and occasionally due to fog or light precipitation. Table 1 presents a summary of particulate results by location and time period and includes the following: location coordinates; particulate parameter (PM₁₀ or PM_{2.5}); starting and ending date/time for the monitoring period; maximum observed particulate reading and time; and the time-weighted average for the monitoring period.

The particulate data was compared to the National Ambient Air Quality Standards (NAAQS) for particle pollution/particulate matter (PM). NAAQS PM Standards include criteria for PM₁₀, particulate matter 10 micrometers or less in diameter, and PM_{2.5}, particulate matter 2.5 micrometers or less in diameter. PM_{2.5} is generally described as fine particles. The standard for PM₁₀ is 150 micrograms per cubic meter (µg/m³) over a 24 hour averaging time period. The standard for PM_{2.5} is 35 µg/m³ over a 24 hour averaging time period. Monitoring conducted with

the pDRs measured total particulates. There is not an NAAQS standard for total particulates. Though applicable only to worker safety and not applicable to public health/safety, for reference there is an Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 15 milligrams per cubic meter (mg/m³)/15,000 µg/m³ TWA for ‘Particulates Not Otherwise Regulated (Total Dust)’, sometimes referred to as nuisance dust.

Exceedances of NAAQS standards were observed at four air monitoring stations over five monitoring periods as presented below:

<u>Monitoring Station</u>	<u>TWA (µg/m³)</u>	<u>NAAQS PM</u>	<u>PM</u>	<u>Monitoring Time Period</u>
Background	37	35	PM _{2.5}	October 24-25, 19:34 – 10:11 hrs
Site area (onsite)/ Site perimeter	645	150	PM ₁₀	October 22, 1:07 – 21:29 hrs
Site perimeter	722	35	PM _{2.5}	October 24-25, 18:12 – 10:21 hrs
Site perimeter	75.7	35	PM _{2.5}	October 26, 8:42 – 20:47 hrs
Park and Ride	254	35	PM _{2.5}	October 24-25, 19:18 – 9:54 hrs

It should be noted that comparison of the monitoring data to the NAAQS PM standard should be qualified. The calculated TWA for EPA’s monitoring results is based on the run time for the monitor and may not always be a 24 hour TWA.

Review of the monitoring data did identify that the maximum concentrations from the particulate monitoring did show exceedances above the good range and into the hazardous range based on the Air Quality Index standards. The maximum concentrations were generally observed as spikes during a monitoring period. The spikes lasted anywhere from 15-30 minutes and then dropped below the NAAQS PM standard PM_{2.5} of 35 ug/m³ and PM₁₀ of 150 ug/m³. Spikes above these levels occurred at each of the monitoring locations through October 28, 2017 and then again on October 31, 2017. Review of the monitoring data also showed that both the TWA and maximum particulate readings consistently decreased each day of the response until the fire was declared over. The last day of monitoring did show a slight increase in the TWAs and maximum readings but may have been due to a weather inversion. Table 1A shows the particulate monitoring data sorted by location and data.

On October 27, 2017 at 11:56 hours, the pDR 1000AN unit was retrieved from the PCHS for troubleshooting, due to apparent errant readings which were much higher than expected, with no visible smoke or odors in the vicinity. The TWA for total particulates during the monitoring period was 415 µg/m³ with a maximum reading of 581µg/m³. The readings were verified to be errant by comparing with the pDR 1500, which indicated a total particulate concentration of 5.7 µg/m³. The pDR unit was cleaned and later re-deployed at the location.

6.2 AreaRAE Monitoring

Air monitoring was conducted using AreaRAE units and the VIPER system for the following parameters: NH₃, VOCs and O₂ (all six units); HCN (four units); Cl₂ (two units). The monitoring was conducted continuously from the time of initial deployment of the units on October 24th until the units were retrieved at approximately 16:45 hours on November 1, 2017, except for brief periods when the batteries were required to be replaced and during monitoring system down times. Graphical representations of the air monitoring data for the AreaRAE units are presented in Attachment 2. The graphs are segregated by air monitoring station. A summary of AreaRAE monitoring data is presented in Table 3. Data tables with the complete AreaRAE results for each location can be found on the EPA OSC website for this Site (Viper Data File): https://response.epa.gov/site/doc_list.aspx?site_id=12462. Air monitoring station locations are depicted in Figures 2 through 5.

The following summarizes the monitoring results from the AreaRAEs for each location:

Location	Sensor	Maximum Concentration Range
Background	HCN	0.4 ppm – 1.0 ppm
	NH ₃	0.4 ppm – 1.4 ppm
	O ₂	19.6 % - 22.5 %
	VOC	0.4 ppm – 1.0 ppm
Mine Outfall Fence	HCN	0.3 ppm – 1.1 ppm
	NH ₃	0 ppm – 0.4 ppm
	O ₂	19.6 % - 22.5 %
	VOC	0 ppm – 0.6 ppm
Park N Ride	HCN	0 ppm – 0.9 ppm
	NH ₃	0 ppm – 0.7 ppm
	O ₂	19.6 % - 23.7 %
	VOC	0 ppm – 28.4 ppm
	CL ₂	0.2 ppm – 0.3 ppm
Source Area/Perimeter	HCN	0.3 ppm – 119.1 ppm
	NH ₃	0 ppm – 2.1 ppm
	O ₂	19.7 % - 22.8 %
	VOC	0 ppm – 0.4 ppm
	CL ₂	0 ppm – 0.3 ppm

There were two significant anomalies observed over the course of the AreaRAE air monitoring. In the first anomaly, the monitoring system/VIPER recorded a very high reading for HCN on October 24th, the first day monitoring was conducted with the AreaRAEs. The high reading occurred on AreaRAE unit serial number (S/N) 292-500657 (Unit # 373), which was to be deployed at the source area perimeter location (see Figure 5). Consecutive instantaneous readings of 52.1 and 119 for HCN, taken at 5-second intervals, were recorded at 15:30 hours just prior to the unit losing communication with the VIPER monitoring system. The readings occurred while the unit was stored in a vehicle prior to their deployment. The unit was deployed at the Site perimeter location at 18:11 hours. The first HCN monitoring reading recorded after the communication came back online at 21:31 hours was also 119 ppm. Subsequent readings were 0 ppm. Direct readings of HCN on the instrument display panel made during the time period between the recorded 119 ppm readings indicated 0 ppm HCN. This spike in the HCN data is believed to be the result of electronic issues with the monitoring system.

The second noteworthy anomaly was observed for VOCs on AreaRAE S/N 292-500659 (unit No. 375), which was deployed at the Park and Ride monitoring station. Elevated VOC readings up to 30 ppm were recorded on VIPER for the period from approximately 21:00 hours on October 24th until approximately 02:00 hours on October 25th. VOC readings for the co-located AreaRAE unit over the same time period were approximately 0 ppm, as was a reading made with a hand-held MultiRAE instrument. Therefore, it is believed that those elevated VOC readings were due to problems with the instrument and/or monitoring system.

Air monitoring was also conducted at the ResCare facility air sampling location with an AreaRAE unit that was co-located with the summa canister (sample AA-09) during the air sampling. The VIPER monitoring system was not used during the monitoring. However, data logging was conducted and parameters were documented when the AreaRAE was retrieved. The data logging parameters are presented in the table below.

Parameter	Sensors			
	NH ₃ (ppm)	VOC (ppm)	HCN (ppm)	O ₂ (%)
Instantaneous reading at 17:11	0	0.0	0	20.9
Peak reading	0	0.2	0	-
Minimum reading	0	0.0	0	20.5
STEL	0	0.0	0	-
TWA	0	0.0	0	-

7.0 ANALYTICAL RESULTS FOR AIR SAMPLES FOR VOCs BY TO-15

The Final Analytical Report for the air samples for VOC analysis by EPA Method TO-15 was received on December 18, 2017. The Final Analytical Report is presented in Attachment 6. A summary of the analytical results for compounds that were detected in one or more samples is presented in Table 5. Table 5 and the Final Analytical Report include results for both rounds of air sampling, conducted on October 25-26 and November 2, 2017. Air sampling locations for both rounds of sampling are depicted in Figure 6. Sample Nos. AA-01 through AA-05 were collected during the first sampling event (October 25-26). Sample Nos. AA-06 through AA-10 were collected during the last sampling event (November 2). A brief discussion of the results is provided in the following paragraphs.

The following compounds were detected at low concentrations in all or most of the air samples:

	Compound Detected	Range Detected
Common solvents	2-butanone (aka methylethylketone) Acetone	ND to 1.4 ug/m ³ 2.1 to 8.7 ug/m ³
Gasoline/petroleum-related constituents	Benzene Cyclohexane Ethanol Heptane Hexane Toluene	ND to 11.6 ug/m ³ ND to 6.2 ug/m ³ 1.1 to 9.2 ug/m ³ ND to 1.3 ug/m ³ ND to 1.3 J ug/m ³ ND to 3.8 ug/m ³
Refrigerants (Freons)	Dichlorodifluoromethane (R-12) Trichlorofluoromethane (R-11);	2.4 to 2.7 ug/m ³ 1.3 J to 1.6 J ug/m ³
Other	Chloromethane Isopropyl alcohol	1.0 to 1.3 ug/m ³ 0.4 J to 1.3 ug/m ³

Note that some of these compounds may fit into more than one of the listed categories. Most, if not all, of these compounds could also be formed from burning materials such as plastics or other organic materials (e.g. wood.) as products of incomplete combustion (PIC).

Acetone was detected in all samples at concentrations ranging from 2.1 to 8.7 micrograms per cubic meter (ug/m³) and 2-butanone was detected in AA-05 through AA-10 at concentrations ranging from 0.5 J to 1.4 ug/m³. Acetone and 2-butanone are both common laboratory contaminants.

Benzene was detected in all samples except AA-08 and AA-10 at concentrations ranging from 0.8 J to 11.6 $\mu\text{g}/\text{m}^3$. Other gasoline/petroleum-related constituents detected in air samples included: cyclohexane, detected in all samples except AA-10 at concentrations from 1.6 to 6.2 $\mu\text{g}/\text{m}^3$; ethanol, detected in all samples at concentrations ranging from 1.1 to 9.2 $\mu\text{g}/\text{m}^3$ (ethanol is also produced from natural processes such as fermentation); hexane, detected in all samples except AA-04, AA-08, and AA-10 at concentrations ranging from 0.7 J to 1.3 J $\mu\text{g}/\text{m}^3$; and toluene, detected in all samples except AA-04 and AA-10 at concentrations ranging from 0.6 J to 3.8 $\mu\text{g}/\text{m}^3$. Trace levels of ethylbenzene, m,p- and o-xylenes were also detected at low concentrations in one or more samples.

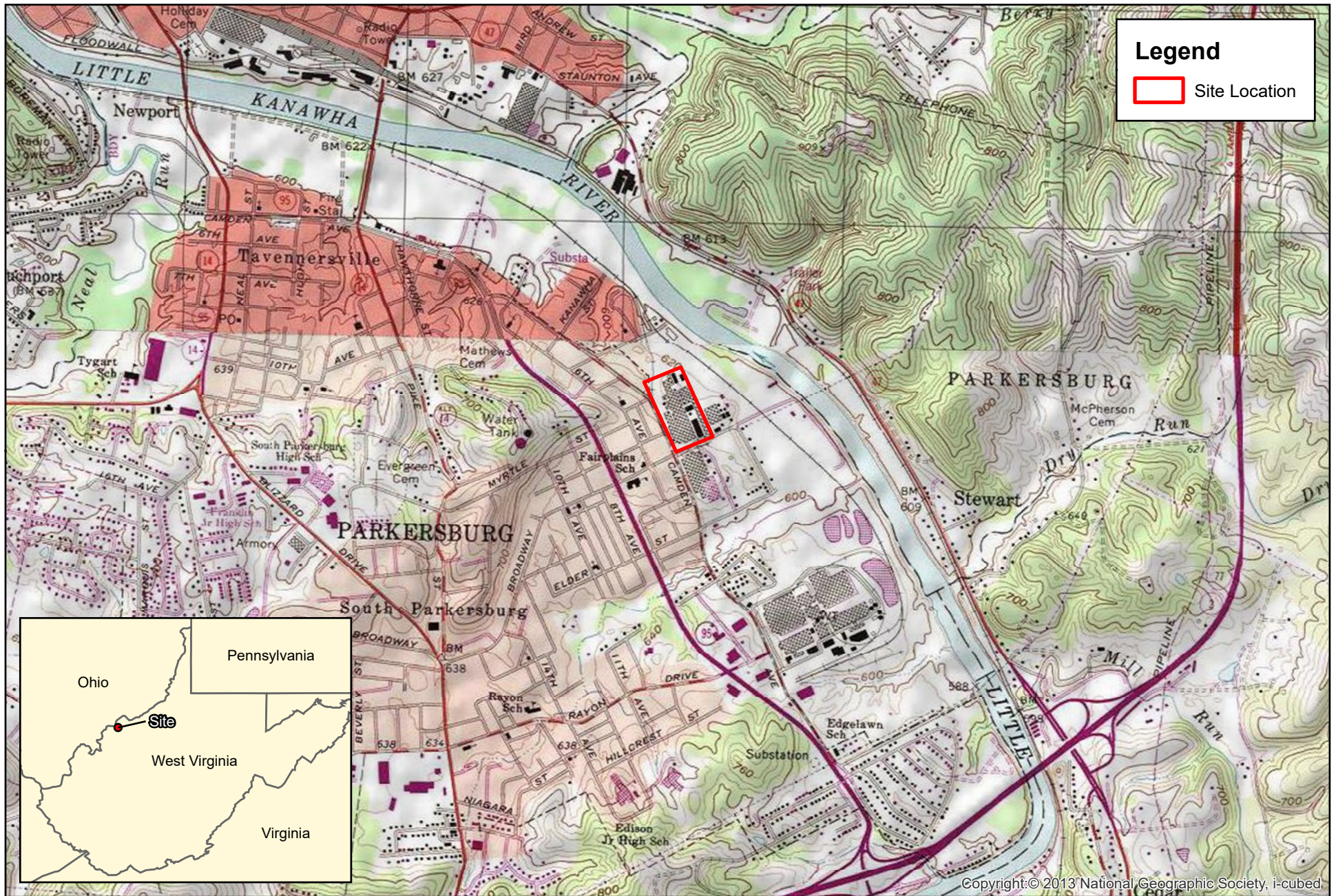
The refrigerant compounds dichlorodifluoromethane and trichlorofluoromethane were detected in all samples. Dichlorodifluoromethane was detected at similar concentrations in all samples ranging from 2.4 to 2.7 $\mu\text{g}/\text{m}^3$. Trichlorofluoromethane was also detected at similar concentrations in all samples, with 1.3 J $\mu\text{g}/\text{m}^3$ in all samples except AA-05, in which it was detected at 1.6 J $\mu\text{g}/\text{m}^3$.

Isopropyl alcohol was detected in all samples at concentrations ranging from 0.4 J to 1.7 $\mu\text{g}/\text{m}^3$. Chloromethane was detected at similar concentrations in all samples ranging from 1.0 to 1.3 $\mu\text{g}/\text{m}^3$.

8.0 REFERENCES

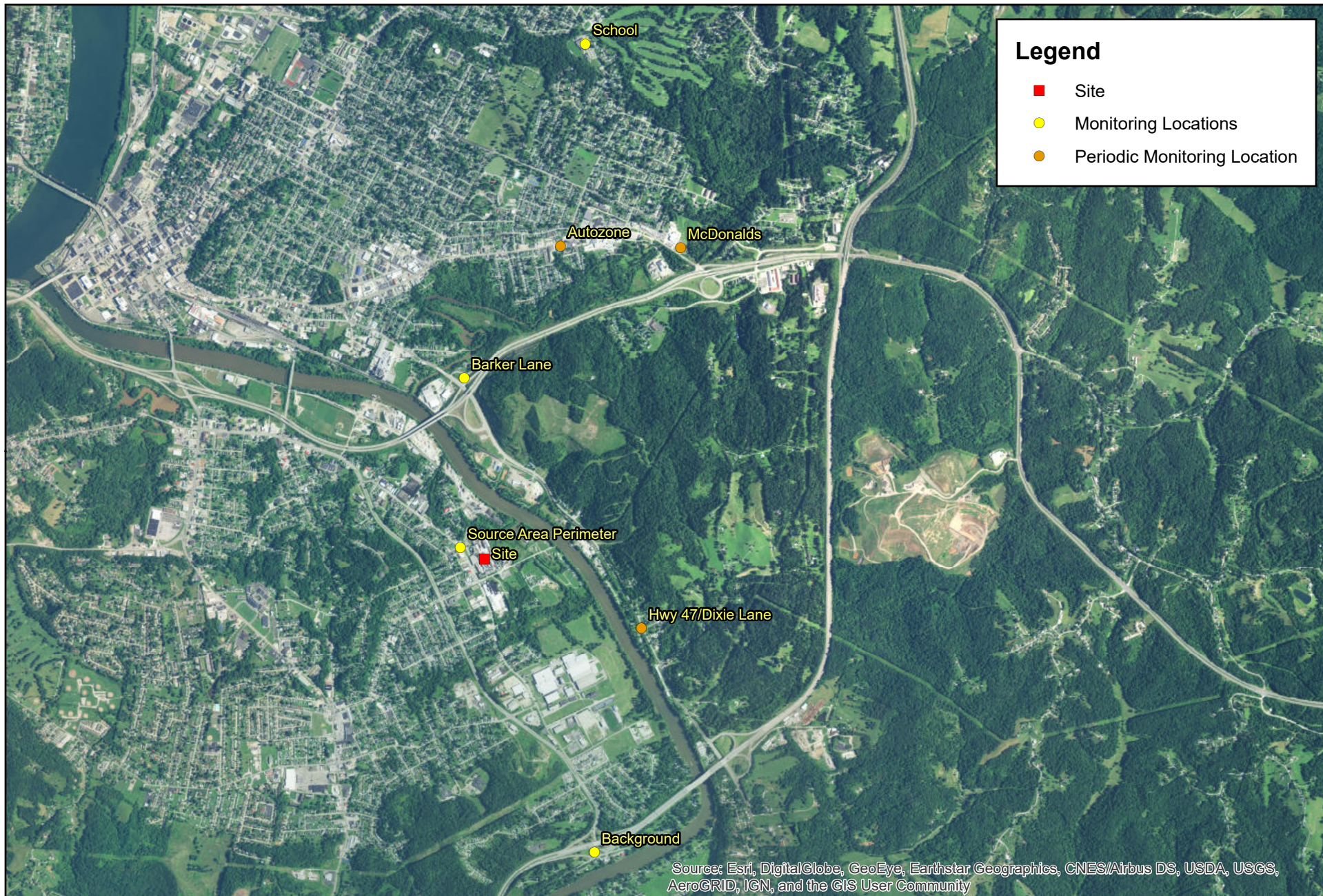
EPA, 2017. U.S. Environmental Protection Agency (EPA) OSC Website, Ames Warehouse Fire ER: https://response.epa.gov/site/site_profile.aspx?site_id=12462

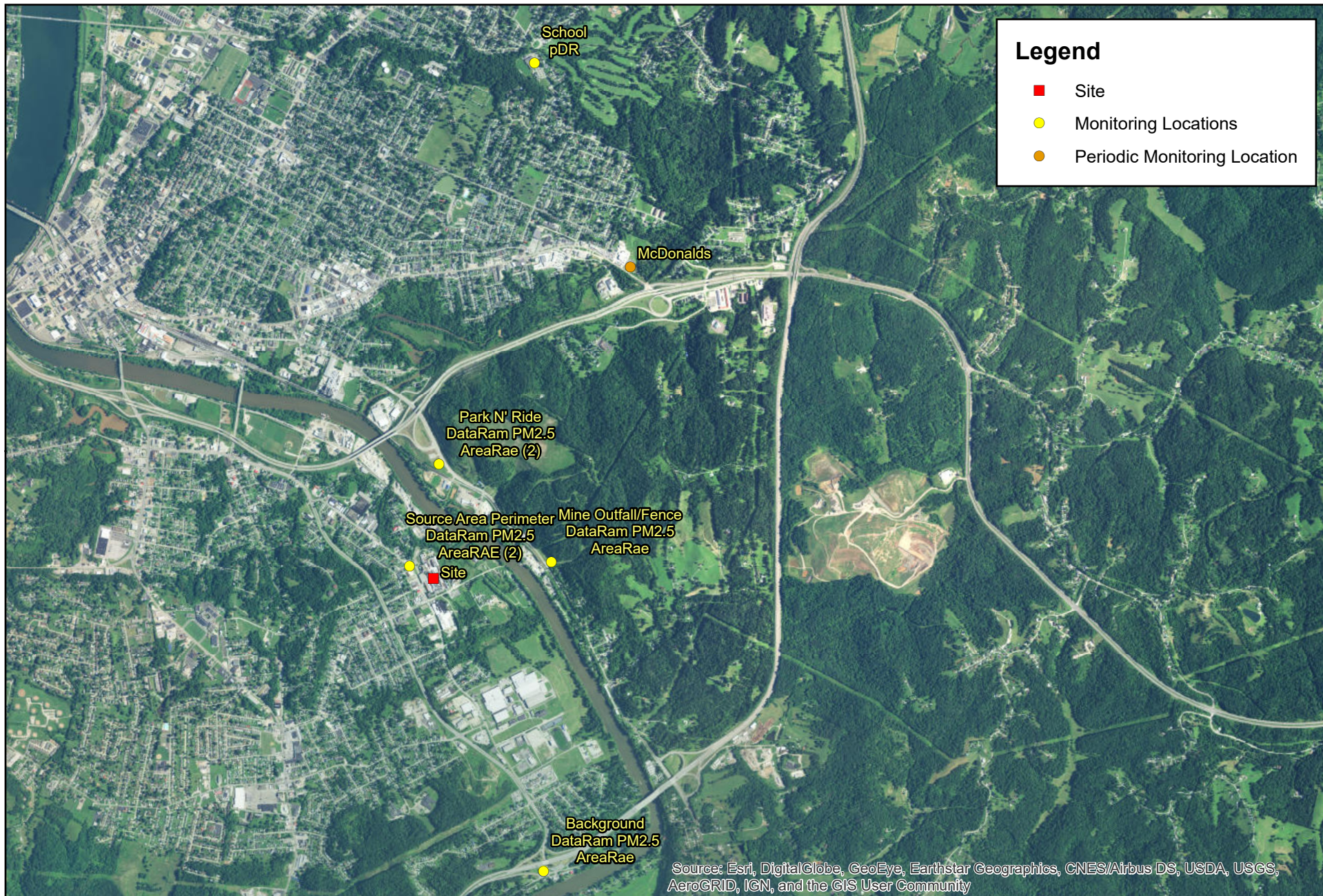
FIGURES











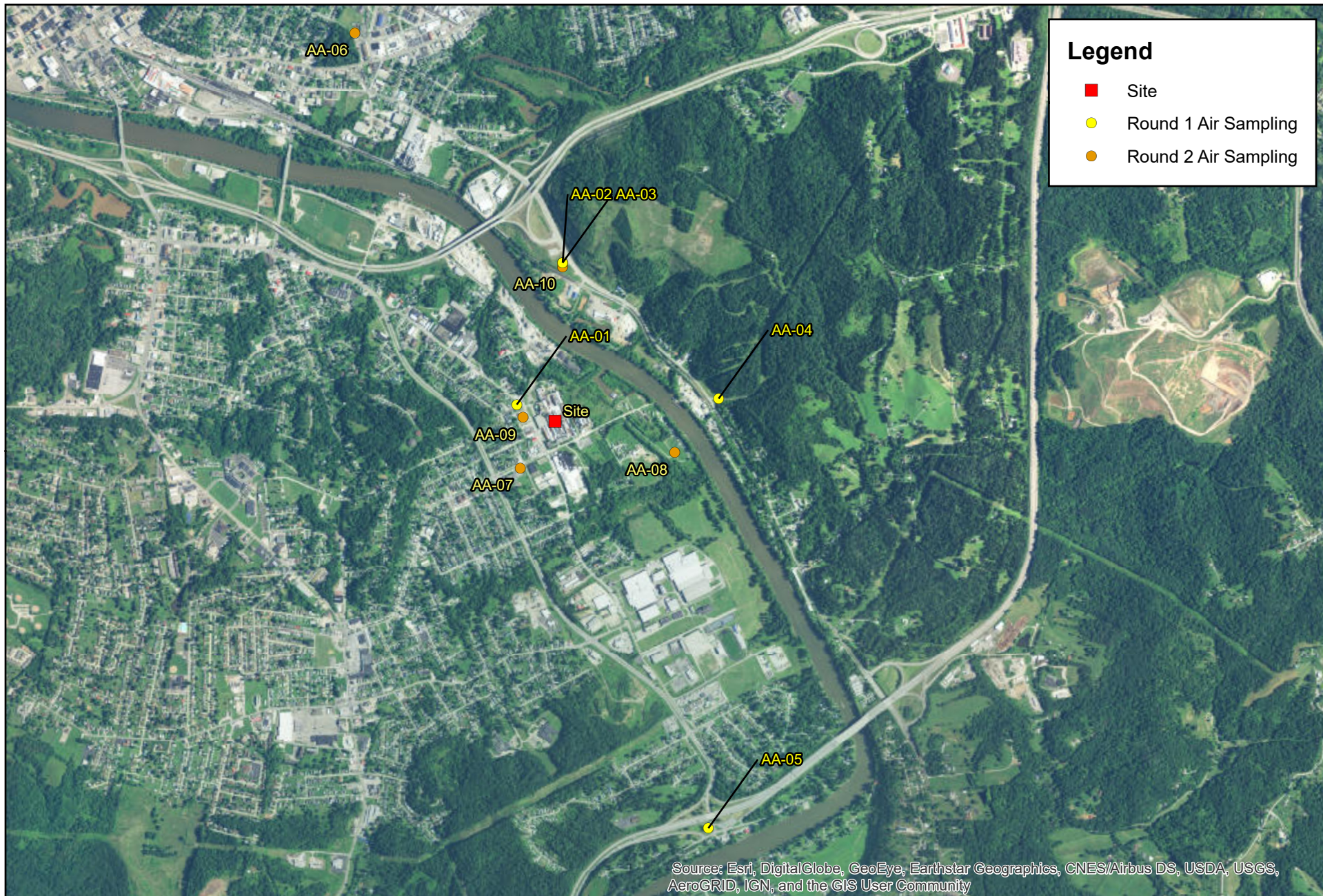


Figure 6 - Air Sampling Locations
 Ames Warehouse Fire ER
 Parkersburg, Wood County, WV

TABLES

Table 1 - Particulate Data Summary
Ames Warehouse Fire
October 22 -31, 2017

Location	Latitude	Longitude	PM Type	Round	Start Date/Time	End Date/Time	Total Run Time	Maximum Reading (ug/m3)	Time of Maximum Reading	TWA (ug/m3)
Barker Lane	39.2589	-81.5316	PM 10	1	10/22/2017; 5:04:34	10/22/2017; 18:39:33	13:36:49	364.95	9:35:39	39.7
Barker Lane	39.2589	-81.5316	PM 10	1	10/23/2017; 2:38:29	10/23/2017; 9:33:29	6:56:30	19.4	6:22:29	9.64
Site Area	39.2477	-81.5319	PM 10	1	10/22/2017; 1:07:04	10/22/2017; 8:02:09	20:24:59	18151.8	16:07:08	645.12
Source Area Perimeter	39.2477	-81.5316	PM10	1	10/22/2017; 21:41:43	10/23/2017; 2:20:43	4:40:20	225.97	2:12:53	10.97
Source Area Perimeter	39.2477	-81.5316	PM10	1	10/23/2017; 8:12:12	10/23/2017; 9:16:17	1:05:30	623	9:03:27	63.8
Background	39.2278	-81.51907	PM2.5	2	10/24/2017; 19:34:54	10/25/2017; 10:11:54	14:37:00	62.87	23:28:54	37.08
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	2	10/25/2017; 1:01:26	10/25/2017; 10:06:26	9:05:00	36.79	3:43:26	11.25
Park N' Ride	39.2545	-81.5293	PM2.5	2	10/24/2017; 19:18:02	10/25/2017; 9:54:02	14:36:00	1545.95	5:07:02	254.93
Source Area Perimeter	39.2477	-81.5316	PM2.5	2	10/24/2017; 18:53:39	10/25/2017; 10:21:39	16:09:00	36615.38	5:03:39	722.08
Background	39.2278	-81.51907	PM2.5	3	10/26/2017; 9:46:45	10/26/2017; 20:33:45	10:48:00	44.82	10:34:45	8.1
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	3	10/26/2017; 9:39:37	10/27/2017; 4:23:37	18:44:00	189.812	9:40:37	21.94
Park N' Ride	39.2545	-81.5293	PM2.5	3	10/26/2017; 9:18:11	10/27/2017; 8:20:11	23:02:00	483.15	9:50:11	28.22
Source Area Perimeter	39.2477	-81.5316	PM2.5	3	10/26/2017; 8:42:38	10/26/2017; 20:47:38	12:06:00	2167.03	10:32:38	75.7
Background	39.2278	-81.51907	PM2.5	4	10/27/2017; 8:40:50	10/28/2017; 3:59:50	19:19:00	30.36	1:44:50	3.97
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	4	10/27/2017; 21:00:29	10/28/2017; 4:19:29	7:19:00	42.58	1:57:29	9.39
Park N' Ride	39.2545	-81.5293	PM2.5	4	10/27/2017; 20:46:21	10/28/2017; 4:33:21	18:44:00	189.81	9:40:37	21.94
Source Area Perimeter	39.2477	-81.5316	PM2.5	4	10/27/2017; 7:14:18	10/27/17; 19:19:18	20:20:00	444.91	12:56:18	17.82
Background	39.2278	-81.51907	PM2.5	5	10/29/2017; 7:27:48	10/29/2017; 3:48:48	20:22:00	16.14	19:36:48	4.86
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	5	10/29/2017; 7:13:35	10/29/2017; 00:42:35	17:32:00	16.13	9:30:35	11.8
Park N' Ride	39.2545	-81.5293	PM2.5	5	10/29/2017; 7:01:05	10/29/2017; 18:33:05	11:33:00	21.64	9:49:05	12.98
Source Area Perimeter	39.2477	-81.5316	PM2.5	5	10/29/2017; 6:30:36	10/29/2017; 19:39:36	13:10:00	23.28	4:44:36	11.75
Background	39.2278	-81.51907	PM2.5	6	10/30/2017; 3:51:23	10/31/2017; 1:20:23	21:30:00	29.26	1:20:23	6.78
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	6	10/30/2017; 3:31:49	10/31/2017; 1:44:49	22:14:00	17.43	7:49:49	7.25
Park N' Ride	39.2545	-81.5293	PM2.5	6	10/29/2017; 20:25:54	10/30/2017; 04:26:54	8:02:00	11.63	20:25:54	3.88
Source Area Perimeter	39.2477	-81.5316	PM2.5	6	10/29/2017; 19:44:33	10/30/2017; 15:55:33	20:12:00	21.09	8:11:33	11.73
Background	39.2278	-81.51907	PM2.5	7	10/31/2017; 01:24:24	10/31/2017; 16:08:24	14:45:00	52.9	2:55:24	5.3
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	7	10/31/2017; 01:52:19	10/31/2017; 15:51:09	14:00:00	29.76	9:40:09	8.68
Park N' Ride	39.2545	-81.5293	PM2.5	7	10/30/2017; 12:41:36	10/31/2017; 10:21:36	21:41:00	48.41	8:12:36	7.16
Source Area Perimeter	39.2477	-81.5316	PM2.5	7	10/30/2017; 17:45:24	10/31/2017; 09:22:24	15:38:00	404.46	8:04:24	19.93

Key:

PM = Particulate matter

ug/m3 = micrograms per cubic meter

TWA = Time-weighted average

Table 1A - Particulate Data Summary - Sorted by Location
Ames Warehouse Fire
October 22 -31, 2017

Location	Latitude	Longitude	PM Type	Round	Start Date/Time	End Date/Time	Total Run Time	Maximum Reading (ug/m3)	Time of Maximum Reading	TWA (ug/m3)
Barker Lane	39.2589	-81.5316	PM 10	1	10/22/2017; 5:04:34	10/22/2017; 18:39:33	13:36:49	364.95	9:35:39	39.7
Barker Lane	39.2589	-81.5316	PM 10	1	10/23/2017; 2:38:29	10/23/2017; 9:33:29	6:56:30	19.4	6:22:29	9.64
Park N' Ride	39.2545	-81.5293	PM2.5	2	10/24/2017; 19:18:02	10/25/2017; 9:54:02	14:36:00	1545.95	5:07:02	254.93
Park N' Ride	39.2545	-81.5293	PM2.5	3	10/26/2017; 9:18:11	10/27/2017; 8:20:11	23:02:00	483.15	9:50:11	28.22
Park N' Ride	39.2545	-81.5293	PM2.5	4	10/27/2017; 20:46:21	10/28/2017; 4:33:21	18:44:00	189.81	9:40:37	21.94
Park N' Ride	39.2545	-81.5293	PM2.5	5	10/29/2017; 7:01:05	10/29/2017; 18:33:05	11:33:00	21.64	9:49:05	12.98
Park N' Ride	39.2545	-81.5293	PM2.5	6	10/29/2017; 20:25:54	10/30/2017; 04:26:54	8:02:00	11.63	20:25:54	3.88
Park N' Ride	39.2545	-81.5293	PM2.5	7	10/30/2017; 12:41:36	10/31/2017; 10:21:36	21:41:00	48.41	8:12:36	7.16
Site Area	39.2477	-81.5319	PM 10	1	10/22/2017; 1:07:04	10/22/2017; 8:02:09	20:24:59	18151.8	16:07:08	645.12
Source Area Perimeter	39.2477	-81.5316	PM10	1	10/22/2017; 21:41:43	10/23/2017; 2:20:43	4:40:20	225.97	2:12:53	10.97
Source Area Perimeter	39.2477	-81.5316	PM10	1	10/23/2017; 8:12:12	10/23/2017; 9:16:17	1:05:30	623	9:03:27	63.8
Source Area Perimeter	39.2477	-81.5316	PM2.5	2	10/24/2017; 18:53:39	10/25/2017; 10:21:39	16:09:00	36615.38	5:03:39	722.08
Source Area Perimeter	39.2477	-81.5316	PM2.5	3	10/26/2017; 8:42:38	10/26/2017; 20:47:38	12:06:00	2167.03	10:32:38	75.7
Source Area Perimeter	39.2477	-81.5316	PM2.5	4	10/27/2017; 7:14:18	10/27/17; 19:19:18	20:20:00	444.91	12:56:18	17.82
Source Area Perimeter	39.2477	-81.5316	PM2.5	5	10/29/2017; 6:30:36	10/29/2017; 19:39:36	13:10:00	23.28	4:44:36	11.75
Source Area Perimeter	39.2477	-81.5316	PM2.5	6	10/29/2017; 19:44:33	10/30/2017; 15:55:33	20:12:00	21.09	8:11:33	11.73
Source Area Perimeter	39.2477	-81.5316	PM2.5	7	10/30/2017; 17:45:24	10/31/2017; 09:22:24	15:38:00	404.46	8:04:24	19.93
Background	39.2278	-81.51907	PM2.5	2	10/24/2017; 19:34:54	10/25/2017; 10:11:54	14:37:00	62.87	23:28:54	37.08
Background	39.2278	-81.51907	PM2.5	3	10/26/2017; 9:46:45	10/26/2017; 20:33:45	10:48:00	44.82	10:34:45	8.1
Background	39.2278	-81.51907	PM2.5	3	10/26/2017; 9:46:45	10/26/2017; 20:33:45	10:48:00	44.82	10:34:45	8.1
Background	39.2278	-81.51907	PM2.5	4	10/27/2017; 8:40:50	10/28/2017; 3:59:50	19:19:00	30.36	1:44:50	3.97
Background	39.2278	-81.51907	PM2.5	5	10/29/2017; 7:27:48	10/29/2017; 3:48:48	20:22:00	16.14	19:36:48	4.86
Background	39.2278	-81.51907	PM2.5	6	10/30/2017; 3:51:23	10/31/2017; 1:20:23	21:30:00	29.26	1:20:23	6.78
Background	39.2278	-81.51907	PM2.5	7	10/31/2017; 01:24:24	10/31/2017; 16:08:24	14:45:00	52.9	2:55:24	5.3
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	2	10/25/2017; 1:01:26	10/25/2017; 10:06:26	9:05:00	36.79	3:43:26	11.25
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	3	10/26/2017; 9:39:37	10/27/2017; 4:23:37	18:44:00	189.812	9:40:37	21.94
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	4	10/27/2017; 21:00:29	10/28/2017; 4:19:29	7:19:00	42.58	1:57:29	9.39
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	5	10/29/2017; 7:13:35	10/29/2017; 00:42:35	17:32:00	16.13	9:30:35	11.8
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	6	10/30/2017; 3:31:49	10/31/2017; 1:44:49	22:14:00	17.43	7:49:49	7.25
Mine Outfall/Fence	39.2482	-81.5196	PM2.5	7	10/31/2017; 01:52:19	10/31/2017; 15:51:09	14:00:00	29.76	9:40:09	8.68

Key:

PM = Particulate matter

ug/m3 = micrograms per cubic meter

TWA = Time-weighted average

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
3879	pDR-1000AN	Background	10/22/2017	8:20	0	0						
3879	pDR-1000AN	Background	10/22/2017	11:18	0	0						
3879	pDR-1000AN	Background	10/22/2017	11:20	0	0						
3879	pDR-1000AN	Background	10/22/2017	13:28	0	0						
3879	pDR-1000AN	Background	10/22/2017	14:41	3	0						
3879	pDR-1000AN	Background	10/22/2017	16:02	18	0						
3879	pDR-1000AN	Background	10/22/2017	19:00	0	0						
3879	pDR-1000AN	Background	10/22/2017	22:38	0	0						
3879	pDR-1000AN	Background	10/23/2017	0:43	0	0						
3879	pDR-1000AN	Background	10/23/2017	2:20	0	0						
3879	pDR-1000AN	Background	10/23/2017	4:50	0	0						
36748	pDR-1500	Site	10/24/2017	9:16	3.1	2.7						
6175	MultiRae Plus	Site	10/24/2017	9:16			0	0	0	0		
36748	pDR-1500	Autozone 7th	10/24/2017	9:32	333.9	318.8						
6175	MultiRae Plus	Autozone 7th	10/24/2017	9:32			0	0 - 0.1	0	0		
36748	pDR-1500	School	10/24/2017	9:40	91.4	87.5						
6175	MultiRae Plus	School	10/24/2017	9:40			0	0-0.1	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/24/2017	9:55	630							In smoke plume directly downwind of fire
6175	MultiRae Plus	Park n Ride - Rt 47	10/24/2017	9:55			0	0.1	0	0		
36748	pDR-1500	Background	10/24/2017	10:15	4.5	8.6						
6175	MultiRae Plus	Background	10/24/2017	10:15			0	0.1	0	0		Smell of burning wood
36748	pDR-1500	Site	10/24/2017	15:54	5.6	3.2						
6175	MultiRae Plus	Site	10/24/2017	15:54			0	0	0	0		
36748	pDR-1500	Autozone on 7th St.	10/24/2017	16:09	3.3	2.9						
6175	MultiRae Plus	Autozone on 7th St.	10/24/2017	16:09			0	0	0	0		
36748	pDR-1500	School	10/24/2017	16:17	3.6	3.2						
6175	MultiRae Plus	School	10/24/2017	16:17			0	0	0	0		
36748	pDR-1500	McDonalds on 618	10/24/2017	16:26	80	70						
6175	MultiRae Plus	McDonalds on 618	10/24/2017	16:26			0	0	0	0		

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
36748	pDR-1500	Barker Lane	10/24/2017	16:52	2.7	3.2						
6175	MultiRae Plus	Barker Lane	10/24/2017	16:52			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/24/2017	16:58	3.6	4.2						
6175	MultiRae Plus	Park n Ride - Rt 47	10/24/2017	16:58			0	0	0	0		
36748	pDR-1500	Intersection Hwy 47 & Dix	10/24/2017	17:04	360	318						
6175	MultiRae Plus	Intersection Hwy 47 & Dix	10/24/2017	17:04			0	0	0	0		
36748	pDR-1500	Background	10/24/2017	17:11	2.4	5.2						
6175	MultiRae Plus	Background	10/24/2017	17:11			0	0	0	0		
6175	MultiRae Plus	Site	10/24/2017	18:11			0	0	0	0		
36748	pDR-1500	School	10/24/2017	18:32	2.8	2.8						
6175	MultiRae Plus	School	10/24/2017	18:32			0	0	0	0		
36748	pDR-1500	McDonalds on 7th St.	10/24/2017	18:57	38.5	32.2						
6175	MultiRae Plus	McDonalds on 7th St.	10/24/2017	18:57			0	0	0	0		
36748	pDR-1500	Barker Lane	10/24/2017	19:04	3.3	3.9						
6175	MultiRae Plus	Barker Lane	10/24/2017	19:04			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/24/2017	19:15:00			0	0	0	0		
6175	MultiRae Plus	Background	10/24/2017	19:36:00			0	0	0	0		
36748	pDR-1500	School	10/25/2017	0:15	4.7	4.8						Slight odor
6175	MultiRae Plus	School	10/25/2017	0:15			0	0	0	0		
269911	Ludlum 14C w 44-	School	10/25/2017	0:15							12	
6175	MultiRae Plus	Park n Ride - Rt 47	10/25/2017	0:41:00			0	0.1	0	0		Mod-Str Odor
36748	pDR-1500	Park n Ride - Rt 47	10/25/2017	0:41:00	19.8	20.2						Mod-Str Odor
269911	Ludlum 14C w 44-	Park n Ride - Rt 47	10/25/2017	0:41:00							17	Mod-Str Odor
6175	MultiRae Plus	Mine Road Fence Rt 47	10/25/2017	1:10:03	4.1	4.2	0	0	0	0		Mod Odor
36748	pDR-1500	Mine Road Fence Rt 47	10/25/2017	1:10:03								Mod Odor
269911	Ludlum 14C w 44-	Mine Road Fence Rt 48	10/25/2017	1:10:03							13	Mod Odor

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Background	10/25/2017	1:33			0	0	0	0		
36748	pDR-1500	Background	10/25/2017	1:33	5.1	6.8						
269911	Ludlum 14C w 44-	Background	10/25/2017	1:33							15	
6175	MultiRae Plus	Site	10/25/2017	2:00:55								Moderate
36748	pDR-1500	Site	10/25/2017	2:00:55	8	6						Moderate
269911	Ludlum 14C w 44-	Site	10/25/2017	2:00:55							10	Moderate
36748	pDR-1500	School	10/25/2017	3:04	14.5	12.8						
6175	MultiRae Plus	School	10/25/2017	3:04			0	0	0	0		
269911	Ludlum 14C w 44-	School	10/25/2017	3:04							15	
6175	MultiRae Plus	Park n Ride - Rt 47	10/25/2017	3:30:29			0	0	0	0		Mod-Str Odor
36748	pDR-1500	Park n Ride - Rt 47	10/25/2017	3:30:29	38.9	28.4						Mod-Str Odor
269911	Ludlum 14C w 44-	Park n Ride - Rt 47	10/25/2017	3:30:29							17	Mod-Str Odor
6175	MultiRae Plus	Mine Road Fence Rt 47	10/25/2017	3:41:52								Moderate
36748	pDR-1500	Mine Road Fence Rt 47	10/25/2017	3:41:52	5.3	4.3						Moderate
269911	Ludlum 14C w 44-	Mine Road Fence Rt 47	10/25/2017	3:41:52							16	Moderate
6175	MultiRae Plus	Background	10/25/2017	4:10:15			0	0	0	0		
36748	pDR-1500	Background	10/25/2017	4:10:15	7.3	6						
269911	Ludlum 14C w 44-	Background	10/25/2017	4:10:15							15	
6175	MultiRae Plus	Site	10/25/2017	4:29:22			0	0.1	0	0		
36748	pDR-1500	Site	10/25/2017	4:29:22	5.5	5.8						
269911	Ludlum 14C w 44-	Site	10/25/2017	4:29:22							10	
6175	MultiRae Plus	Site	10/25/2017	5:34			0	0	0	0		
36748	pDR-1500	Site	10/25/2017	5:34	327	519.1						
36748	pDR-1500	School	10/25/2017	5:57	30.7	30.9						
6175	MultiRae Plus	School	10/25/2017	5:57			0	0	0	0		
36748	pDR-1500	McDonalds at 7th St. & 150	10/25/2017	6:12	67.6	65.8						
6175	MultiRae Plus	McDonalds at 7th St. & 150	10/25/2017	6:12			0	0	0	0		
36748	pDR-1500	Barker	10/25/2017	6:20	131.4	137.1						
6175	MultiRae Plus	Barker	10/25/2017	6:20			0	0	0	0		

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Park n Ride - Rt 47	10/25/2017	6:23			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/25/2017	6:23	87	129.5						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/25/2017	6:45			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/25/2017	6:45	5.8	6						
6175	MultiRae Plus	Background	10/25/2017	6:55			0	0	0	0		
36748	pDR-1500	Background	10/25/2017	6:55	6.2	6.1						
6175	MultiRae Plus	Site	10/25/2017	8:59			0	0.1	0	0		
36748	pDR-1500	Site	10/25/2017	8:59	4.7	4.7						
36748	pDR-1500	Autozone on 7th St.	10/25/2017	9:17								
6175	MultiRae Plus	Autozone on 7th St.	10/25/2017	9:17	150	151	0	0	0	0		
36748	pDR-1500	School	10/25/2017	9:39	7.7	8.2						
6175	MultiRae Plus	School	10/25/2017	9:39			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/25/2017	9:51			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/25/2017	9:51								
6175	MultiRae Plus	Mine Road Fence Rt 47	10/25/2017	10:03			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/25/2017	10:03	6.7	5.4						
6175	MultiRae Plus	Background	10/25/2017	10:13			0	0	0	0		
36748	pDR-1500	Background	10/25/2017	10:13	5.4	5.1						10:22 Oct-25: All DataRam shut down and returned due to incoming rain showers on radar
6175	MultiRae Plus	Site	10/26/2017	17:57			0	0	0	0		
36748	pDR-1500	Site	10/26/2017	17:57	4.2	4.6						
36748	pDR-1500	School	10/26/2017	18:26	4.7	3.9						
6175	MultiRae Plus	School	10/26/2017	18:26			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/26/2017	18:51			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/26/2017	18:51	6.1	5.2						

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Mine Road Fence Rt 47	10/26/2017	19:04			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/26/2017	19:04	3.1	3.6						
6175	MultiRae Plus	Background	10/26/2017	19:16			0	0	0	0		
36748	pDR-1500	Background	10/26/2017	19:16	13.9	9						
6175	MultiRae Plus	Site	10/27/2017	1:45			0	0	0	0		
36748	pDR-1500	Site	10/27/2017	1:45	835.4	837.9						
6175	MultiRae Plus	Park n Ride - Rt 47	10/27/2017	2:37			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/27/2017	2:37	4.4	4.2						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/27/2017	2:58			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/27/2017	2:58	4.8	6						
6175	MultiRae Plus	Background	10/27/2017	3:16			0	0	0	0		
36748	pDR-1500	Background	10/27/2017	3:16	13.8	6						
36748	pDR-1500	School	10/27/2017	3:34	4.8	5.6						
6175	MultiRae Plus	School	10/27/2017	3:34			0	0	0	0		
6175	MultiRae Plus	Site	10/27/2017	7:15			0	0	0	0		
36748	pDR-1500	Site	10/27/2017	7:15	15.1	6.1						
36748	pDR-1500	School	10/27/2017	8:00	4.9	6.7						
6175	MultiRae Plus	School	10/27/2017	8:00			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/27/2017	8:14			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/27/2017	8:14	5.3	6.3						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/27/2017	8:20			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/27/2017	8:20	4.5	4.8						
6175	MultiRae Plus	Background	10/27/2017	8:37			0	0	0	0		
36748	pDR-1500	Background	10/27/2017	8:37	6.3	3.9						
6175	MultiRae Plus	Site	10/27/2017	11:33			0	0	0	0		
36748	pDR-1500	Site	10/27/2017	11:33	6	5.9						

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
36748	pDR-1500	School	10/27/2017	11:56								
6175	MultiRae Plus	School	10/27/2017	11:56			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/27/2017	12:33			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/27/2017	12:33	27.1	30.3						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/27/2017	12:47			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/27/2017	12:47	27.1	30.3						
6175	MultiRae Plus	Background	10/27/2017	12:58			0	0	0	0		
36748	pDR-1500	Background	10/27/2017	12:58	5.3	5.7						
6175	MultiRae Plus	Site	10/27/2017	15:47			0.2	0	0	0		
36748	pDR-1500	Site	10/27/2017	15:47	5.8	4.7						
6175	MultiRae Plus	Park n Ride - Rt 47	10/27/2017	16:33			1	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/27/2017	16:33	26	18.8						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/27/2017	16:38			0-1	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/27/2017	16:38	4.6	8.7						
6175	MultiRae Plus	Background	10/27/2017	16:49			0-2	0	0	0		
36748	pDR-1500	Background	10/27/2017	16:49	3.1	4.9						
6175	MultiRae Plus	Site	10/27/2017	19:20			0	0	0	0		
36748	pDR-1500	Site	10/27/2017	19:20								Battery dead, replaced at next location
36748	pDR-1500	School	10/27/2017	20:15	4.9	5.4						
6175	MultiRae Plus	School	10/27/2017	20:15			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/27/2017	20:46			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/27/2017	20:46	7.6	10.6						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/27/2017	20:59			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/27/2017	20:59	6.1	6.6						
6175	MultiRae Plus	Background	10/27/2017	21:38			0	0	0	0		
36748	pDR-1500	Background	10/27/2017	21:38	9.6	8.4						

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Site	10/28/2017	3:31			0	0	0	0		
36748	pDR-1500	Site	10/28/2017	3:31	12.5	12.9						
6175	MultiRae Plus	Background	10/28/2017	3:56			0	0	0	0		
36748	pDR-1500	Background	10/28/2017	3:56	14.8	12.5						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/28/2017	4:17			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/28/2017	4:17	14.5	15						
6175	MultiRae Plus	Park n Ride - Rt 47	10/28/2017	4:32			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/28/2017	4:32	14	14.5						
6175	MultiRae Plus	Site	10/28/2017	9:56			0	0	0	0		
36748	pDR-1500	Site	10/28/2017	9:56	7.4	7.2						
36748	pDR-1500	School	10/28/2017	10:31	1.8	1.9						
6175	MultiRae Plus	School	10/28/2017	10:31			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/28/2017	10:54			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/28/2017	10:54	2.5	2.7						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/28/2017	11:01			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/28/2017	11:01	2.1	2.3						
6175	MultiRae Plus	Background	10/28/2017	11:12			0	0	0	0		
36748	pDR-1500	Background	10/28/2017	11:12	2.5	2.6						
6175	MultiRae Plus	Site	10/28/2017	13:13			0-1	0	0	0		
36748	pDR-1500	Site	10/28/2017	13:13								
36748	pDR-1500	School	10/28/2017	13:35	2.2	2.3	0	0	0	0		
6175	MultiRae Plus	School	10/28/2017	13:35								
6175	MultiRae Plus	Park n Ride - Rt 47	10/28/2017	13:51			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/28/2017	13:51	2.5	2.6						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/28/2017	14:24			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/28/2017	14:24	2.1	2.1						

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Background	10/28/2017	14:37			0	0	0	0		
36748	pDR-1500	Background	10/28/2017	14:37	3.3	2.7						
6175	MultiRae Plus	Site	10/28/2017	17:28			0	0	0	0		
36748	pDR-1500	Site	10/28/2017	17:28	2.5	2						
36748	pDR-1500	School	10/28/2017	17:46	2.2	2.6						
6175	MultiRae Plus	School	10/28/2017	17:46			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/28/2017	18:09			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/28/2017	18:09	3.9	3.1						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/28/2017	18:17			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/28/2017	18:17	6.1	3.4						
6175	MultiRae Plus	Background	10/28/2017	18:44			0	0	0	0		
36748	pDR-1500	Background	10/28/2017	18:44	6.2	6.3						
6175	MultiRae Plus	Site	10/28/2017	21:24			0	0	0	0		
36748	pDR-1500	Site	10/28/2017	21:24	6	5.6						
36748	pDR-1500	School	10/28/2017	21:48	7.3	6.9						
6175	MultiRae Plus	School	10/28/2017	21:48			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/28/2017	22:04			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/28/2017	22:04	6.9	6.5						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/28/2017	22:11			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/28/2017	22:11	6.8	7.3						
6175	MultiRae Plus	Background	10/28/2017	22:22			0	0	0	0		
36748	pDR-1500	Background	10/28/2017	22:22	6.6	7.9						
6175	MultiRae Plus	Site	10/29/2017	2:15			0	0	0	0		
36748	pDR-1500	Site	10/29/2017	2:15	7.9	7.6						
36748	pDR-1500	School	10/29/2017	2:38	8.3	8.6						
6175	MultiRae Plus	School	10/29/2017	2:38			0	0	0	0		

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Park n Ride - Rt 47	10/29/2017	2:52			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/29/2017	2:52	9	8.9						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/29/2017	2:56			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/29/2017	2:56	12	10.4						
6175	MultiRae Plus	Background	10/29/2017	3:06			0	0	0	0		
36748	pDR-1500	Background	10/29/2017	3:06	9	8.5						
6175	MultiRae Plus	Site	10/29/2017	6:30			0	0	0	0		
36748	pDR-1500	Site	10/29/2017	6:30	6.5	6						
36748	pDR-1500	School	10/29/2017	6:48	5.5	5.9						
6175	MultiRae Plus	School	10/29/2017	6:48			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/29/2017	7:01			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/29/2017	7:01	6	6.4						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/29/2017	7:12			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/29/2017	7:12	7.6	7						
6175	MultiRae Plus	Background	10/29/2017	7:27			0	0	0	0		
36748	pDR-1500	Background	10/29/2017	7:27	7	6.8						
6175	MultiRae Plus	Site	10/29/2017	9:25			0	0	0	0		
36748	pDR-1500	Site	10/29/2017	9:25	8.3	8.3						
36748	pDR-1500	School	10/29/2017	9:46	8.3	8.3						
6175	MultiRae Plus	School	10/29/2017	9:46			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/29/2017	10:05			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/29/2017	10:05	9	9						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/29/2017	10:18			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/29/2017	10:18	9.7	9.6						
6175	MultiRae Plus	Background	10/29/2017	10:34			0	0	0	0		
36748	pDR-1500	Background	10/29/2017	10:34	10.6	10.7						

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Site	10/29/2017	13:14			0	0	0	0		
36748	pDR-1500	Site	10/29/2017	13:14	6.9	6.5						
36748	pDR-1500	School	10/29/2017	13:39	5.2	5.4						
6175	MultiRae Plus	School	10/29/2017	13:39			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/29/2017	14:05			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/29/2017	14:05	5.4	5.4						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/29/2017	14:19			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/29/2017	14:19	5	5.5						
6175	MultiRae Plus	Background	10/29/2017	14:35			0	0	0	0		
36748	pDR-1500	Background	10/29/2017	14:35	6	5.9						
6175	MultiRae Plus	Site	10/29/2017	17:44			0	0	0	0		
36748	pDR-1500	Site	10/29/2017	17:44	7	6.5						
36748	pDR-1500	School	10/29/2017	18:18	5.8	6.6						
6175	MultiRae Plus	School	10/29/2017	18:18			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/29/2017	18:30			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/29/2017	18:30	11.1	7.7						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/29/2017	18:48			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/29/2017	18:48	9.2	8.4						
6175	MultiRae Plus	Background	10/29/2017	19:06			0	0	0	0		
36748	pDR-1500	Background	10/29/2017	19:06	9.1	8.9						
6175	MultiRae Plus	Site	10/29/2017	23:14			0	0	0	0		
36748	pDR-1500	Site	10/29/2017	23:14	6	6.3						
36748	pDR-1500	School	10/29/2017	23:52	7	6.7						
6175	MultiRae Plus	School	10/29/2017	23:52			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/30/2017	0:09			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/30/2017	0:09	8.4	8.4						

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Mine Road Fence Rt 47	10/30/2017	0:18			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/30/2017	0:18	10.2	9.5						
6175	MultiRae Plus	Background	10/30/2017	0:30			0	0	0	0		
36748	pDR-1500	Background	10/30/2017	0:30	11	9.9						
6175	MultiRae Plus	Site	10/30/2017	2:36			0	0	0	0		
36748	pDR-1500	Site	10/30/2017	2:36	8.8	9.2						
36748	pDR-1500	School	10/30/2017	2:59	8.6	8.4						
6175	MultiRae Plus	School	10/30/2017	2:59			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/30/2017	3:09			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/30/2017	3:09	8.3	8.1						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/30/2017	3:31			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/30/2017	3:31	8.8	9						
6175	MultiRae Plus	Background	10/30/2017	3:47			0	0	0	0		
36748	pDR-1500	Background	10/30/2017	3:47	8.3	7.8						
6175	MultiRae Plus	Site	10/30/2017	9:42			0	0	0	0		
36748	pDR-1500	Site	10/30/2017	9:42	5.9	6						
36748	pDR-1500	School	10/30/2017	10:01	5.5	5.9						
6175	MultiRae Plus	School	10/30/2017	10:01			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/30/2017	10:39			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/30/2017	10:39	10.4	12						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/30/2017	10:47			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/30/2017	10:47	7.1	7.4						
6175	MultiRae Plus	Background	10/30/2017	11:14			0	0	0	0		
36748	pDR-1500	Background	10/30/2017	11:14	7.1	7						
6175	MultiRae Plus	Site	10/30/2017	14:22			0	0	0	0		
36748	pDR-1500	Site	10/30/2017	14:22	6.9	5.1						

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
36748	pDR-1500	School	10/30/2017	14:50	4.7	4.6						
6175	MultiRae Plus	School	10/30/2017	14:50			0-1	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/30/2017	15:19			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/30/2017	15:19	5.5	5						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/30/2017	15:27			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/30/2017	15:27								
6175	MultiRae Plus	Background	10/30/2017	15:41			0	0	0	0		
36748	pDR-1500	Background	10/30/2017	15:41	4.7	5						
6175	MultiRae Plus	Site	10/30/2017	17:44			0	0	0	0		
36748	pDR-1500	Site	10/30/2017	17:44	6.1	6.1						
36748	pDR-1500	School	10/30/2017	18:07								Sporting event: no readings taken
6175	MultiRae Plus	School	10/30/2017	18:07								Sporting event: no readings taken
6175	MultiRae Plus	Park n Ride - Rt 47	10/30/2017	18:18			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/30/2017	18:18	13.1	5.8						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/30/2017	18:28			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/30/2017	18:28	6	5.7						
6175	MultiRae Plus	Background	10/30/2017	18:44			0	0	0	0		
36748	pDR-1500	Background	10/30/2017	18:44	5.9	5.5						
6175	MultiRae Plus	Site	10/30/2017	21:29			0	0	0	0		
36748	pDR-1500	Site	10/30/2017	21:29	5.1	5.2						
36748	pDR-1500	School	10/30/2017	21:52	4.9	5.8						
6175	MultiRae Plus	School	10/30/2017	21:52			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/30/2017	22:12			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/30/2017	22:12	4.3	6						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/30/2017	22:19:00			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/30/2017	22:19:00	4.3	4.1						

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Background	10/30/2017	22:31			0	0	0	0		
36748	pDR-1500	Background	10/30/2017	22:31	6.7	4.8						
6175	MultiRae Plus	Site	10/31/2017	2:24:00			0	0	0	0		
36748	pDR-1500	Site	10/31/2017	2:24:00	5.4	5						
36748	pDR-1500	School	10/31/2017	2:11	4.1	3.9						
6175	MultiRae Plus	School	10/31/2017	2:11			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/31/2017	1:56			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/31/2017	1:56	4	3.9						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/31/2017	1:44			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/31/2017	1:44	3.3	3.7						
6175	MultiRae Plus	Background	10/31/2017	1:18			0	0	0	0		
36748	pDR-1500	Background	10/31/2017	1:18	35.4	13.2						
6175	MultiRae Plus	Site	10/31/2017	5:41			0	0	0	0		
36748	pDR-1500	Site	10/31/2017	5:41	18.7	20.1						
36748	pDR-1500	School	10/31/2017	6:01	3.4	3.8						
6175	MultiRae Plus	School	10/31/2017	6:01			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/31/2017	6:13			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/31/2017	6:13	6.3	7.3						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/31/2017	6:26			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/31/2017	6:26	4.5	5.4						
6175	MultiRae Plus	Background	10/31/2017	6:36			0	0	0	0		
36748	pDR-1500	Background	10/31/2017	6:36	5.7	5.6						
6175	MultiRae Plus	Site	10/31/2017	9:35			0	0	0	0		
36748	pDR-1500	Site	10/31/2017	9:35	7	6.3						
36748	pDR-1500	School	10/31/2017	9:55	5.3	5.9						
6175	MultiRae Plus	School	10/31/2017	9:55			0	0	0	0		

**Table 2 - Air Monitoring Data
Hand-Held Instruments
Ames Warehouse Fire ER
Parkersburg, Wood County, WV**

Monitor ID	Monitor Type	Location	RealDate	RealTime	Particulate		Chemical/LEL				RAD	Notes
					Concentration (ug/m ³)	TWA	CO	VOC	H2S	LEL	Gamma uR/hr	
6175	MultiRae Plus	Park n Ride - Rt 47	10/31/2017	10:17			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/31/2017	10:17	5.2	7.1						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/31/2017	10:31			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/31/2017	10:31	4.5	5.2						
6175	MultiRae Plus	Background	10/31/2017	10:41			0	0	0	0		
36748	pDR-1500	Background	10/31/2017	10:41								
6175	MultiRae Plus	Site	10/31/2017	16:43								
36748	pDR-1500	Site	10/31/2017	16:43								
36748	pDR-1500	School	10/31/2017	15:22	4.2	5.2						
6175	MultiRae Plus	School	10/31/2017	15:22			0	0	0	0		
6175	MultiRae Plus	Park n Ride - Rt 47	10/31/2017	15:36			0	0	0	0		
36748	pDR-1500	Park n Ride - Rt 47	10/31/2017	15:36	4.8	5.4						
6175	MultiRae Plus	Mine Road Fence Rt 47	10/31/2017	15:48			0	0	0	0		
36748	pDR-1500	Mine Road Fence Rt 47	10/31/2017	15:48	5.6	4.9						
6175	MultiRae Plus	Background	10/31/2017	16:06			0	0	0	0		
36748	pDR-1500	Background	10/31/2017	16:06	4.8	4.7						

Table 3 - AreaRAE Monitoring Data Summary
Ames Warehouse Fire
Parkersburg, Wood County, WV

Location	Meter Serial Number	Start Date/Time	End Date/Time	Total Run Time	Sensor	Maximum Reading	Minimum Reading (O2)	Flag	Units	Time of Minimum/Maximum Reading
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/24/2017 21:31:29	10/24/2017 23:59:55	2:28:25	HCN	119.1			ppm	21:31:29
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/24/2017 21:31:29	10/24/2017 23:59:55	2:28:25	O2	20.9		*	%	21:31:29
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/24/2017 21:31:29	10/24/2017 23:59:55	2:28:25	VOC	0.2		*	ppm	22:00:46
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/24/2017 21:31:29	10/24/2017 23:59:55	2:28:25	NH3	0		A	ppm	21:31:29
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/24/2017 21:31:29	10/24/2017 23:59:55	2:28:25	O2		20.3	*	%	22:00:46
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/24/2017 21:31:35	10/24/2017 23:59:56	2:28:21	VOC	28.4			ppm	22:34:21
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/24/2017 21:31:35	10/24/2017 23:59:56	2:28:21	O2	21.6		*	%	21:34:50
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/24/2017 21:31:35	10/24/2017 23:59:56	2:28:21	NH3	0		A	ppm	23:59:56
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/24/2017 21:31:35	10/24/2017 23:59:56	2:28:21	HCN	0		A	ppm	23:59:56
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/24/2017 21:31:35	10/24/2017 23:59:56	2:28:21	O2		20.9	*	%	23:59:56
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/24/2017 21:31:41	10/25/2017 0:00:00	2:28:19	O2	21.2		*	%	22:45:36
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/24/2017 21:31:41	10/25/2017 0:00:00	2:28:19	NH3	0.6			ppm	22:23:01
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/24/2017 21:31:41	10/25/2017 0:00:00	2:28:19	VOC	0.2		*	ppm	22:56:10
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/24/2017 21:31:41	10/25/2017 0:00:00	2:28:19	Cl2	0.2		*	ppm	23:49:30
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/24/2017 21:31:41	10/25/2017 0:00:00	2:28:19	O2		20.9	*	%	0:00:00
Background	PRG2CAP - AreaRAE - S/N292-500658	10/24/2017 21:31:47	10/24/2017 23:59:55	2:28:08	O2	20.9		A	%	23:59:55
Background	PRG2CAP - AreaRAE - S/N292-500658	10/24/2017 21:31:47	10/24/2017 23:59:55	2:28:08	VOC	0.5		*	ppm	23:56:52
Background	PRG2CAP - AreaRAE - S/N292-500658	10/24/2017 21:31:47	10/24/2017 23:59:55	2:28:08	NH3	0.4		*	ppm	23:38:15
Background	PRG2CAP - AreaRAE - S/N292-500658	10/24/2017 21:31:47	10/24/2017 23:59:55	2:28:08	HCN	0.4			ppm	22:39:49
Background	PRG2CAP - AreaRAE - S/N292-500658	10/24/2017 21:31:47	10/24/2017 23:59:55	2:28:08	O2		20.9	A	%	21:31:47
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/24/2017 21:45:47	10/25/2017 0:00:00	2:14:13	O2	22.7			%	22:05:07
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/24/2017 21:45:47	10/25/2017 0:00:00	2:14:13	NH3	0.6		*	ppm	22:25:10
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/24/2017 21:45:47	10/25/2017 0:00:00	2:14:13	VOC	0		A	ppm	0:00:00
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/24/2017 21:45:47	10/25/2017 0:00:00	2:14:13	Cl2	0		A	ppm	0:00:00
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/24/2017 21:45:47	10/25/2017 0:00:00	2:14:13	O2		20.2	*	%	23:53:50
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/25/2017 0:00:00	10/25/2017 23:59:59	23:59:59	O2	20.6		*	%	19:55:56
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/25/2017 0:00:00	10/25/2017 23:59:59	23:59:59	HCN	0.3			ppm	5:18:44
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/25/2017 0:00:00	10/25/2017 23:59:59	23:59:59	VOC	0.2		*	ppm	4:58:09
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/25/2017 0:00:00	10/25/2017 23:59:59	23:59:59	NH3	0		A	ppm	23:59:59
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/25/2017 0:00:00	10/25/2017 23:59:59	23:59:59	O2		20.2	*	%	4:30:21
Background	PRG2CAP - AreaRAE - S/N292-500658	10/25/2017 0:00:02	10/25/2017 21:17:48	21:17:46	O2	20.9		*	%	21:17:48
Background	PRG2CAP - AreaRAE - S/N292-500658	10/25/2017 0:00:02	10/25/2017 21:17:48	21:17:46	VOC	0.7		*	ppm	16:34:32
Background	PRG2CAP - AreaRAE - S/N292-500658	10/25/2017 0:00:02	10/25/2017 21:17:48	21:17:46	HCN	0.6		*	ppm	17:29:45
Background	PRG2CAP - AreaRAE - S/N292-500658	10/25/2017 0:00:02	10/25/2017 21:17:48	21:17:46	NH3	0.5			ppm	10:15:27
Background	PRG2CAP - AreaRAE - S/N292-500658	10/25/2017 0:00:02	10/25/2017 21:17:48	21:17:46	O2		20.5	*	%	15:14:29

Table 3 - AreaRAE Monitoring Data Summary
Ames Warehouse Fire
Parkersburg, Wood County, WV

Location	Meter Serial Number	Start Date/Time	End Date/Time	Total Run Time	Sensor	Maximum Reading	Minimum Reading (O2)	Flag	Units	Time of Minimum/Maximum Reading
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/25/2017 0:00:02	10/25/2017 23:59:59	23:59:57	O2	20.9		*	%	0:00:02
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/25/2017 0:00:02	10/25/2017 23:59:59	23:59:57	VOC	16.6			ppm	0:10:21
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/25/2017 0:00:02	10/25/2017 23:59:59	23:59:57	HCN	0.2		*	ppm	4:33:51
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/25/2017 0:00:02	10/25/2017 23:59:59	23:59:57	NH3	0		A	ppm	0:00:02
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/25/2017 0:00:02	10/25/2017 23:59:59	23:59:57	O2		20.4	*	%	5:17:58
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	O2	22.7		*	%	23:31:12
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	NH3	0.6			ppm	4:30:31
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	VOC	0		A	ppm	23:59:58
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	Cl2	0		A	ppm	23:59:58
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	O2		20.1	*	%	9:16:41
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	O2	20.9		*	%	20:41:35
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	VOC	1.3			ppm	7:11:24
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	NH3	0.6		*	ppm	7:15:15
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	Cl2	0.2		*	ppm	23:04:03
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/25/2017 0:00:04	10/25/2017 23:59:58	23:59:54	O2		20.4	*	%	11:01:07
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/25/2017 0:26:20	10/25/2017 23:59:58	23:33:38	O2	21.3		*	%	1:57:48
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/25/2017 0:26:20	10/25/2017 23:59:58	23:33:38	VOC	0.6			ppm	10:09:27
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/25/2017 0:26:20	10/25/2017 23:59:58	23:33:38	VOC	0.6			ppm	10:09:32
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/25/2017 0:26:20	10/25/2017 23:59:58	23:33:38	HCN	0.6			ppm	11:32:44
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/25/2017 0:26:20	10/25/2017 23:59:58	23:33:38	NH3	0		A	ppm	0:26:20
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/25/2017 0:26:20	10/25/2017 23:59:58	23:33:38	O2		19.6		%	16:08:35
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	O2	22.4		*	%	19:17:45
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	NH3	1.2			ppm	8:55:28
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	VOC	0.2		*	ppm	21:14:04
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	Cl2	0.2		*	ppm	23:02:37
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	O2		19.9		%	8:55:08
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	O2	20.9		*	%	22:11:46
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	NH3	0.7		*	ppm	9:50:19
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	VOC	0.3			ppm	9:47:42
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	Cl2	0.2		*	ppm	23:41:39
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	O2		20.3	*	%	11:32:04
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	O2	22.5			%	22:49:15
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	HCN	1.1			ppm	13:17:08
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	NH3	0.4		*	ppm	12:12:05
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	VOC	0.2		*	ppm	0:23:57
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/26/2017 0:00:03	10/26/2017 23:59:59	23:59:56	O2		20	*	%	0:34:10

Table 3 - AreaRAE Monitoring Data Summary
Ames Warehouse Fire
Parkersburg, Wood County, WV

Location	Meter Serial Number	Start Date/Time	End Date/Time	Total Run Time	Sensor	Maximum Reading	Minimum Reading (O2)	Flag	Units	Time of Minimum/Maximum Reading
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/26/2017 0:00:04	10/27/2017 0:00:00	23:59:56	O2	20.9		*	%	13:53:59
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/26/2017 0:00:04	10/27/2017 0:00:00	23:59:56	NH3	2.1		*	ppm	11:40:00
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/26/2017 0:00:04	10/27/2017 0:00:00	23:59:56	HCN	0.8		*	ppm	13:17:21
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/26/2017 0:00:04	10/27/2017 0:00:00	23:59:56	VOC	0.4		*	ppm	19:52:27
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/26/2017 0:00:04	10/27/2017 0:00:00	23:59:56	O2		20.2	*	%	0:00:44
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/26/2017 0:00:04	10/26/2017 23:59:57	23:59:52	O2	20.9		*	%	23:59:57
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/26/2017 0:00:04	10/26/2017 23:59:57	23:59:52	HCN	0.9			ppm	19:57:11
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/26/2017 0:00:04	10/26/2017 23:59:57	23:59:52	VOC	0		A	ppm	23:59:57
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/26/2017 0:00:04	10/26/2017 23:59:57	23:59:52	NH3	0		A	ppm	23:59:57
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/26/2017 0:00:04	10/26/2017 23:59:57	23:59:52	O2		20.5	*	%	1:49:33
Background	PRG2CAP - AreaRAE - S/N292-500658	10/26/2017 0:23:01	10/26/2017 23:59:56	23:36:55	O2	20.9		*	%	22:40:13
Background	PRG2CAP - AreaRAE - S/N292-500658	10/26/2017 0:23:01	10/26/2017 23:59:56	23:36:55	NH3	1.1		*	ppm	14:56:40
Background	PRG2CAP - AreaRAE - S/N292-500658	10/26/2017 0:23:01	10/26/2017 23:59:56	23:36:55	VOC	0.9		*	ppm	17:49:30
Background	PRG2CAP - AreaRAE - S/N292-500658	10/26/2017 0:23:01	10/26/2017 23:59:56	23:36:55	HCN	0.9		*	ppm	17:32:25
Background	PRG2CAP - AreaRAE - S/N292-500658	10/26/2017 0:23:01	10/26/2017 23:59:56	23:36:55	O2		20.3	*	%	22:43:45
Background	PRG2CAP - AreaRAE - S/N292-500658	10/27/2017 0:00:00	10/27/2017 23:59:56	23:59:56	O2	21.3			%	17:58:47
Background	PRG2CAP - AreaRAE - S/N292-500658	10/27/2017 0:00:00	10/27/2017 23:59:56	23:59:56	NH3	1.3		*	ppm	9:08:10
Background	PRG2CAP - AreaRAE - S/N292-500658	10/27/2017 0:00:00	10/27/2017 23:59:56	23:59:56	VOC	1		*	ppm	9:59:47
Background	PRG2CAP - AreaRAE - S/N292-500658	10/27/2017 0:00:00	10/27/2017 23:59:56	23:59:56	HCN	1		*	ppm	10:32:12
Background	PRG2CAP - AreaRAE - S/N292-500658	10/27/2017 0:00:00	10/27/2017 23:59:56	23:59:56	O2		20.5	*	%	9:30:13
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/27/2017 0:00:01	10/27/2017 23:59:56	23:59:56	O2	21.4			%	18:39:09
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/27/2017 0:00:01	10/27/2017 23:59:56	23:59:56	HCN	0.6			ppm	14:04:08
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/27/2017 0:00:01	10/27/2017 23:59:56	23:59:56	VOC	0		A	ppm	23:59:56
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/27/2017 0:00:01	10/27/2017 23:59:56	23:59:56	NH3	0		A	ppm	23:59:56
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/27/2017 0:00:01	10/27/2017 23:59:56	23:59:56	O2		20.3	*	%	2:59:26
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/27/2017 0:00:04	10/27/2017 23:59:58	23:59:54	O2	22.8			%	15:36:24
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/27/2017 0:00:04	10/27/2017 23:59:58	23:59:54	NH3	1		*	ppm	19:40:31
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/27/2017 0:00:04	10/27/2017 23:59:58	23:59:54	VOC	0.2		*	ppm	1:47:55
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/27/2017 0:00:04	10/27/2017 23:59:58	23:59:54	Cl2	0.2		*	ppm	21:04:36
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/27/2017 0:00:04	10/27/2017 23:59:58	23:59:54	O2		20.2	*	%	3:14:21
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:54	O2	20.9		*	%	23:29:48
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:54	NH3	0.7		*	ppm	21:01:47
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:54	VOC	0.2		*	ppm	20:52:27
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:54	Cl2	0.2		*	ppm	22:21:51
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:54	O2		20.3	*	%	9:28:37
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:55	O2	21.8		*	%	21:06:27
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:55	HCN	0.6		*	ppm	14:17:28
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:55	NH3	0.2			ppm	10:07:25
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:55	VOC	0		A	ppm	23:59:59
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/27/2017 0:00:04	10/27/2017 23:59:59	23:59:55	O2		20.4	*	%	9:58:08

Table 3 - AreaRAE Monitoring Data Summary
Ames Warehouse Fire
Parkersburg, Wood County, WV

Location	Meter Serial Number	Start Date/Time	End Date/Time	Total Run Time	Sensor	Maximum Reading	Minimum Reading (O2)	Flag	Units	Time of Minimum/ Maximum Reading
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/27/2017 0:00:05	10/28/2017 0:00:00	23:59:55	O2	20.9		*	%	0:00:00
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/27/2017 0:00:05	10/28/2017 0:00:00	23:59:55	HCN	0.9			ppm	15:45:13
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/27/2017 0:00:05	10/28/2017 0:00:00	23:59:55	NH3	0.7		*	ppm	10:09:41
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/27/2017 0:00:05	10/28/2017 0:00:00	23:59:55	VOC	0.3			ppm	14:23:17
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/27/2017 0:00:05	10/28/2017 0:00:00	23:59:55	O2		20.1	*	%	7:32:13
Background	PRG2CAP - AreaRAE - S/N292-500658	10/28/2017 0:00:00	10/28/2017 23:59:57	23:59:57	O2	20.9		A	%	23:59:57
Background	PRG2CAP - AreaRAE - S/N292-500658	10/28/2017 0:00:00	10/28/2017 23:59:57	23:59:57	NH3	1.1		*	ppm	1:24:58
Background	PRG2CAP - AreaRAE - S/N292-500658	10/28/2017 0:00:00	10/28/2017 23:59:57	23:59:57	HCN	1			ppm	4:53:09
Background	PRG2CAP - AreaRAE - S/N292-500658	10/28/2017 0:00:00	10/28/2017 23:59:57	23:59:57	VOC	0.9		*	ppm	0:21:55
Background	PRG2CAP - AreaRAE - S/N292-500658	10/28/2017 0:00:00	10/28/2017 23:59:57	23:59:57	O2		20.9	A	%	23:59:57
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/28/2017 0:00:01	10/28/2017 23:59:58	23:59:57	O2	20.9		*	%	23:59:58
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/28/2017 0:00:01	10/28/2017 23:59:58	23:59:57	HCN	0.7		*	ppm	19:38:35
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/28/2017 0:00:01	10/28/2017 23:59:58	23:59:57	VOC	0		A	ppm	23:59:58
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/28/2017 0:00:01	10/28/2017 23:59:58	23:59:57	NH3	0		A	ppm	23:59:58
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/28/2017 0:00:01	10/28/2017 23:59:58	23:59:57	O2		20.6	*	%	14:27:47
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/28/2017 0:00:03	10/28/2017 22:40:54	22:40:51	O2	20.9		*	%	12:03:53
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/28/2017 0:00:03	10/28/2017 22:40:54	22:40:51	NH3	0.8		*	ppm	21:25:54
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/28/2017 0:00:03	10/28/2017 22:40:54	22:40:51	Cl2	0.1		*	ppm	22:37:32
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/28/2017 0:00:03	10/28/2017 22:40:54	22:40:51	VOC	0		A	ppm	22:40:54
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/28/2017 0:00:03	10/28/2017 22:40:54	22:40:51	O2		20.3	*	%	21:59:15
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/28/2017 0:00:04	10/28/2017 17:46:08	17:46:04	O2	20.9		*	%	3:32:46
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/28/2017 0:00:04	10/28/2017 17:46:08	17:46:04	NH3	0.7		*	ppm	14:23:06
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/28/2017 0:00:04	10/28/2017 17:46:08	17:46:04	Cl2	0.2		*	ppm	16:52:13
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/28/2017 0:00:04	10/28/2017 17:46:08	17:46:04	VOC	0.1			ppm	14:15:07
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/28/2017 0:00:04	10/28/2017 17:46:08	17:46:04	O2		20.3	*	%	14:14:31
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/28/2017 0:00:04	10/29/2017 0:00:00	23:59:55	O2	21.3		*	%	0:16:01
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/28/2017 0:00:04	10/29/2017 0:00:00	23:59:55	HCN	0.3		*	ppm	0:02:32
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/28/2017 0:00:04	10/29/2017 0:00:00	23:59:55	VOC	0		A	ppm	0:00:04
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/28/2017 0:00:04	10/29/2017 0:00:00	23:59:55	NH3	0		A	ppm	0:00:04
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/28/2017 0:00:04	10/29/2017 0:00:00	23:59:55	O2		20.9	*	%	0:16:06
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/28/2017 0:00:05	10/29/2017 0:00:00	23:59:55	O2	20.9		*	%	4:52:58
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/28/2017 0:00:05	10/29/2017 0:00:00	23:59:55	HCN	0.7			ppm	19:40:21
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/28/2017 0:00:05	10/29/2017 0:00:00	23:59:55	VOC	0.1		*	ppm	19:39:37
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/28/2017 0:00:05	10/29/2017 0:00:00	23:59:55	NH3	0		A	ppm	0:00:00
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/28/2017 0:00:05	10/29/2017 0:00:00	23:59:55	O2		20.3	*	%	10:25:21
Background	PRG2CAP - AreaRAE - S/N292-500658	10/29/2017 0:00:02	10/29/2017 23:59:55	23:59:53	O2	20.9		*	%	23:59:55
Background	PRG2CAP - AreaRAE - S/N292-500658	10/29/2017 0:00:02	10/29/2017 23:59:55	23:59:53	HCN	1			ppm	8:56:38
Background	PRG2CAP - AreaRAE - S/N292-500658	10/29/2017 0:00:02	10/29/2017 23:59:55	23:59:53	NH3	0.8			ppm	3:06:54
Background	PRG2CAP - AreaRAE - S/N292-500658	10/29/2017 0:00:02	10/29/2017 23:59:55	23:59:53	VOC	0.4		*	ppm	4:41:47
Background	PRG2CAP - AreaRAE - S/N292-500658	10/29/2017 0:00:02	10/29/2017 23:59:55	23:59:53	O2		20.5	*	%	8:48:51

Table 3 - AreaRAE Monitoring Data Summary
Ames Warehouse Fire
Parkersburg, Wood County, WV

Location	Meter Serial Number	Start Date/Time	End Date/Time	Total Run Time	Sensor	Maximum Reading	Minimum Reading (O2)	Flag	Units	Time of Minimum/Maximum Reading
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/29/2017 0:00:04	10/29/2017 23:59:55	23:59:52	O2	20.9		*	%	23:59:55
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/29/2017 0:00:04	10/29/2017 23:59:55	23:59:52	HCN	0.5			ppm	1:59:14
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/29/2017 0:00:04	10/29/2017 23:59:55	23:59:52	VOC	0		A	ppm	23:59:55
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/29/2017 0:00:04	10/29/2017 23:59:55	23:59:52	NH3	0		A	ppm	23:59:55
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/29/2017 0:00:04	10/29/2017 23:59:55	23:59:52	O2		20.7	*	%	4:33:01
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/29/2017 0:00:06	10/29/2017 23:59:59	23:59:54	O2	20.9		A	%	23:59:59
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/29/2017 0:00:06	10/29/2017 23:59:59	23:59:54	HCN	0.3			ppm	18:18:03
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/29/2017 0:00:06	10/29/2017 23:59:59	23:59:54	VOC	0		A	ppm	23:59:59
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/29/2017 0:00:06	10/29/2017 23:59:59	23:59:54	NH3	0		A	ppm	23:59:59
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/29/2017 0:00:06	10/29/2017 23:59:59	23:59:54	O2		20.9	A	%	23:59:59
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/29/2017 0:00:06	10/30/2017 0:00:00	23:59:54	O2	20.9		*	%	17:46:54
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/29/2017 0:00:06	10/30/2017 0:00:00	23:59:54	HCN	0.5			ppm	3:23:10
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/29/2017 0:00:06	10/30/2017 0:00:00	23:59:54	VOC	0.1		*	ppm	22:13:55
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/29/2017 0:00:06	10/30/2017 0:00:00	23:59:54	NH3	0		A	ppm	0:00:00
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/29/2017 0:00:06	10/30/2017 0:00:00	23:59:54	O2		20.4	*	%	23:45:34
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/29/2017 2:30:54	10/29/2017 23:59:59	21:29:05	O2	20.5		*	%	23:50:01
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/29/2017 2:30:54	10/29/2017 23:59:59	21:29:05	NH3	1		*	ppm	2:36:27
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/29/2017 2:30:54	10/29/2017 23:59:59	21:29:05	Cl2	0.1		*	ppm	23:59:04
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/29/2017 2:30:54	10/29/2017 23:59:59	21:29:05	VOC	0		A	ppm	23:59:59
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/29/2017 2:30:54	10/29/2017 23:59:59	21:29:05	O2		20	*	%	2:40:15
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/29/2017 17:20:13	10/29/2017 23:59:59	6:39:46	O2	20.6		*	%	17:29:14
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/29/2017 17:20:13	10/29/2017 23:59:59	6:39:46	NH3	0.4		*	ppm	21:05:46
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/29/2017 17:20:13	10/29/2017 23:59:59	6:39:46	Cl2	0.2		*	ppm	23:17:36
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/29/2017 17:20:13	10/29/2017 23:59:59	6:39:46	VOC	0		A	ppm	23:59:59
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/29/2017 17:20:13	10/29/2017 23:59:59	6:39:46	O2		20.4	*	%	23:54:06
Background	PRG2CAP - AreaRAE - S/N292-500658	10/30/2017 0:00:02	10/30/2017 23:59:58	23:59:57	O2	22.5			%	15:45:30
Background	PRG2CAP - AreaRAE - S/N292-500658	10/30/2017 0:00:02	10/30/2017 23:59:58	23:59:57	NH3	1.1		*	ppm	18:39:09
Background	PRG2CAP - AreaRAE - S/N292-500658	10/30/2017 0:00:02	10/30/2017 23:59:58	23:59:57	HCN	0.9		*	ppm	8:42:42
Background	PRG2CAP - AreaRAE - S/N292-500658	10/30/2017 0:00:02	10/30/2017 23:59:58	23:59:57	VOC	0.4		*	ppm	20:32:13
Background	PRG2CAP - AreaRAE - S/N292-500658	10/30/2017 0:00:02	10/30/2017 23:59:58	23:59:57	O2		19.6		%	8:10:50
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/30/2017 0:00:03	10/30/2017 23:59:59	23:59:56	O2	20.9		*	%	23:59:59
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/30/2017 0:00:03	10/30/2017 23:59:59	23:59:56	HCN	0.3		*	ppm	13:39:01
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/30/2017 0:00:03	10/30/2017 23:59:59	23:59:56	VOC	0		A	ppm	23:59:59
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/30/2017 0:00:03	10/30/2017 23:59:59	23:59:56	NH3	0		A	ppm	23:59:59
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/30/2017 0:00:03	10/30/2017 23:59:59	23:59:56	O2		20.4	*	%	10:52:15
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/30/2017 0:00:04	10/30/2017 23:59:55	23:59:51	O2	20.9		*	%	17:13:28
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/30/2017 0:00:04	10/30/2017 23:59:55	23:59:51	NH3	1		*	ppm	9:47:05
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/30/2017 0:00:04	10/30/2017 23:59:55	23:59:51	Cl2	0.2		*	ppm	18:59:05
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/30/2017 0:00:04	10/30/2017 23:59:55	23:59:51	VOC	0		A	ppm	23:59:55
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/30/2017 0:00:04	10/30/2017 23:59:55	23:59:51	O2		20	*	%	2:55:04

Table 3 - AreaRAE Monitoring Data Summary
Ames Warehouse Fire
Parkersburg, Wood County, WV

Location	Meter Serial Number	Start Date/Time	End Date/Time	Total Run Time	Sensor	Maximum Reading	Minimum Reading (O2)	Flag	Units	Time of Minimum/ Maximum Reading
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/30/2017 0:00:04	10/30/2017 23:59:56	23:59:51	O2	22.3			%	12:16:07
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/30/2017 0:00:04	10/30/2017 23:59:56	23:59:51	NH3	0.7		*	ppm	22:26:30
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/30/2017 0:00:04	10/30/2017 23:59:56	23:59:51	VOC	0.3			ppm	3:30:14
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/30/2017 0:00:04	10/30/2017 23:59:56	23:59:51	Cl2	0.2		*	ppm	23:58:30
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/30/2017 0:00:04	10/30/2017 23:59:56	23:59:51	O2		19.6		%	11:25:36
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/30/2017 0:00:05	10/30/2017 23:59:56	23:59:51	O2	21.8		*	%	6:49:45
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/30/2017 0:00:05	10/30/2017 23:59:56	23:59:51	HCN	0.3		*	ppm	22:04:54
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/30/2017 0:00:05	10/30/2017 23:59:56	23:59:51	VOC	0		A	ppm	23:59:56
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/30/2017 0:00:05	10/30/2017 23:59:56	23:59:51	NH3	0		A	ppm	23:59:56
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/30/2017 0:00:05	10/30/2017 23:59:56	23:59:51	O2		20.3	*	%	9:55:00
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/30/2017 0:00:05	10/30/2017 23:59:57	23:59:52	O2	20.9		*	%	23:18:12
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/30/2017 0:00:05	10/30/2017 23:59:57	23:59:52	HCN	0.5			ppm	8:41:00
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/30/2017 0:00:05	10/30/2017 23:59:57	23:59:52	VOC	0.1		*	ppm	22:08:45
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/30/2017 0:00:05	10/30/2017 23:59:57	23:59:52	NH3	0		A	ppm	23:59:57
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/30/2017 0:00:05	10/30/2017 23:59:57	23:59:52	O2		20.2	*	%	9:36:22
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/31/2017 0:00:00	10/31/2017 16:48:47	16:48:47	O2	20.9		*	%	16:48:47
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/31/2017 0:00:00	10/31/2017 16:48:47	16:48:47	NH3	0.9		*	ppm	9:11:21
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/31/2017 0:00:00	10/31/2017 16:48:47	16:48:47	Cl2	0.3			ppm	2:49:17
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/31/2017 0:00:00	10/31/2017 16:48:47	16:48:47	VOC	0		A	ppm	16:48:47
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-503066	10/31/2017 0:00:00	10/31/2017 16:48:47	16:48:47	O2		19.7		%	2:49:17
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/31/2017 0:00:01	10/31/2017 15:41:58	15:41:57	O2	23.7			%	9:48:50
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/31/2017 0:00:01	10/31/2017 15:41:58	15:41:57	NH3	0.5		*	ppm	9:16:00
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/31/2017 0:00:01	10/31/2017 15:41:58	15:41:57	Cl2	0.3		*	ppm	5:05:47
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/31/2017 0:00:01	10/31/2017 15:41:58	15:41:57	VOC	0		A	ppm	15:41:58
Park N' Ride	PRG2CAP - AreaRAE - S/N292-503069	10/31/2017 0:00:01	10/31/2017 15:41:58	15:41:57	O2		19.6		%	9:55:32
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/31/2017 0:00:01	10/31/2017 15:56:04	15:56:03	O2	21.6		*	%	8:16:40
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/31/2017 0:00:01	10/31/2017 15:56:04	15:56:03	HCN	0.5			ppm	11:34:01
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/31/2017 0:00:01	10/31/2017 15:56:04	15:56:03	VOC	0		A	ppm	15:56:04
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/31/2017 0:00:01	10/31/2017 15:56:04	15:56:03	NH3	0		A	ppm	15:56:04
Mine Outfall/Fence	PRG2CAP - AreaRAE - S/N292-500656	10/31/2017 0:00:01	10/31/2017 15:56:04	15:56:03	O2		20.3	*	%	9:50:36
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/31/2017 0:00:01	10/31/2017 16:48:47	16:48:46	O2	20.9		*	%	16:48:47
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/31/2017 0:00:01	10/31/2017 16:48:47	16:48:46	HCN	0.6		*	ppm	11:01:52
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/31/2017 0:00:01	10/31/2017 16:48:47	16:48:46	VOC	0.1		*	ppm	15:41:26
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/31/2017 0:00:01	10/31/2017 16:48:47	16:48:46	NH3	0		A	ppm	16:48:47
Source Area Perimeter	PRG2CAP - AreaRAE - S/N292-500657	10/31/2017 0:00:01	10/31/2017 16:48:47	16:48:46	O2		20.2	*	%	9:56:03
Background	PRG2CAP - AreaRAE - S/N292-500658	10/31/2017 0:00:02	10/31/2017 16:14:03	16:14:02	O2	21.6			%	8:25:29
Background	PRG2CAP - AreaRAE - S/N292-500658	10/31/2017 0:00:02	10/31/2017 16:14:03	16:14:02	NH3	1.4		*	ppm	9:40:10
Background	PRG2CAP - AreaRAE - S/N292-500658	10/31/2017 0:00:02	10/31/2017 16:14:03	16:14:02	VOC	0.9		*	ppm	9:16:24
Background	PRG2CAP - AreaRAE - S/N292-500658	10/31/2017 0:00:02	10/31/2017 16:14:03	16:14:02	HCN	0.8		*	ppm	10:52:23
Background	PRG2CAP - AreaRAE - S/N292-500658	10/31/2017 0:00:02	10/31/2017 16:14:03	16:14:02	O2		20.3		%	9:11:24

Table 3 - AreaRAE Monitoring Data Summary
Ames Warehouse Fire
Parkersburg, Wood County, WV

Location	Meter Serial Number	Start Date/Time	End Date/Time	Total Run Time	Sensor	Maximum Reading	Minimum Reading (O2)	Flag	Units	Time of Minimum/Maximum Reading
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/31/2017 0:00:02	10/31/2017 15:41:58	15:41:56	O2	20.9		*	%	15:41:58
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/31/2017 0:00:02	10/31/2017 15:41:58	15:41:56	HCN	0.6		*	ppm	10:47:25
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/31/2017 0:00:02	10/31/2017 15:41:58	15:41:56	VOC	0		A	ppm	15:41:58
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/31/2017 0:00:02	10/31/2017 15:41:58	15:41:56	NH3	0		A	ppm	15:41:58
Park N' Ride	PRG2CAP - AreaRAE - S/N292-500659	10/31/2017 0:00:02	10/31/2017 15:41:58	15:41:56	O2		20.3	*	%	6:31:02

Key:

% = Percent

Cl2 = Chlorine

HCN = Hydrogen cyanide

NH3 = Ammonia

O2 = Oxygen

ppm = Parts per million

VOC = Volatile organic compounds

Flag:

* = There were multiple occurrences of maximum or minimum reading. Time associated with the reading is for the first occurrence during the monitoring period.

A = The maximum or minimum value was the same value for all readings recorded during the monitoring period.

**Table 4 - Air Sampling Locations
Ames Warehouse Fire**

Air Sample ID	Lat	Long	Start Date	Start Time	End Date	End Time	Summa Pressure _i (PSIG)	Summa Pressure _f (PSIG)	Description
AA-01	39.2477	-81.5319	10/25/17	22:26	10/26/17	12:03	-30	-11	Site air monitoring station, Camden Ave/Myrtle St.
AA-02	39.2545	-81.5293	10/25/17	23:05	10/26/17	12:56	-30	-8	Park and Ride at intersection US 50/Hwy 47
AA-03	39.2545	-81.5293	10/25/17	23:05	10/26/17	12:56	-30	-6	Co-located with AA-02
AA-04	39.2482	-81.5196	10/25/17	23:13	10/26/17	13:24	-30	-10	Mine Road Fence
AA-05	39.2278	-81.5196	10/25/17	23:22	10/26/17	11:11	-30	-8	Background air monitoring location
AA-06	39.2652	-81.5423	11/02/17	7:26	11/02/17	19:40	-30	-9	Jefferson Elementary School, playground fence
AA-07	39.2447	-81.5316	11/02/17	7:44	11/02/17	22:10	-30	-10	Fairplains Elementary School, playground fence
AA-08	39.2456	-81.5222	11/02/17	7:58	11/02/17	21:16	-30	-10	Broadway Campground
AA-09	39.2471	-81.5315	11/02/17	8:08	11/02/17	21:35	-30	-9	at ResCare facility property
AA-10	39.2543	-81.5293	11/02/17	8:43	11/02/17	20:15	-30	-10	Park and Ride at intersection US 50/Hwy 47

Key:

Pressure_i = Initial pressure at start of sampling.

Pressure_f = Final pressure when sampling ended.

PSIG = Pounds per square inch gauge.

Table 5 - Analytical Results for VOCs in Air Samples
Ames Warehouse Fire ER
Parkersburg, Wood County, WV

Field Sample #	1710022-01		1710022-2		1710022-3		1710022-4		1710022-5		1710022-09		1710022-10		1710022-06		1710022-07		1710022-08	
Sample Location	AA-01		AA-04		AA-02		AA-03		AA-05		AA-06		AA-07		AA-08		AA-09		AA-10	
Sample Type	Field Sample		Field Sample		Field Sample		Co-located w/ AA-02		Field Sample		Field Sample		Field Sample		Field Sample		Field Sample		Field Sample	
Matrix	Air		Air		Air		Air		Air		Air		Air		Air		Air		Air	
Date Sampled	10/26/2017		10/26/2017		10/26/2017		10/26/2017		10/26/2017		11/2/2017		11/2/2017		11/2/2017		11/2/2017		11/2/2017	
Date Analyzed	11/2/2017		11/2/2017		11/2/2017		11/2/2017		11/2/2017		11/6/2017		11/6/2017		11/6/2017		11/6/2017		11/6/2017	
Units:	ug/m3	Q	ug/m3	Q	ug/m3	Q	ug/m3	Q	ug/m3	Q	ug/m3	Q	ug/m3	Q	ug/m3	Q	ug/m3	Q	ug/m3	Q
1,2-Dichlorobenzene	3.7		ND		ND		ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	2.7	J	ND		ND		ND		ND		ND		ND		ND		ND		ND	
2-Butanone	ND		ND		ND		ND		0.5	J	1.4		1.2	J	0.9	J	1	J	0.9	J
Acetone	2.5		2.3		5.6		2.1		2.1		8.7		7.1		7		6.9		5.5	
Benzene	11.6		2.9		4.3		4.3		3.3		0.8	J	1.2	J	ND		2.3		ND	
Carbon Tetrachloride	1.8	J	ND		ND		ND		1	J	ND		ND		ND		ND		ND	
Chlorobenzene	32.3		ND		ND		ND		1.5	J	ND		ND		ND		ND		ND	
Chloromethane	1.1		1		1.1		1.1		1.1		1.2		1.3		1.2		1.3		1.2	
Cyclohexane	6.2		1.6		2.2		2.5		2.2		2.8		4		2.1		3.7		ND	
Dichlorodifluoromethane	2.5		2.4		2.5		2.5		2.7		2.5		2.4		2.5		2.5		2.5	
Ethanol	1.9		1.2		1.1		1.2		1.7		5.2		7.1		3.6		9.2		3.8	
Ethylbenzene	ND		ND		ND		ND		ND		ND		ND		ND		1.2	J	ND	
Heptane	ND		ND		ND		ND		0.6	J	0.8	J	0.9	J	ND		1.3	J	ND	
Hexane	0.9	J	ND		0.7	J	0.7	J	0.9	J	0.9	J	1.3	J	ND		1.2	J	ND	
Isopropyl alcohol	0.6	J	0.7	J	0.6	J	0.4	J	0.7	J	1.7		0.8	J	0.6	J	1	J	1.8	
m,p-Xylene	1.6	J	ND		ND		ND		ND		1.2	J	2.2	J	ND		4	J	ND	
o-Xylene	ND		ND		ND		ND		ND		ND		0.7	J	ND		0.7	J	ND	
Styrene	ND		ND		ND		ND		ND		ND		ND		ND		0.8	J	ND	
Tetrachloroethene	ND		ND		ND		ND		ND		ND		ND		ND		ND		1.3	J
Toluene	1.9		ND		1.3	J	1.2	J	1	J	2.4		2.9		0.6	J	3.8		ND	
Trichlorofluoromethane	1.3	J	1.3	J	1.3	J	1.3	J	1.6	J	1.3	J	1.3	J	1.3	J	1.3	J	1.3	J

Key:

Q = Qualifier

ug/m3 = micrograms per cubic meter

Qualifiers:

J = The identification of the analyte is acceptable; the reported value is an estimate.

ATTACHMENT 1

DataRAM 4000 Graphed Results

Air monitoring was conducted using DataRAM Particulate Monitors. Instantaneous (or real time) readings from the DataRAMs are presented as a blue line on the graphs. The numbers on the left axis of the graph show the concentration of particulate matter in the air at a given time (shown on the bottom axis of the graph). The air monitors were placed in a stationary location during the time period shown on the bottom of the graph. You will see “peaks” on the graph which represent times at which the smoke was blown in the direction of our monitor. The intensity of these peaks varies depending on the concentration of particulate matter in the air. The Time-Weighted Average (TWA) is presented on the top corner of the graphs. This line is an average of all the instantaneous readings over the monitoring period indicated at the bottom of the graph.

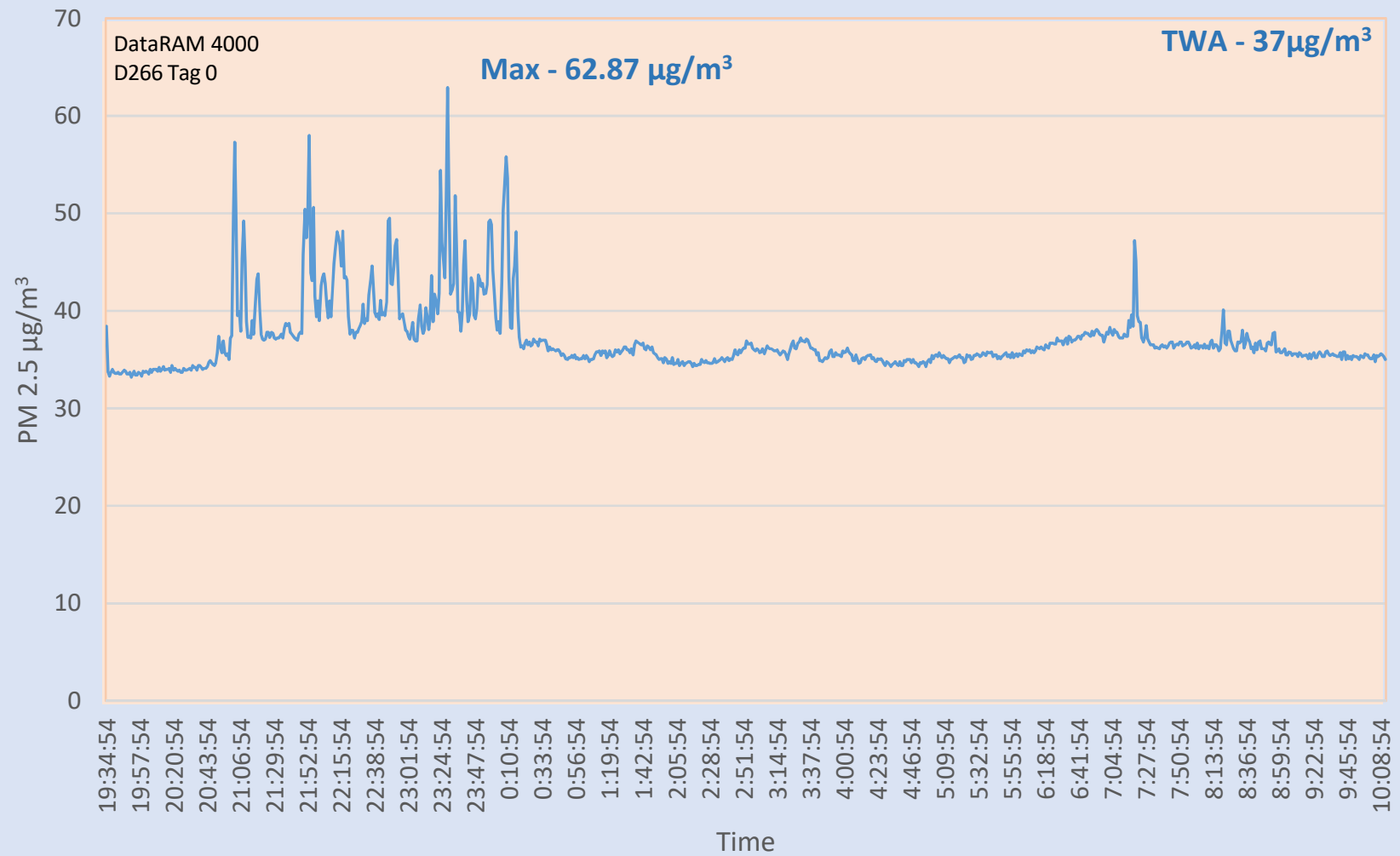
Background Location Graphs

These graphs are data compiled from monitors placed upwind of the site.

Background Location - PM2.5

October 24-25, 2017 19:34 - 10:11

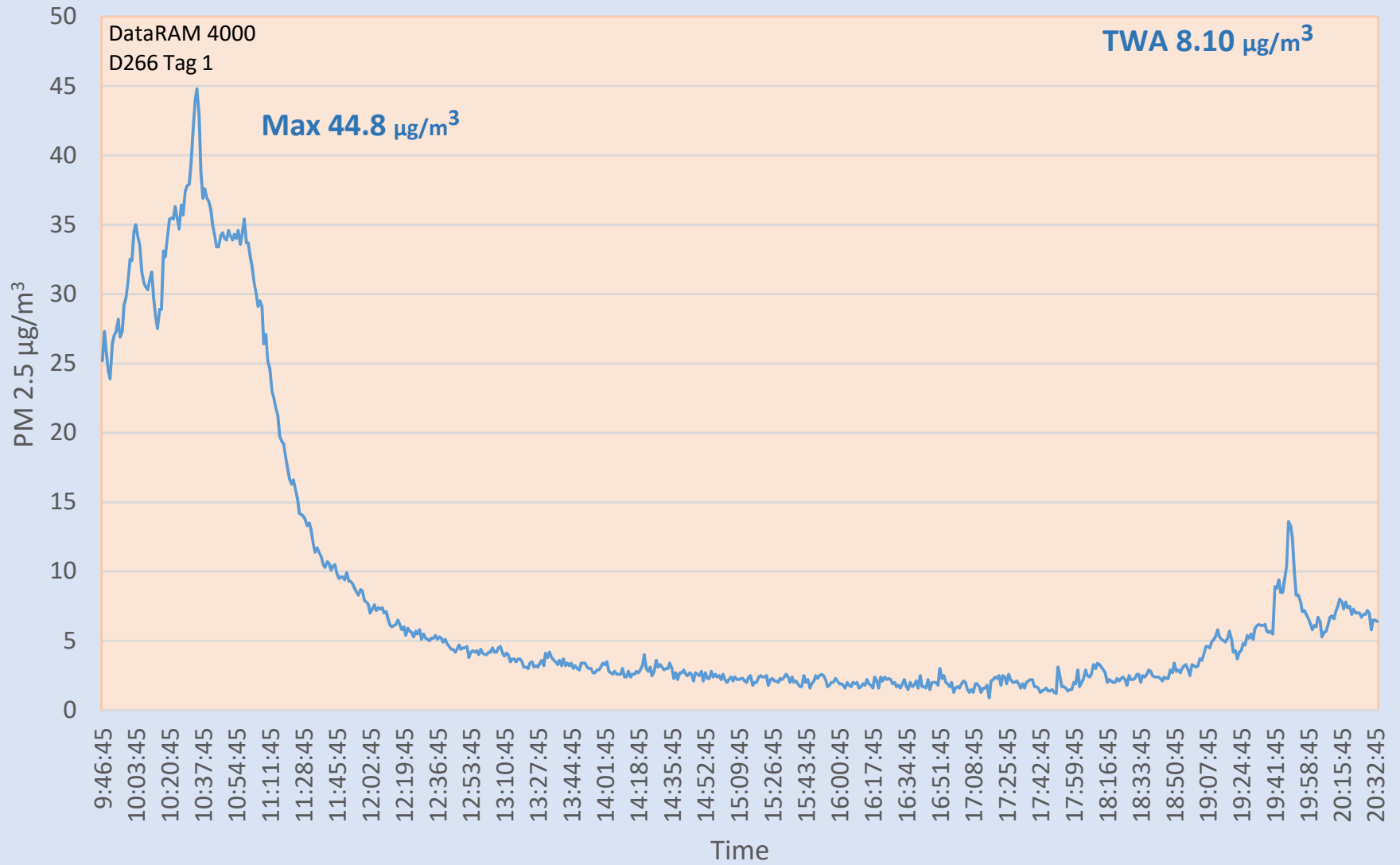
1.42 mi 158.68° from Source



Background Location - PM2.5

October 26, 2017 09:46 - 20:33

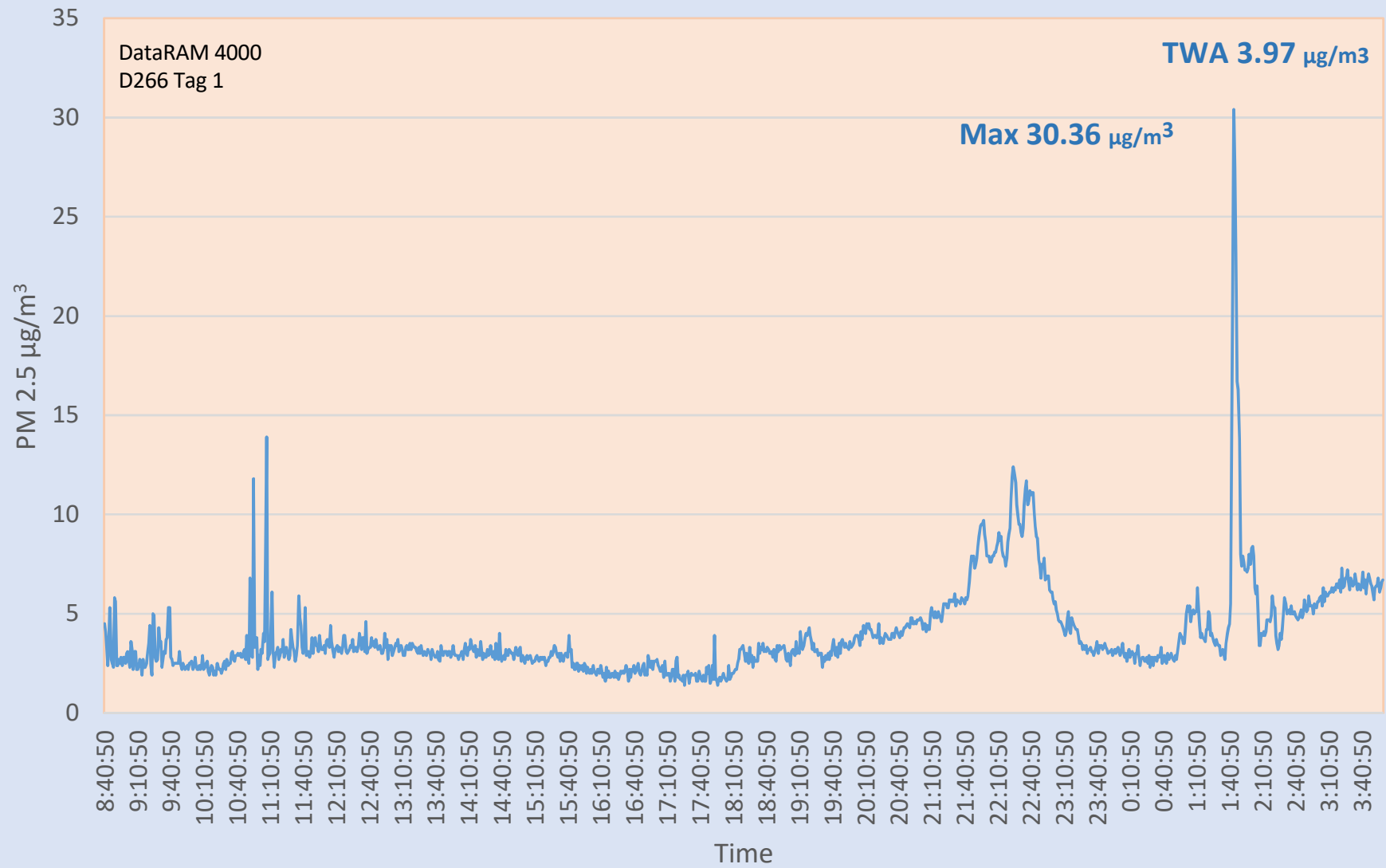
1.42 mi Heading 158.68° from Source



Background Location - PM2.5

October 27 -28, 2017 08:40 - 03:59

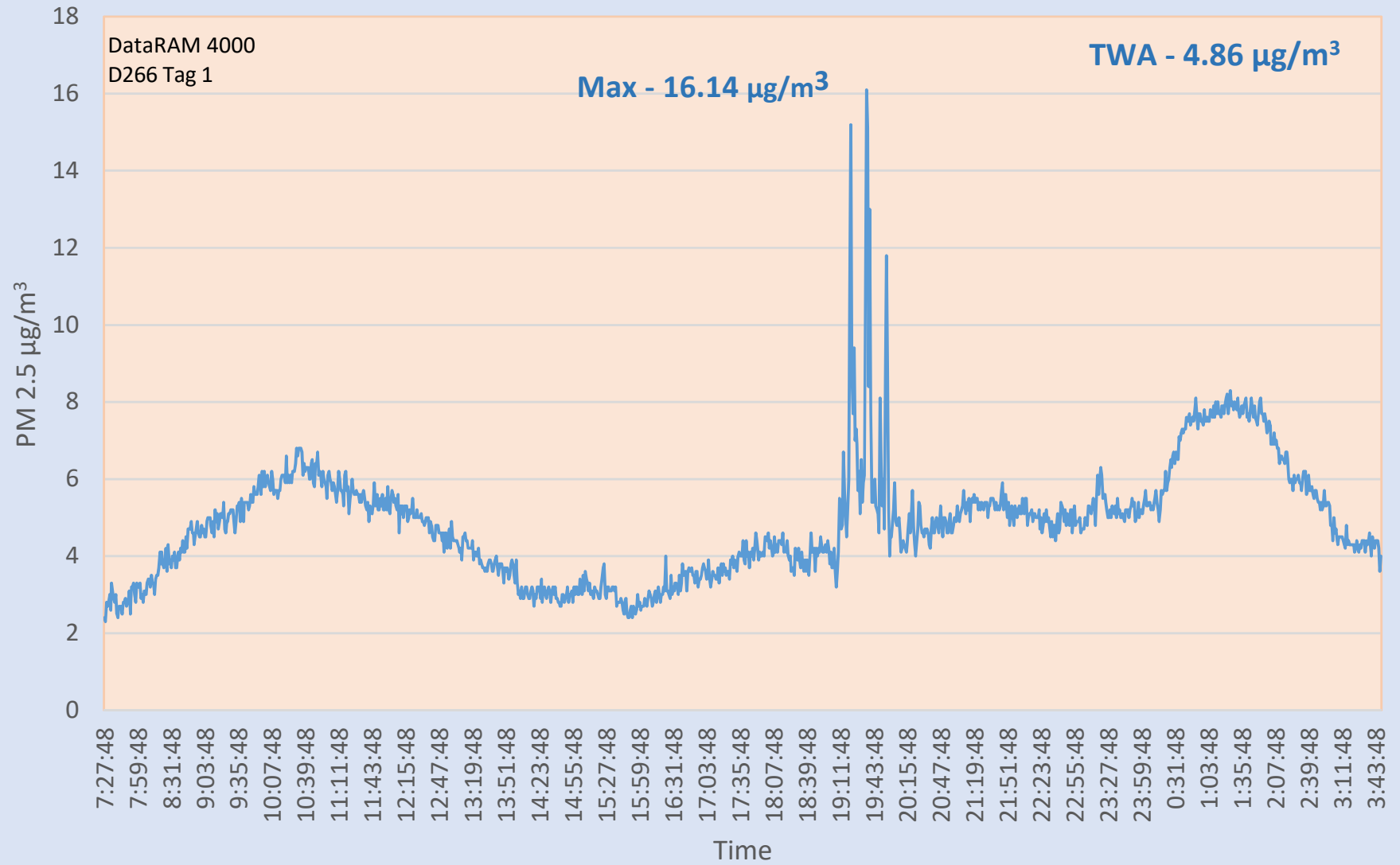
1.42 mi Heading 158.68° from Source



Background Location - PM2.5

October 29 -30, 2017 07:27 - 03:48

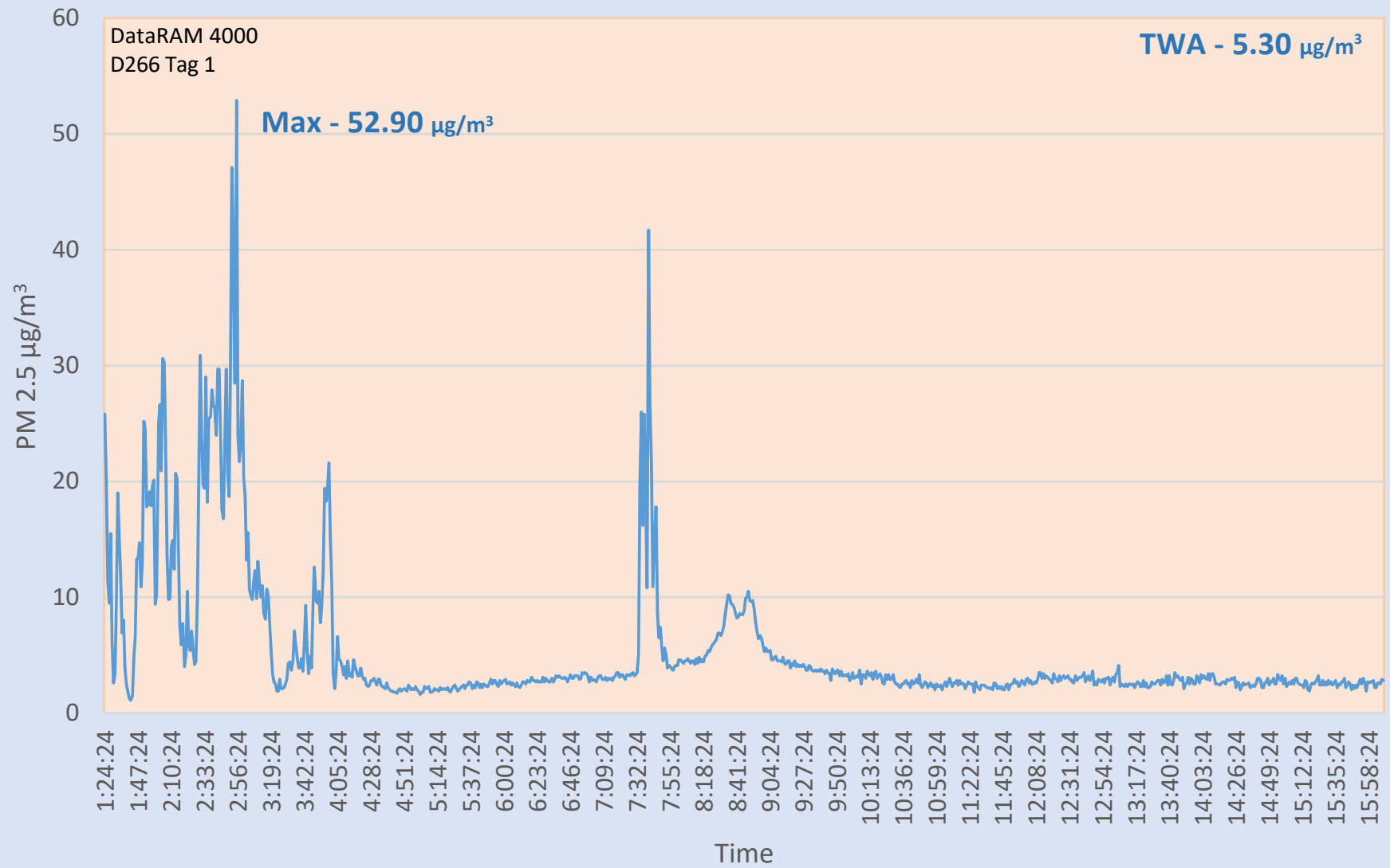
1.42 mi Heading 158.68° from Source



Background Location - PM2.5

October 31, 2017 01:24 - 16:08

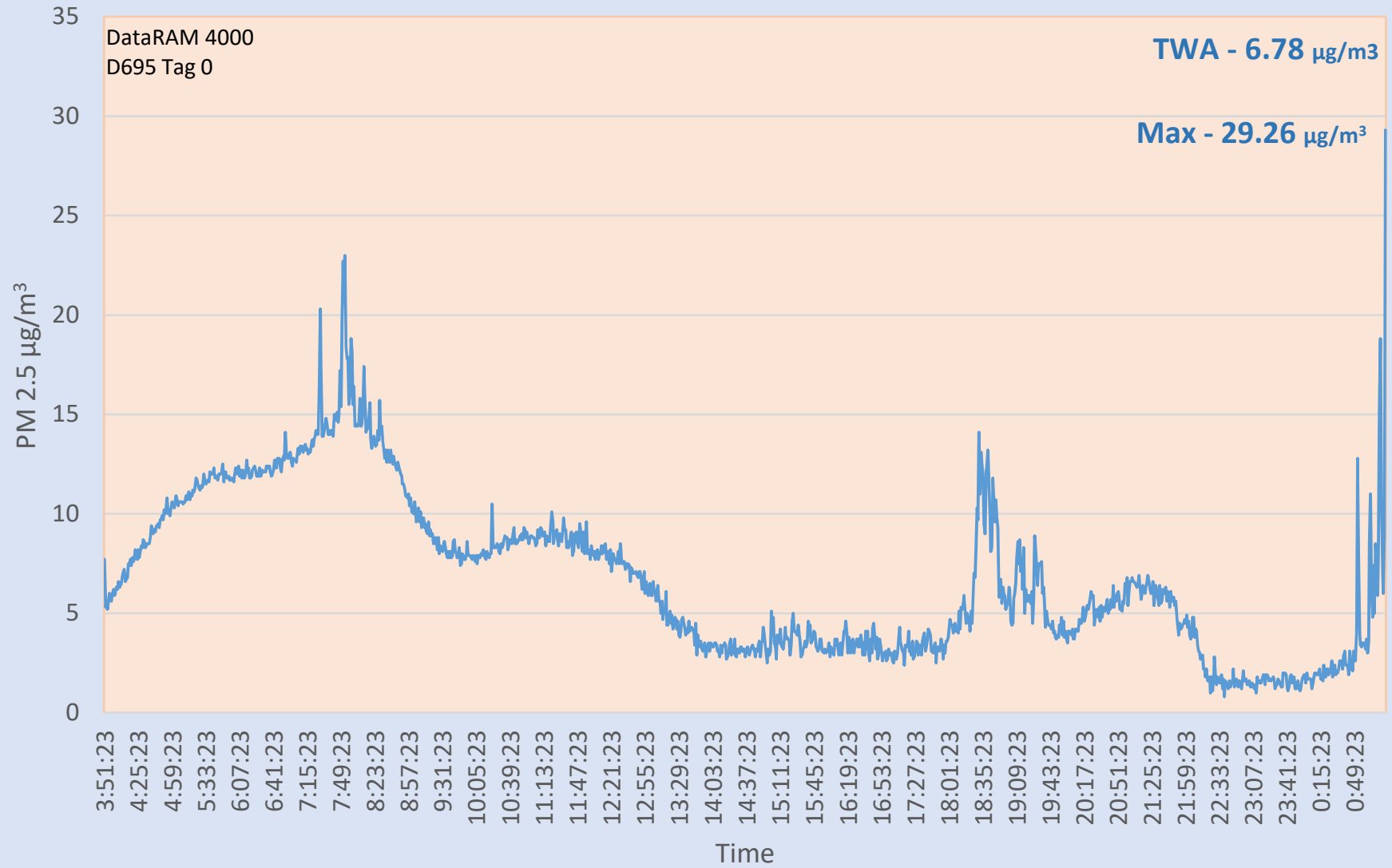
1.42 mi Heading 158.68° from Source



Background Location - PM2.5

October 30 -31, 2017 03:51 - 01:20

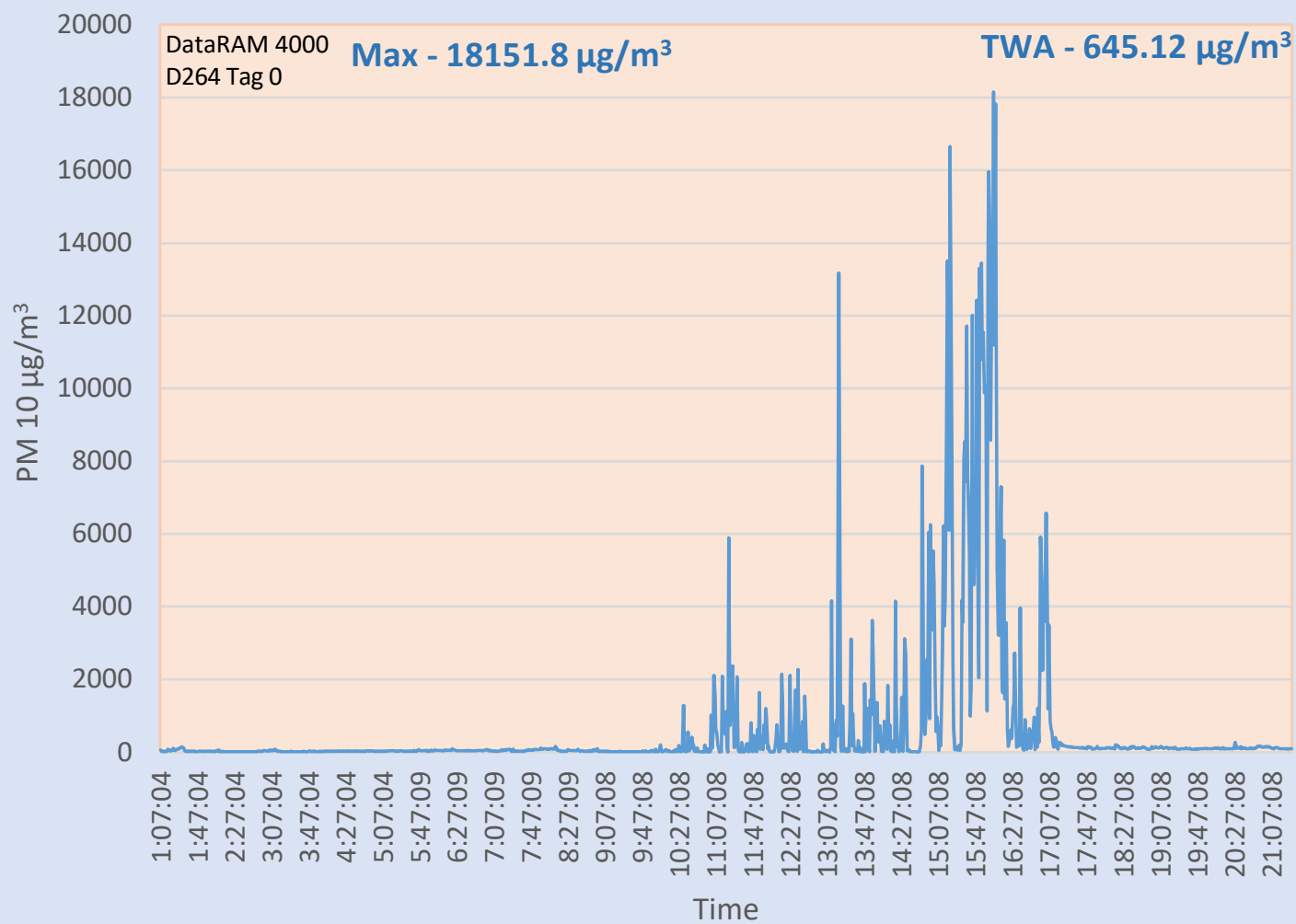
1.42 mi Heading 158.68° from Source



Site Area

These graphs are data compiled from monitors placed near the site.

Site Area - PM10
October 22, 2017 1:07 - 21:29
On Site Near Fire



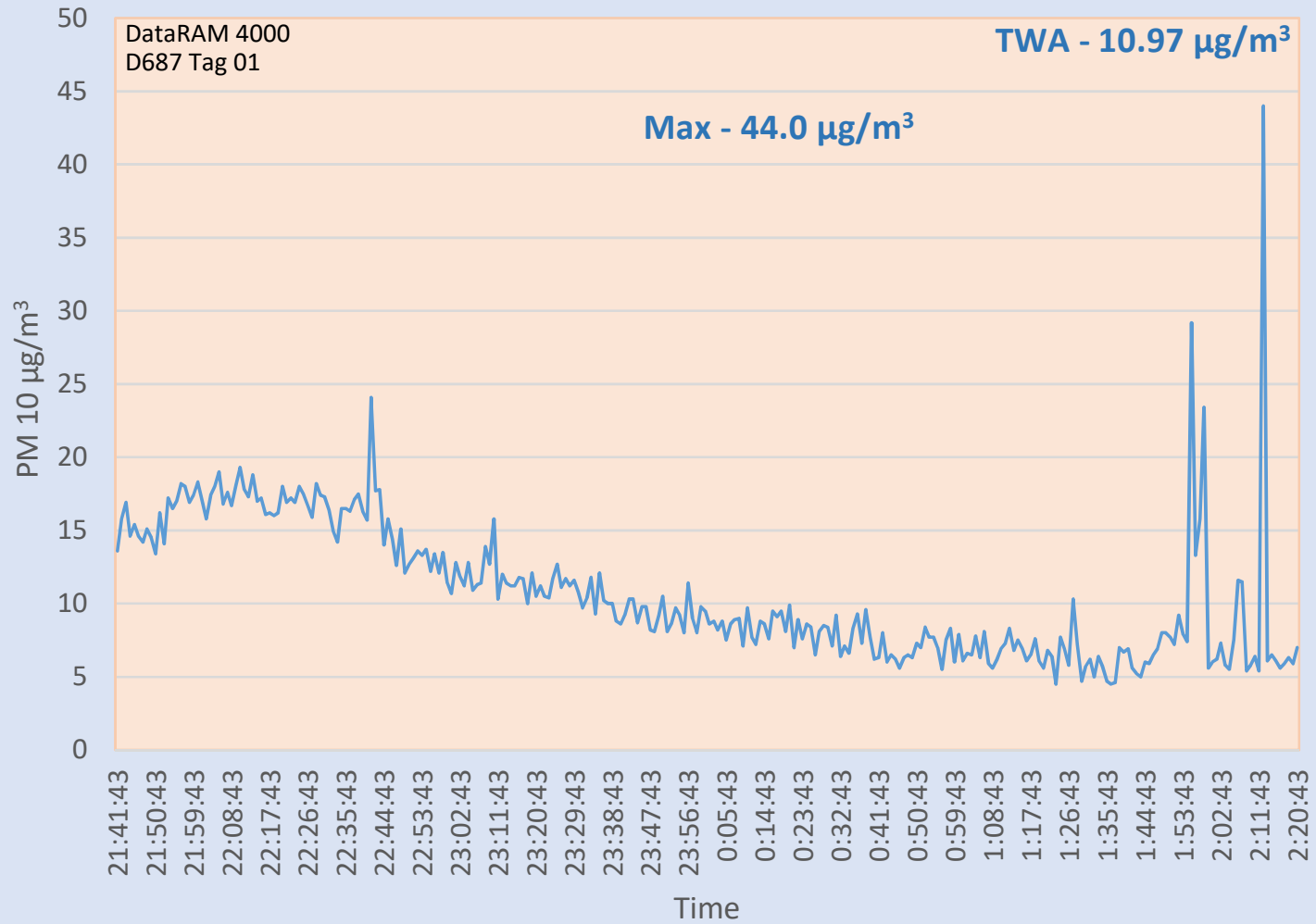
Source Area Perimeter

These graphs are data compiled from monitors placed downwind at the perimeter of the source of the fire.

Source Area Perimeter - PM10

October 22, 2017 - October 23, 2017 21:41:43-2:20:43

Corner of Myrtle St. and Camden Ave.
300 feet 280.14° from Source



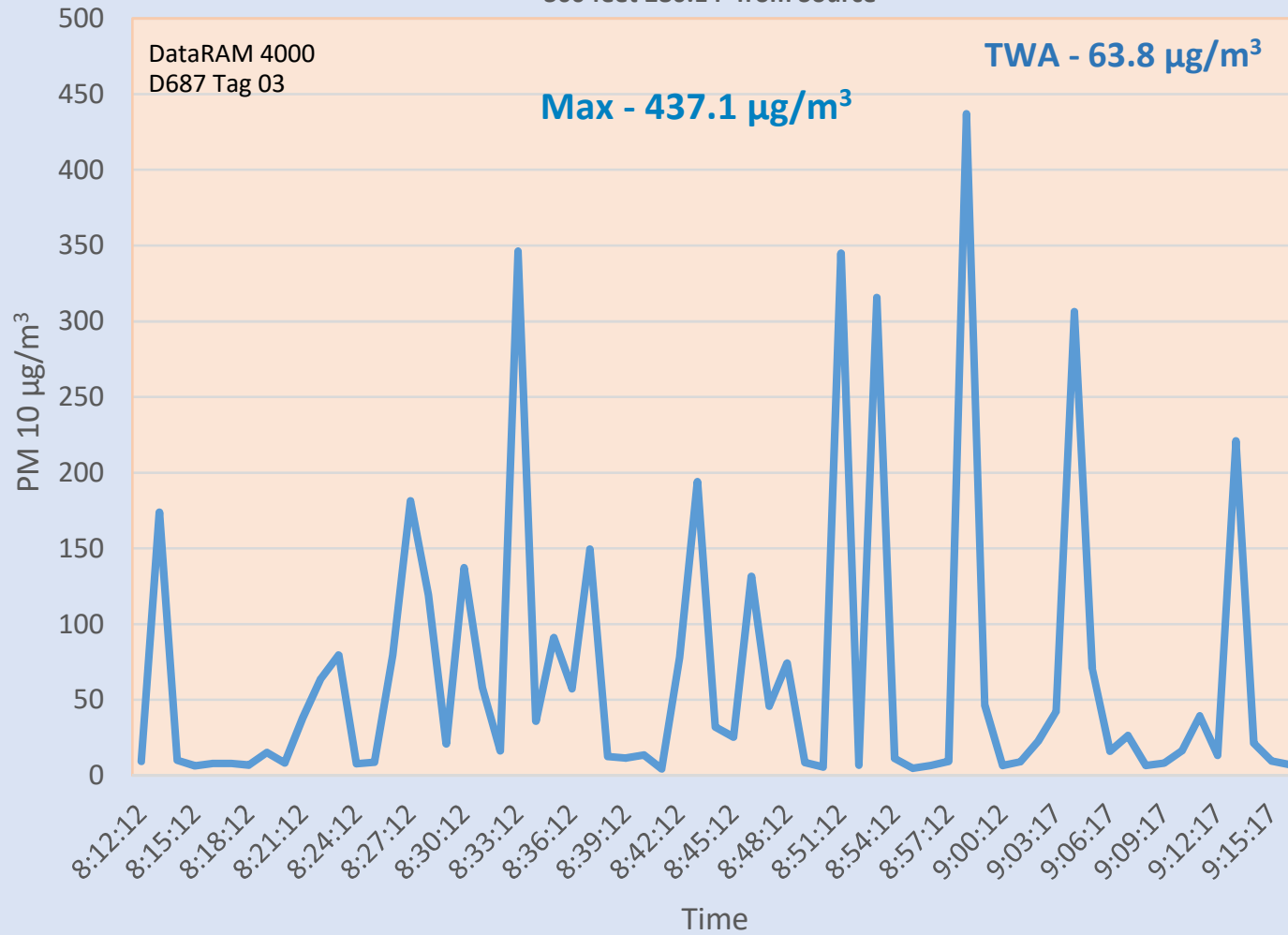
Max - 225.97 $\mu\text{g}/\text{m}^3$

Source Area Perimeter - PM10

October 23, 2017 8:12-9:16

Corner of Myrtle St. and Camden Ave.

300 feet 280.14° from Source

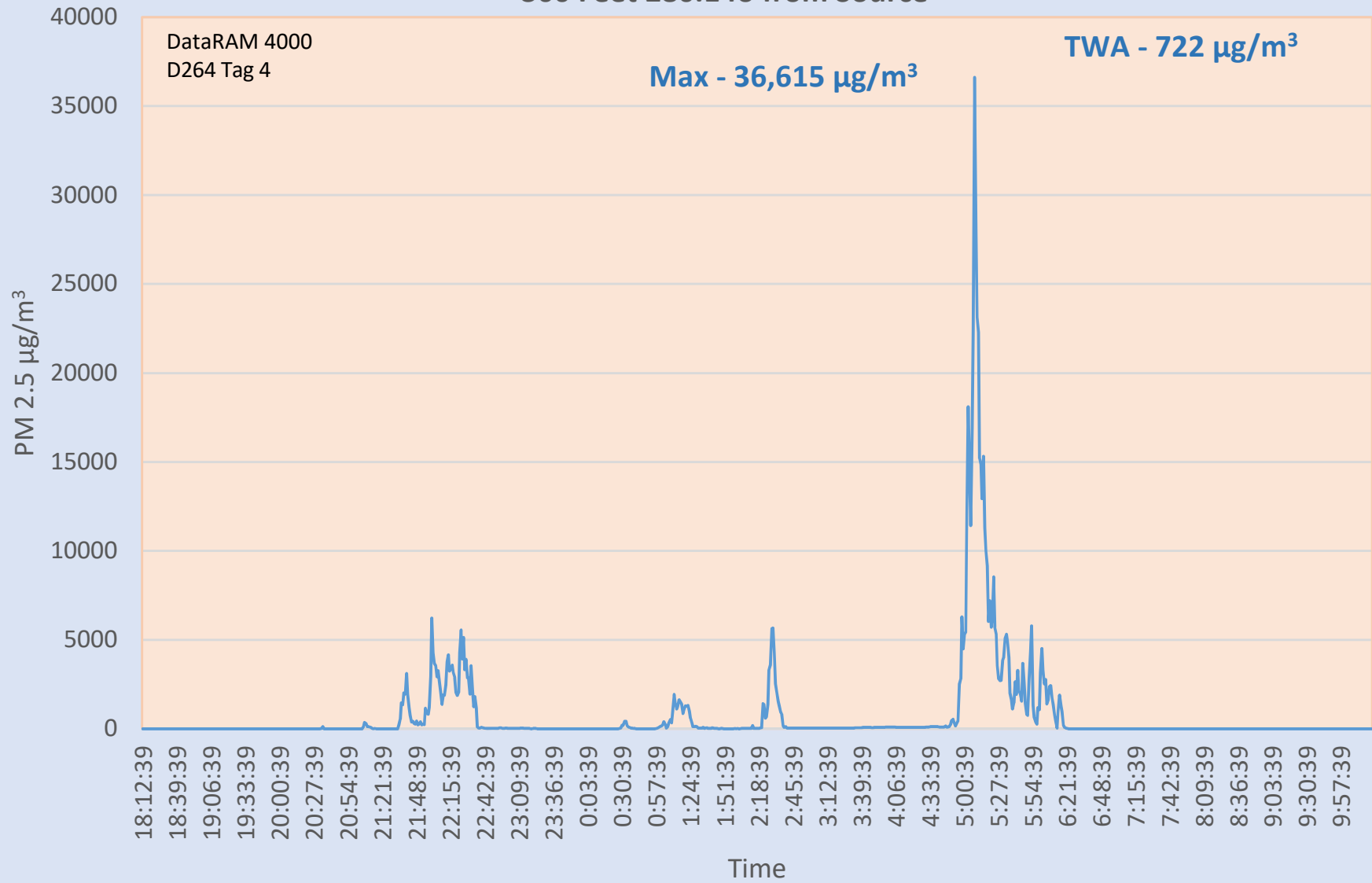


Max - 623 $\mu\text{g}/\text{m}^3$

Source Area Perimeter - PM2.5

October 24-25, 2017 18:12 - 10:21

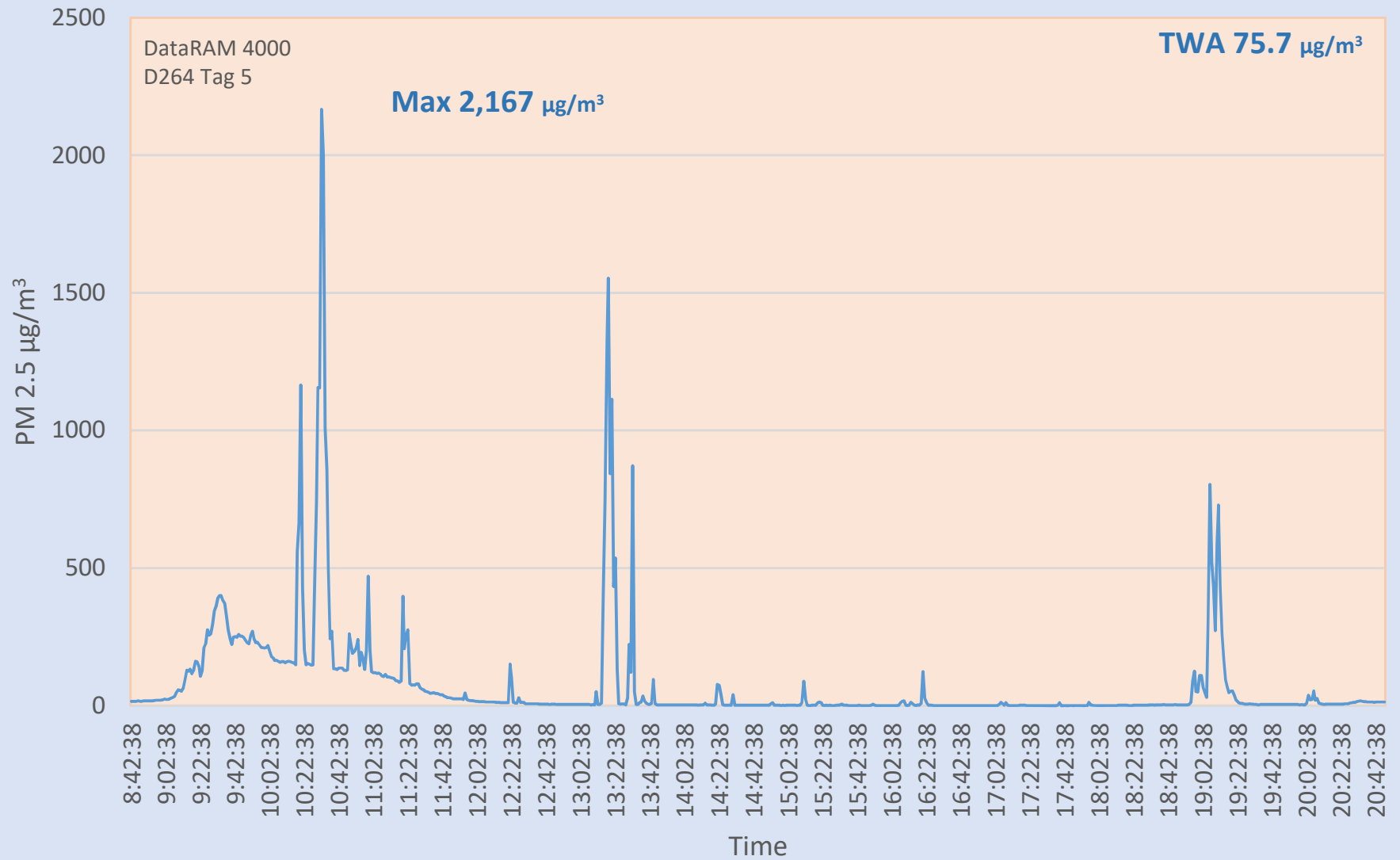
300 Feet 280.14o from Source



Source Area Perimeter - PM2.5

October 26, 2017 08:42 - 20:47

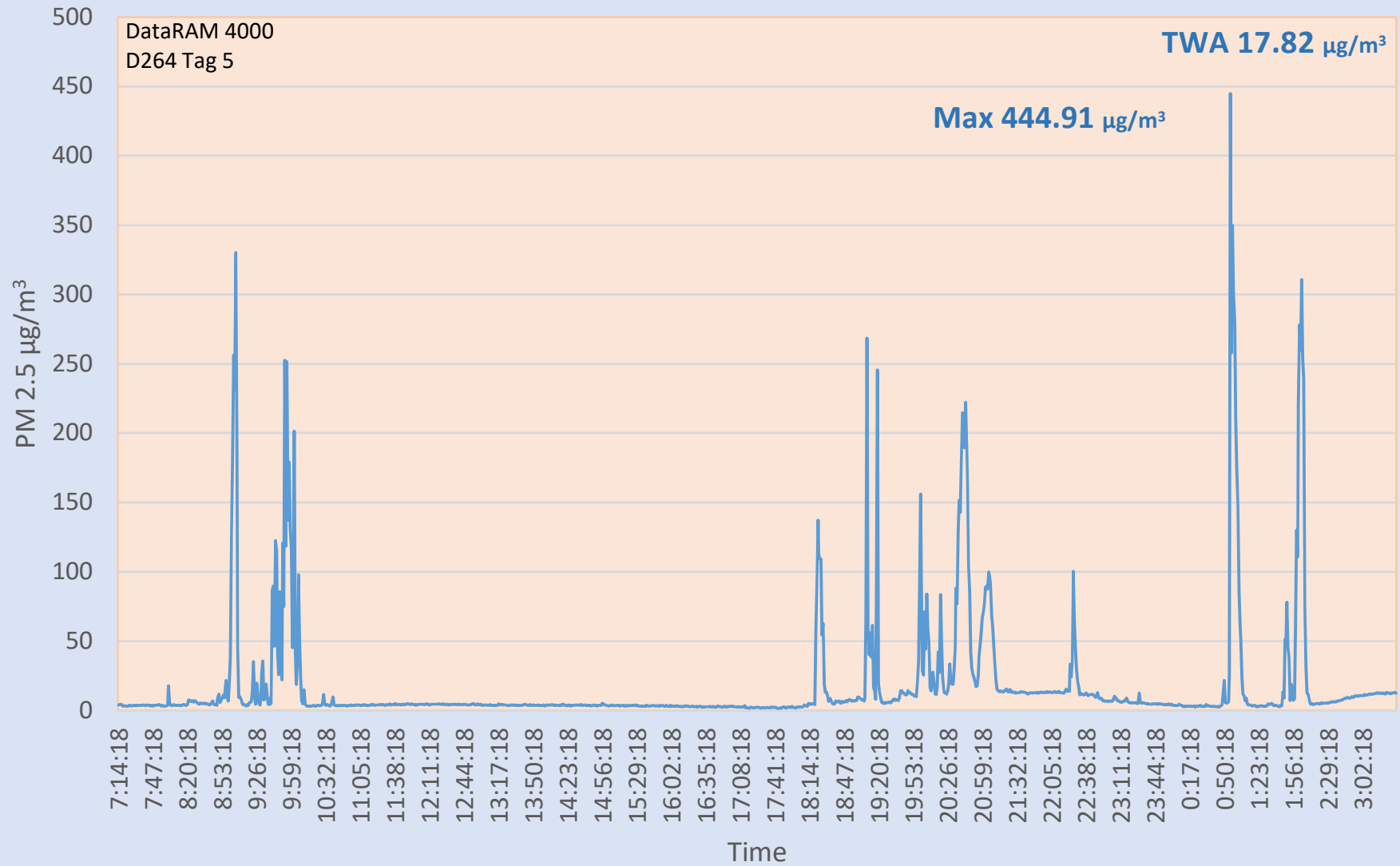
658 Feet Heading 280.14° from approx. center of Source Area



Source Area Perimeter- PM2.5

October 27-28, 2017 07:14 - 03:34

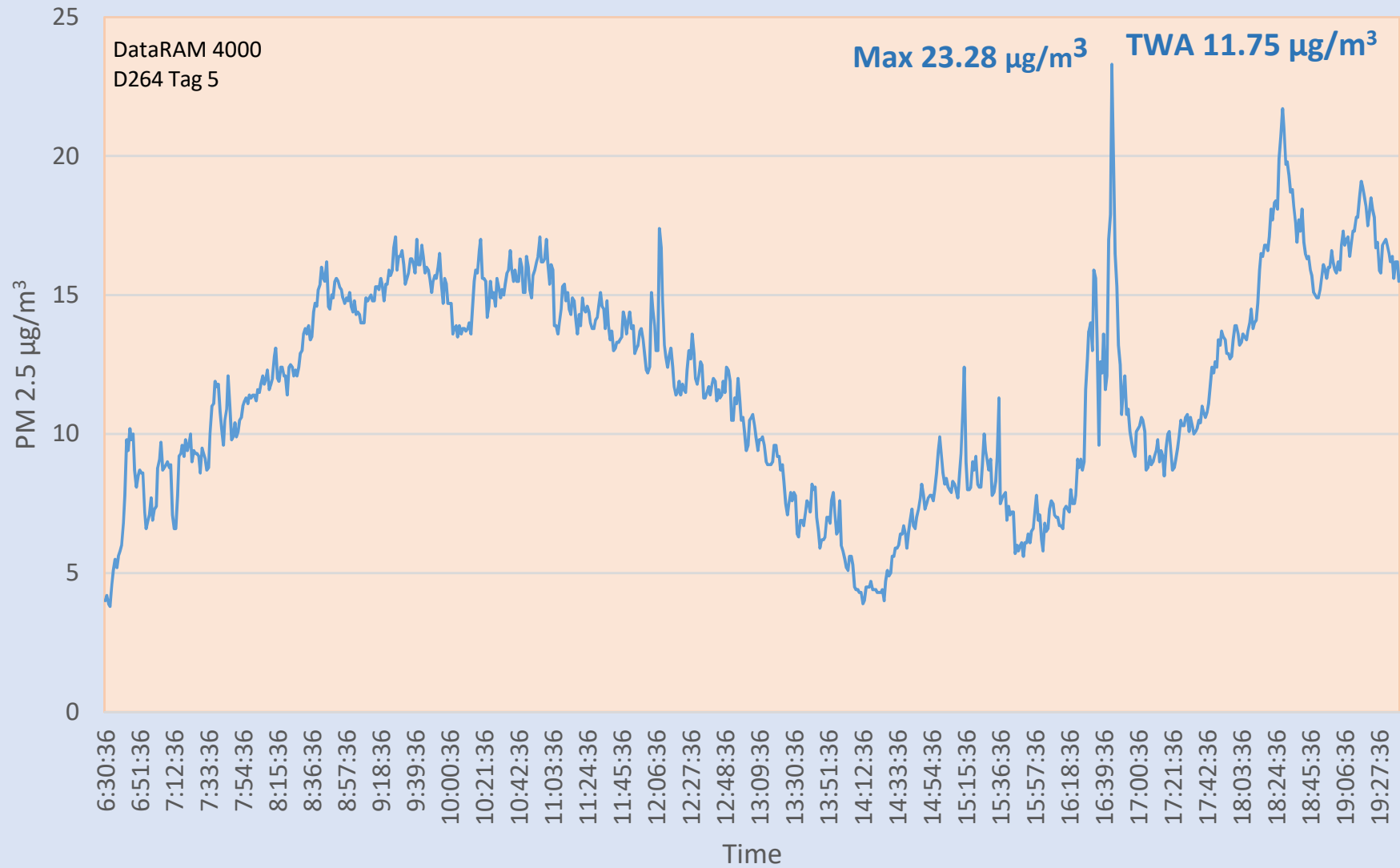
658 Feet Heading 280.14° from approx. center of Source Area



Source Area Perimeter - PM2.5

October 29, 2017 06:30 - 19:39

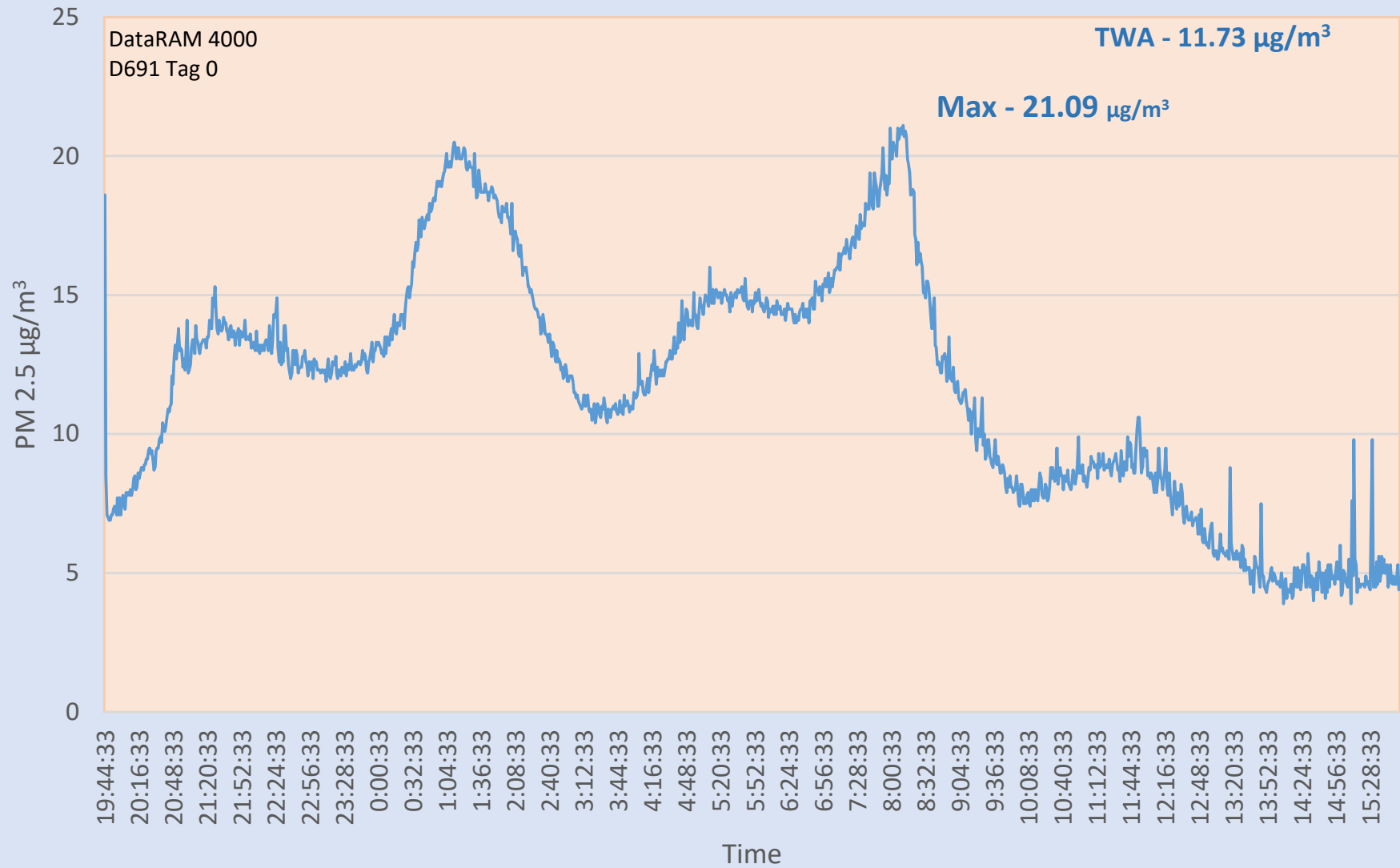
658 Feet Heading 280.14° from approx. center of Source Area



Source Area Perimeter - PM2.5

October 29-30, 2017 19:44 - 15:55

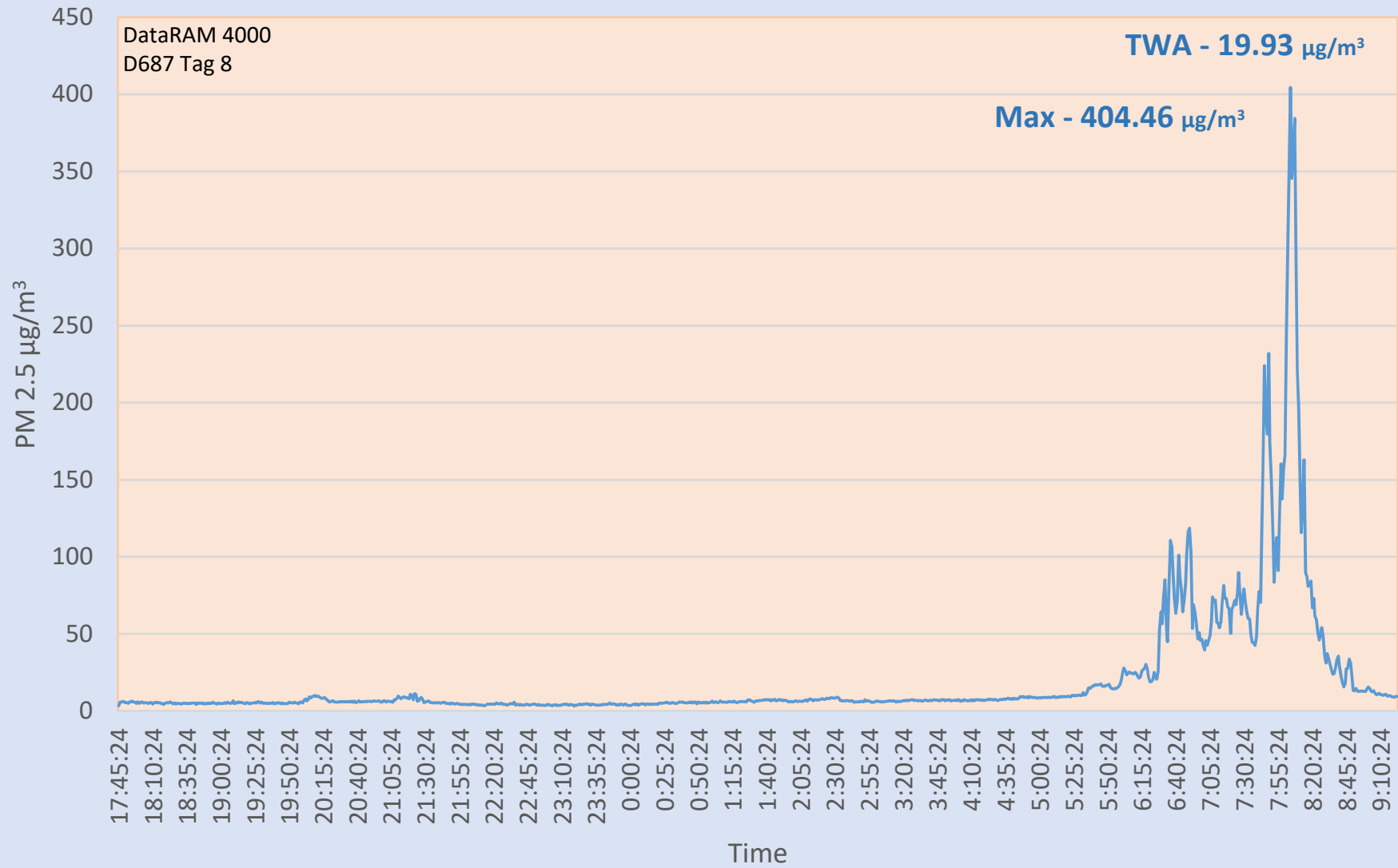
658 Feet Heading 280.14° from approx. center of Source Area



Source Area Perimeter - PM2.5

October 30-31, 2017 17:45 - 9:22

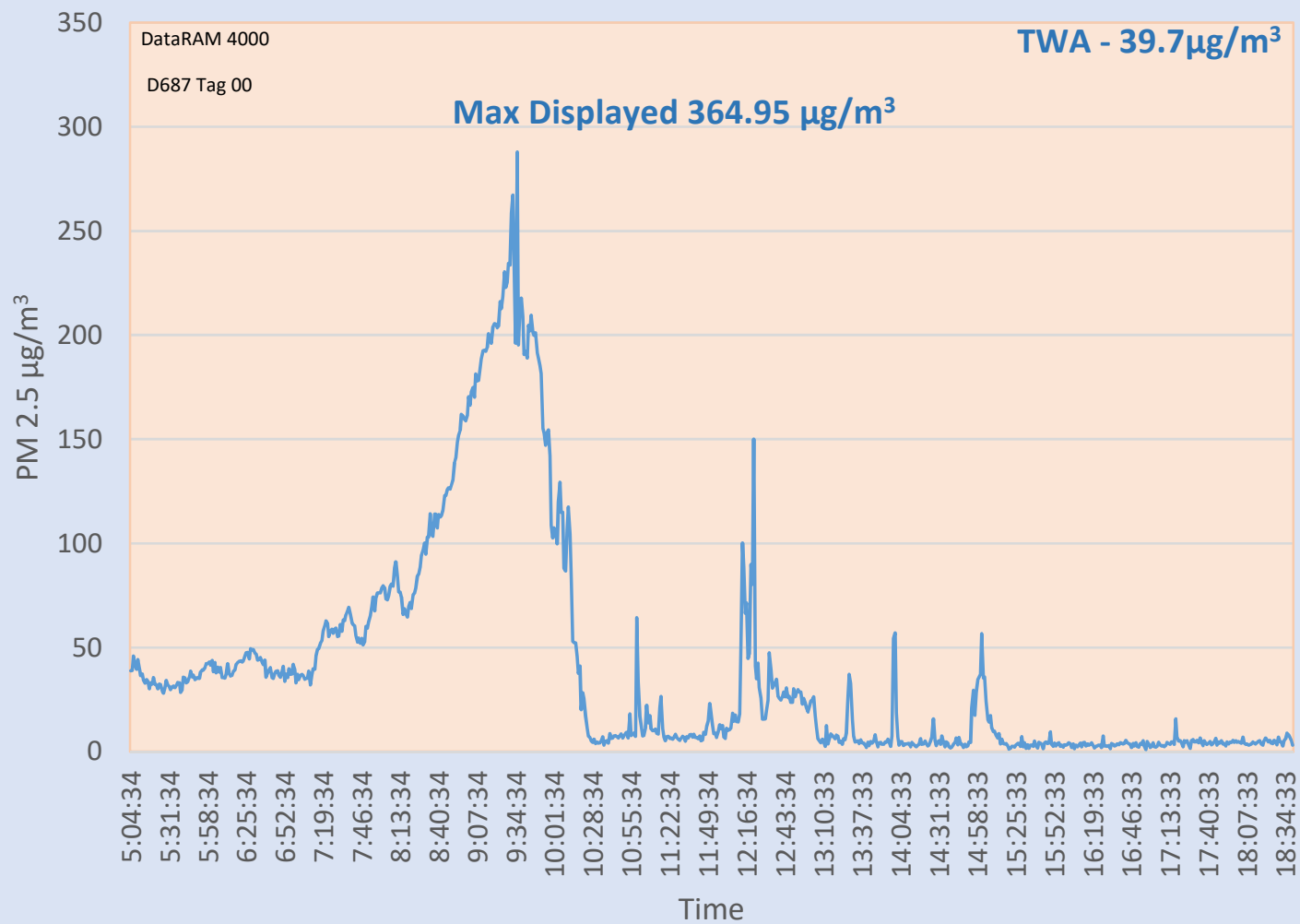
658 Feet Heading 280.14° from approx. center of Source Area



Barker Lane

These graphs are data compiled from monitors placed on Barker Lane.

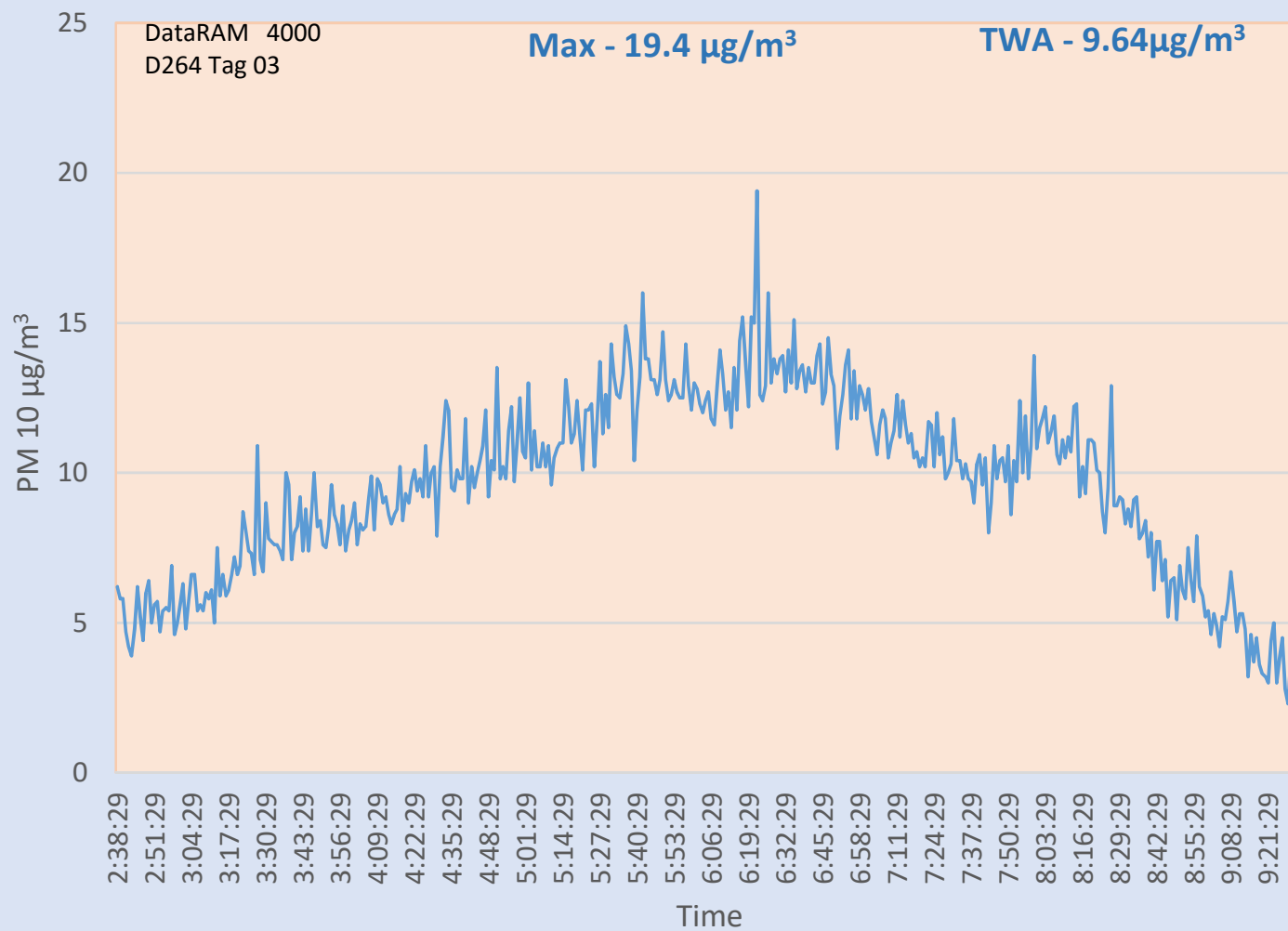
Barker Lane - PM10
October 22, 2017 5:04-18:39
0.81 miles 352.66₀ from Source Area



Barker Lane - PM10

October 23, 2017 2:38-9:33

0.81 miles 352.66₀ from Source Area



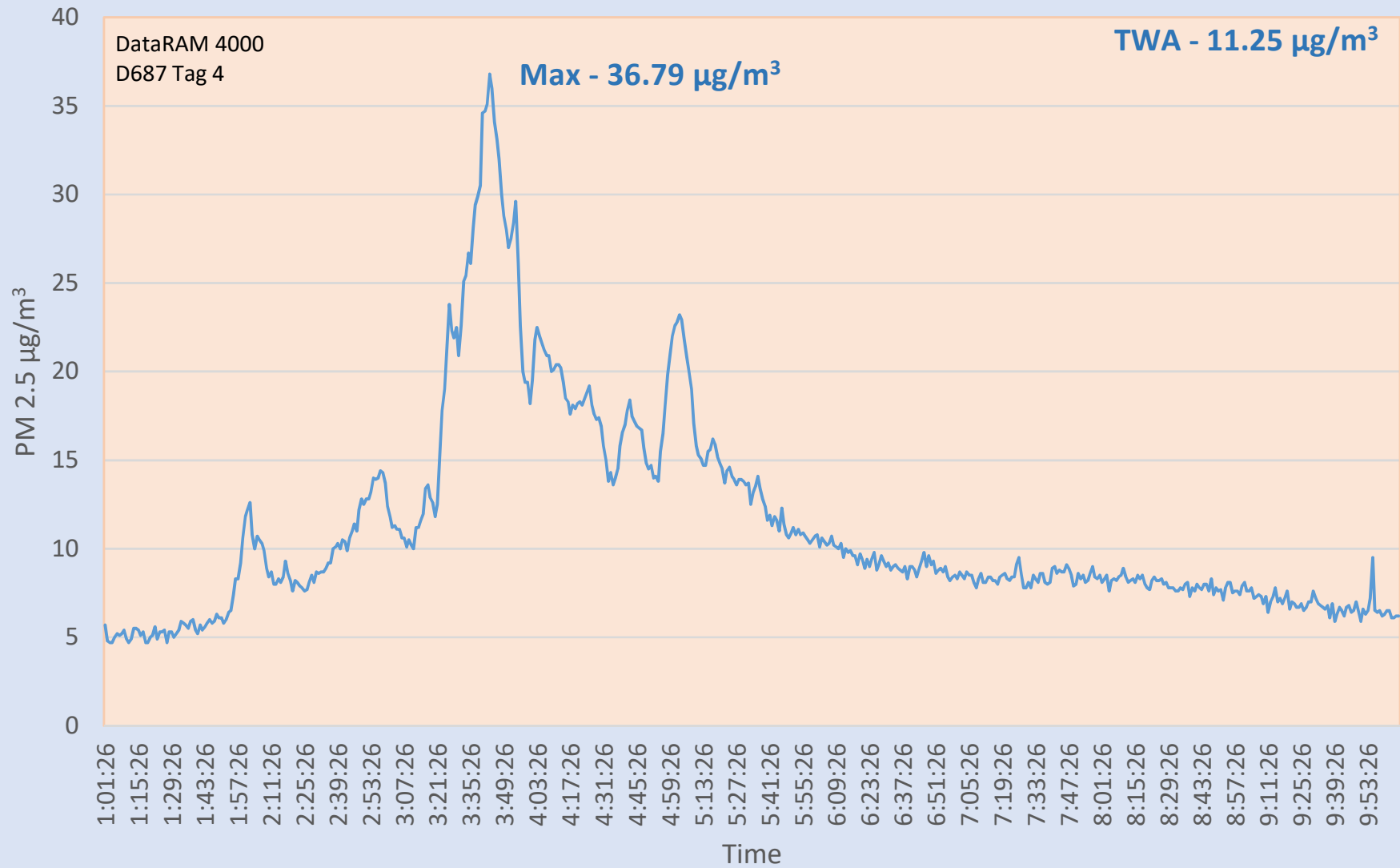
Mine Outfall Fence

These graphs are data compiled from monitors placed near the mine outfall fence.

Mine Outfall Fence - PM2.5

October 25, 2017 1:01 - 10:06

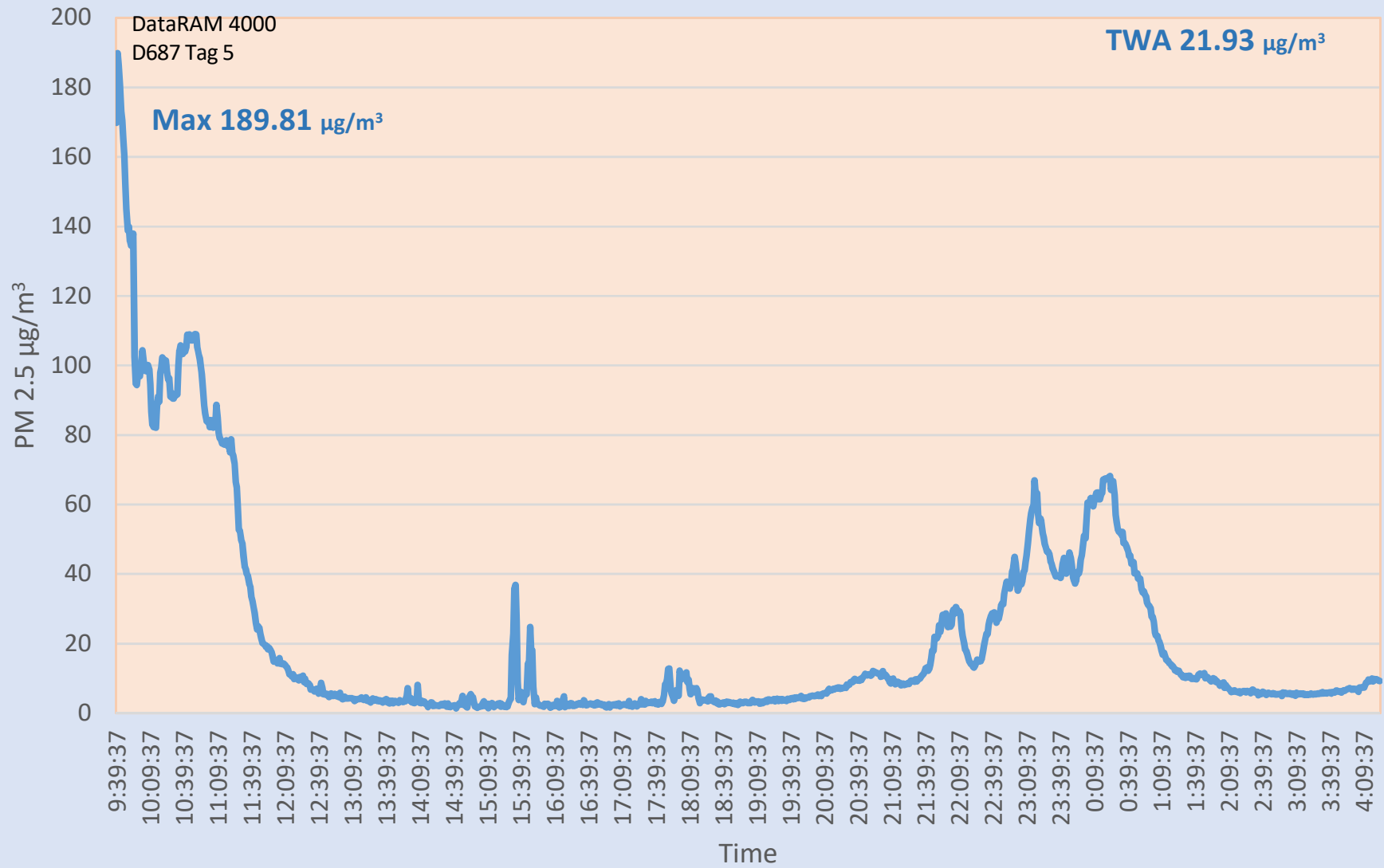
0.53 Miles 81.44° from Source



Mine Outfall Fence - PM2.5

October 26-27, 2017 09:39 - 04:23

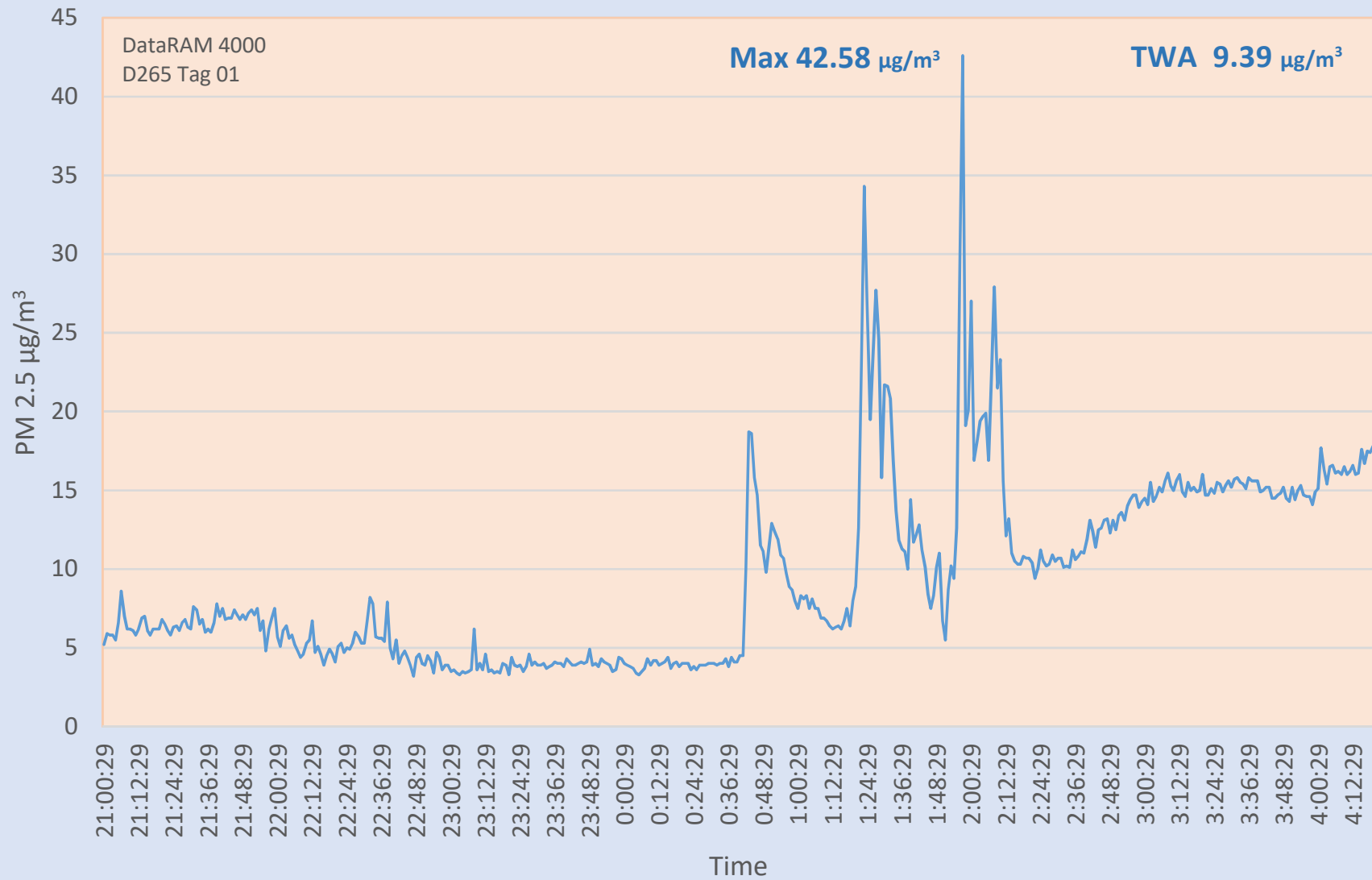
0.53 Miles Heading 81.02° from Source



Mine Outfall Fence - PM2.5

October 27-28, 2017 21:00 - 04:19

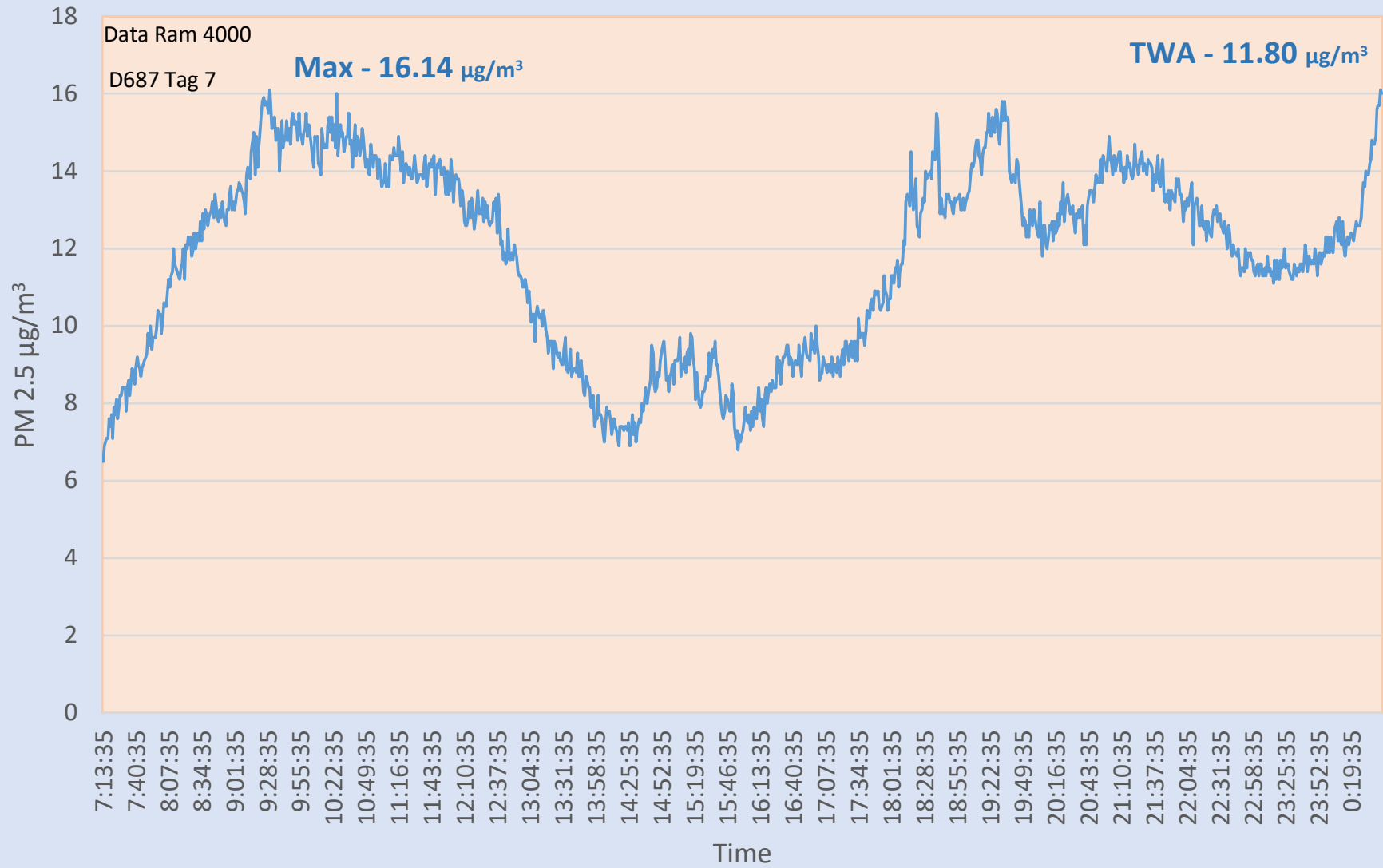
0.53 Miles Heading 81.02° from Source



Mine Outfall Fence - PM2.5

October 29-30, 2017 7:13 - 0:44

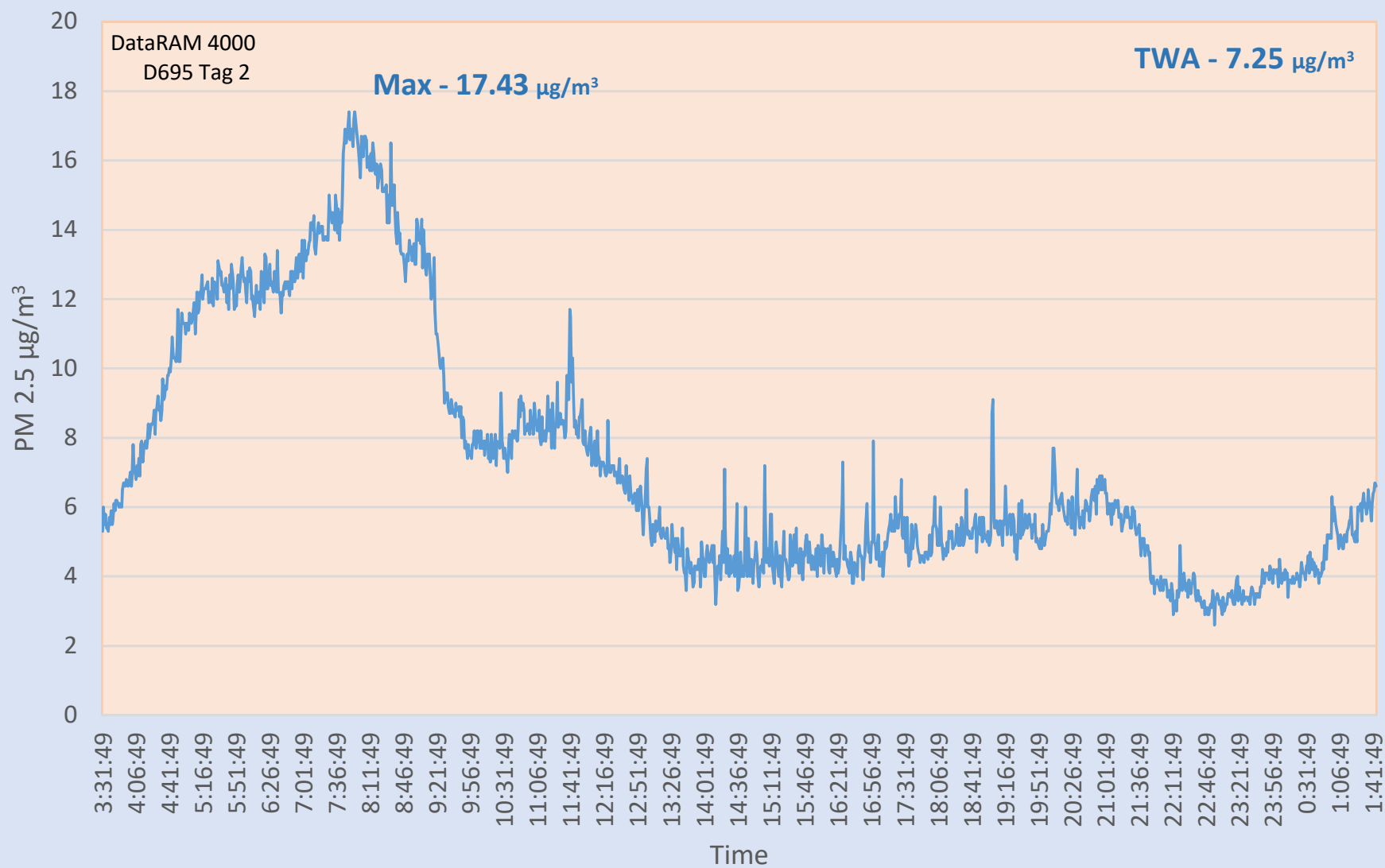
0.53 Miles Heading 81.02° from Source



Mine Outfall Fence - PM2.5

October 30-31, 2017 3:31 - 1:44

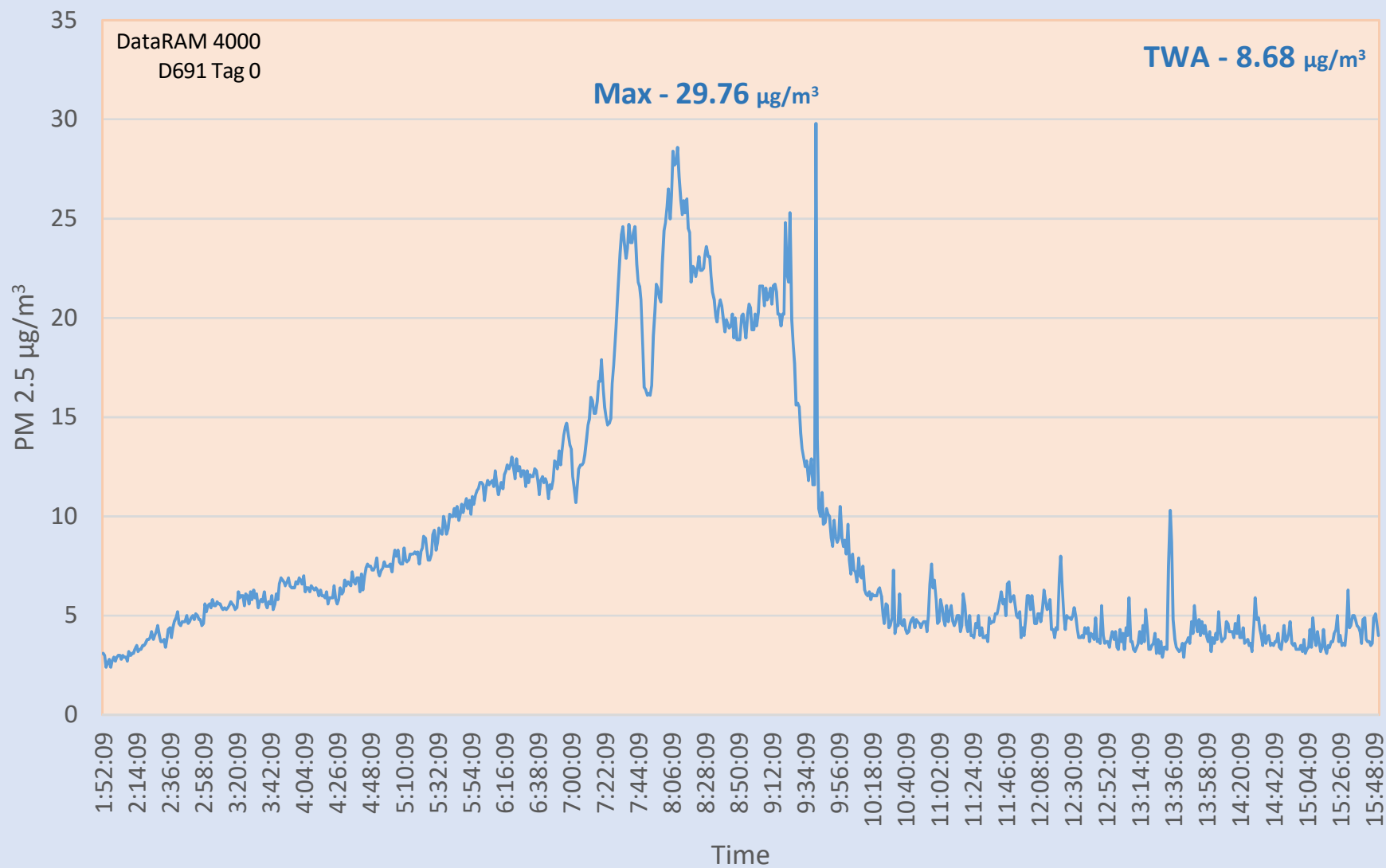
0.53 Miles Heading 81.02° from Source



Mine Outfall Fence - PM2.5

October 31, 2017 1:52 - 15:51

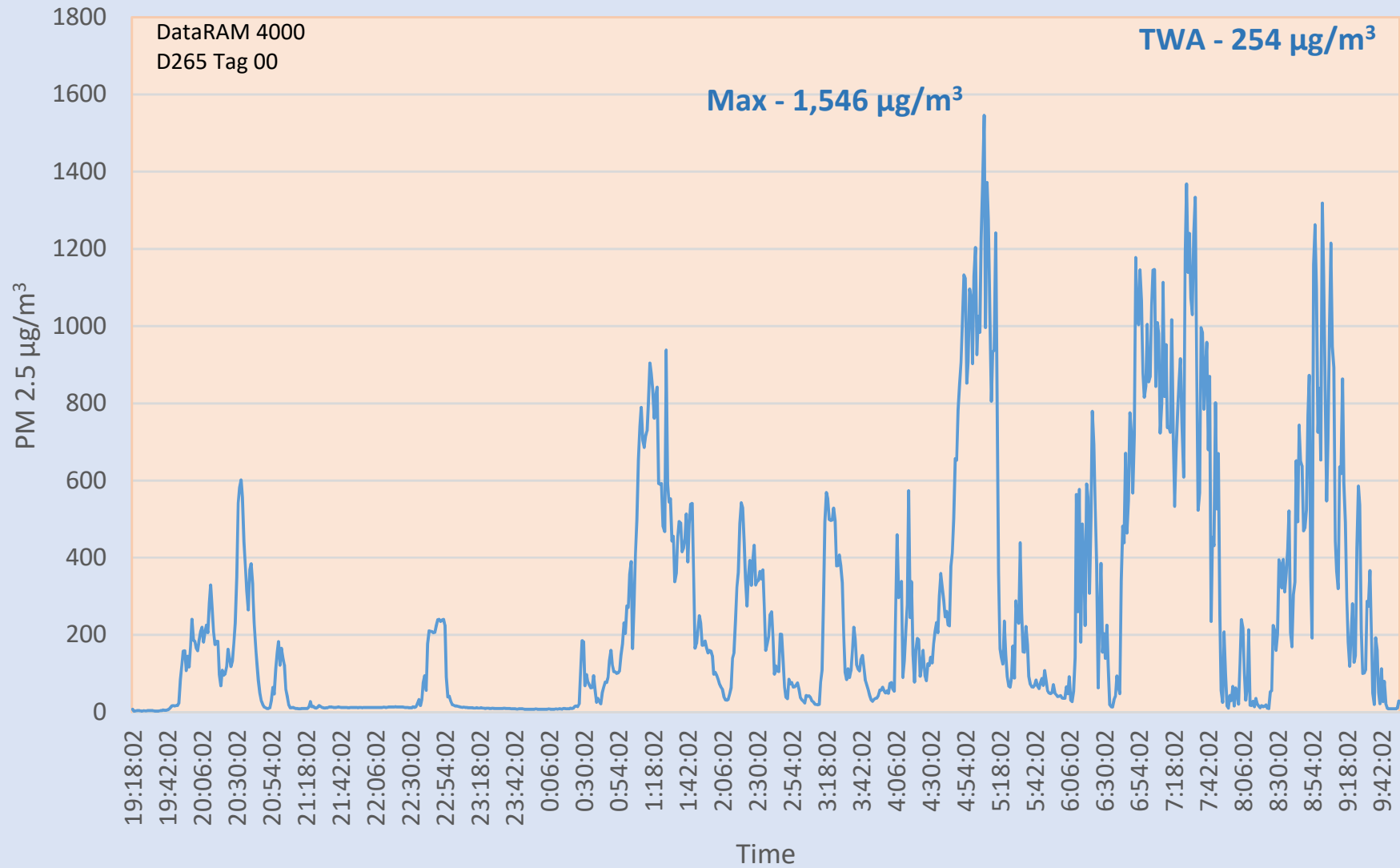
0.53 Miles Heading 81.02° from Source



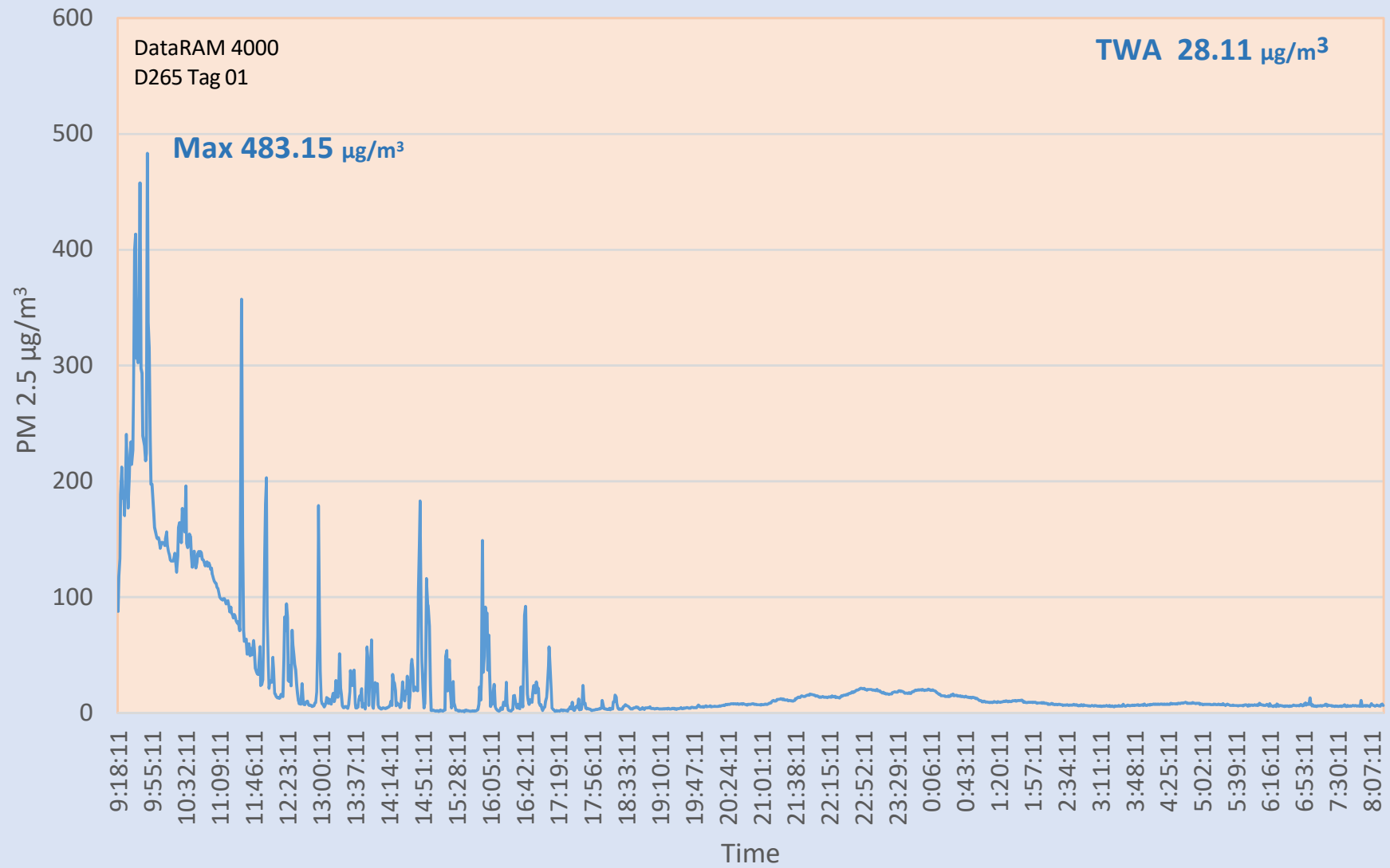
Park N' Ride

These graphs are data compiled from monitors placed near the Park N' Ride.

PARK N' RIDE - PM2.5
October 24-25, 2017 19:18 - 09:54
0.51 Miles 2.40° from Source



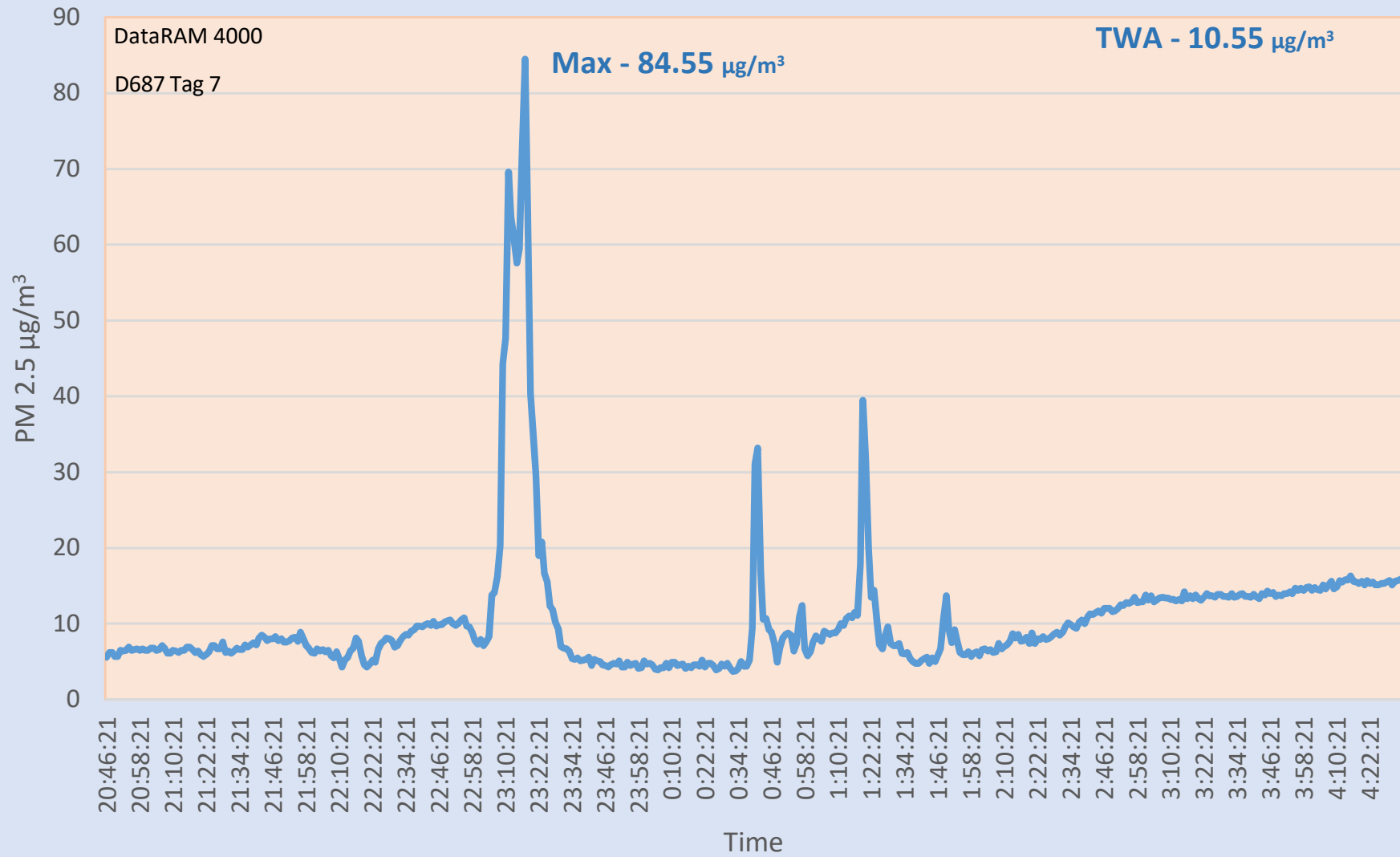
PARK N' RIDE - PM2.5
October 26-27, 2017 09:18 - 08:20
0.51 Miles Heading 2.40° from Source



PARK N' RIDE - PM2.5

October 27-28, 2017 20:46 - 04:33

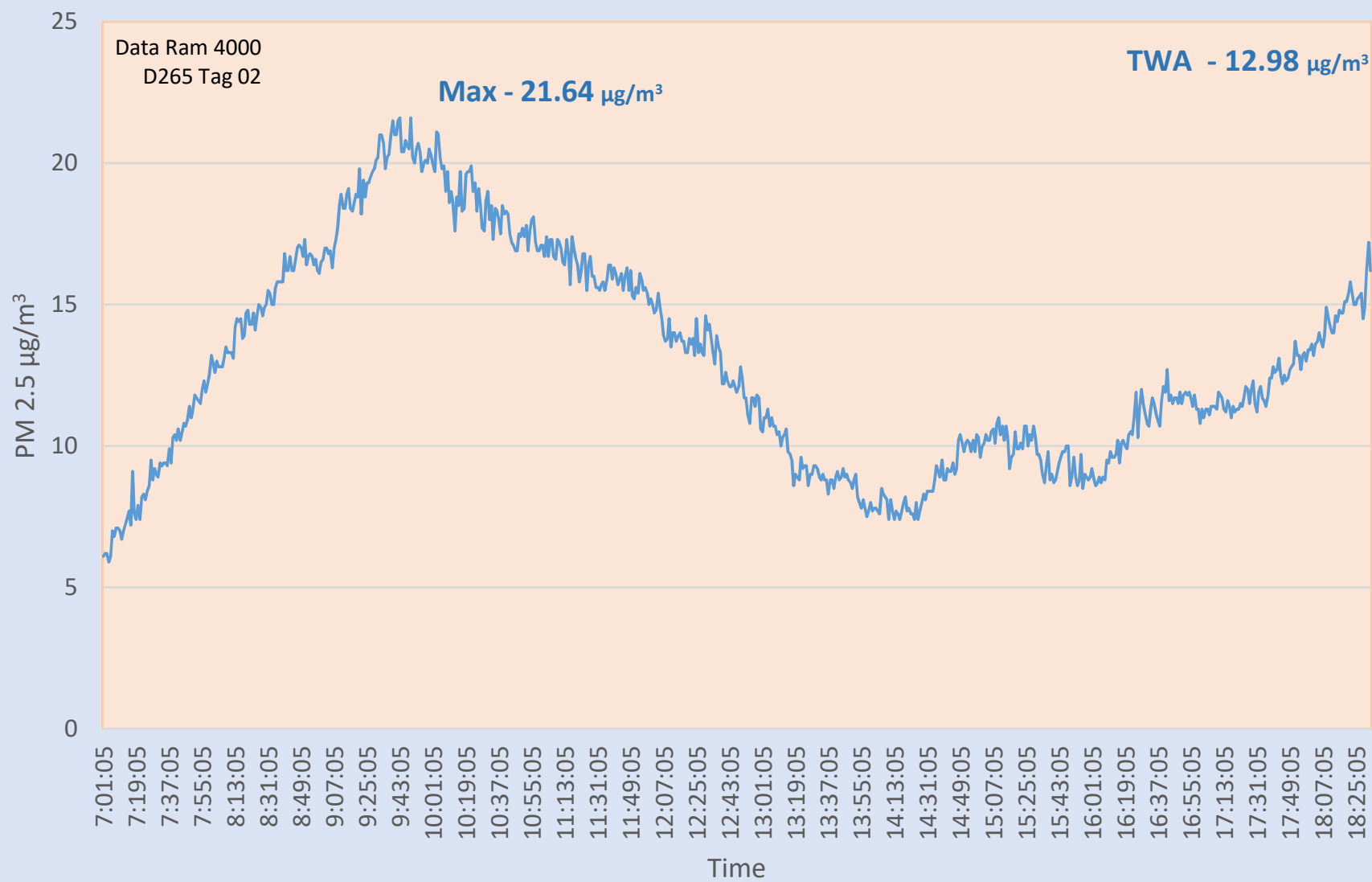
0.51 Miles Heading 2.40° from Source



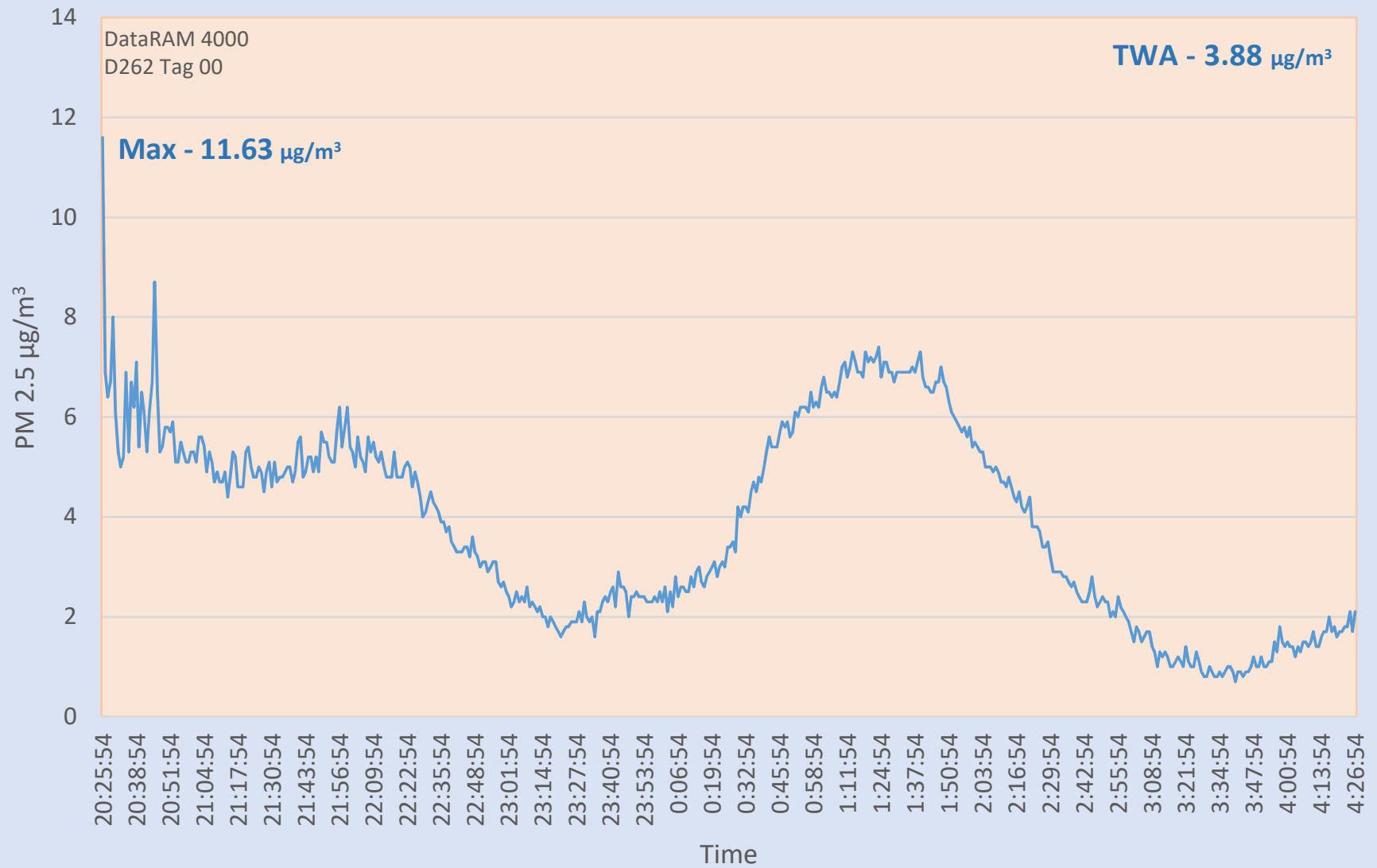
Park N' Ride- PM2.5

October 29, 2017 7:01 - 18:33

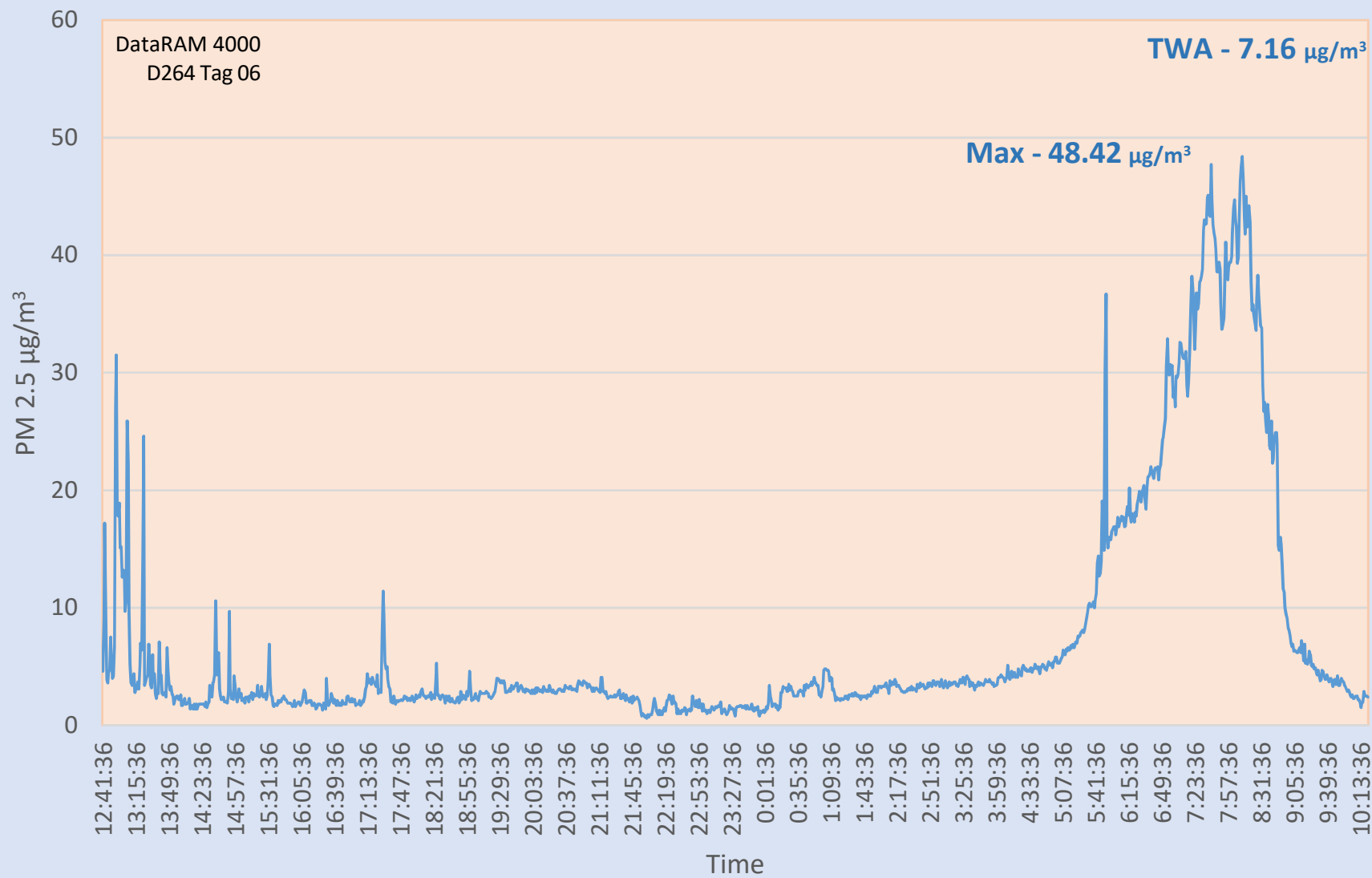
0.51 Mi. Heading 2.40° from Source Area



Park N' Ride- PM2.5
October 29-30, 2017 20:25 - 4:26
0.51 Mi. Heading 2.40° from Source Area



Park N' Ride- PM2.5
October 30-31, 2017 12:41 - 10:21
0.51 Mi. Heading 2.40° from Source Area

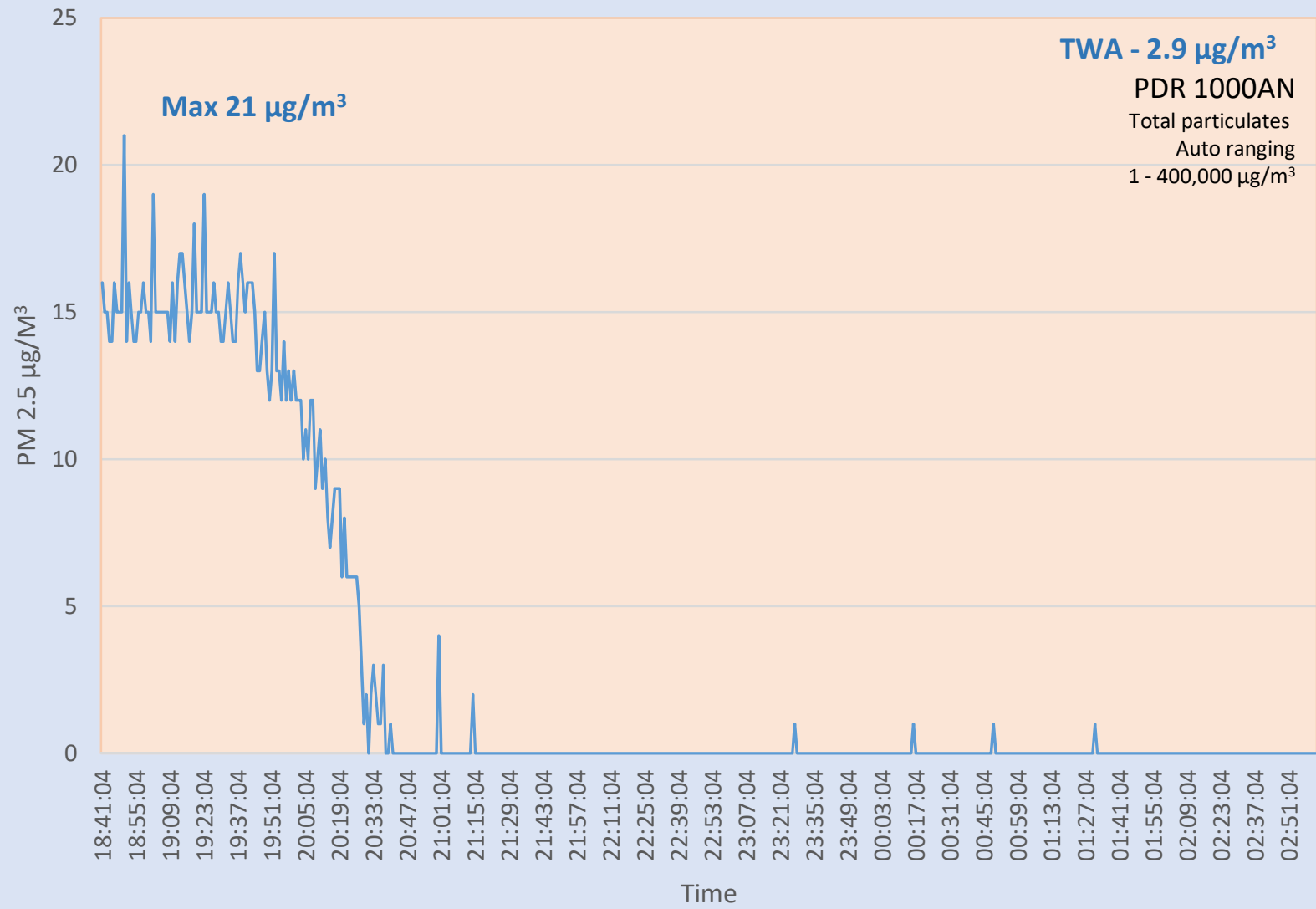


Parkersburg Catholic School

pDR 1000AN Monitor
(measured for total particulates)

These graphs are data compiled from monitors placed at Parkersburg Catholic High School

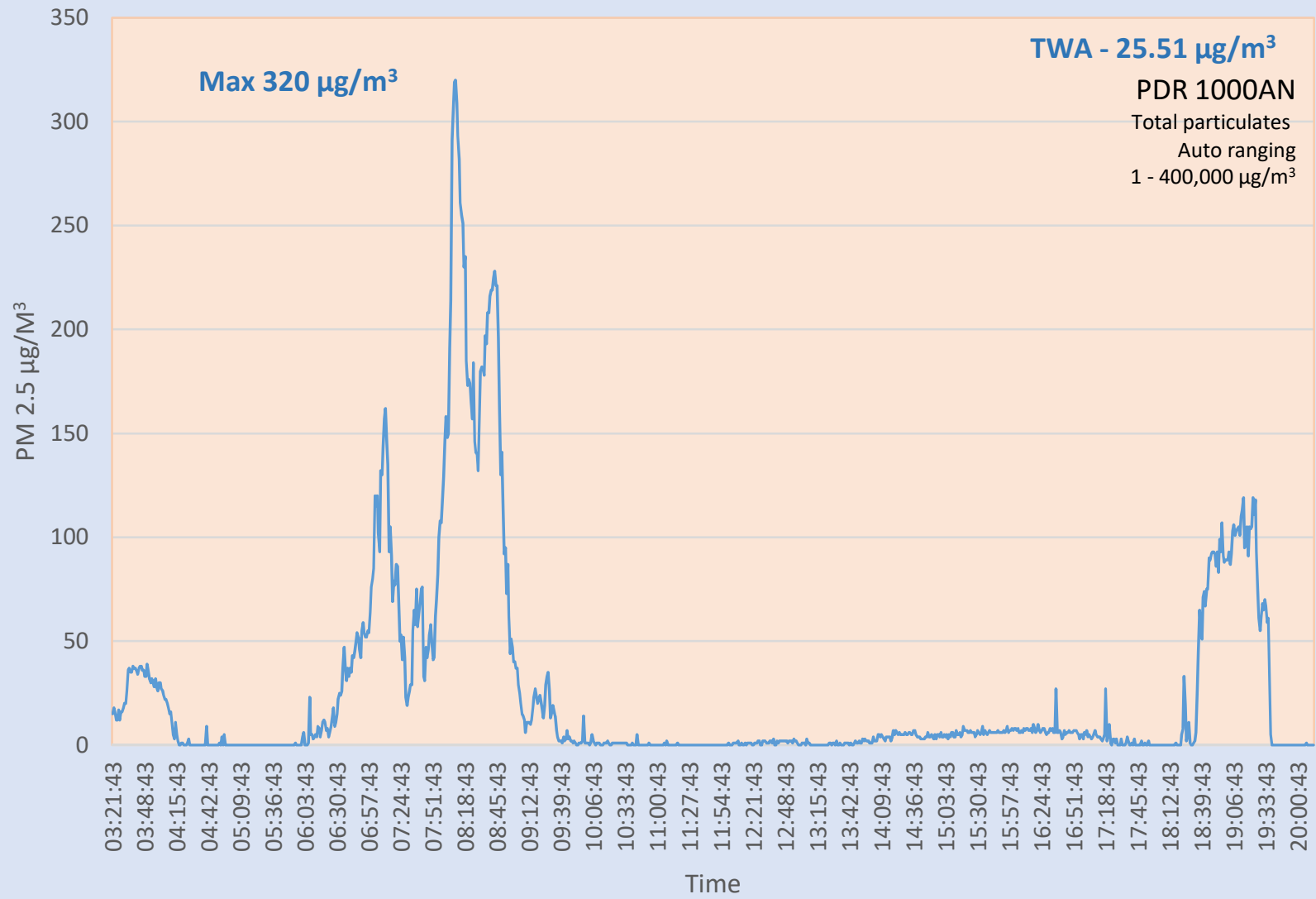
Parkersburg Catholic High School
October 24, 2017 - October 25, 2017 18:41 - 03:02
2.38 miles feet 8.33 degrees from Source



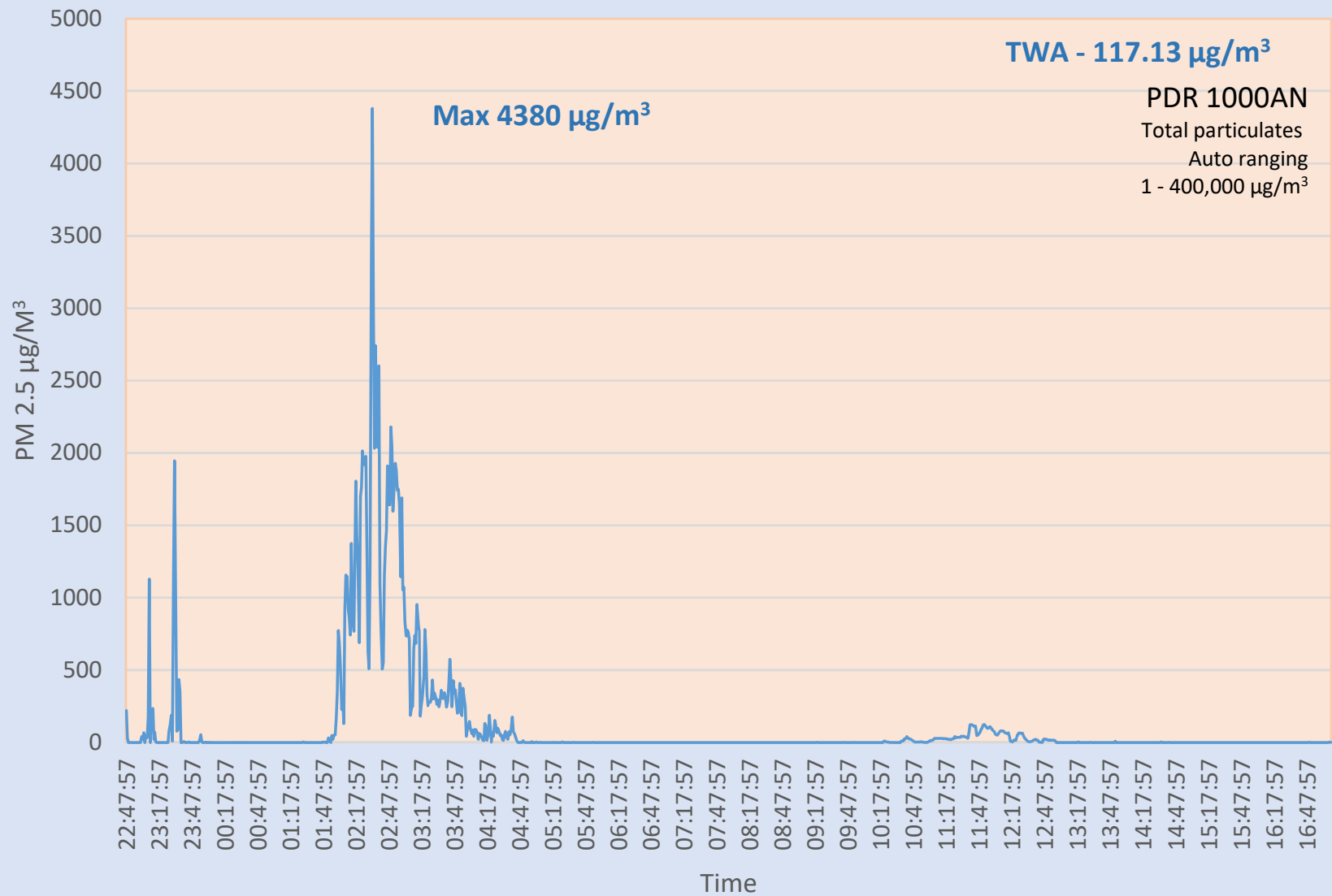
Parkersburg Catholic High School

October 25, 2017 03:21 - 20:13

2.38 miles feet 8.33 degrees from Source



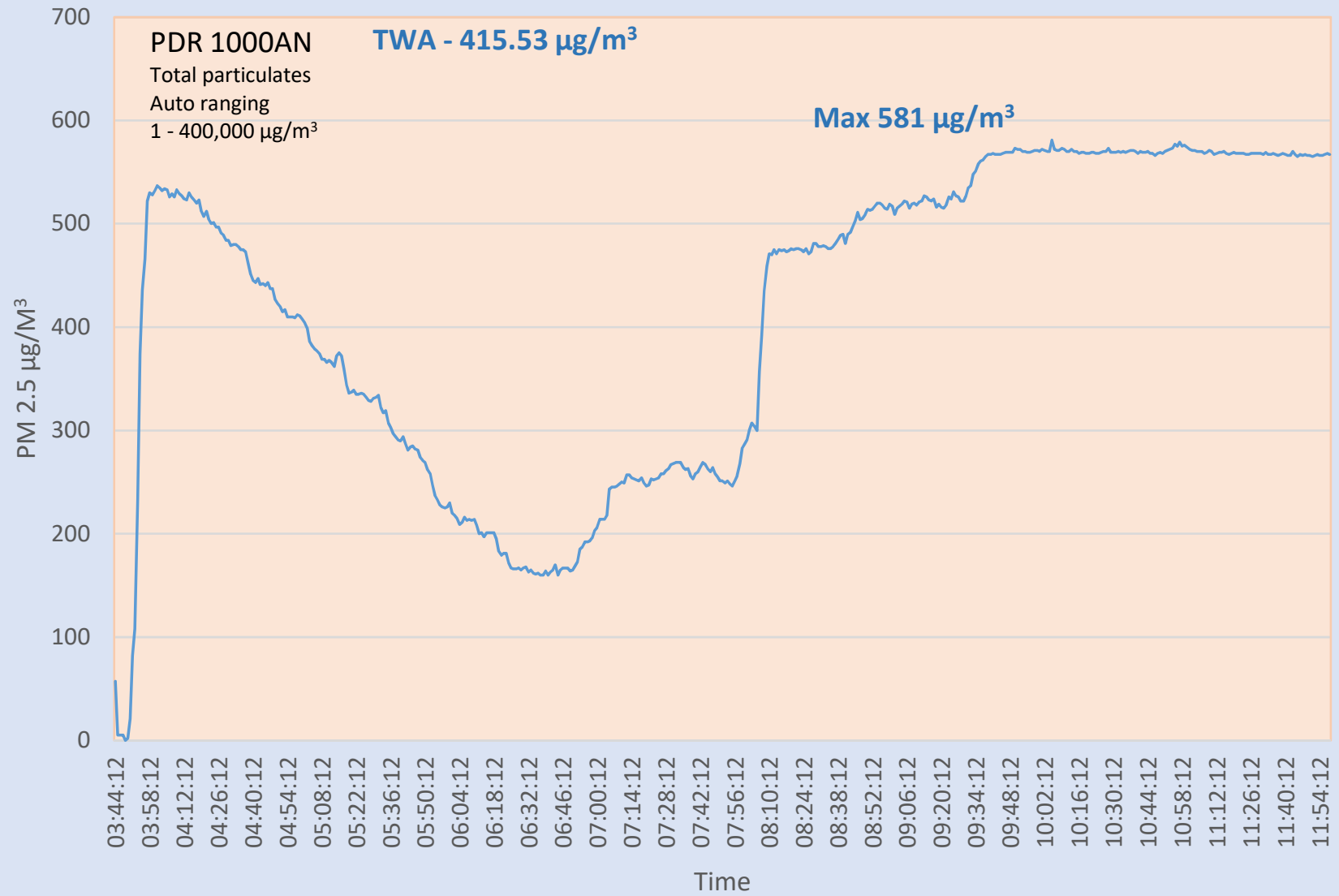
Parkersburg Catholic High School
October 25, 2017 - October 26, 2017 22:47 - 17:09
2.38 miles feet 8.33 degrees from Source



Parkersburg Catholic High School

October 27, 2017 03:44 - 11:58

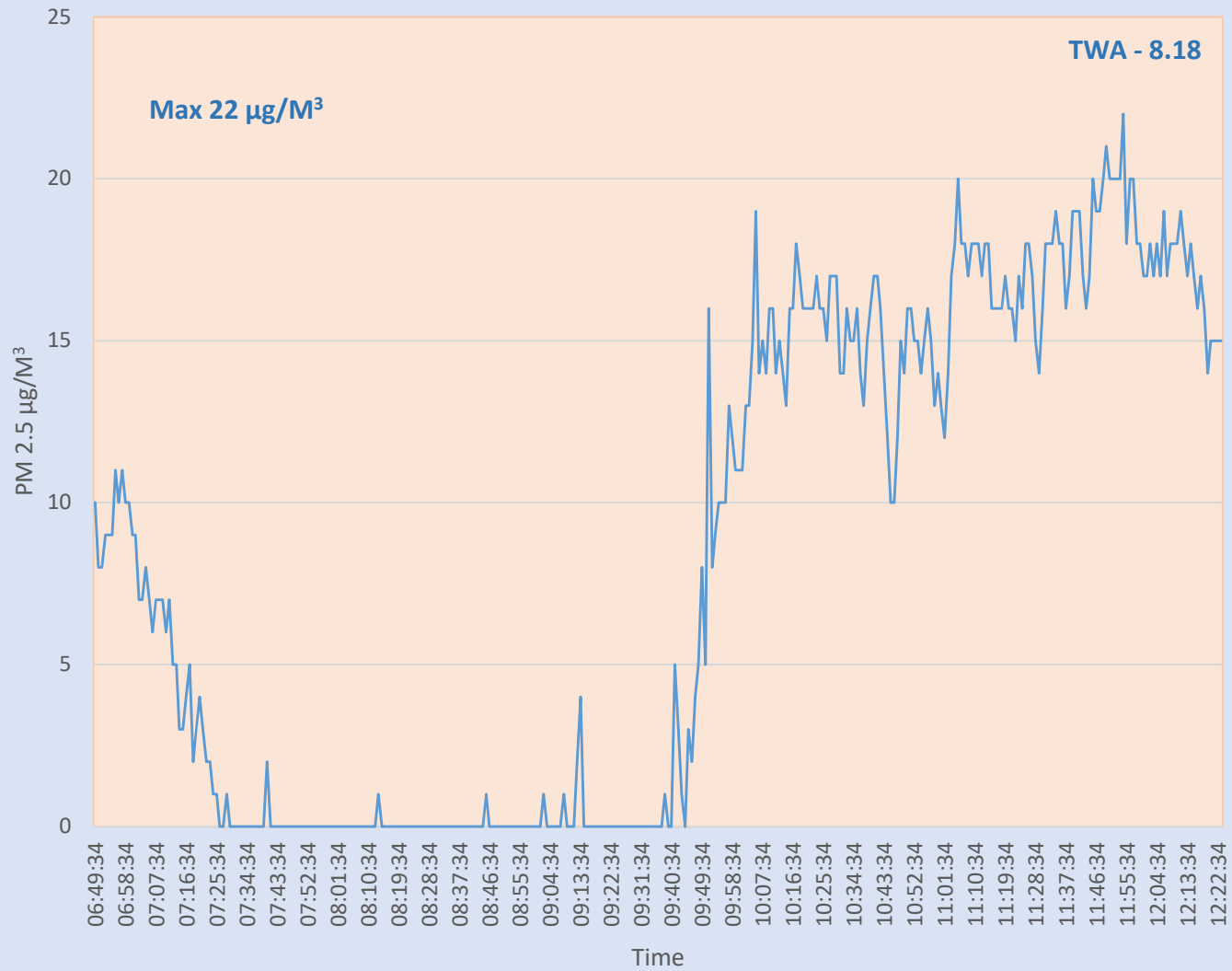
2.38 miles feet 8.33 degrees from Source



Parkersburg Catholic High School

October 29, 2017 6:49 - 12:23

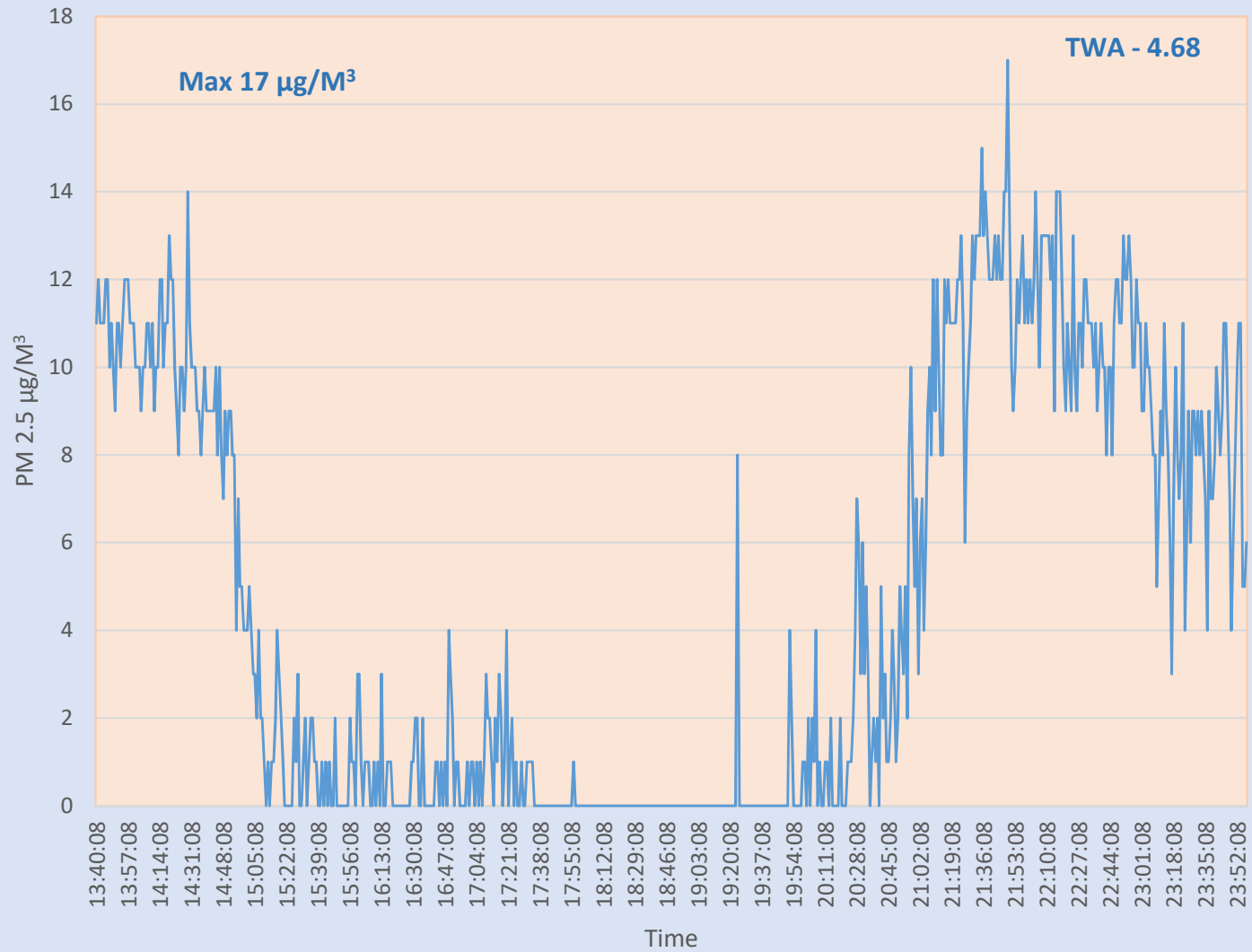
2.38 miles feet 8.33 degrees from Source



Parkersburg Catholic High School

October 29, 2017 13:40 - 23:57

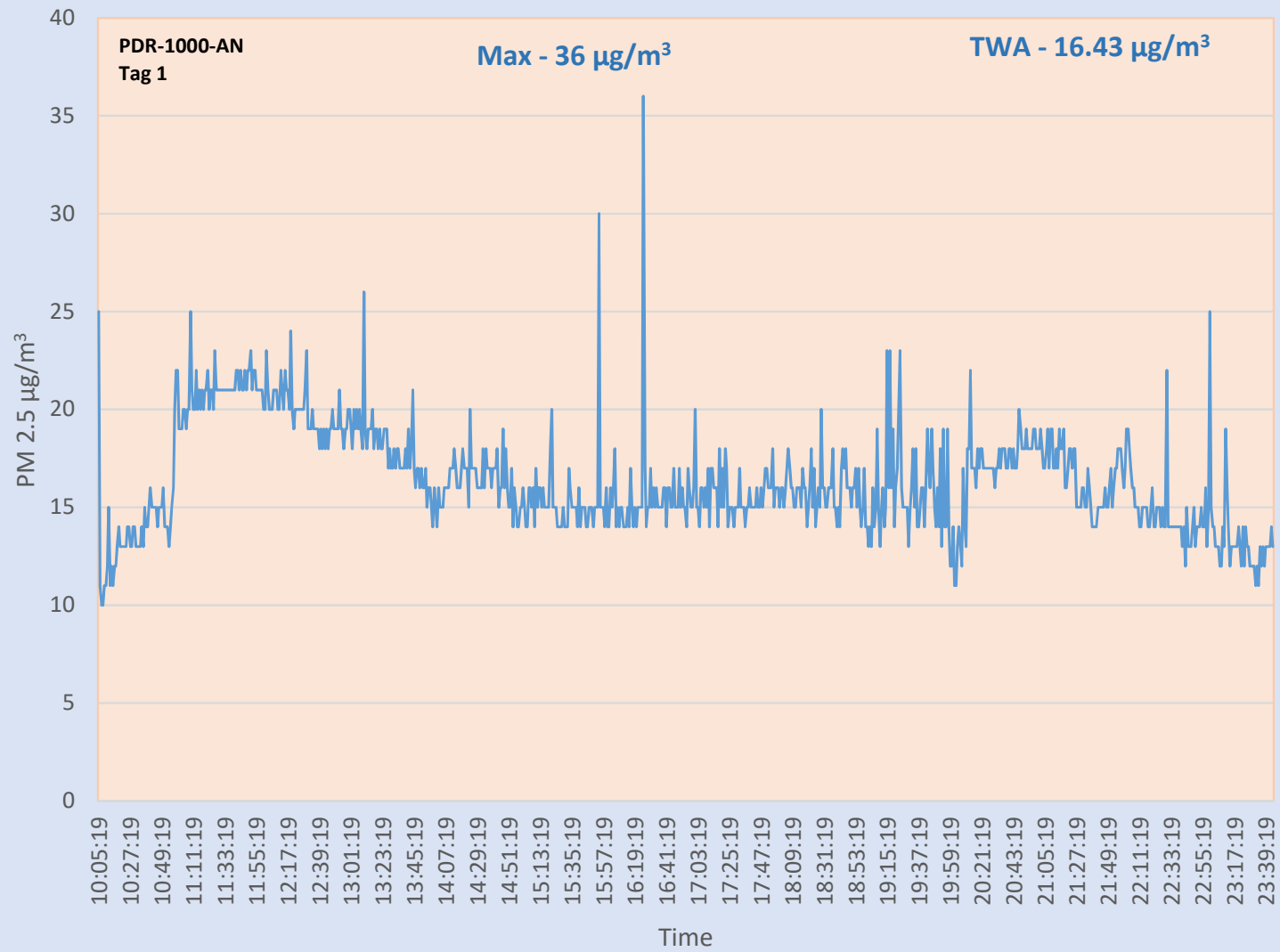
2.38 miles feet 8.33 degrees from Source



Parkersburg Catholic High School

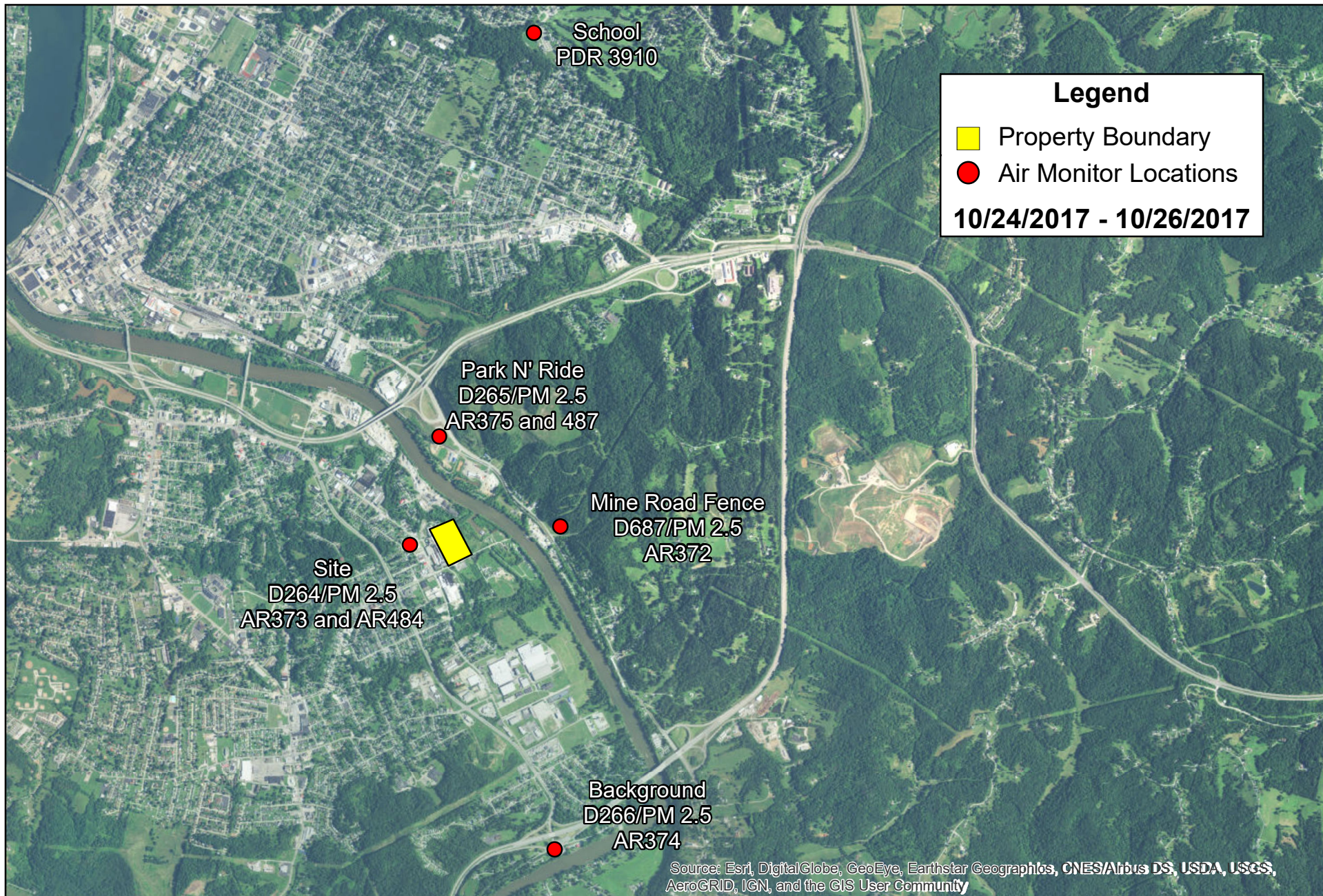
October 30, 2017 10:05 - 23:44

2.38 miles feet 8.33 degrees from Source



ATTACHMENT 2

AreaRAEs				
Location	Serial ID	Unit ID	Latitude	Longitude
Background	(.3007) AreaRAE PRG2CAP - AreaRAE - S/N292-500658	374	39.2278	-81.51907
Mine Outfall Fence	(.3005) AreaRAE PRG2CAP - AreaRAE - S/N292-500656	372	39.2482	-81.5196
Source Area Perimeter	(.3006) AreaRAE PRG2CAP - AreaRAE - S/N292-500657	373	39.2477	-81.5316
Source Area Perimeter	(.3001) AreaRAE PRG2CAP - AreaRAE - S/N292-503066	484	39.2477	-81.5316
Park N' Ride	(.3008) AreaRAE PRG2CAP - AreaRAE - S/N292-500659	375	39.2545	-81.5293
Park N' Ride	(.3004) AreaRAE PRG2CAP - AreaRAE - S/N292-503069	487	39.2545	-81.5293

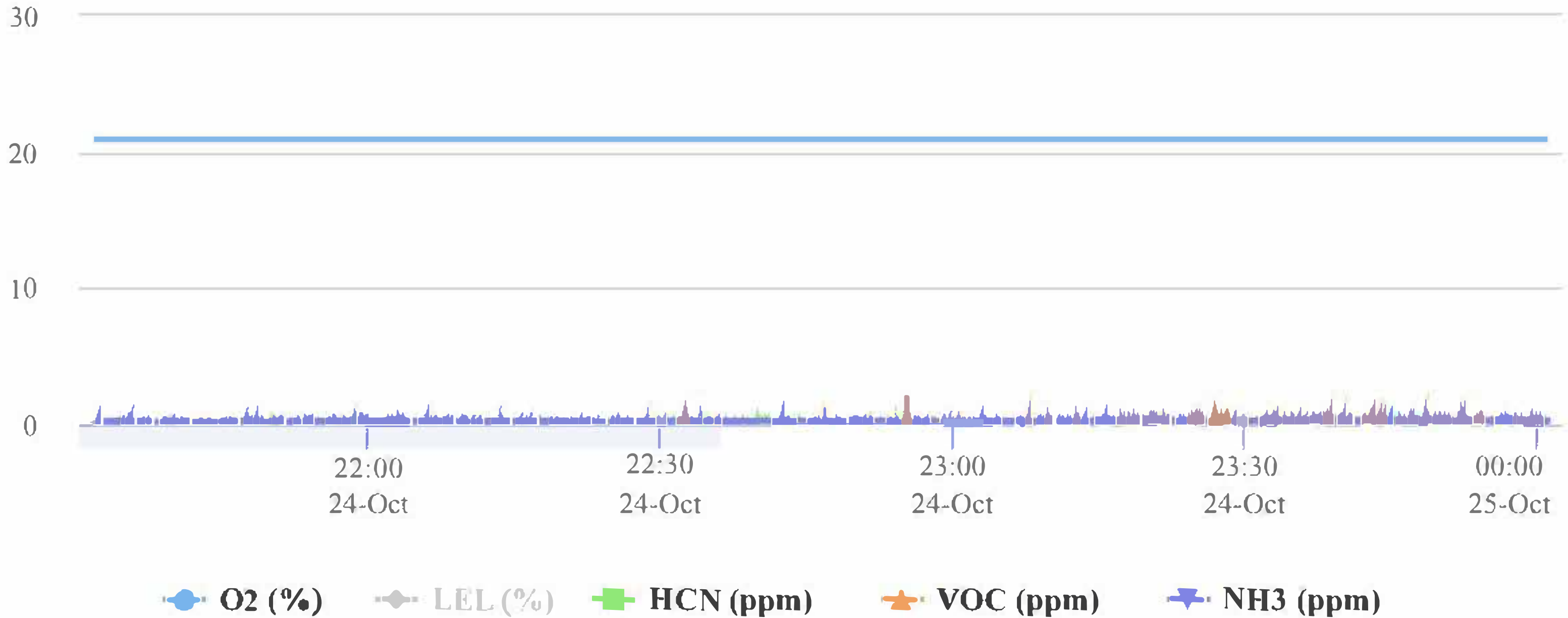


Background Location (39.2278, -81.51907)

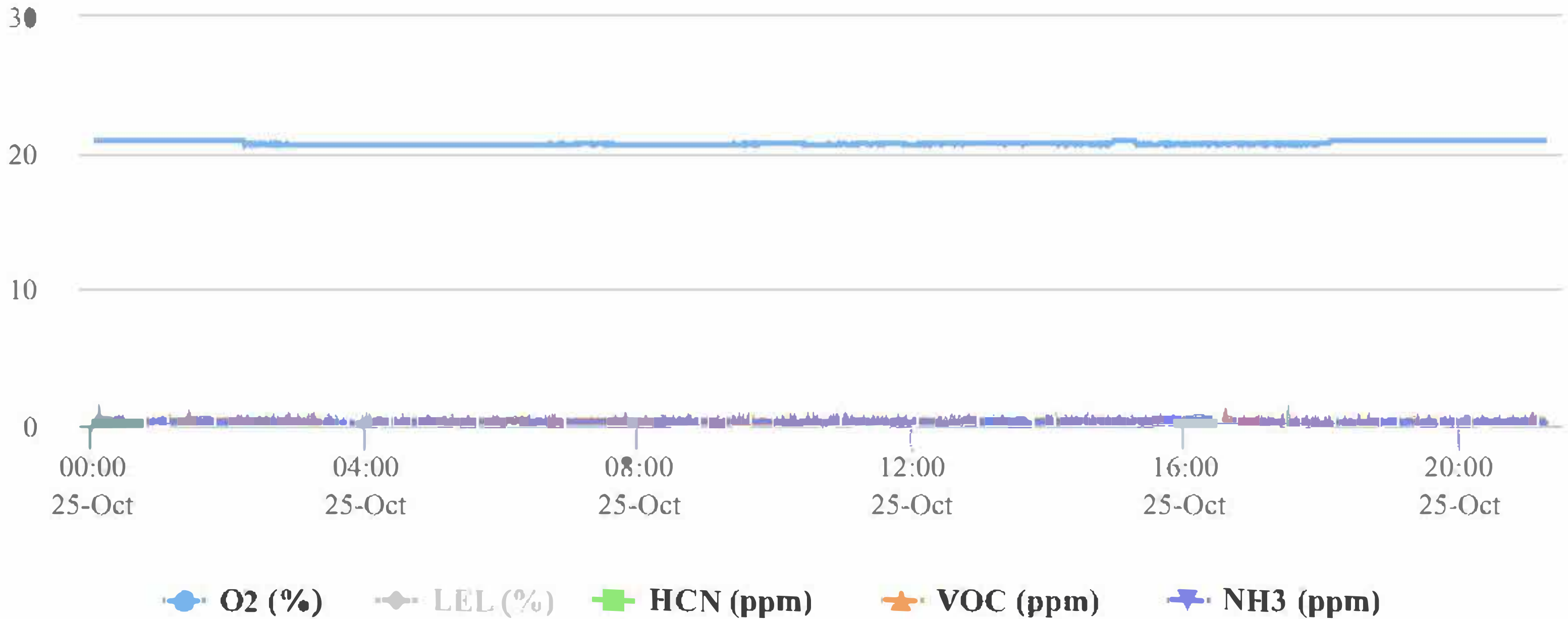
AreaRAE VIPER Graphs

S/N292-500658

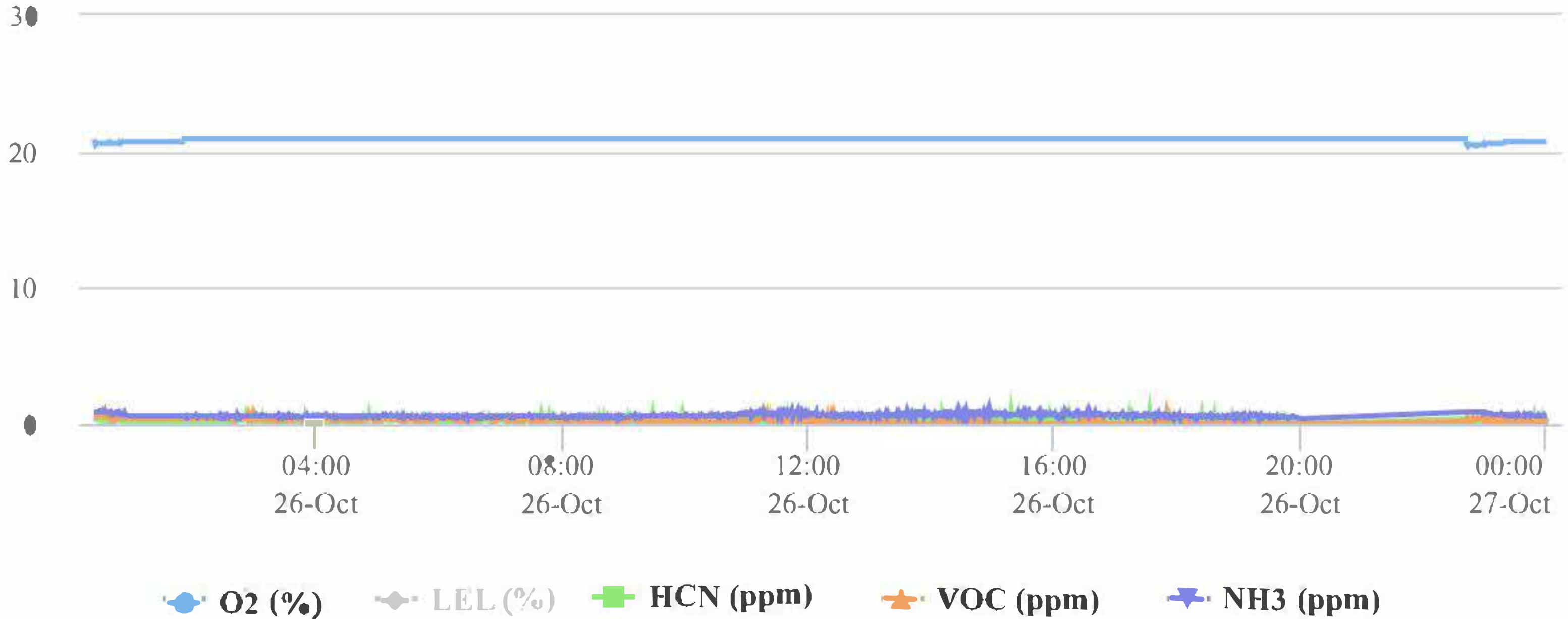
Background: (.3007) AreaRAE - PRG2CAP - AreaRAE - S/N292-500658



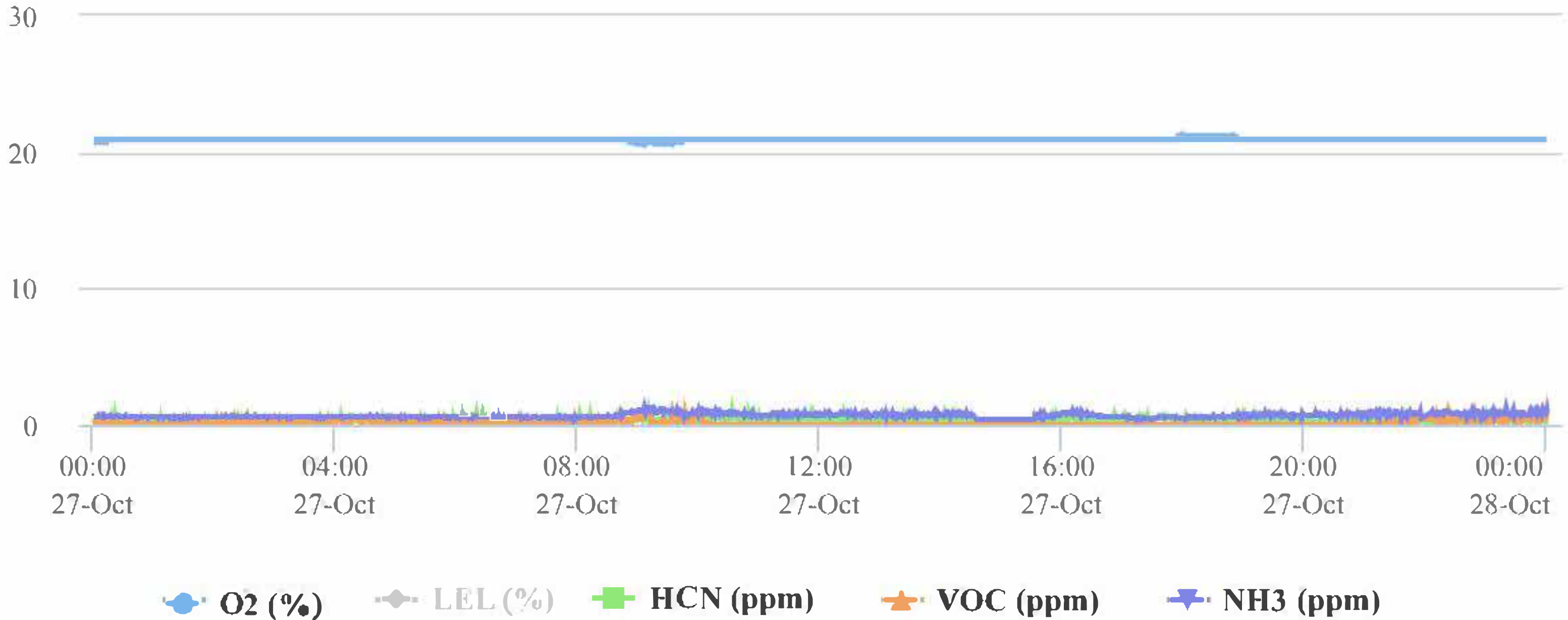
Background: (.3007) AreaRAE - PRG2CAP - AreaRAE - S/N292-500658



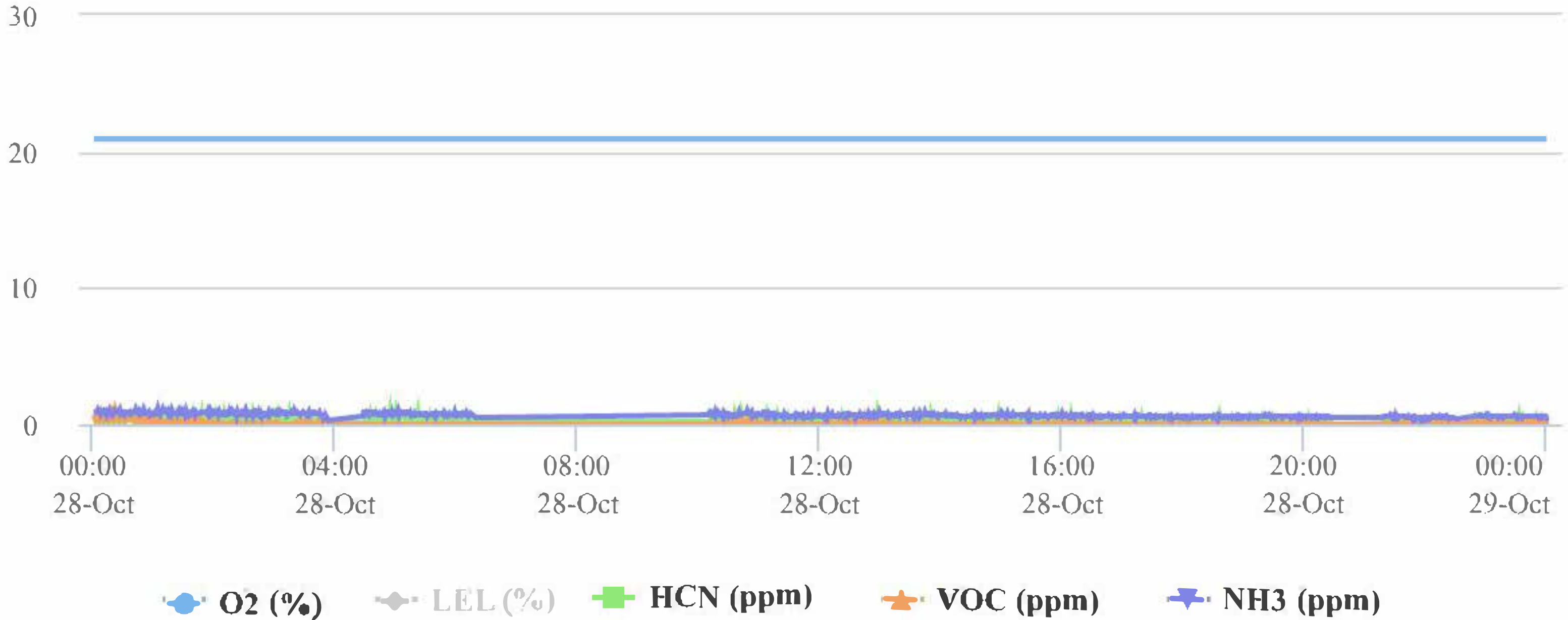
Background: (.3007) AreaRAE - PRG2CAP - AreaRAE - S/N292-500658



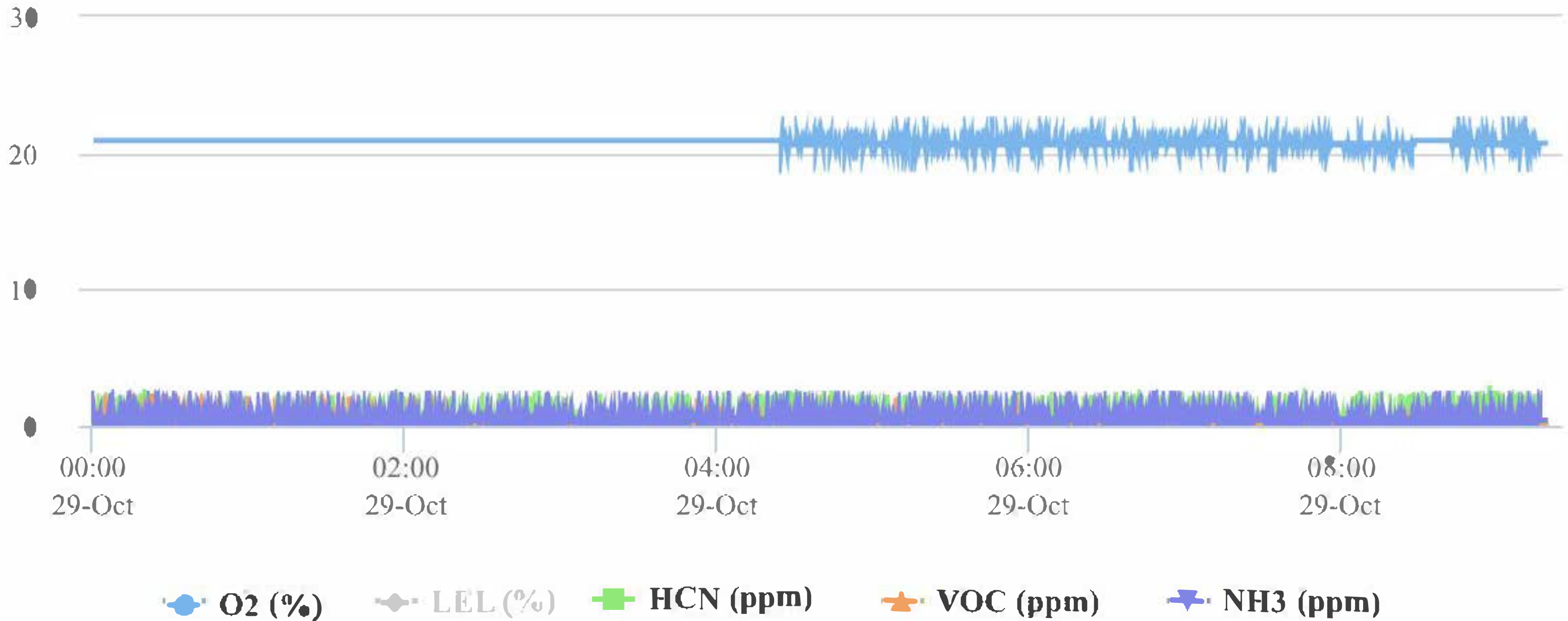
Background: (.3007) AreaRAE - PRG2CAP - AreaRAE - S/N292-500658



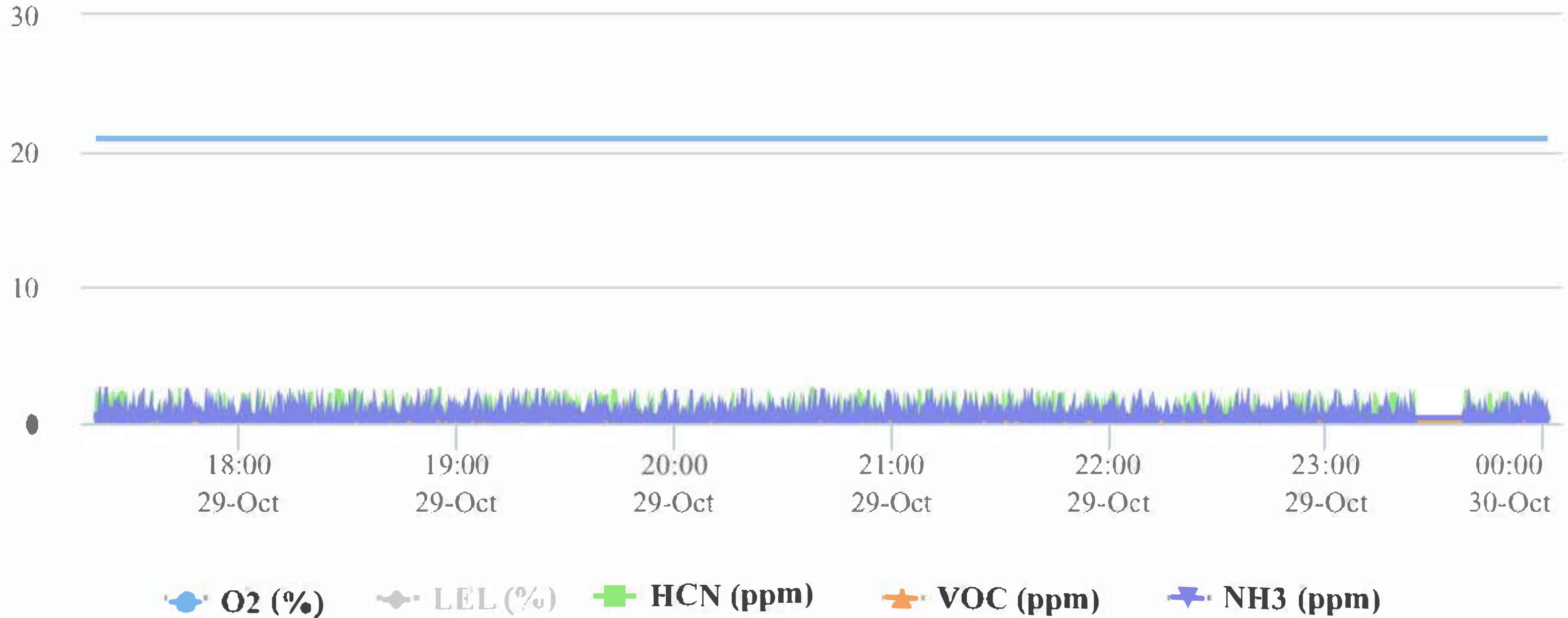
Background: (.3007) AreaRAE - PRG2CAP - AreaRAE - S/N292-500658



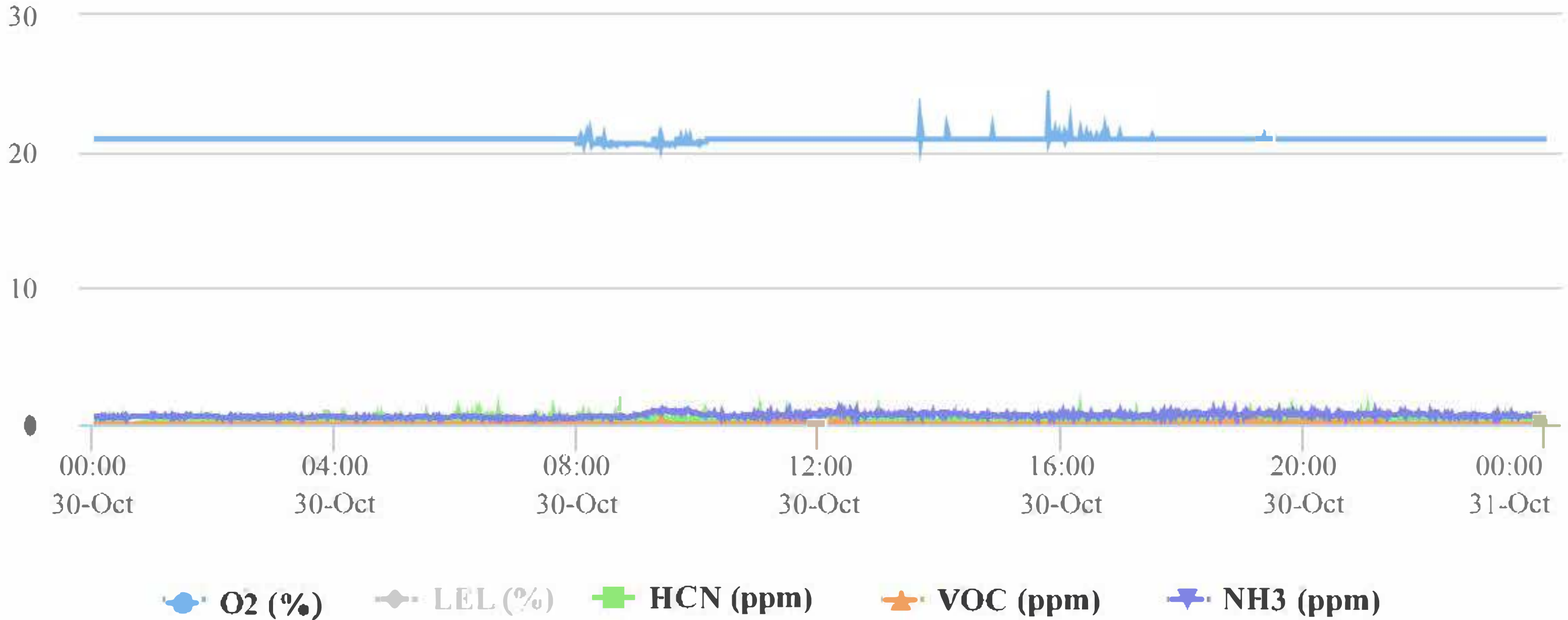
Background: (.3007) AreaRAE - PRG2CAP - AreaRAE - S/N292-500658



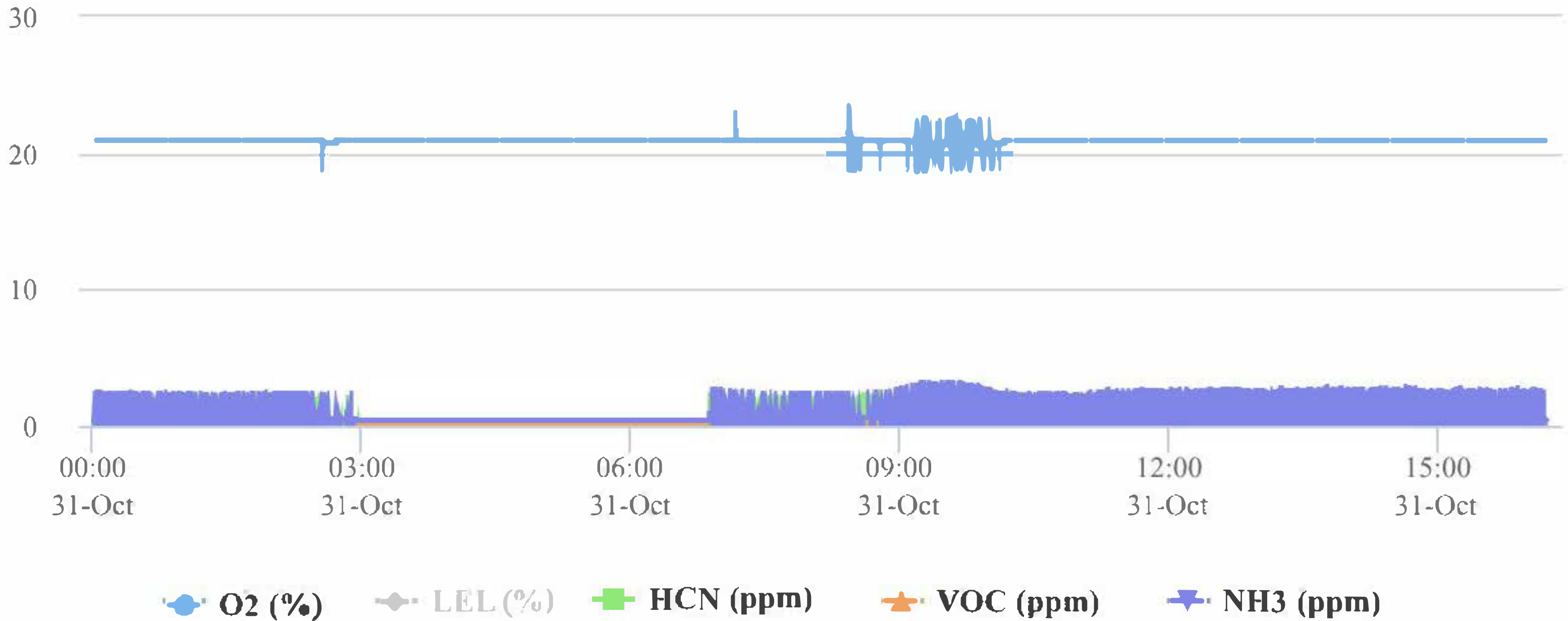
Background: (.3007) AreaRAE - PRG2CAP - AreaRAE - S/N292-500658



Background: (.3007) AreaRAE - PRG2CAP - AreaRAE - S/N292-500658



Background: (.3007) AreaRAE - PRG2CAP - AreaRAE - S/N292-500658

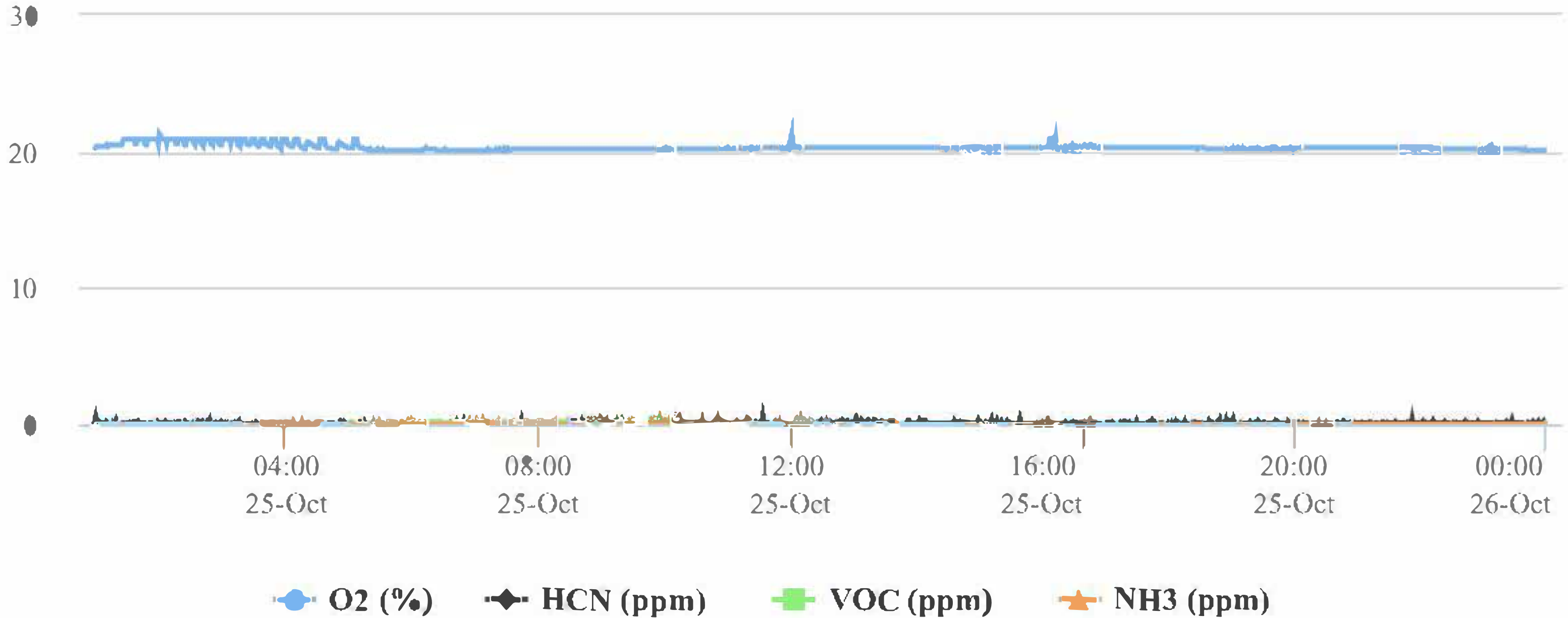


Mine Outfall Location (39.2482, -81.5196)

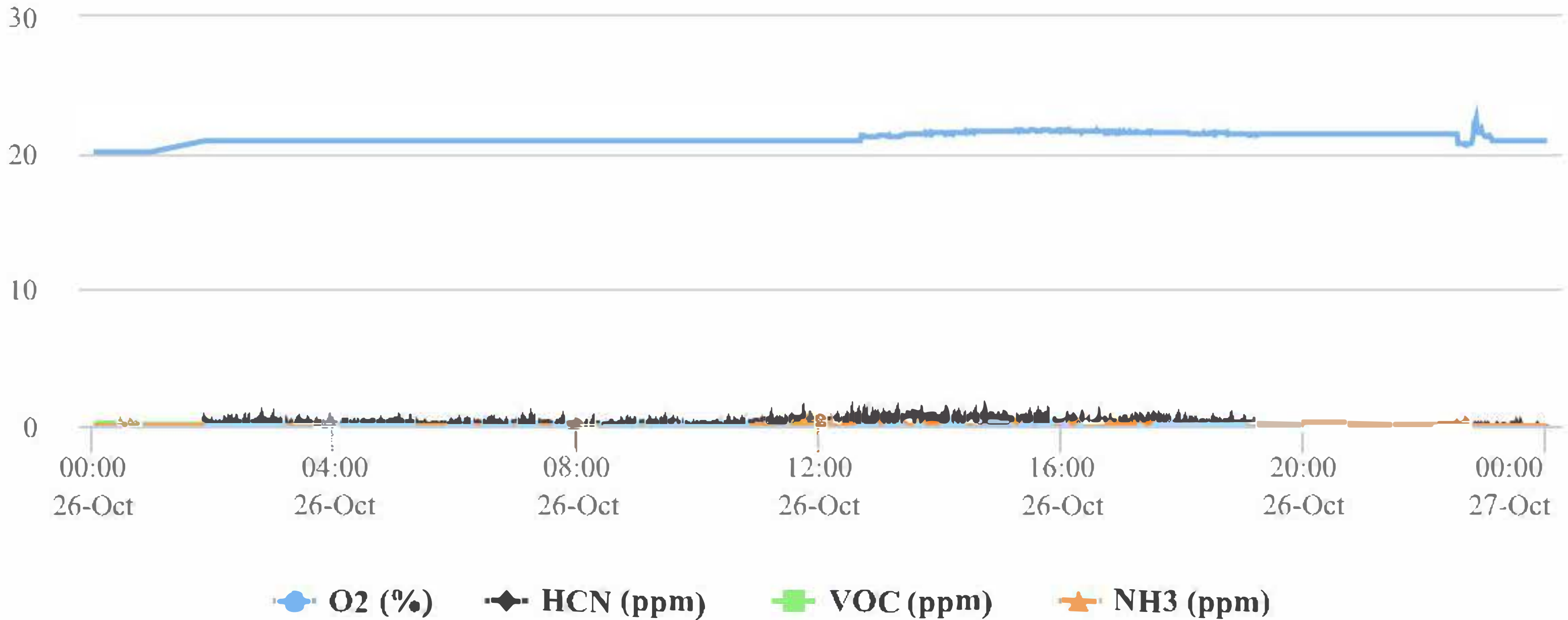
AreaRAE VIPER Graphs

S/N292-500656

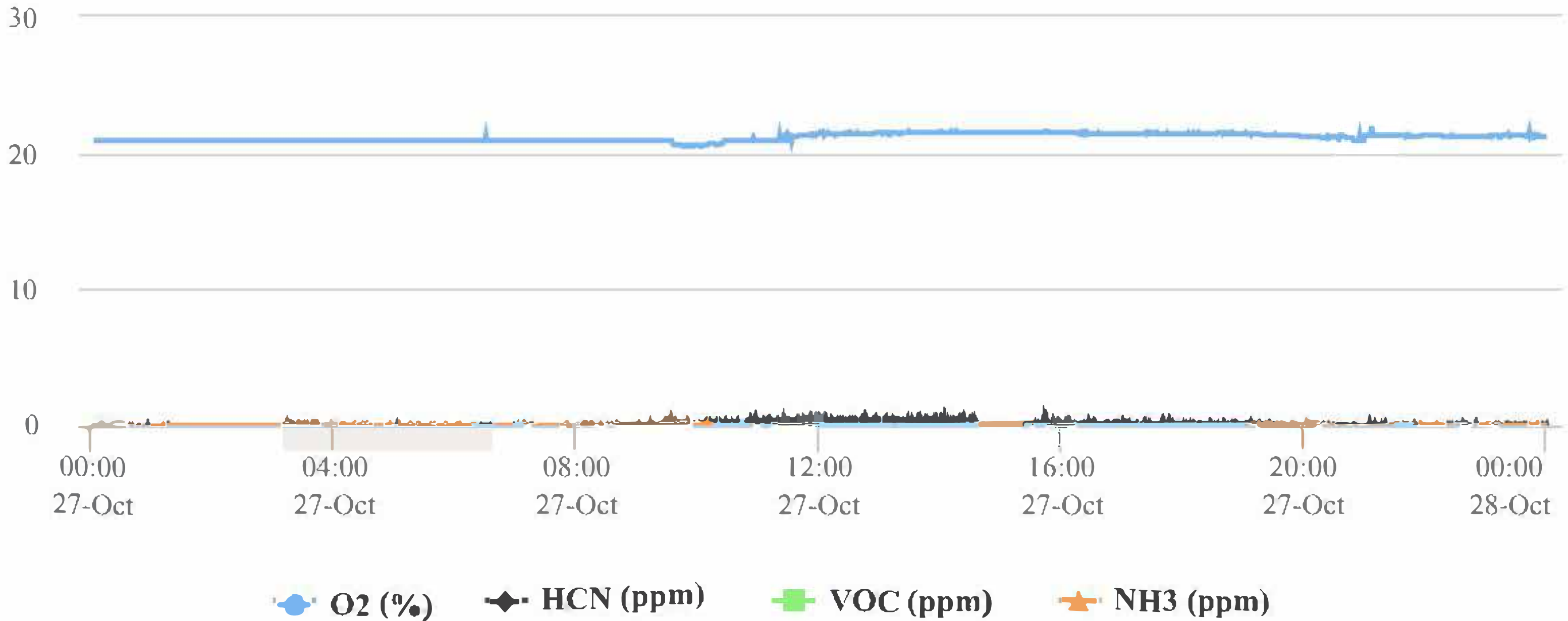
Mine Outfall Fence: (.3005) AreaRAE - PRG2CAP - AreaRAE - S/N292-500656



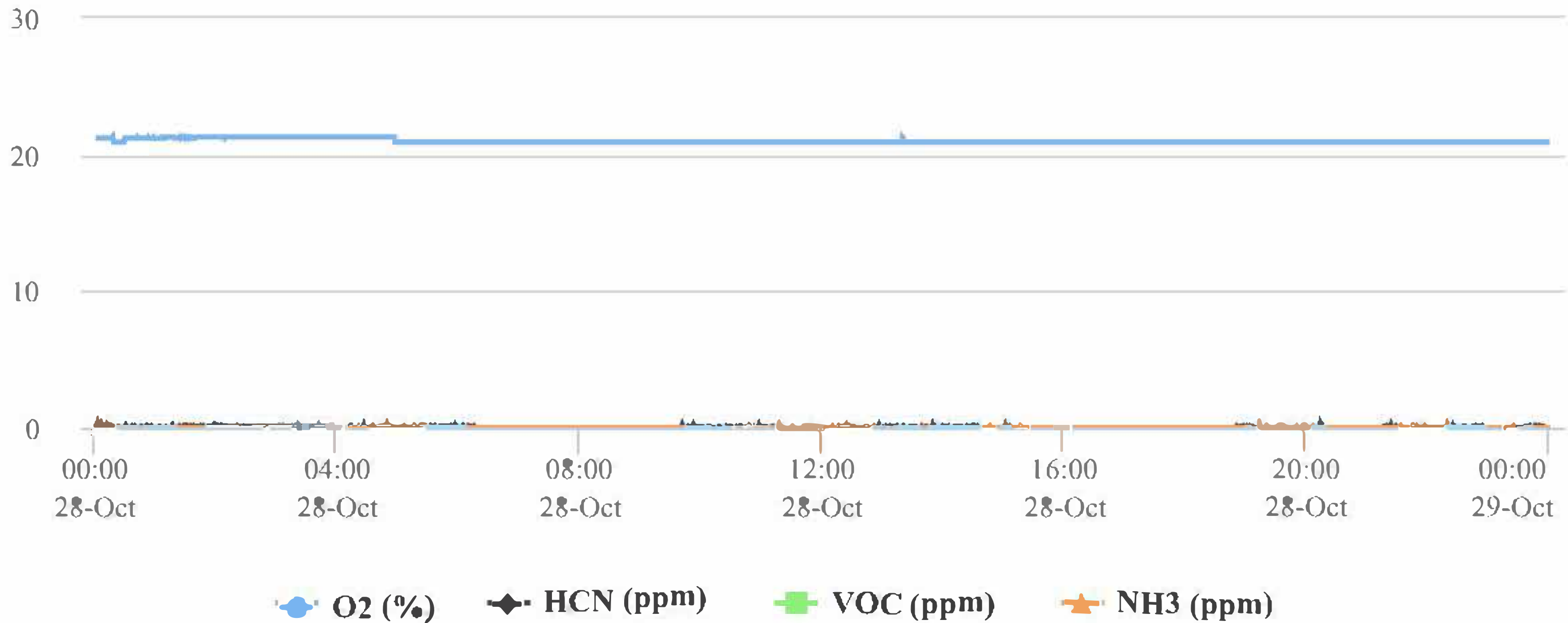
Mine Outfall Fence: (.3005) AreaRAE - PRG2CAP- AreaRAE - S/N292-500656



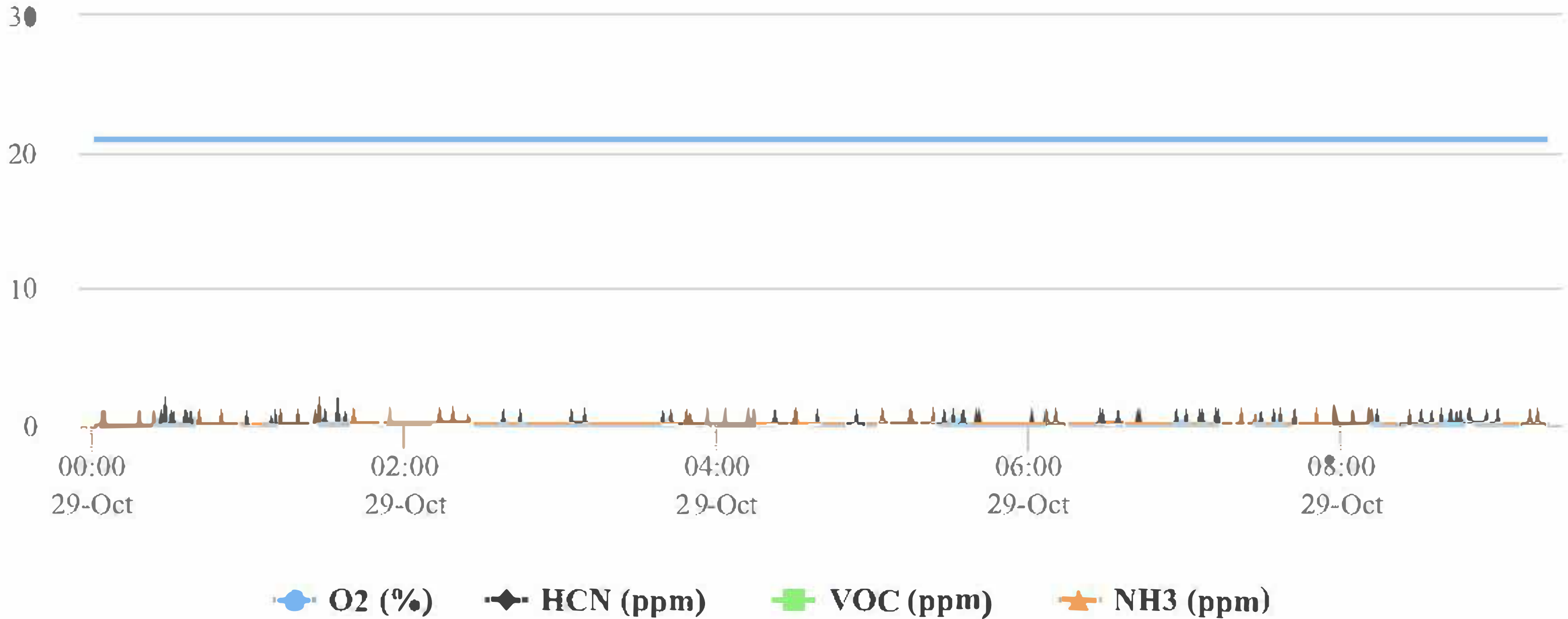
Mine Outfall Fence: (.3005) AreaRAE - PRG2CAP- AreaRAE - S/N292-500656



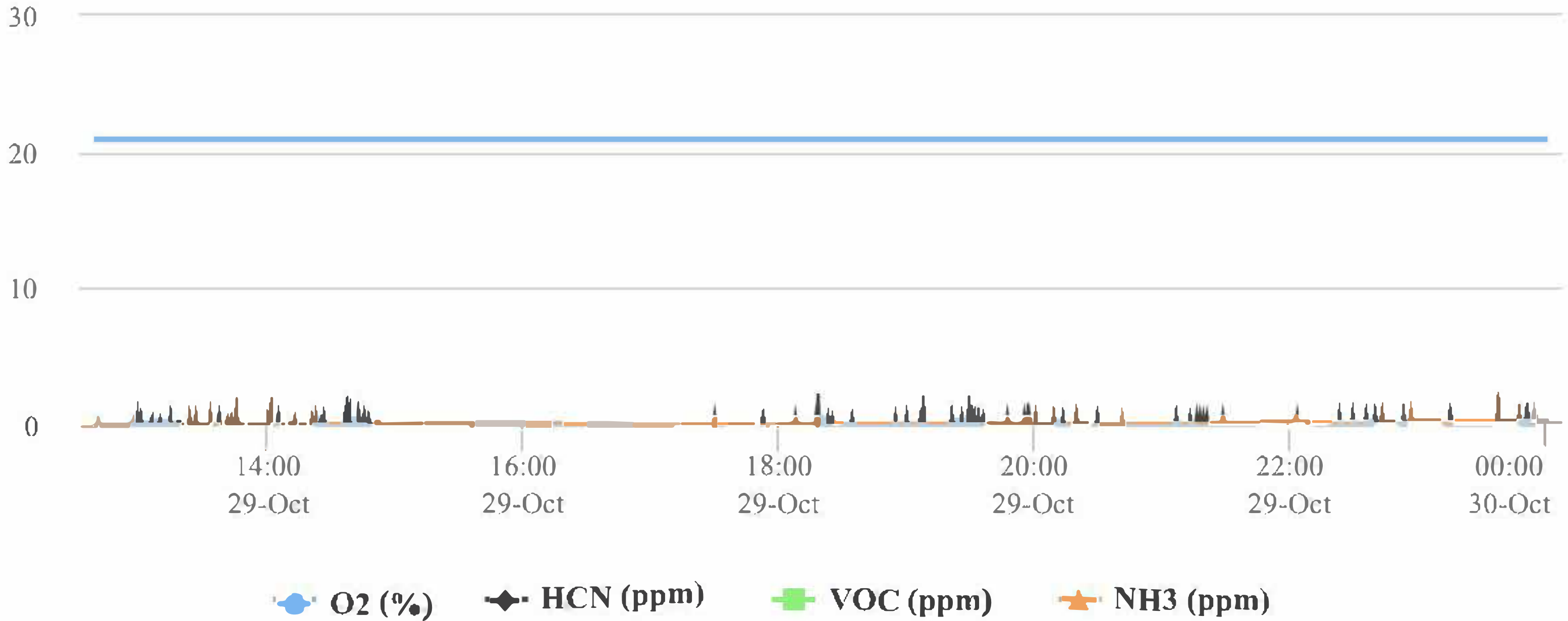
Mine Outfall Fence: (.3005) AreaRAE - PRG2CAP - AreaRAE - S/N292-500656



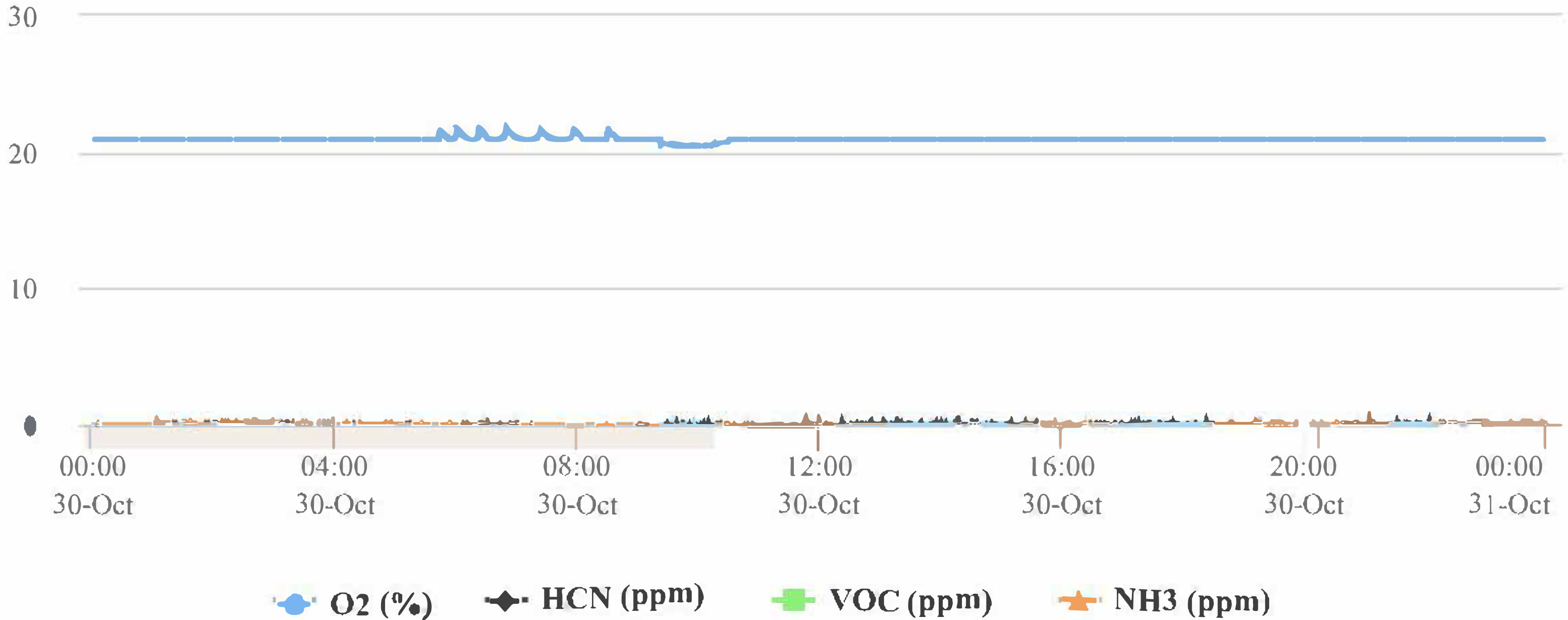
Mine Outfall Fence: (.3005) AreaRAE - PRG2CAP - AreaRAE - S/N292-500656



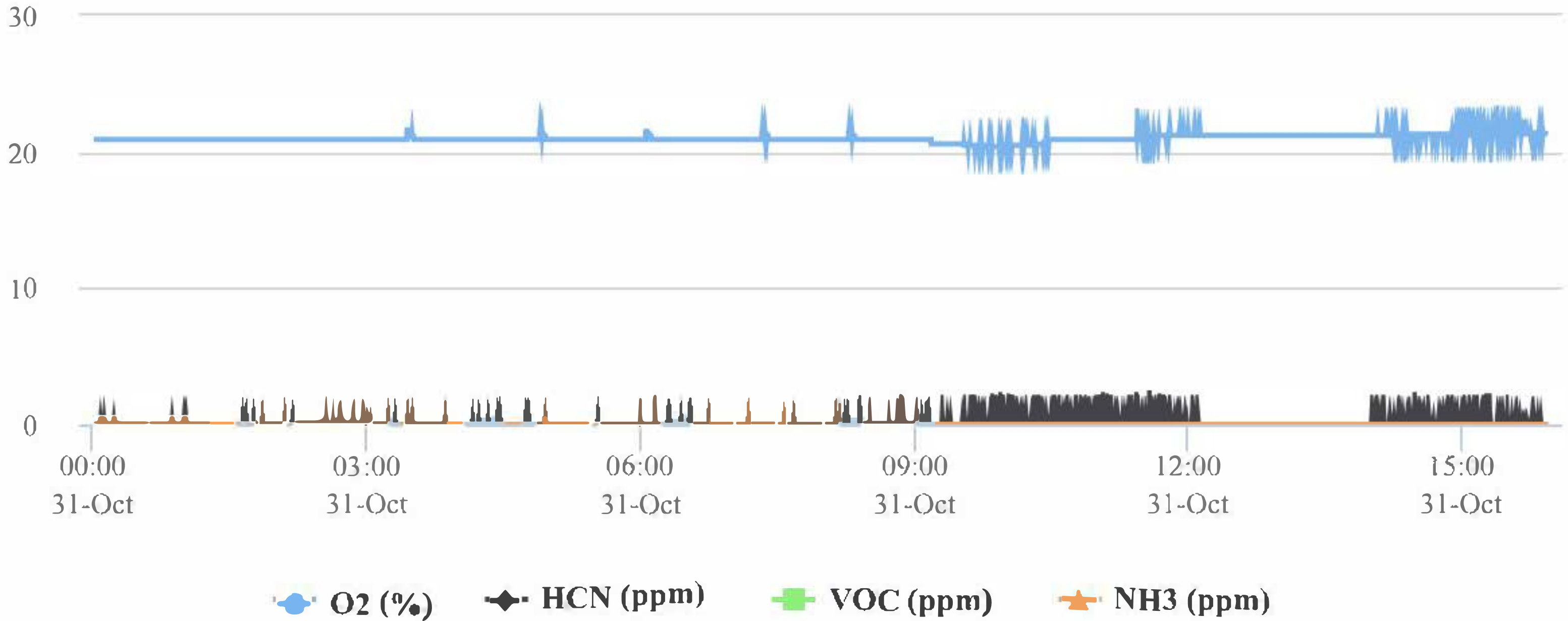
Mine Outfall Fence: (.3005) AreaRAE - PRG2CAP - AreaRAE - S/N292-500656



Mine Outfall Fence: (.3005) AreaRAE - PRG2CAP - AreaRAE - S/N292-500656



Mine Outfall Fence: (.3005) AreaRAE - PRG2CAP - AreaRAE - S/N292-500656

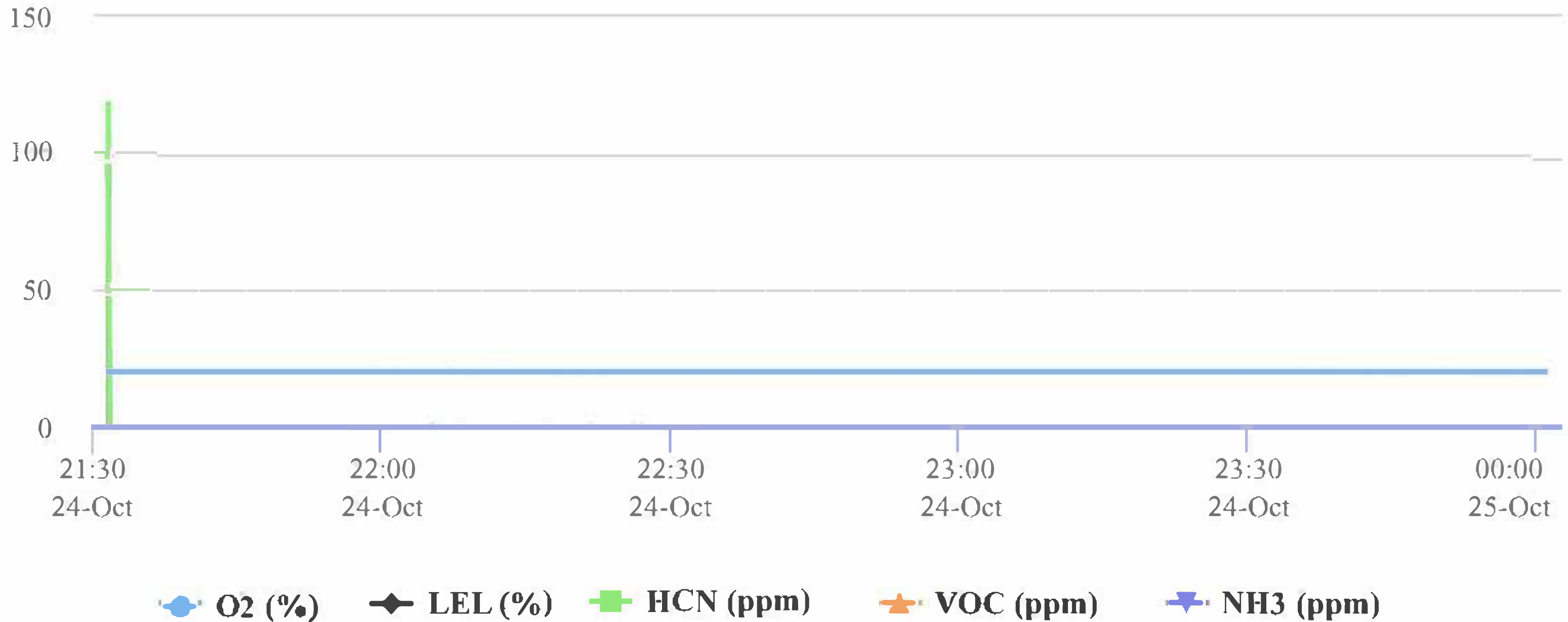


SourceArea Perimeter Location (39.2477, -81.5316)

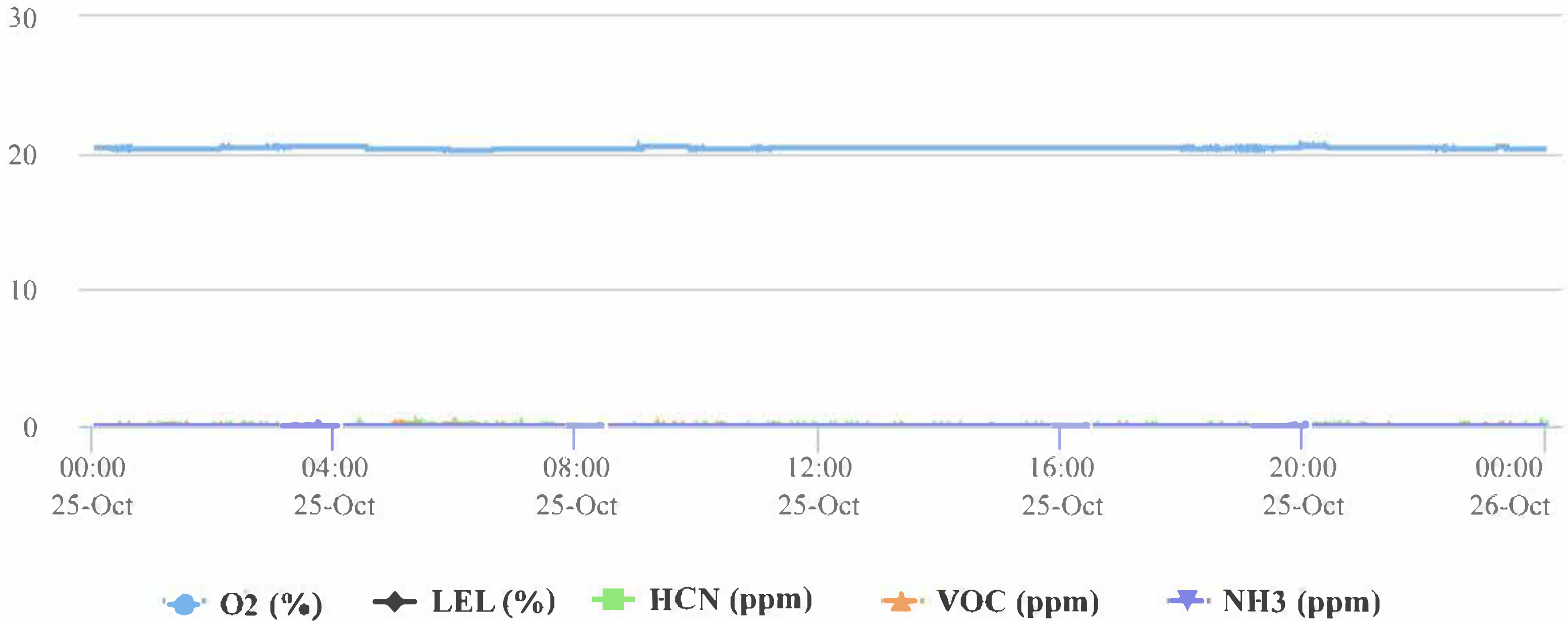
AreaRAE VIPER Graphs

S/N292-500657 with HCN Sensor

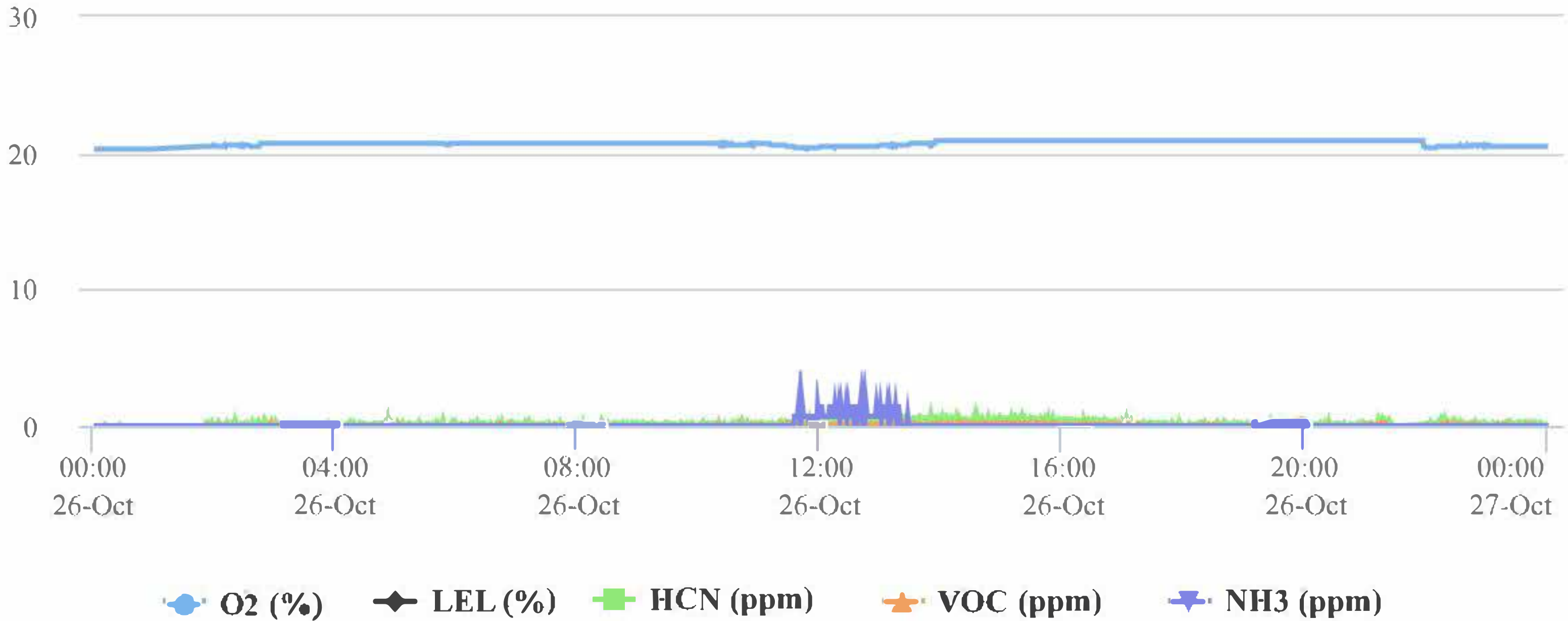
Source Area Perimeter: (.3006) AreaRAE - PRG2CAP - AreaRAE - S/N292-500657



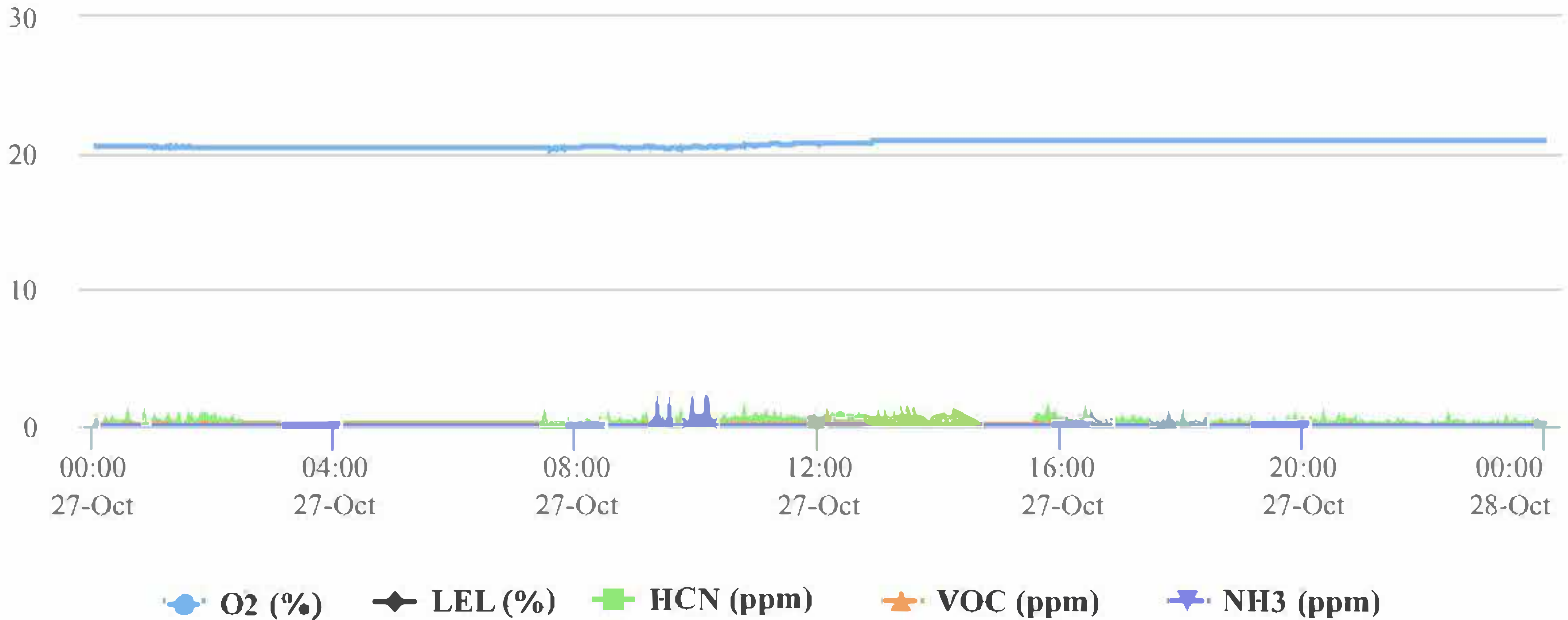
Source Area Perimeter: (.3006) AreaRAE - PRG2CAP - AreaRAE - S/N292-500657



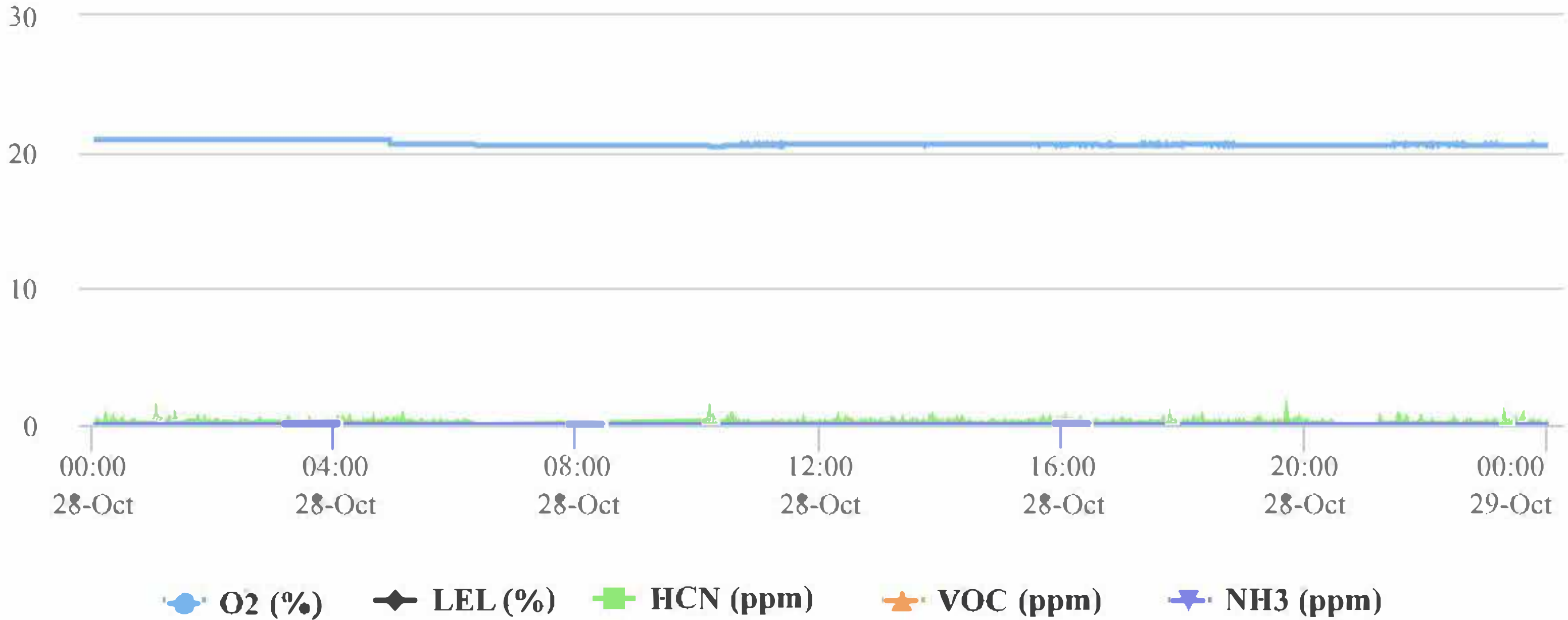
Source Area Perimeter: (.3006) AreaRAE - PRG2CAP - AreaRAE - S/N292-500657



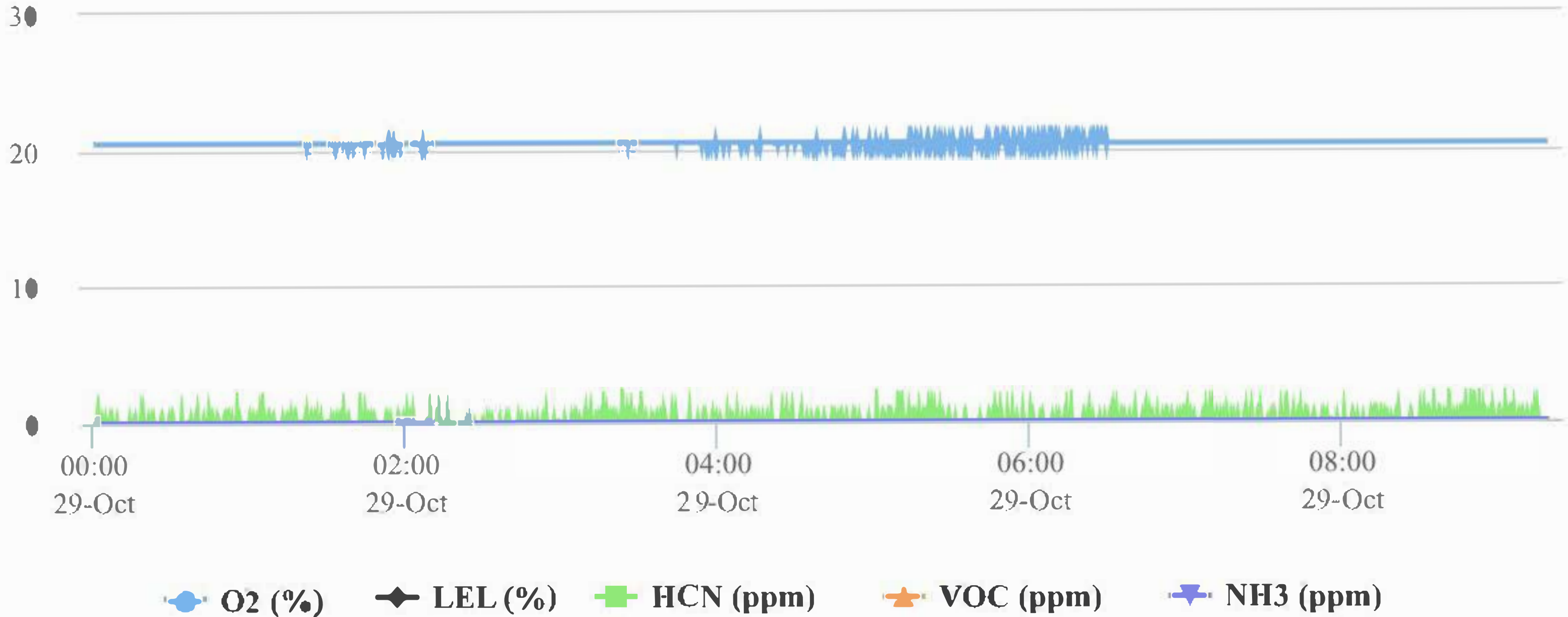
Source Area Perimeter: (.3006) AreaRAE - PRG2CAP - AreaRAE - S/N292-500657



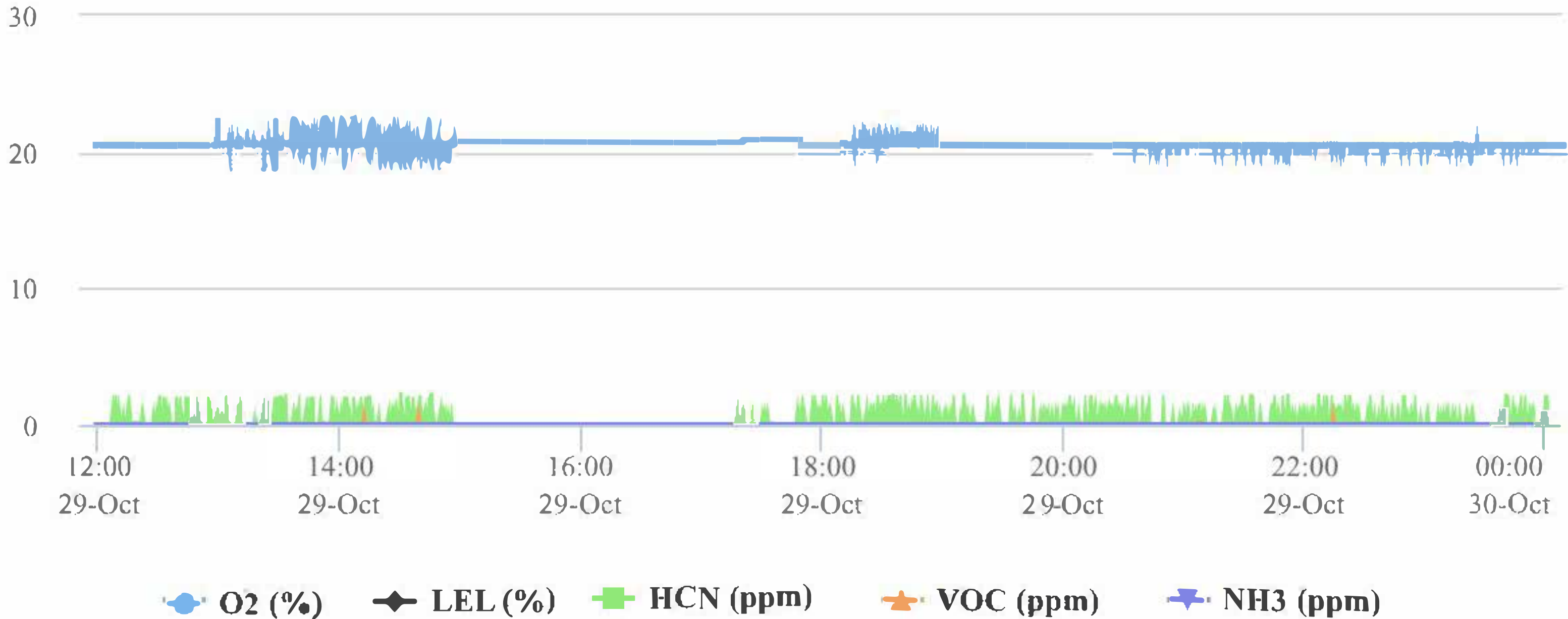
Source Area Perimeter: (.3006) AreaRAE - PRG2CAP - AreaRAE - S/N292-500657



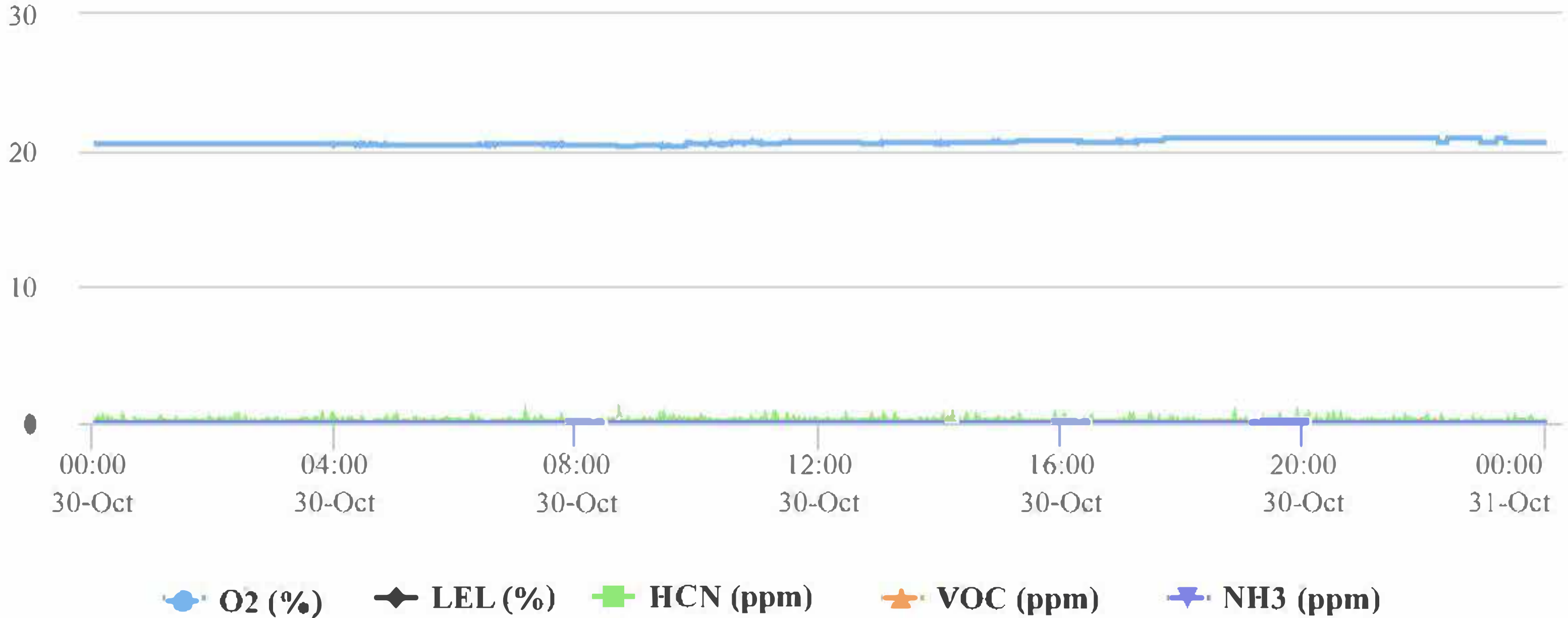
Source Area Perimeter: (.3006) AreaRAE - PRG2CAP - AreaRAE - S/N292-500657



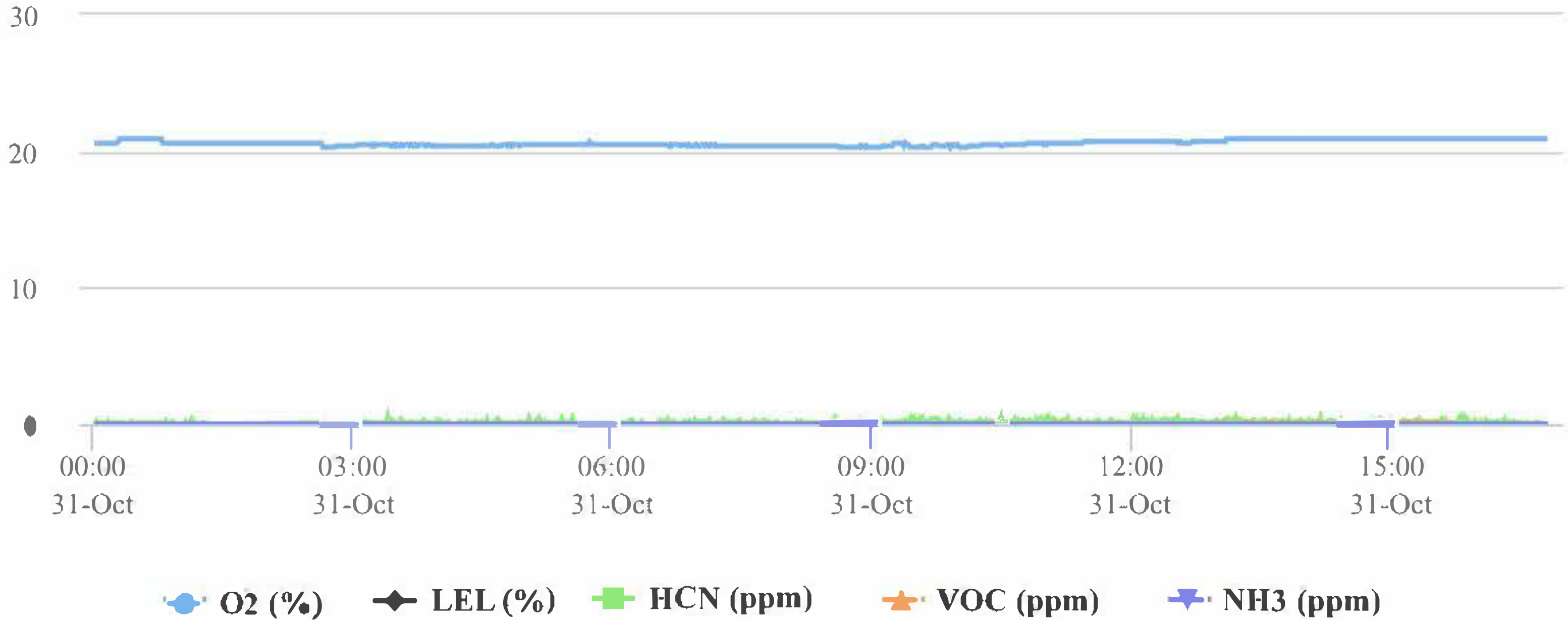
Source Area Perimeter: (.3006) AreaRAE - PRG2CAP - AreaRAE - S/N292-500657



Source Area Perimeter: (.3006) AreaRAE - PRG2CAP - AreaRAE - S/N292-500657



Source Area Perimeter: (.3006) AreaRAE - PRG2CAP - AreaRAE - S/N292-500657

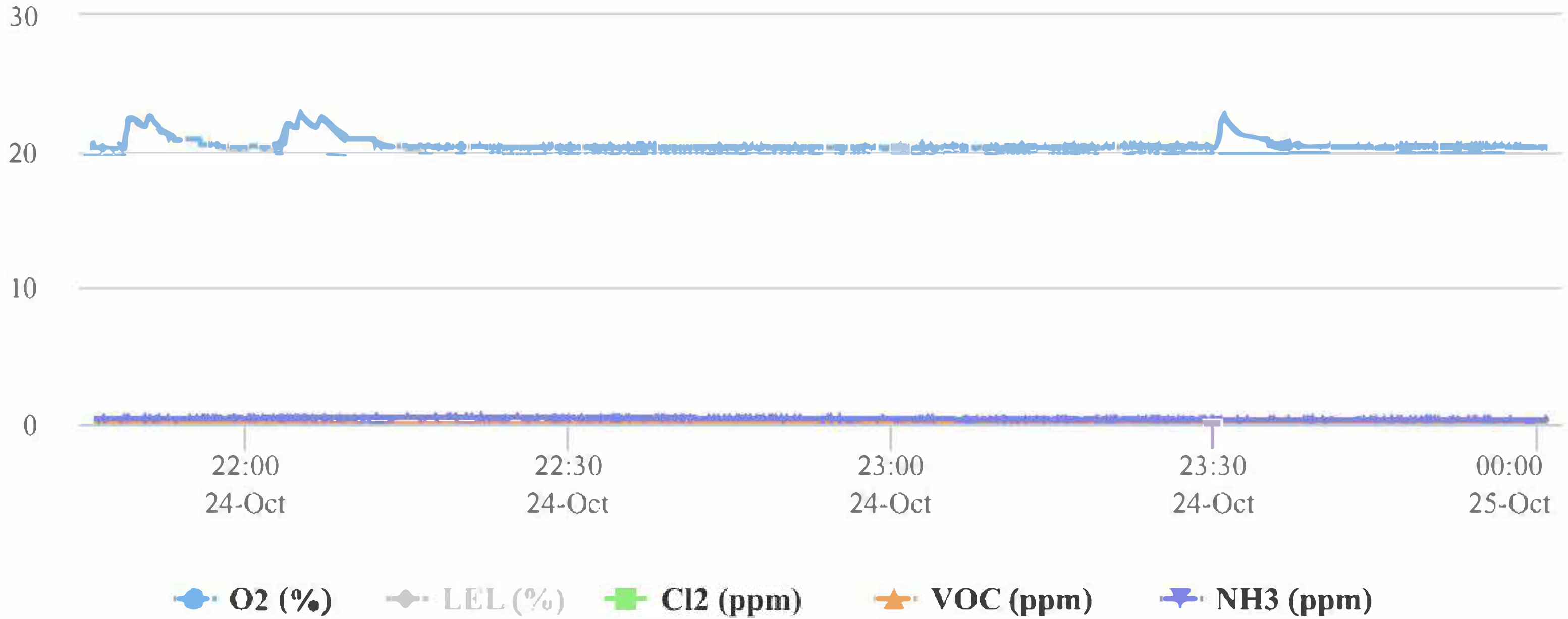


SourceArea Perimeter Location (39.2477, -81.5316)

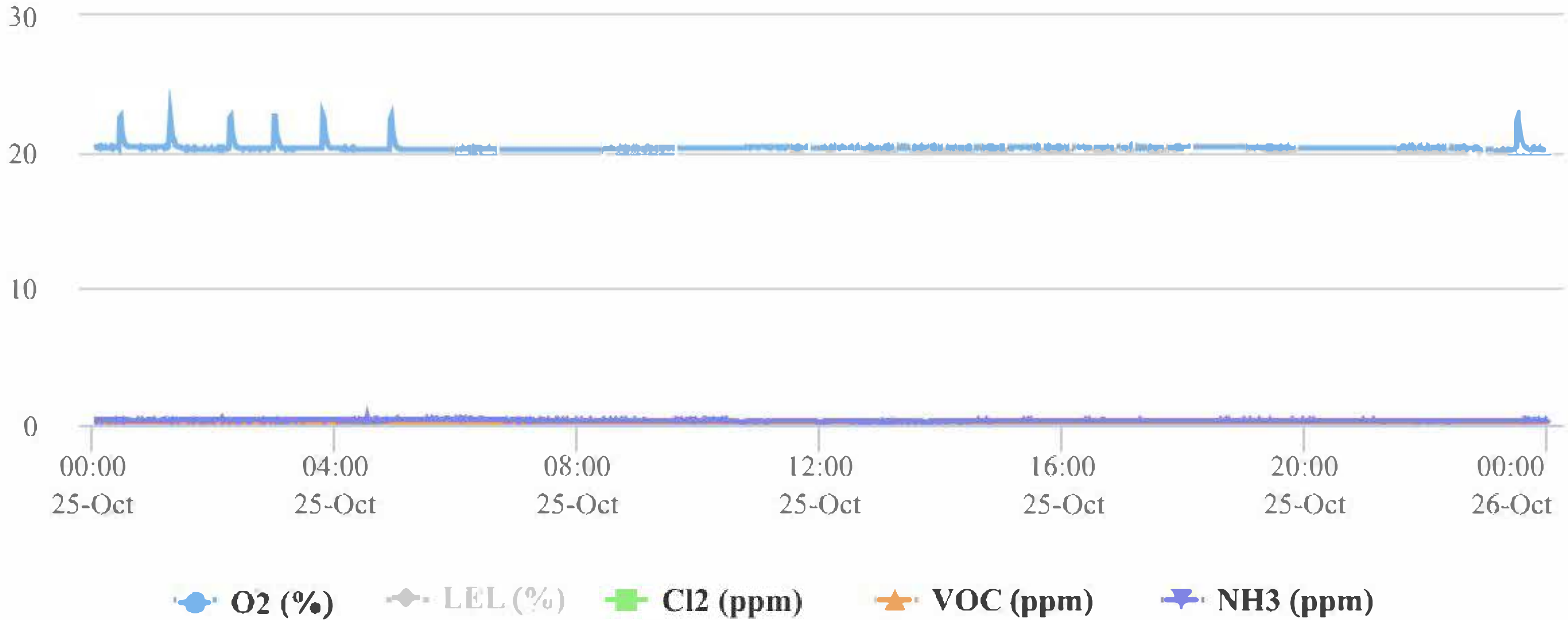
AreaRAE VIPER Graphs

S/N292-503066 with Cl2 Sensor

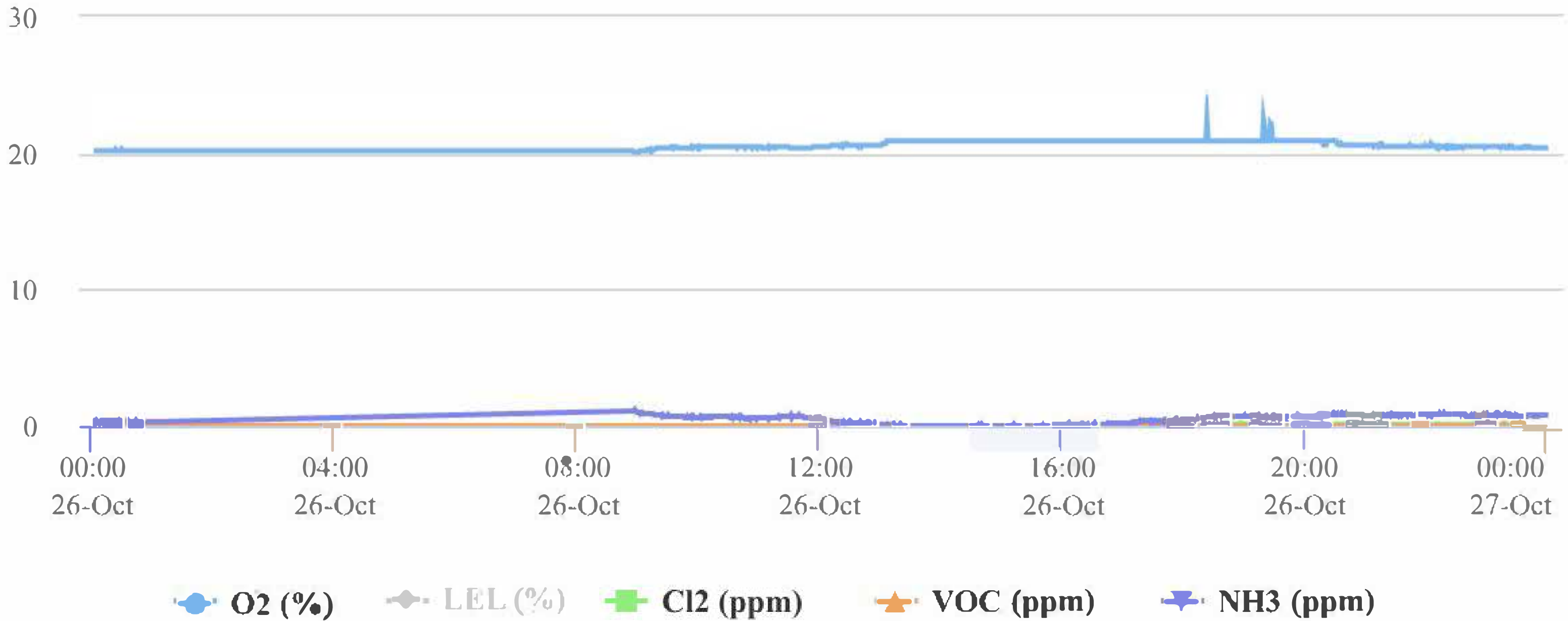
Source Area Perimeter: (.3001) AreaRAE - PRG2CAP -AreaRAE - S/N292-503066



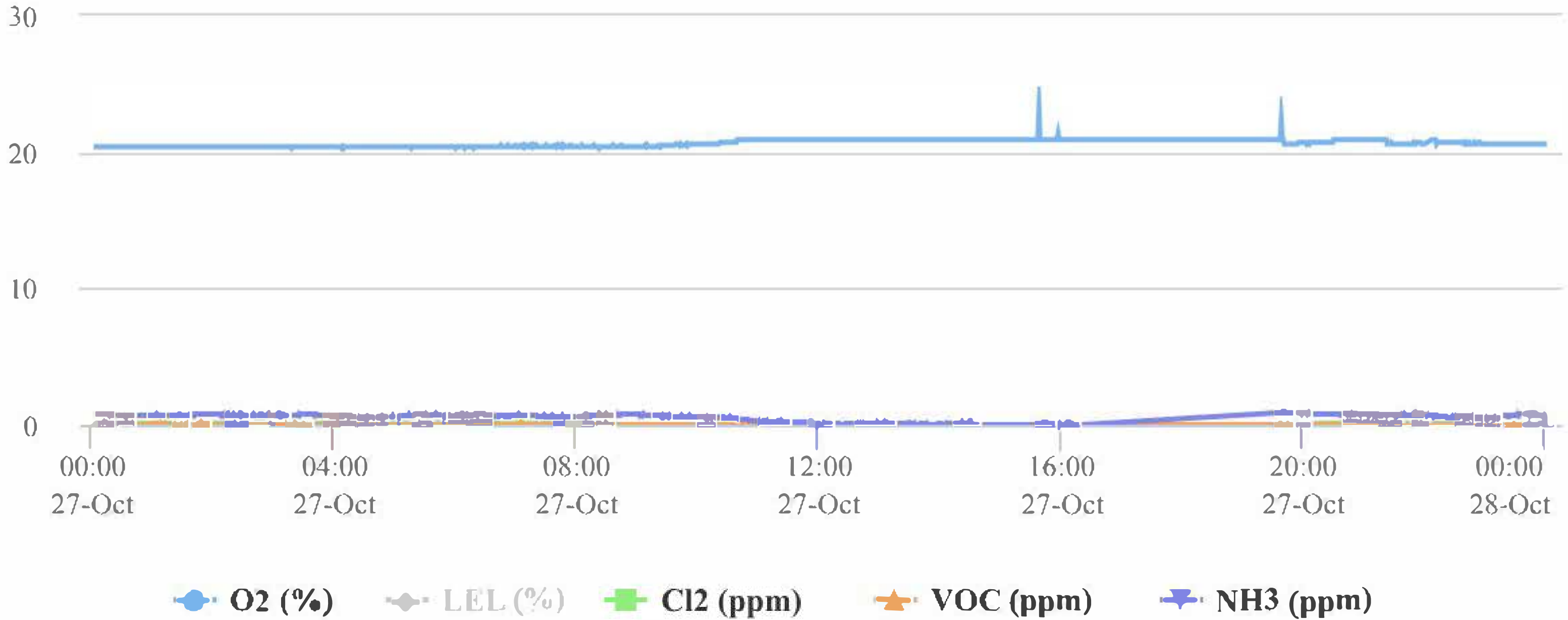
Source Area Perimeter: (.3001) AreaRAE - PRG2CAP -AreaRAE - S/N292-503066



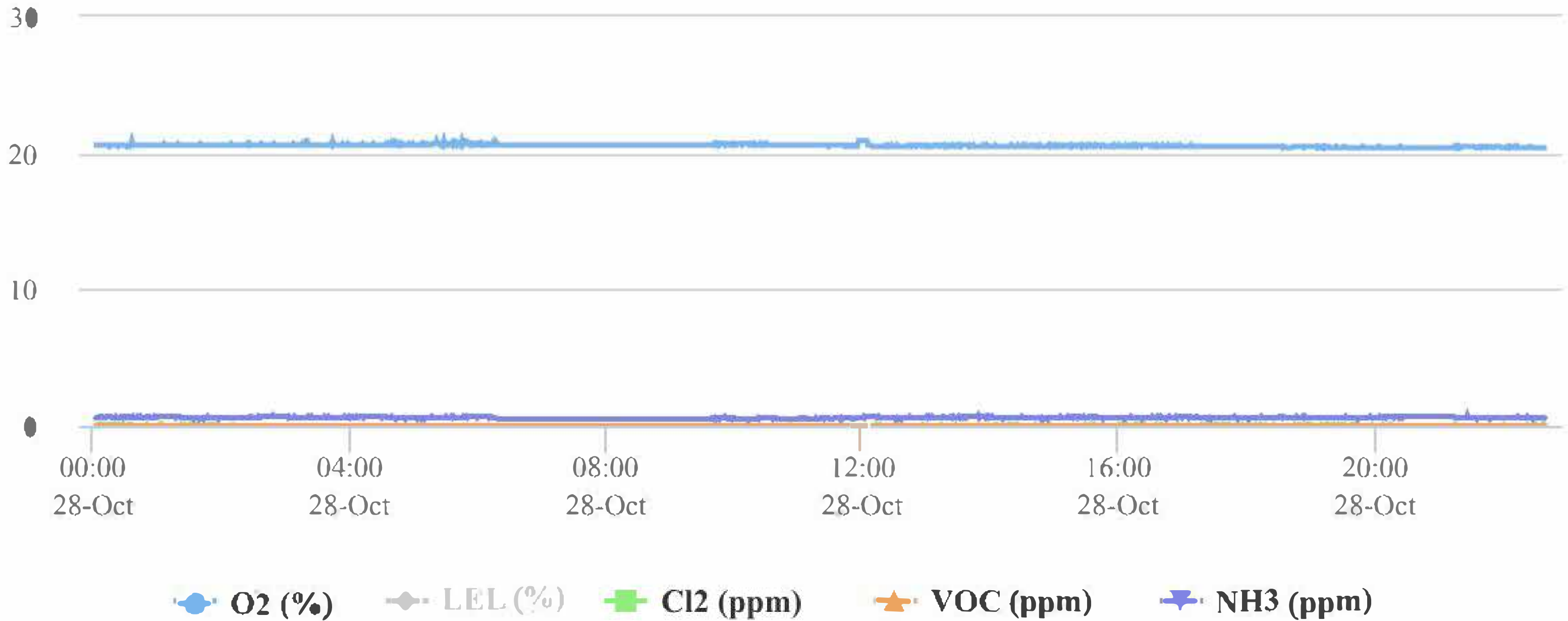
Source Area Perimeter: (.3001) AreaRAE - PRG2CAP -AreaRAE - S/N292-503066



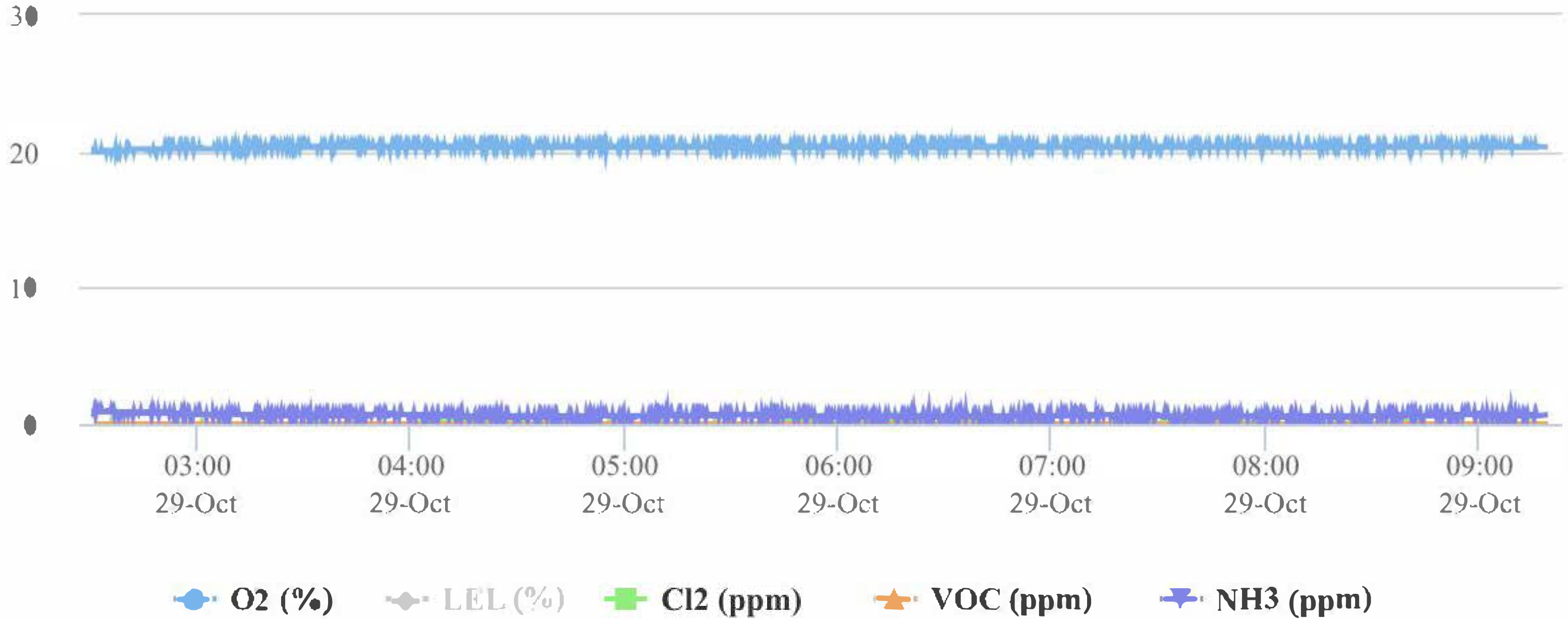
Source Area Perimeter: (.3001) AreaRAE - PRG2CAP -AreaRAE - S/N292-503066



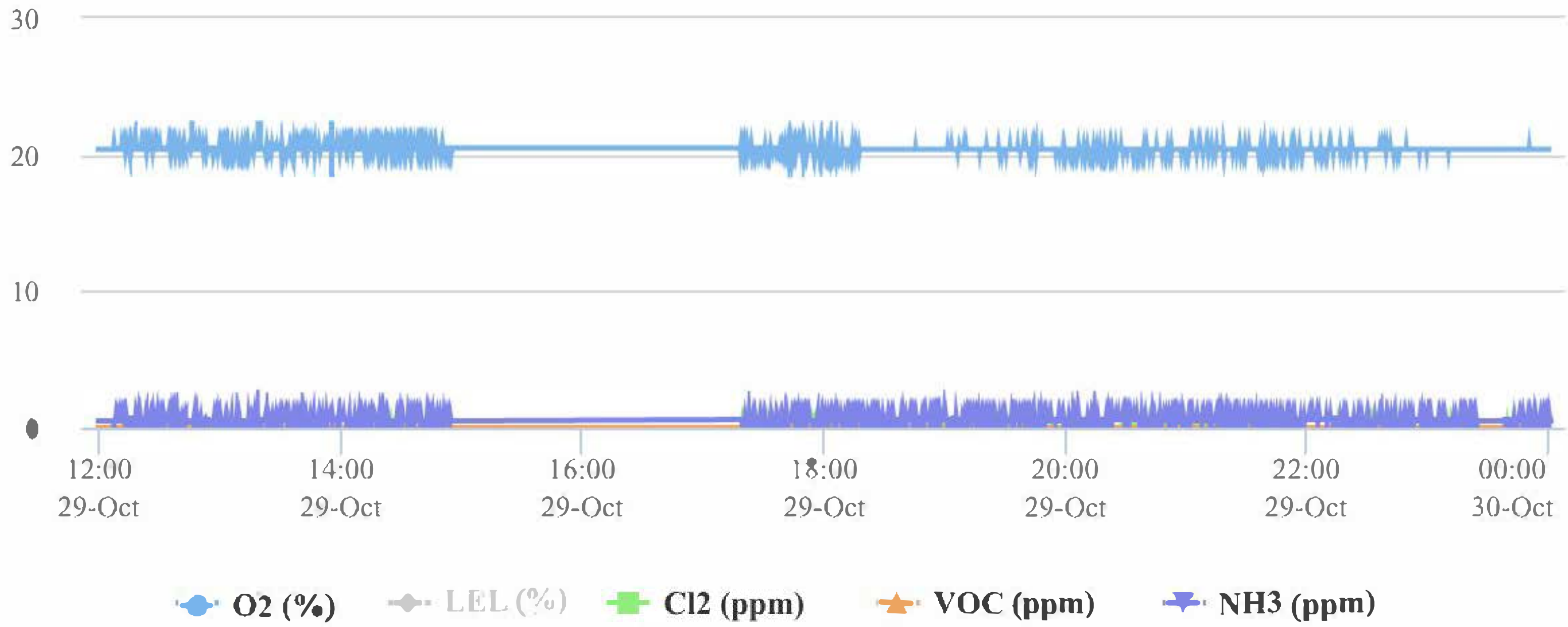
Source Area Perimeter: (.3001) AreaRAE - PRG2CAP -AreaRAE - S/N292-503066



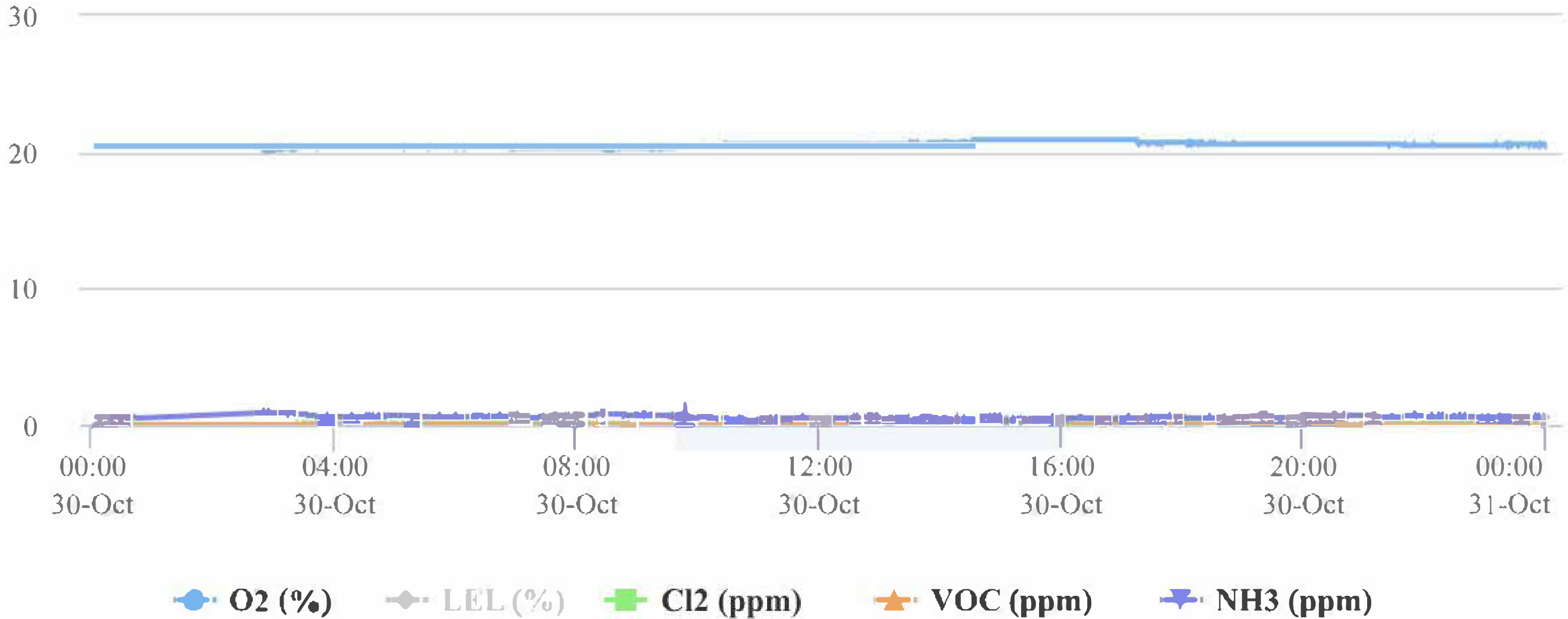
Source Area Perimeter: (.3001) AreaRAE - PRG2CAP -AreaRAE - S/N292-503066



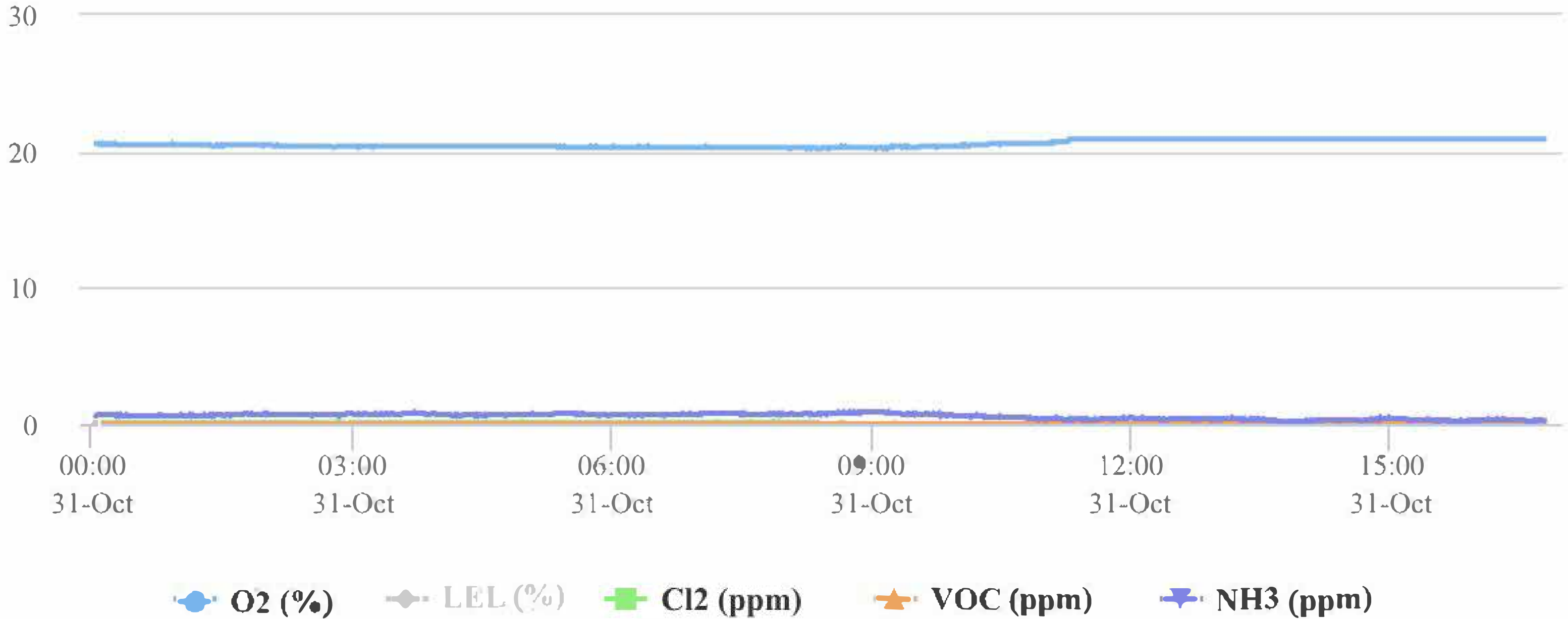
Source Area Perimeter: (.3001) AreaRAE - PRG2CAP -AreaRAE - S/N292-503066



Source Area Perimeter: (.3001) AreaRAE - PRG2CAP -AreaRAE - S/N292-503066



Source Area Perimeter: (.3001) AreaRAE - PRG2CAP -AreaRAE - S/N292-503066

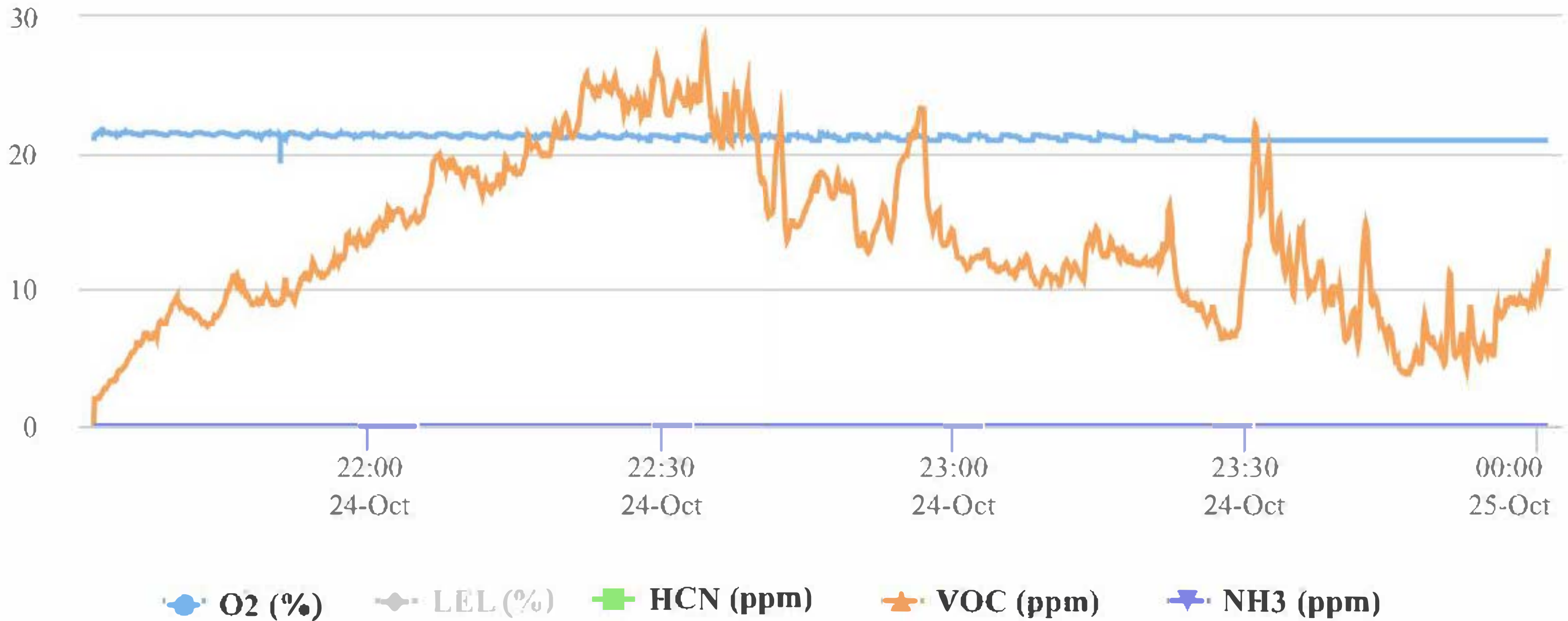


Park N' Ride Location (39.2545, -81.5293)

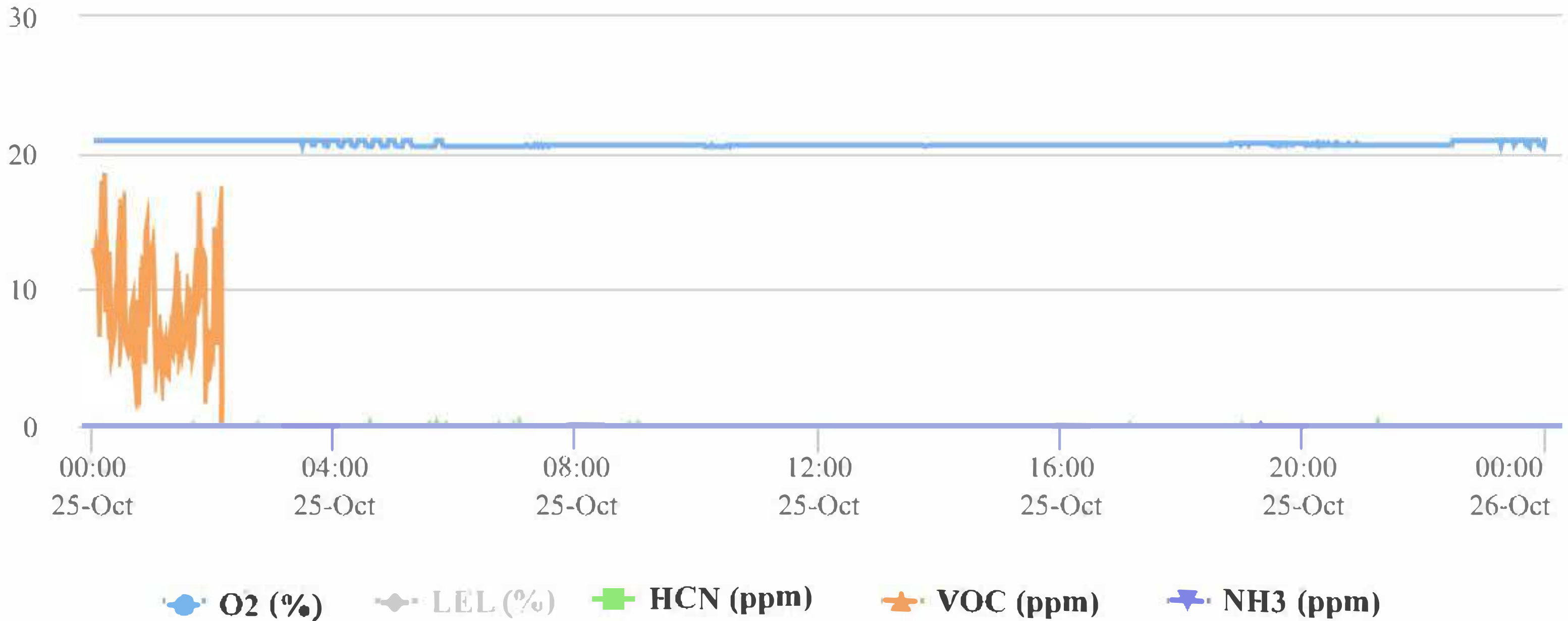
AreaRAE VIPER Graphs

S/N292-500659 with HCN Sensor

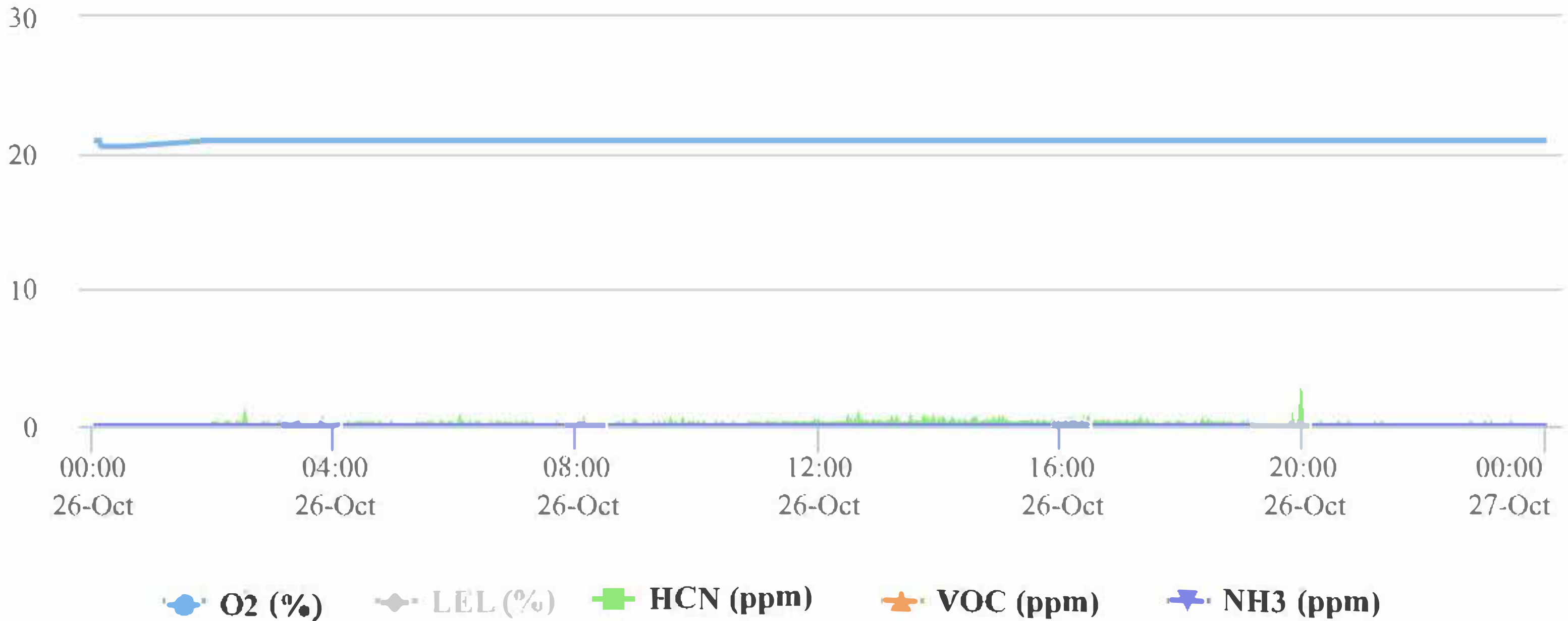
Park N' Ride: (.3008) AreaRAE - PRG2CAP - AreaRAE - S/N292-500659



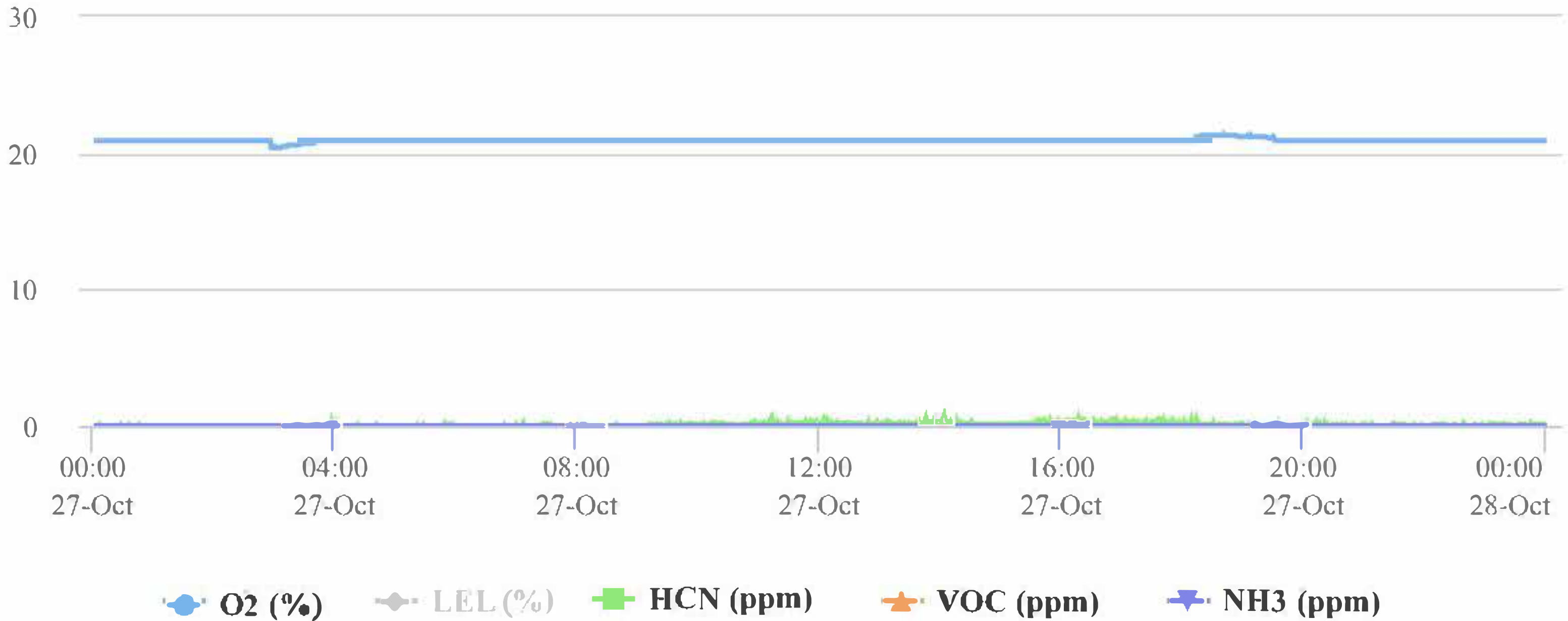
Park N' Ride: (.3008) AreaRAE - PRG2CAP - AreaRAE - S/N292-500659



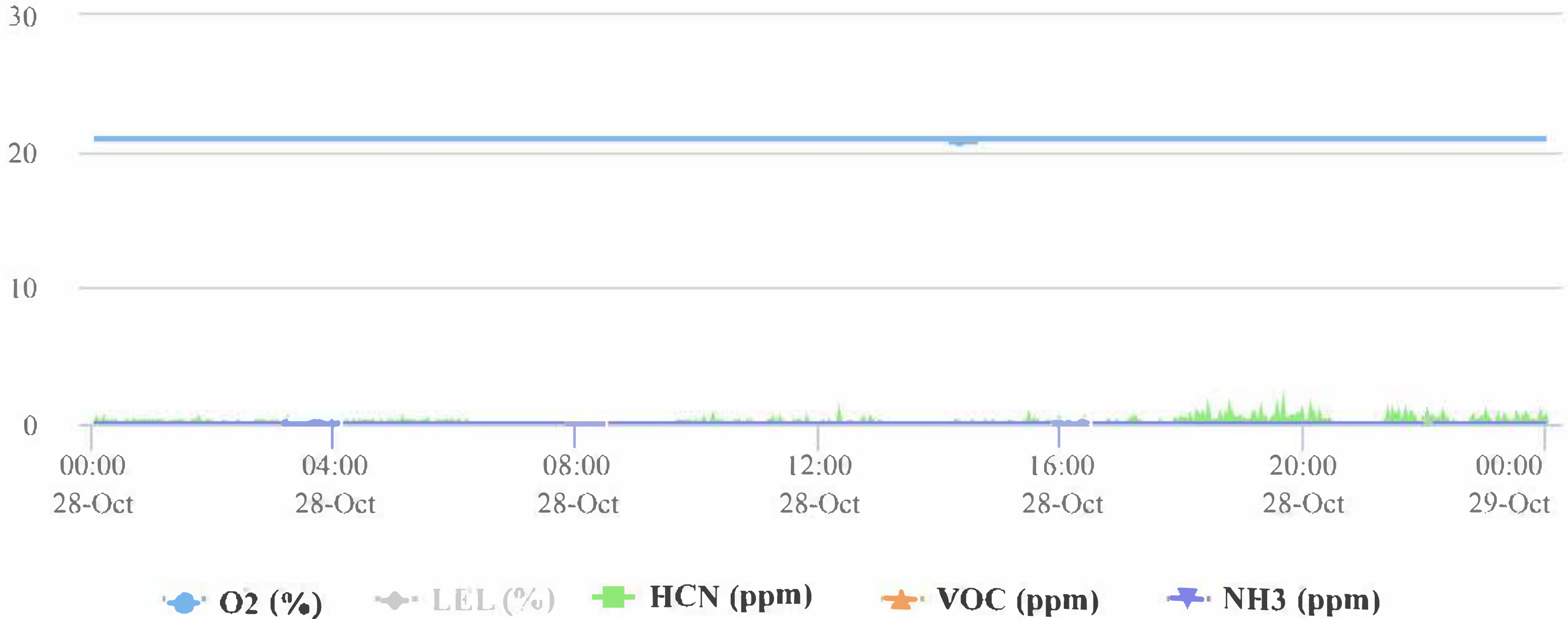
Park N' Ride: (.3008) AreaRAE - PRG2CAP - AreaRAE - S/N292-500659



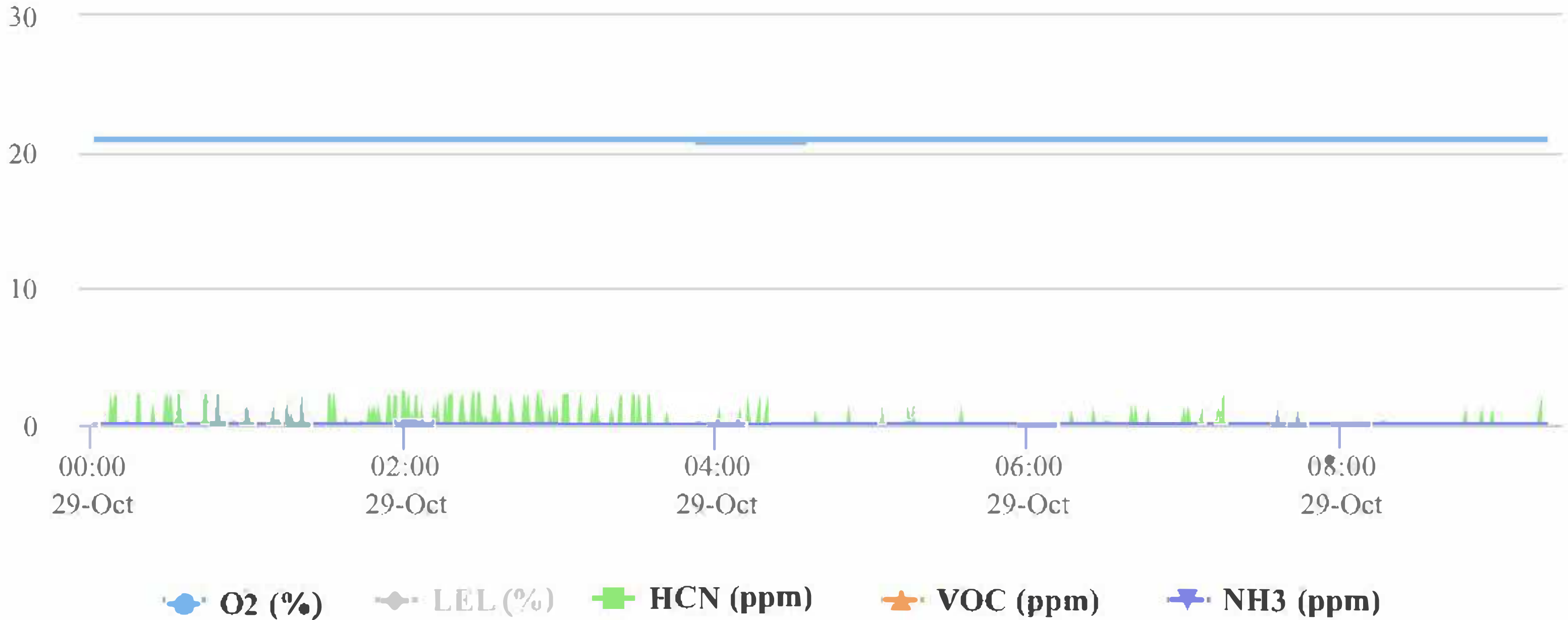
Park N' Ride: (.3008) AreaRAE - PRG2CAP - AreaRAE - S/N292-500659



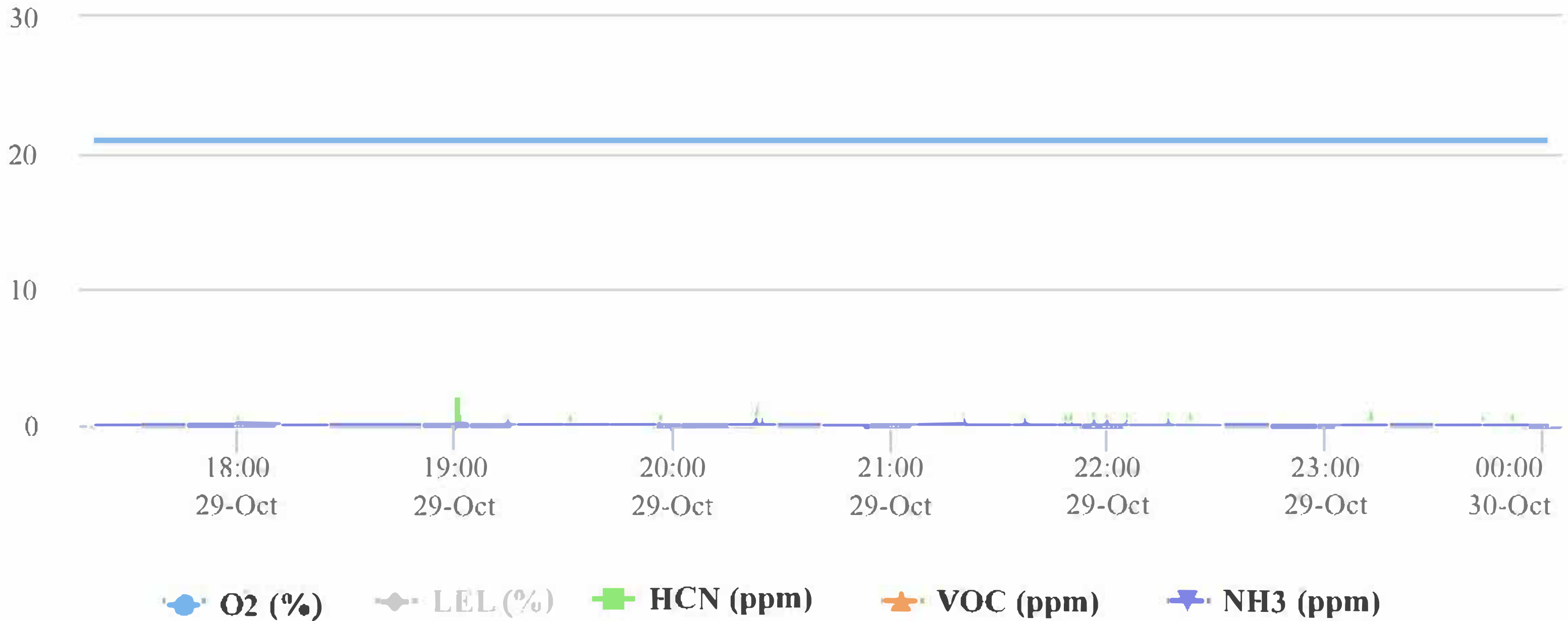
Park N' Ride: (.3008) AreaRAE - PRG2CAP - AreaRAE - S/N292-500659



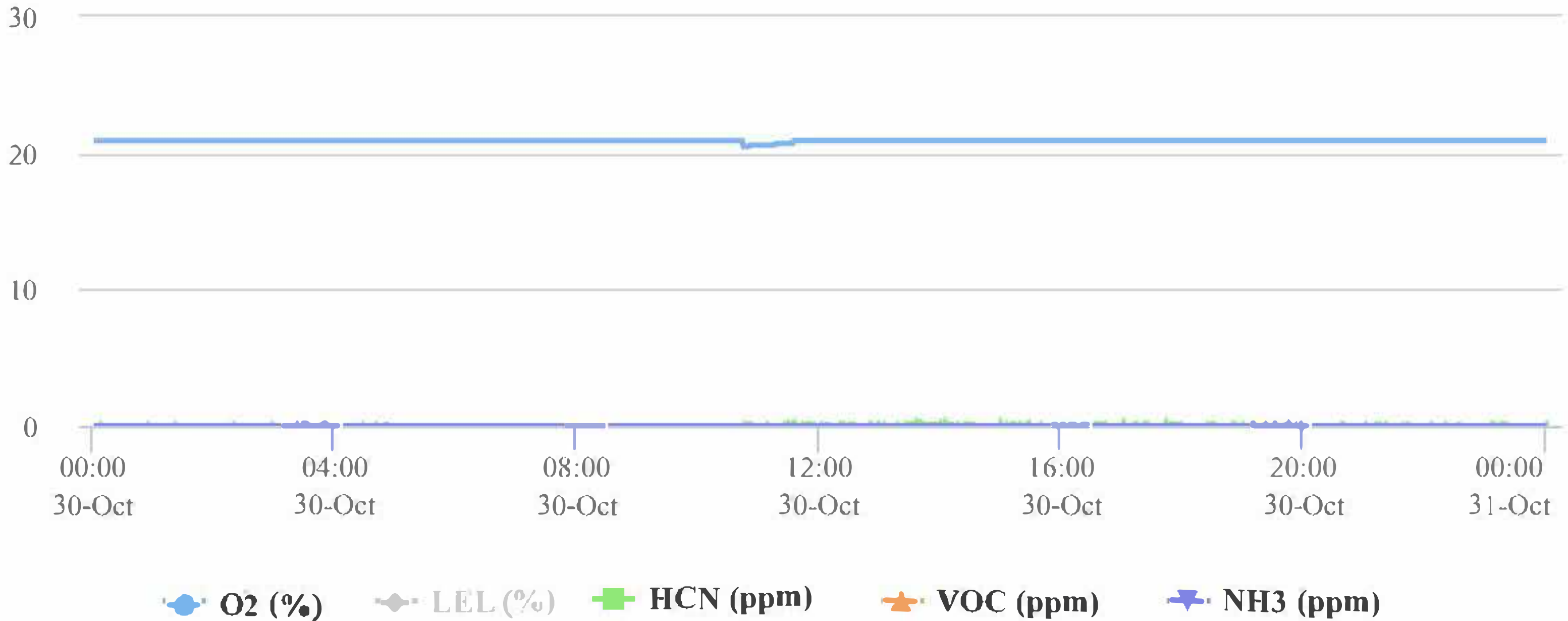
Park N' Ride: (.3008) AreaRAE - PRG2CAP - AreaRAE - S/N292-500659



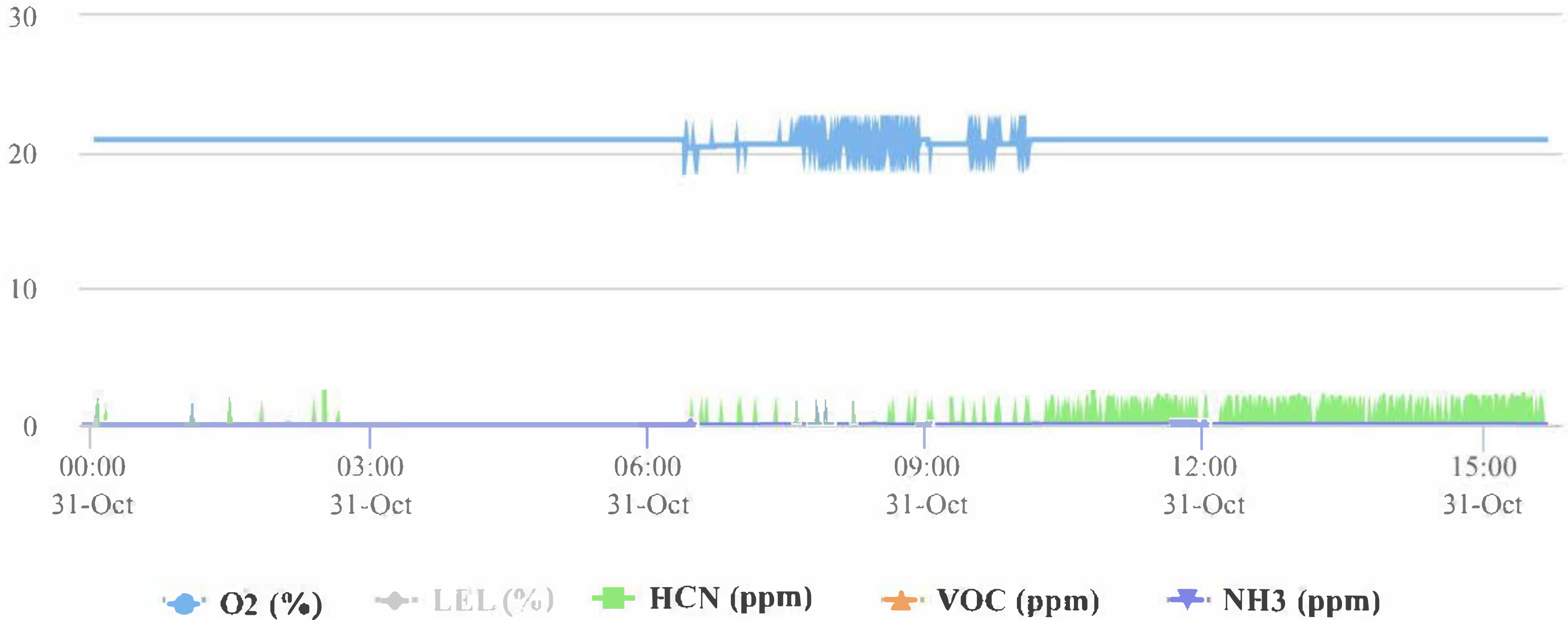
Park N' Ride: (.3008) AreaRAE - PRG2CAP - AreaRAE - S/N292-500659



Park N' Ride: (.3008) AreaRAE - PRG2CAP - AreaRAE - S/N292-500659



Park N' Ride: (.3008) AreaRAE - PRG2CAP - AreaRAE - S/N292-500659

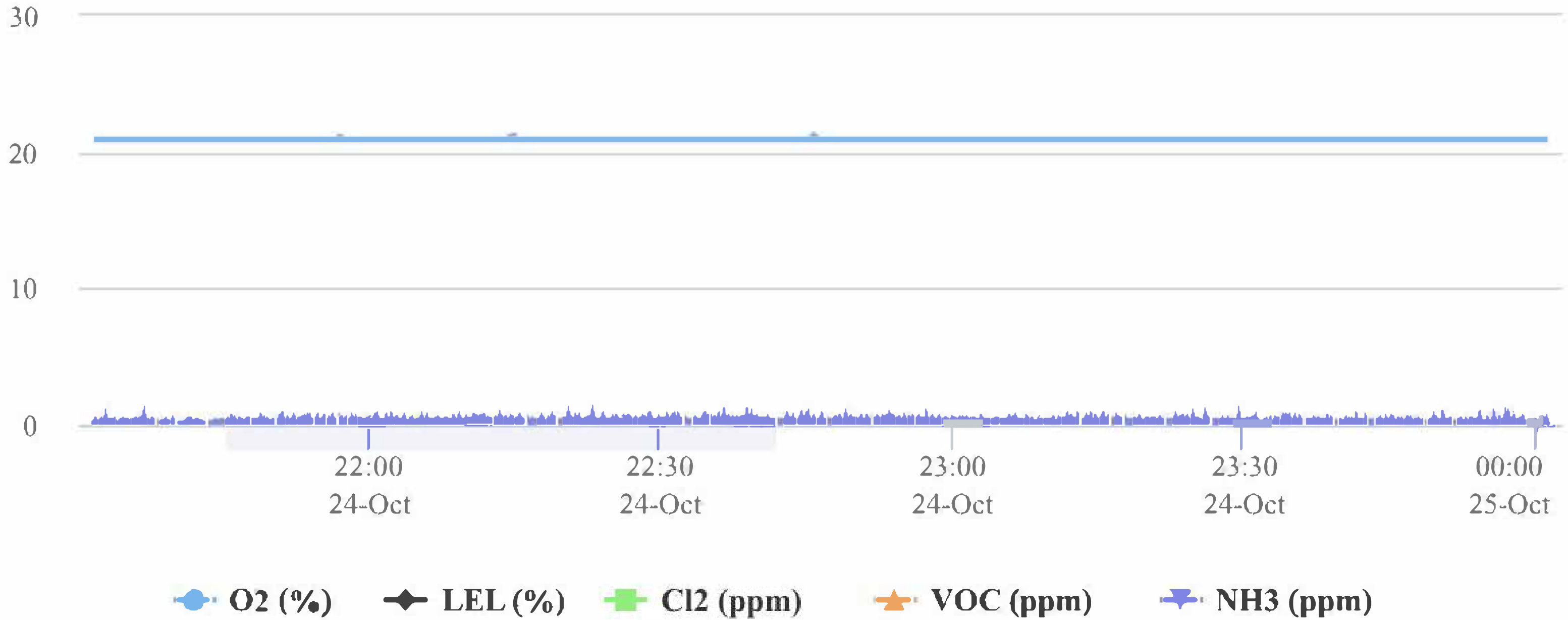


Park N' Ride Location (39.2545, -81.5293)

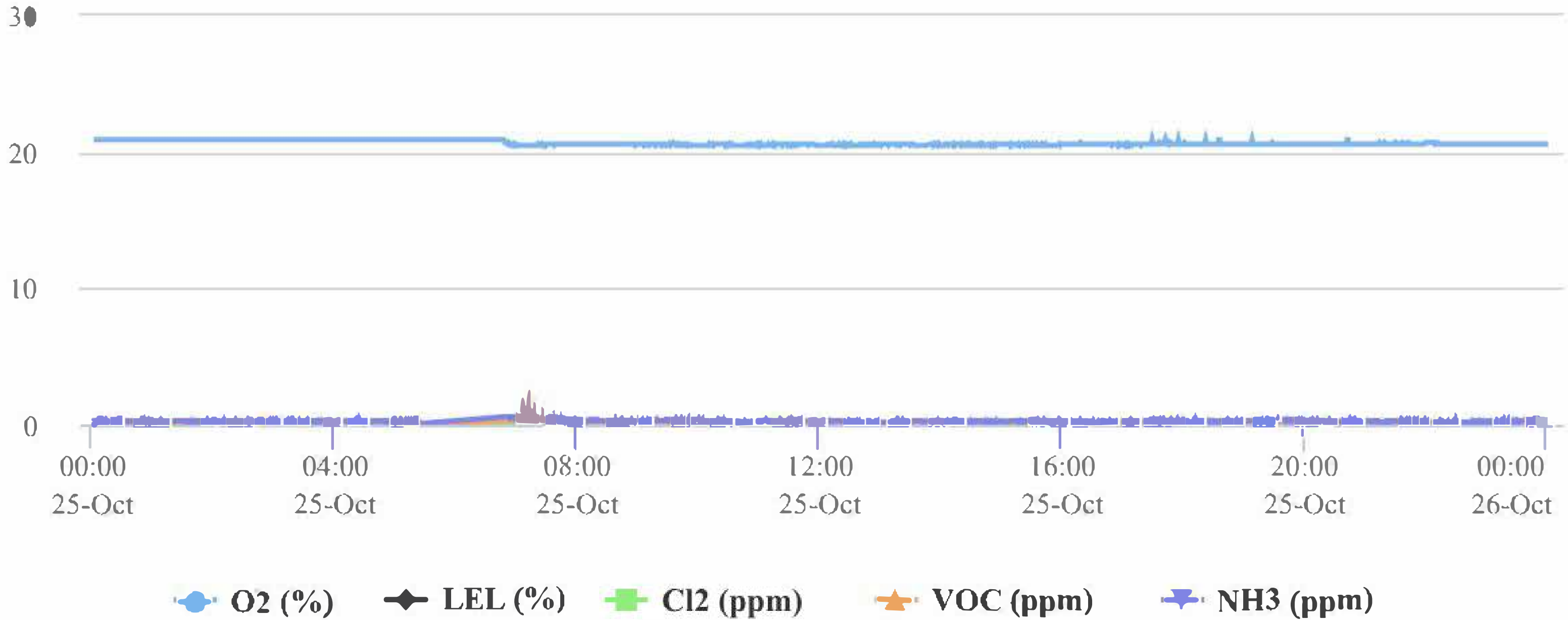
AreaRAE VIPER Graphs

S/N292-503069 with Cl2 Sensor

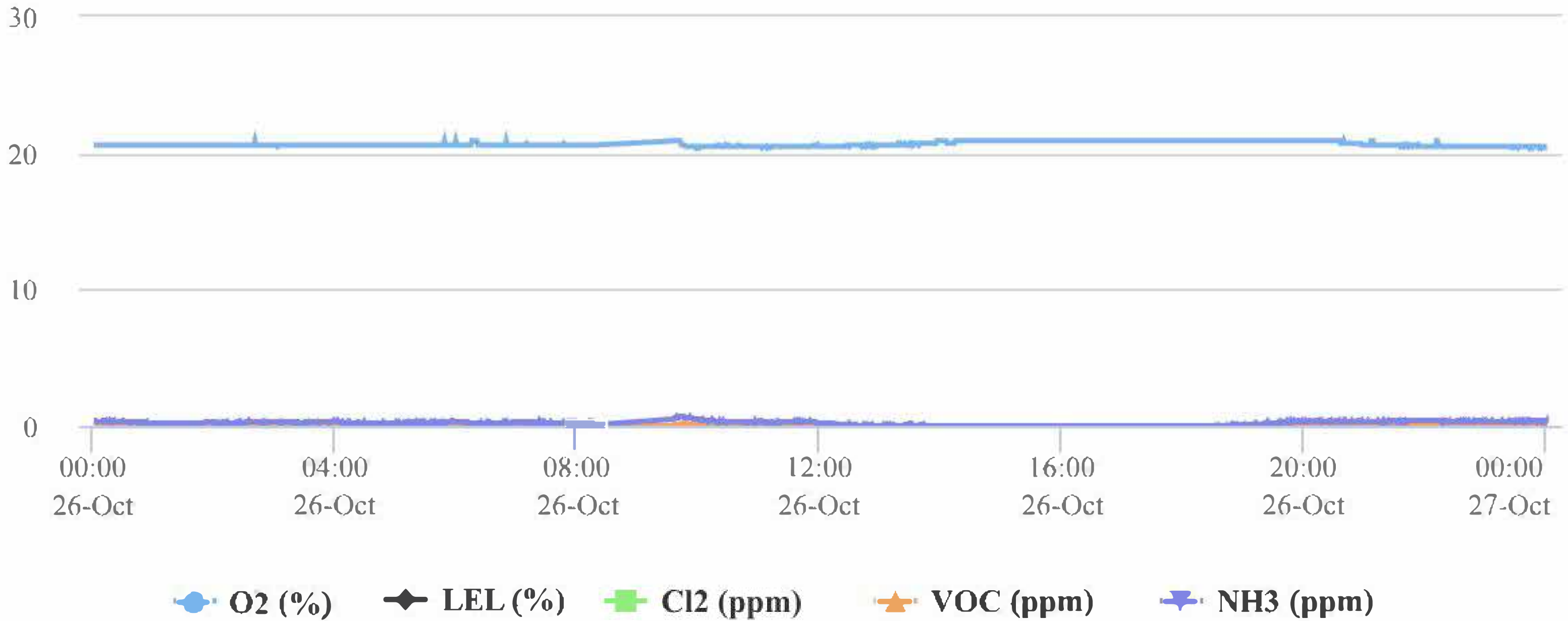
Park N' Ride: (.3004) AreaRAE - PRG2CAP - AreaRAE - S/N292-503069



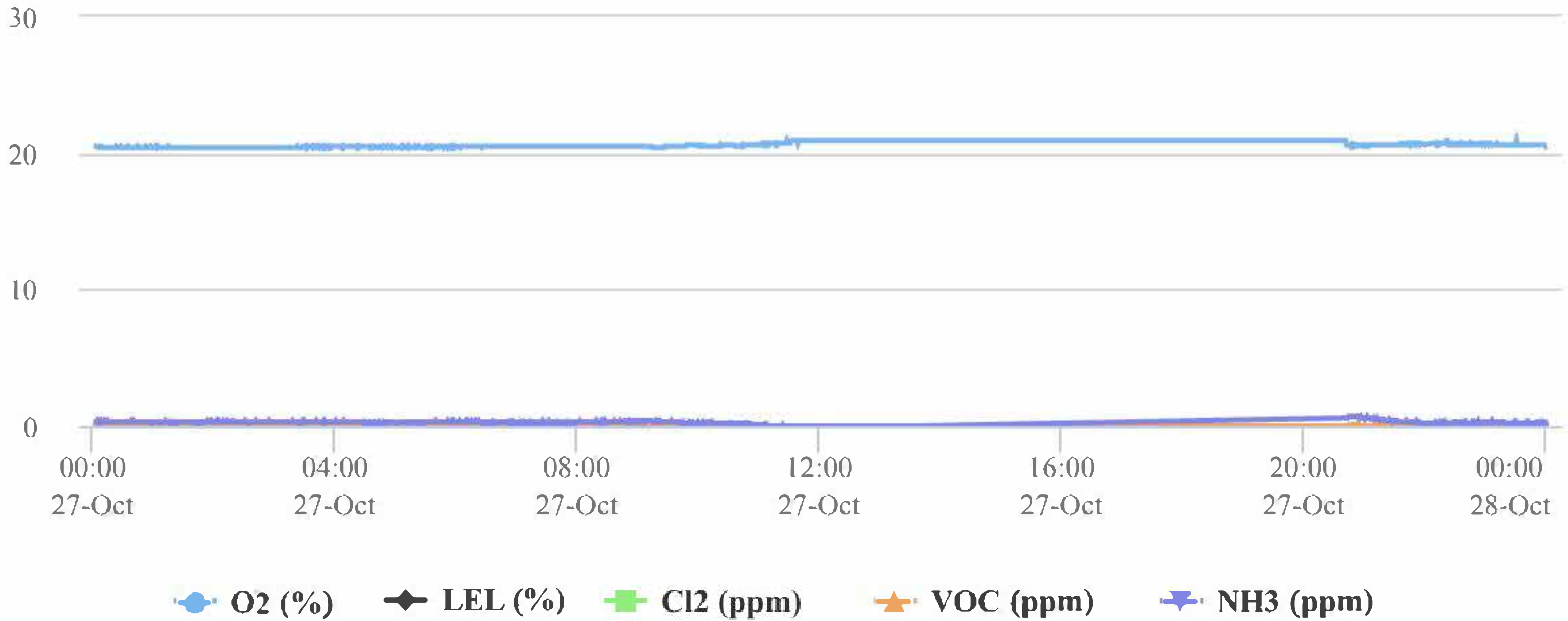
Park N' Ride: (.3004) AreaRAE - PRG2CAP - AreaRAE - S/N292-503069



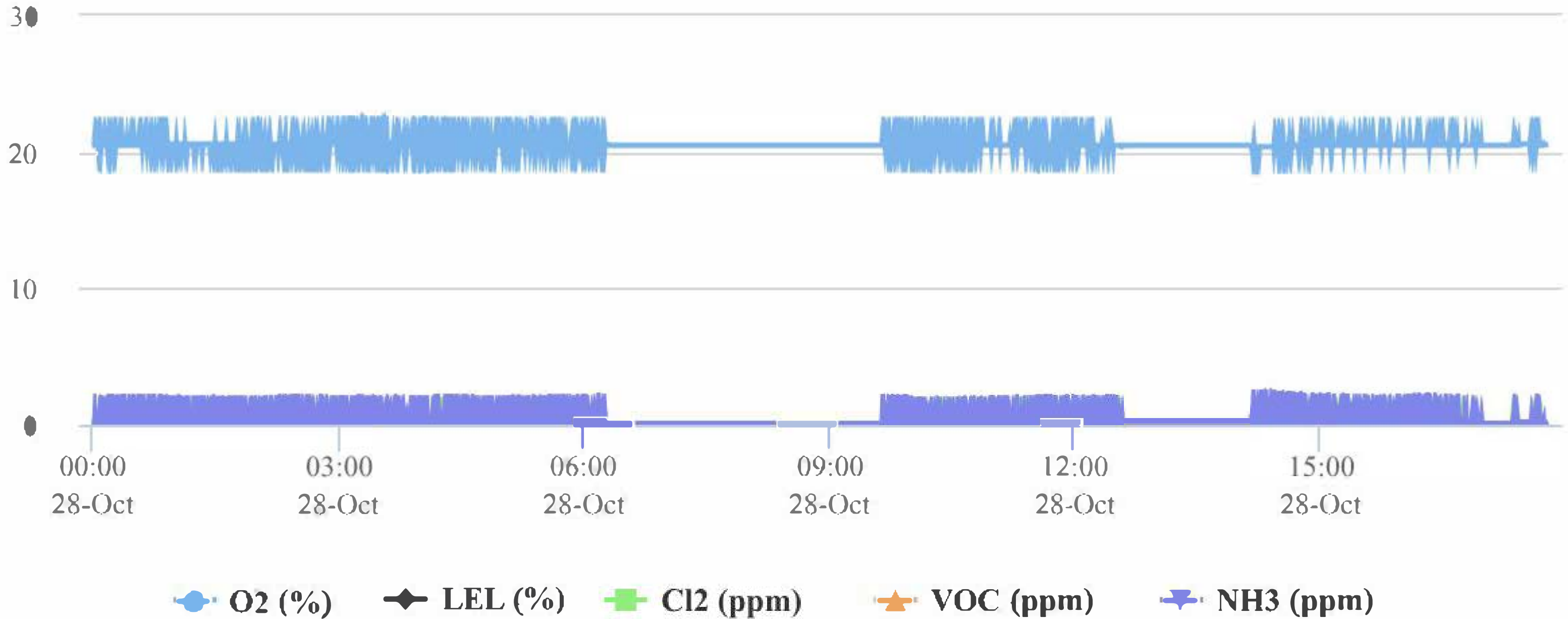
Park N' Ride: (.3004) AreaRAE - PRG2CAP - AreaRAE - S/N292-503069



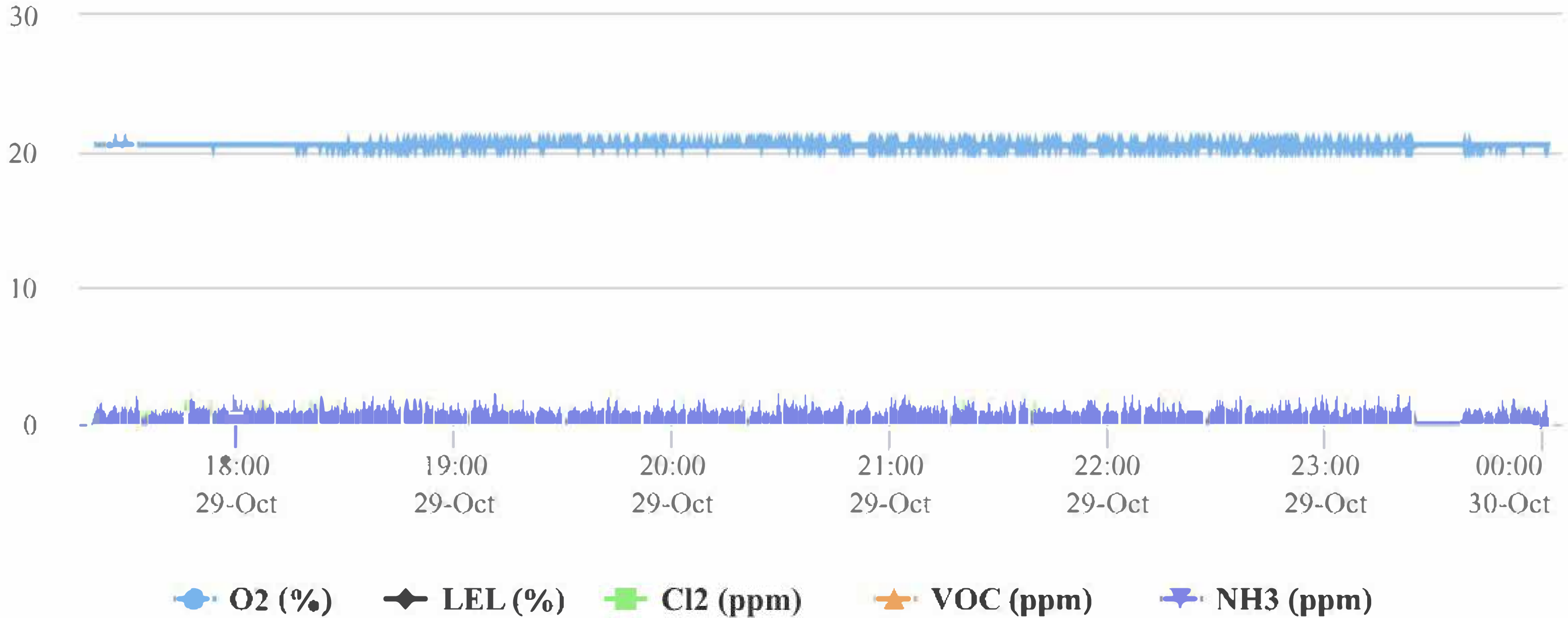
Park N' Ride: (.3004) AreaRAE - PRG2CAP - AreaRAE - S/N292-503069



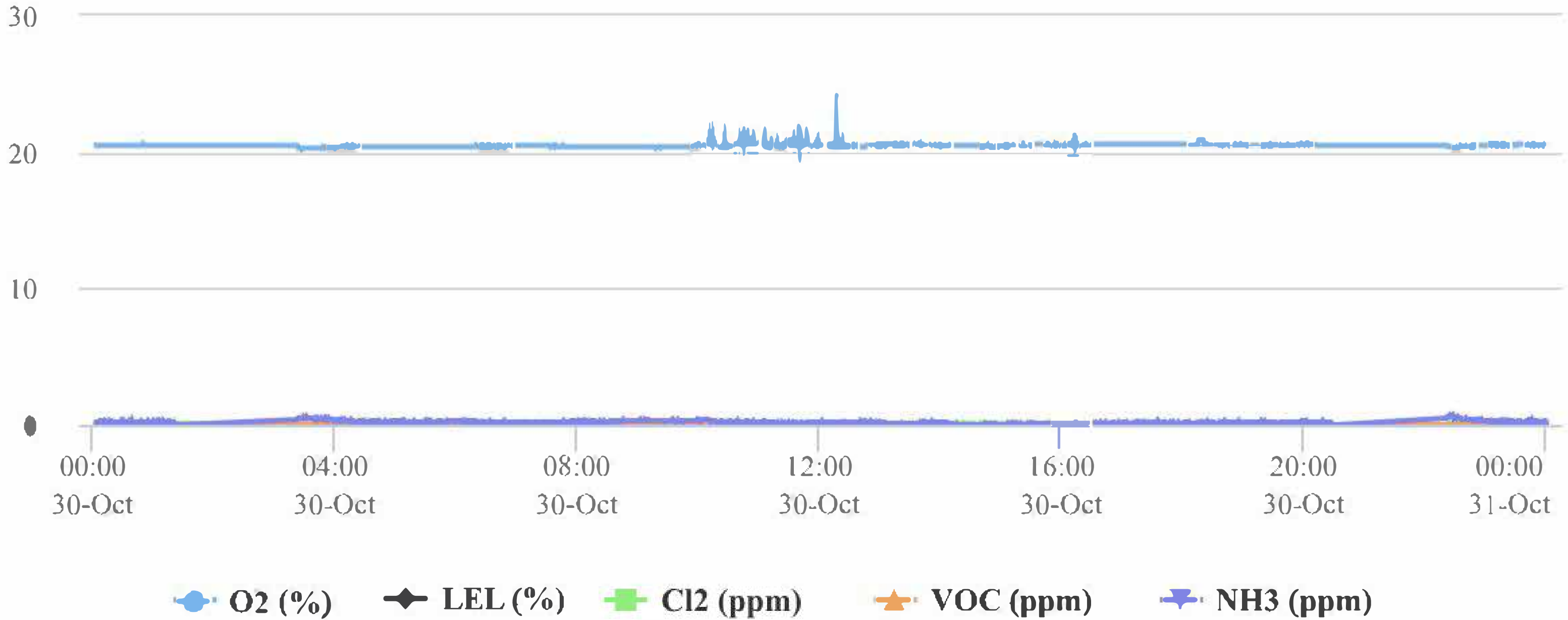
Park N' Ride: (.3004) AreaRAE - PRG2CAP - AreaRAE - S/N292-503069



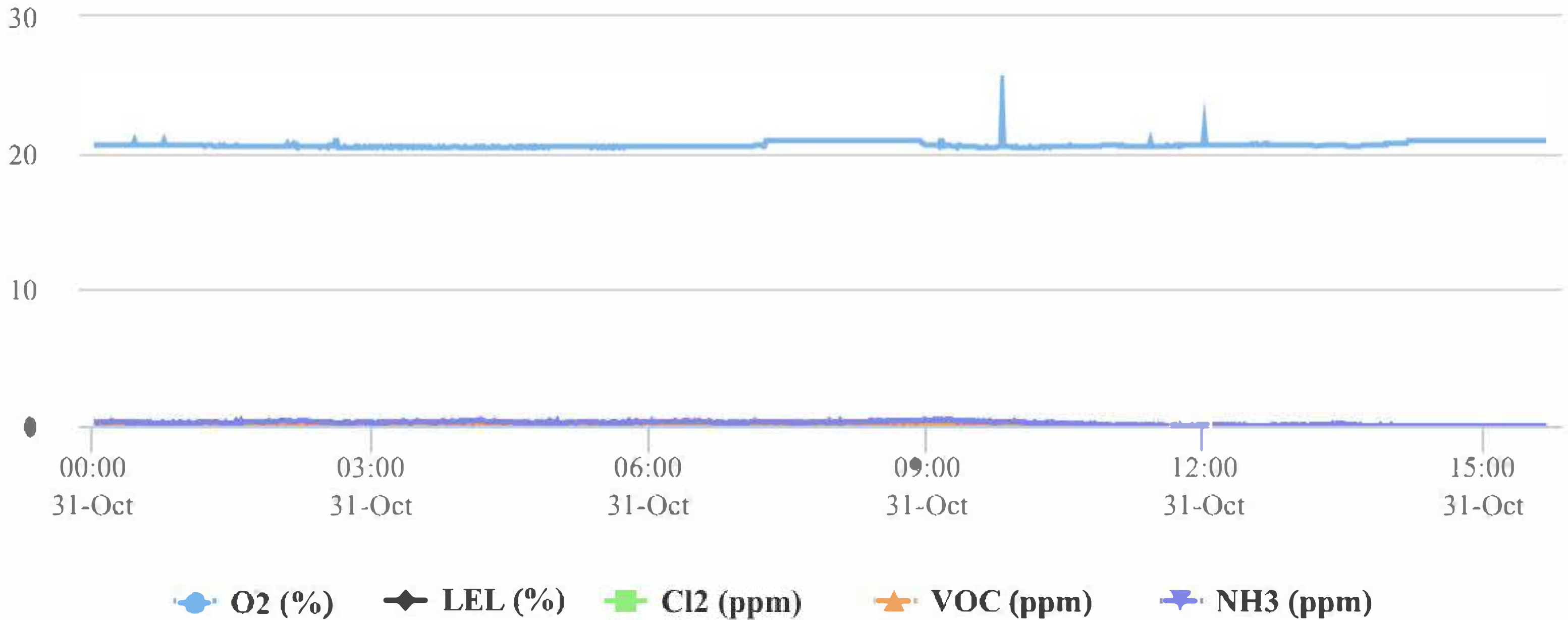
Park N' Ride: (.3004) AreaRAE - PRG2CAP - AreaRAE - S/N292-503069



Park N' Ride: (.3004) AreaRAE - PRG2CAP - AreaRAE - S/N292-503069



Park N' Ride: (.3004) AreaRAE - PRG2CAP - AreaRAE - S/N292-503069



ATTACHMENT 3

Lab Phone: 410-305-3032

[illegible]

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #
Analysis Key: TO15=VOCs by TO15	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

USEPA CLP Generic COC (REGION COPY)

DateShipped: 10/26/2017

CarrierName: FedEx

AirbillNo: 8023 3815 0026

CHAIN OF CUSTODY RECORD

Ames Warehouse Fire ER/WV

DAS #: R35254

Cooler #: 2

No: 3-102617-165608-0002

Lab: OASQA

Lab Contact:

Lab Phone: 410-305-3032

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
AA-02		Ambient Air/ [REDACTED]	Grab	TO15(21)	3-1001 (1)	Park	10/26/2017 12:56	Field Duplicate of AA-03
AA-03		Ambient Air/ [REDACTED]	Grab	TO15(21)	3-1005 (1)	Park	10/26/2017 13:00	Field Duplicate of AA-02

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #
Analysis Key: TO15=VOCs by TO15	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

USEPA CLP Generic COC (REGION COPY)

DateShipped: 10/26/2017

CarrierName: FedEx

AirbillNo: 8023 3815 0026

CHAIN OF CUSTODY RECORD

Ames Warehouse Fire ER/WV

DAS #: R35254

Cooler #: 3

No: 3-102617-170043-0003

Lab: OASQA

Lab Contact:

Lab Phone: 410-305-3032

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
AA-05		Ambient Air/ [REDACTED]	Grab	TO15(21)	3-1003 (1)	H_95	10/26/2017 11:11	Field Sample

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #
Analysis Key: TO15=VOCs by TO15	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

ATTACHMENT 4

AirbillNo: 8023 3815 0037

CHAIN OF CUSTODY RECORD

Ames Warehouse Fire ER/WV

DAS #: R35254

Cooler #: 1

No: 3-110317-112045-0004

Lab: OASQA

Lab Contact: kEVIN pOFF

Lab Phone: 410-305-3032

[illegible]

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #
Analysis Key: TO15=VOCs by TO15	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

USEPA CLP Generic COC (REGION COPY)

DateShipped: 11/3/2017

CarrierName: FedEx

AirbillNo: 8023 3815 0037

CHAIN OF CUSTODY RECORD

Ames Warehouse Fire ER/WV

DAS #: R35254

Cooler #:

No: 3-110317-113540-0005

Lab: OASQA

Lab Contact: Kevin Poff

Lab Phone: 410-305-3032

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	Sample Type
AA-10		Ambient Air/ [REDACTED]	Grab	TO15(21)	3-1011 (1)	Park	11/02/2017 20:15	Field Sample

Special Instructions:	Shipment for Case Complete? Y
	Samples Transferred From Chain of Custody #
Analysis Key: TO15=VOCs by TO15	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

Lab Phone: 410-305-3032

[illegible]

Special Instructions:	Shipment for Case Complete? Y
	Samples Transferred From Chain of Custody #
Analysis Key: TO15=VOCs by TO15	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

ATTACHMENT 5

Parkersburg, WV

Wood County Wilson

⌚ 3:24 PM EST on December 05, 2017 (GMT -0500)

Weather History for KPKB - October, 2017

October

21

2017

View
Saturday, October 21, 2017

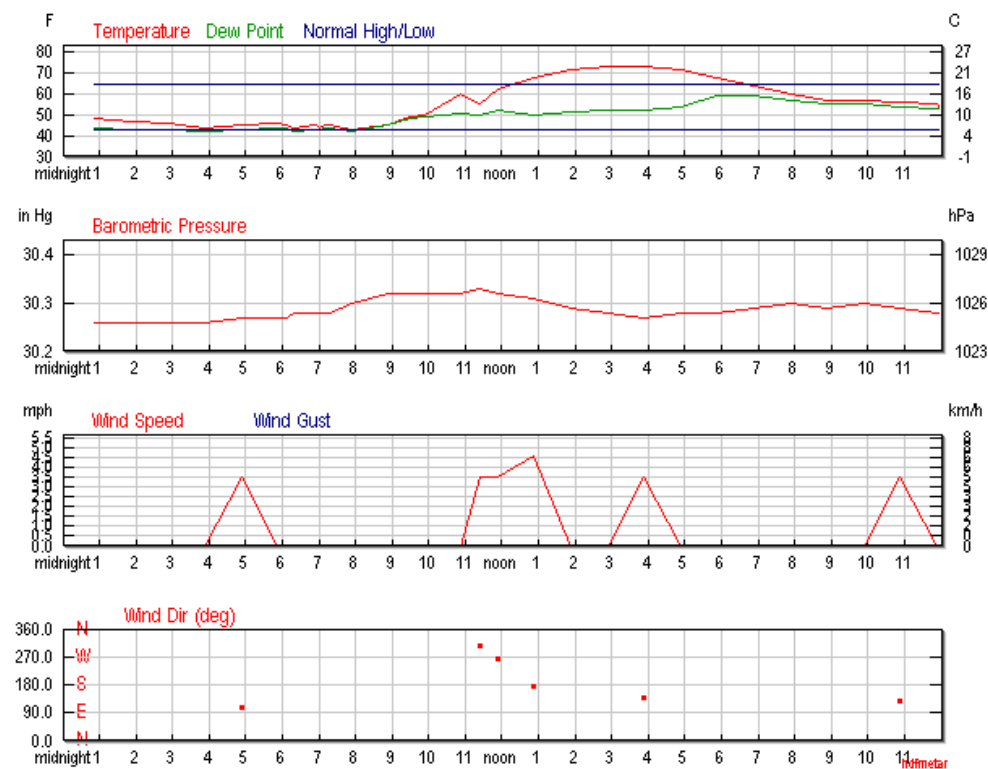
Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				59 °F	54 °F	
Max Temperature				74 °F	65 °F	84 °F (1947)
Min Temperature				43 °F	43 °F	21 °F (1952)
Degree Days						
Heating Degree Days				6	12	
Month to date heating degree days				78	186	
Since 1 July heating degree days				138	262	
Cooling Degree Days				0	0	
Month to date cooling degree days				46	13	
Year to date cooling degree days				973	949	
Growing Degree Days				8 (Base 50)		
Moisture						
Dew Point				49 °F		
Average Humidity				73		
Maximum Humidity				100		
Minimum Humidity				46		

	Actual	Average	Record
Precipitation			
Precipitation	0.00 in	0.09 in	1.15 in (2016)
Month to date precipitation	2.02	1.90	
Year to date precipitation	42.78	33.77	
Sea Level Pressure			
Sea Level Pressure	30.29 in		
Wind			
Wind Speed	1 mph (SSE)		
Max Wind Speed	7 mph		
Max Gust Speed	11 mph		
Visibility	6 miles		
Events	Fog		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

21

Submit

Astronomy

Oct. 21, 2017	Rise	Set
Actual Time	7:42 AM EDT	6:37 PM EDT
Civil Twilight	7:14 AM EDT	7:05 PM EDT
Nautical Twilight	6:43 AM EDT	7:36 PM EDT
Astronomical Twilight	6:12 AM EDT	8:07 PM EDT
Moon	9:17 AM EDT (10/21)	8:08 PM EDT (10/21)
Length of Visible Light	11h 50m	
Length of Day	10h 55m	

Waxing Crescent, 3% of the Moon is Illuminated

Oct 21	Oct 27	Nov 4	Nov 10	Nov 18
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	48.0 °F	-	44.1 °F	86%	30.26 in	10.0 mi	Calm	Calm	-	N/A		Clear
1:53 AM	46.9 °F	-	43.0 °F	86%	30.26 in	10.0 mi	Calm	Calm	-	N/A		Clear
2:53 AM	46.0 °F	-	43.0 °F	89%	30.26 in	10.0 mi	Calm	Calm	-	N/A		Clear
3:53 AM	44.1 °F	-	42.1 °F	93%	30.26 in	10.0 mi	Calm	Calm	-	N/A		Clear
4:53 AM	45.0 °F	43.5 °F	43.0 °F	93%	30.27 in	10.0 mi	ESE	3.5 mph	-	N/A		Clear
5:53 AM	46.0 °F	-	44.1 °F	93%	30.27 in	6.0 mi	Calm	Calm	-	N/A		Clear

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
6:09 AM	45.0 °F	-	44.1 °F	97%	30.27 in	1.8 mi	Calm	Calm	-	N/A		Clear
6:18 AM	44.1 °F	-	42.1 °F	93%	30.28 in	3.0 mi	Calm	Calm	-	N/A		Clear
6:53 AM	45.0 °F	-	43.0 °F	93%	30.28 in	3.0 mi	Calm	Calm	-	N/A		Clear
6:57 AM	45.0 °F	-	43.0 °F	93%	30.28 in	1.8 mi	Calm	Calm	-	N/A		Partly Cloudy
7:02 AM	44.1 °F	-	43.0 °F	96%	30.28 in	0.8 mi	Calm	Calm	-	N/A		Mist
7:13 AM	45.0 °F	-	44.1 °F	97%	30.28 in	1.0 mi	Calm	Calm	-	N/A		Mist
7:18 AM	45.0 °F	-	44.1 °F	97%	30.28 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog
7:53 AM	43.0 °F	-	42.1 °F	97%	30.30 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog
8:53 AM	45.0 °F	-	45.0 °F	100%	30.32 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog
9:30 AM	48.9 °F	-	48.0 °F	97%	30.32 in	1.0 mi	Calm	Calm	-	N/A		Mist
9:33 AM	48.9 °F	-	48.0 °F	97%	30.32 in	10.0 mi	Calm	Calm	-	N/A		Smoke
9:53 AM	50.0 °F	-	48.9 °F	96%	30.32 in	10.0 mi	Calm	Calm	-	N/A		Smoke
10:53 AM	60.1 °F	-	51.1 °F	72%	30.32 in	10.0 mi	Calm	Calm	-	N/A		Smoke
11:25 AM	55.0 °F	-	50.0 °F	83%	30.33 in	10.0 mi	NW	3.5 mph	-	N/A		Smoke
11:53 AM	62.1 °F	-	52.0 °F	70%	30.32 in	10.0 mi	West	3.5 mph	-	N/A		Smoke
12:53 PM	68.0 °F	-	50.0 °F	52%	30.31 in	7.0 mi	South	4.6 mph	-	N/A		Smoke
1:53 PM	71.6 °F	-	51.8 °F	50%	30.29 in	7.0 mi	Calm	Calm	-	N/A		Smoke
2:53 PM	73.0 °F	-	52.0 °F	48%	30.28 in	7.0 mi	Calm	Calm	-	N/A		Smoke
3:53 PM	73.0 °F	-	52.0 °F	48%	30.27 in	10.0 mi	SE	3.5 mph	-	N/A		Scattered Clouds
4:53 PM	72.0 °F	-	54.0 °F	53%	30.28 in	10.0 mi	Calm	Calm	-	N/A		Scattered Clouds
5:53 PM	68.0 °F	-	59.0 °F	73%	30.28 in	9.0 mi	Calm	Calm	-	N/A		Scattered Clouds
6:53 PM	64.0 °F	-	59.0 °F	84%	30.29 in	10.0 mi	Calm	Calm	-	N/A		Scattered Clouds
7:53 PM	60.1 °F	-	57.0 °F	90%	30.30 in	9.0 mi	Calm	Calm	-	N/A		Scattered Clouds

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:53 PM	57.0 °F	-	55.0 °F	93%	30.29 in	7.0 mi	Calm	Calm	-	N/A		Scattered Clouds
9:53 PM	57.0 °F	-	55.0 °F	93%	30.30 in	7.0 mi	Calm	Calm	-	N/A		Scattered Clouds
10:53 PM	55.9 °F	-	54.0 °F	93%	30.29 in	6.0 mi	SE	3.5 mph	-	N/A		Partly Cloudy
11:53 PM	55.0 °F	-	53.1 °F	93%	30.28 in	7.0 mi	Calm	Calm	-	N/A		Clear
11:57 PM	54.0 °F	-	53.1 °F	97%	30.28 in	1.5 mi	Calm	Calm	-	N/A		Clear

|



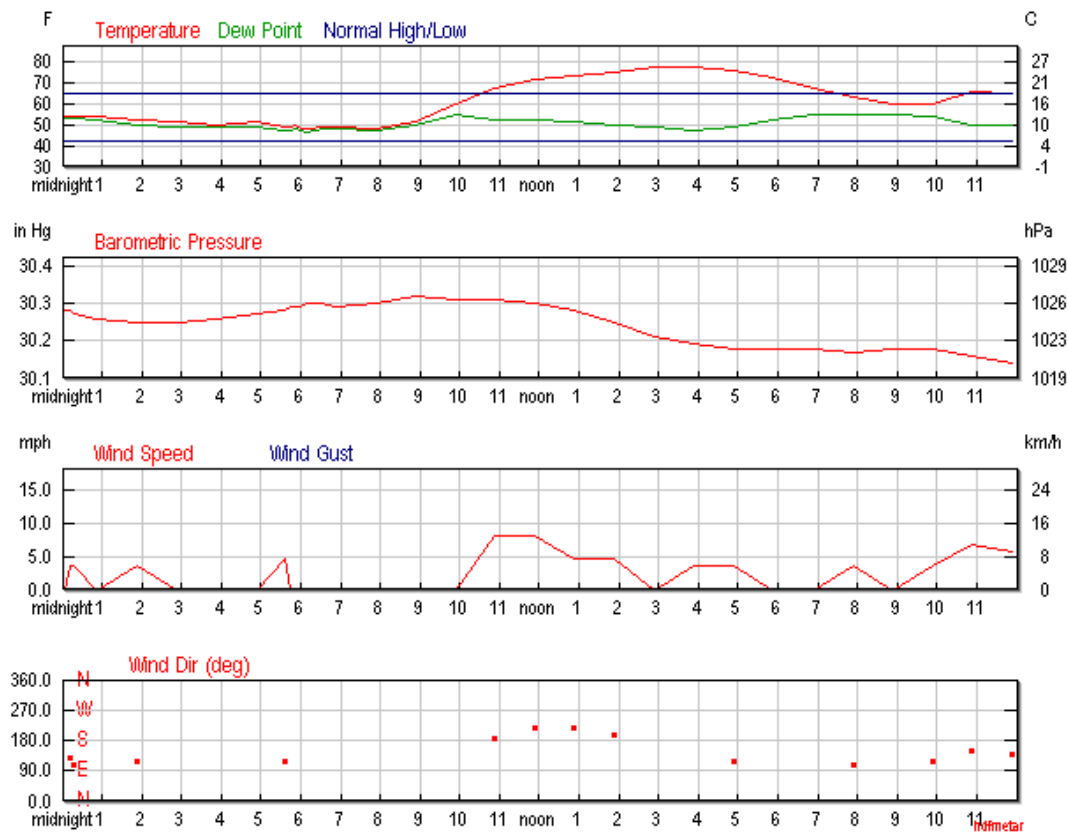
🕒 3:26 PM EST on December 05, 2017 (GMT -0500)

Sunday, October 22, 2017

<https://www.wunderground.com/history/airport/KPKB/2017/10/22/DailyHistory.html?req...> 12/5/2017

	Actual	Average	Record
Maximum Humidity	100		
Minimum Humidity	33		
Precipitation			
Precipitation	0.00 in	0.09 in	1.49 in (1983)
Month to date precipitation	2.02	1.99	
Year to date precipitation	42.78	33.86	
Sea Level Pressure			
Sea Level Pressure	30.25 in		
Wind			
Wind Speed	3 mph (SSE)		
Max Wind Speed	9 mph		
Max Gust Speed	14 mph		
Visibility	6 miles		
Events	Fog		
T = Trace of Precipitation, MM = Missing Value		Source: NWS Daily Summary	

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

22

Submit

Astronomy

Oct. 22, 2017	Rise	Set
Actual Time	7:43 AM EDT	6:36 PM EDT

Oct. 22, 2017	Rise	Set		
Civil Twilight	7:15 AM EDT	7:03 PM EDT		
Nautical Twilight	6:44 AM EDT	7:35 PM EDT		
Astronomical Twilight	6:13 AM EDT	8:06 PM EDT		
Moon	10:14 AM EDT (10/22)	8:44 PM EDT (10/22)		
Length of Visible Light	11h 48m			
Length of Day	10h 53m			
Waxing Crescent, 8% of the Moon is Illuminated				
Oct 22	Oct 27	Nov 4	Nov 10	Nov 18
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:05 AM	54.0 °F	53.1 °F	97%	30.28 in	0.5 mi	Calm	Calm	-	N/A	Fog	Fog
12:11 AM	54.0 °F	53.1 °F	97%	30.28 in	2.5 mi	SE	3.5 mph	-	N/A		Clear
12:18 AM	54.0 °F	53.1 °F	97%	30.27 in	5.0 mi	ESE	3.5 mph	-	N/A		Clear
12:53 AM	54.0 °F	52.0 °F	93%	30.26 in	4.0 mi	Calm	Calm	-	N/A		Clear
1:53 AM	52.0 °F	50.0 °F	93%	30.25 in	3.0 mi	ESE	3.5 mph	-	N/A		Clear
2:53 AM	51.1 °F	48.9 °F	92%	30.25 in	9.0 mi	Calm	Calm	-	N/A		Clear
3:53 AM	50.0 °F	48.9 °F	96%	30.26 in	7.0 mi	Calm	Calm	-	N/A		Clear
4:53 AM	51.1 °F	48.9 °F	92%	30.27 in	9.0 mi	Calm	Calm	-	N/A		Clear
5:35 AM	48.9 °F	46.9 °F	93%	30.28 in	2.5 mi	ESE	4.6 mph	-	N/A		Clear
5:45 AM	48.9 °F	46.9 °F	93%	30.29 in	4.0 mi	Calm	Calm	-	N/A		Clear
5:53 AM	50.0 °F	48.0 °F	93%	30.29 in	4.0 mi	Calm	Calm	-	N/A		Clear
6:01 AM	48.0 °F	46.9 °F	96%	30.29 in	1.5 mi	Calm	Calm	-	N/A		Clear

Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
6:10 AM	48.0 °F	46.0 °F	93%	30.30 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog
6:20 AM	48.0 °F	46.9 °F	96%	30.30 in	1.0 mi	Calm	Calm	-	N/A		Clear
6:24 AM	48.9 °F	46.9 °F	93%	30.30 in	3.0 mi	Calm	Calm	-	N/A		Clear
6:26 AM	48.9 °F	46.9 °F	93%	30.30 in	1.2 mi	Calm	Calm	-	N/A		Clear
6:33 AM	48.9 °F	48.0 °F	97%	30.30 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog
6:53 AM	48.9 °F	48.0 °F	97%	30.29 in	7.0 mi	Calm	Calm	-	N/A	Fog	Patches of Fog
7:53 AM	48.0 °F	46.9 °F	96%	30.30 in	7.0 mi	Calm	Calm	-	N/A	Fog	Patches of Fog
8:53 AM	51.1 °F	50.0 °F	96%	30.32 in	7.0 mi	Calm	Calm	-	N/A	Fog	Patches of Fog
9:53 AM	60.1 °F	55.0 °F	83%	30.31 in	7.0 mi	Calm	Calm	-	N/A	Fog	Patches of Fog
10:53 AM	66.9 °F	52.0 °F	59%	30.31 in	10.0 mi	South	8.1 mph	-	N/A		Partly Cloudy
11:53 AM	71.1 °F	52.0 °F	51%	30.30 in	10.0 mi	SW	8.1 mph	-	N/A		Partly Cloudy
12:53 PM	73.0 °F	51.1 °F	46%	30.28 in	10.0 mi	SW	4.6 mph	-	N/A		Partly Cloudy
1:53 PM	75.0 °F	50.0 °F	41%	30.25 in	10.0 mi	SSW	4.6 mph	-	N/A		Partly Cloudy
2:53 PM	77.0 °F	48.9 °F	37%	30.21 in	10.0 mi	Calm	Calm	-	N/A		Partly Cloudy
3:53 PM	77.0 °F	46.9 °F	34%	30.19 in	10.0 mi	Variable	3.5 mph	-	N/A		Partly Cloudy
4:53 PM	75.9 °F	48.9 °F	38%	30.18 in	10.0 mi	ESE	3.5 mph	-	N/A		Partly Cloudy
5:53 PM	72.0 °F	52.0 °F	49%	30.18 in	10.0 mi	Calm	Calm	-	N/A		Partly Cloudy
6:53 PM	66.9 °F	55.0 °F	66%	30.18 in	10.0 mi	Calm	Calm	-	N/A		Clear
7:53 PM	63.0 °F	55.0 °F	75%	30.17 in	10.0 mi	ESE	3.5 mph	-	N/A		Clear
8:53 PM	60.1 °F	55.0 °F	83%	30.18 in	10.0 mi	Calm	Calm	-	N/A		Clear
9:53 PM	60.1 °F	54.0 °F	80%	30.18 in	10.0 mi	ESE	3.5 mph	-	N/A		Clear

Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
10:53 PM	66.0 °F	50.0 °F	56%	30.16 in	10.0 mi	SSE	6.9 mph	-	N/A		Clear
11:53 PM	64.9 °F	50.0 °F	58%	30.14 in	10.0 mi	SE	5.8 mph	-	N/A		Clear

|

Parkersburg, WV

Wood County Wilson

© 3:46 PM EST on December 05, 2017 (GMT -0500)

Weather History for KPKB - October, 2017

October

23

2017

View

Monday, October 23, 2017

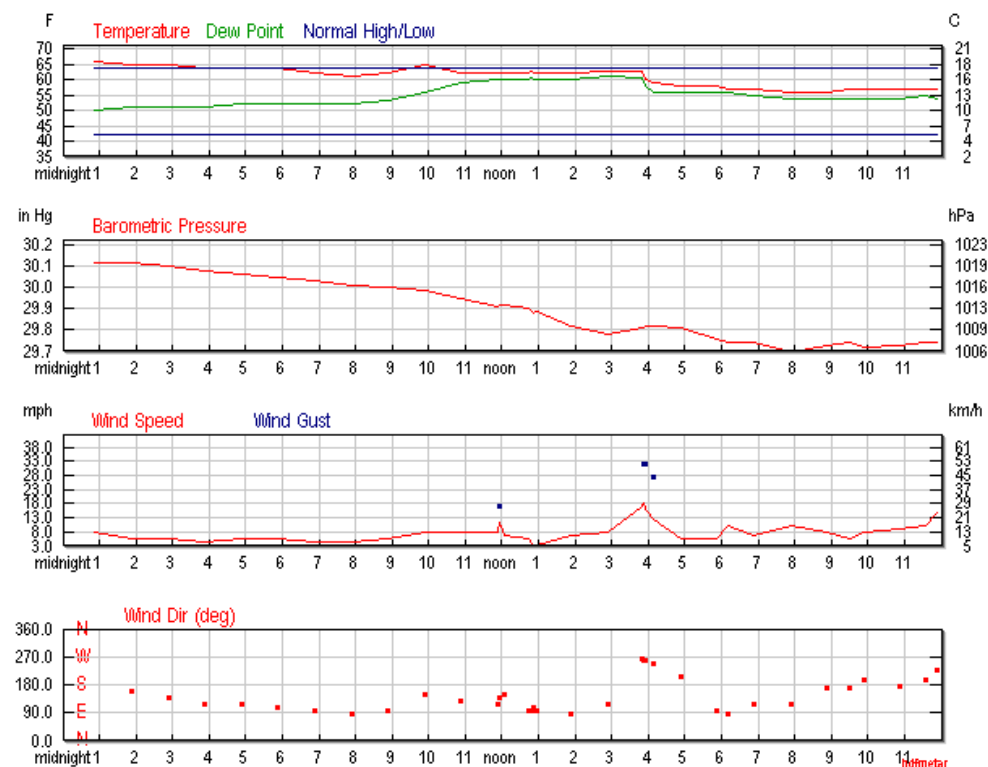
Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				62 °F	53 °F	
Max Temperature				67 °F	64 °F	84 °F (1975)
Min Temperature				56 °F	42 °F	27 °F (1952)
Degree Days						
Heating Degree Days				3	12	
Month to date heating degree days				83	210	
Since 1 July heating degree days				143	286	
Cooling Degree Days				0	0	
Month to date cooling degree days				46	13	
Year to date cooling degree days				973	949	
Growing Degree Days				10 (Base 50)		
Moisture						
Dew Point				56 °F		
Average Humidity				77		
Maximum Humidity				97		
Minimum Humidity				56		

	Actual	Average	Record
Precipitation			
Precipitation	1.19 in	0.09 in	1.19 in (2017)
Month to date precipitation	3.21	2.08	
Year to date precipitation	43.97	33.95	
Sea Level Pressure			
Sea Level Pressure	29.88 in		
Wind			
Wind Speed	8 mph (SE)		
Max Wind Speed	20 mph		
Max Gust Speed	33 mph		
Visibility	7 miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

23

Submit

Astronomy

Oct. 23, 2017	Rise	Set		
Actual Time	7:44 AM EDT	6:35 PM EDT		
Civil Twilight	7:16 AM EDT	7:02 PM EDT		
Nautical Twilight	6:45 AM EDT	7:33 PM EDT		
Astronomical Twilight	6:14 AM EDT	8:04 PM EDT		
Moon	11:10 AM EDT (10/23)	9:24 PM EDT (10/23)		
Length of Visible Light	11h 45m			
Length of Day	10h 51m			
Waxing Crescent, 14% of the Moon is Illuminated				
Oct 23	Oct 27	Nov 4	Nov 10	Nov 18
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	66.0 °F	50.0 °F	56%	30.12 in	10.0 mi	SSE	8.1 mph	-	N/A		Clear
1:53 AM	64.9 °F	51.1 °F	61%	30.12 in	10.0 mi	SSE	5.8 mph	-	N/A		Clear
2:53 AM	64.9 °F	51.1 °F	61%	30.10 in	10.0 mi	SE	5.8 mph	-	N/A		Clear
3:53 AM	64.0 °F	51.1 °F	63%	30.08 in	10.0 mi	ESE	4.6 mph	-	N/A		Clear
4:53 AM	64.0 °F	52.0 °F	65%	30.06 in	10.0 mi	ESE	5.8 mph	-	N/A		Clear
5:53 AM	64.0 °F	52.0 °F	65%	30.05 in	10.0 mi	ESE	5.8 mph	-	N/A		Mostly Cloudy

Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
6:53 AM	62.1 °F	52.0 °F	70%	30.03 in	10.0 mi	East	4.6 mph	-	N/A		Clear
7:53 AM	61.0 °F	52.0 °F	72%	30.01 in	10.0 mi	East	4.6 mph	-	N/A		Clear
8:53 AM	62.1 °F	53.1 °F	72%	30.00 in	10.0 mi	East	5.8 mph	-	N/A		Mostly Cloudy
9:53 AM	64.9 °F	55.9 °F	73%	29.99 in	9.0 mi	SSE	8.1 mph	-	0.00 in	Rain	Light Rain
10:53 AM	62.1 °F	59.0 °F	90%	29.95 in	5.0 mi	SE	8.1 mph	-	0.06 in	Rain	Light Rain
11:53 AM	62.1 °F	60.1 °F	93%	29.91 in	1.2 mi	ESE	8.1 mph	17.3 mph	0.18 in	Rain	Heavy Rain
11:55 AM	62.1 °F	60.1 °F	93%	29.92 in	2.0 mi	SE	11.5 mph	17.3 mph	0.01 in	Rain	Heavy Rain
12:04 PM	62.1 °F	60.1 °F	93%	29.92 in	6.0 mi	SSE	6.9 mph	-	0.02 in	Rain	Light Rain
12:43 PM	62.1 °F	60.1 °F	93%	29.90 in	2.5 mi	East	5.8 mph	-	0.07 in	Rain , Thunderstorm	Thunderstorms and Rain
12:48 PM	62.6 °F	60.8 °F	94%	29.89 in	8.0 mi	East	3.5 mph	-	0.07 in	Rain , Thunderstorm	Light Thunderstorms and Rain
12:53 PM	62.1 °F	60.1 °F	93%	29.88 in	7.0 mi	ESE	3.5 mph	-	0.08 in	Rain , Thunderstorm	Light Thunderstorms and Rain
12:58 PM	62.1 °F	60.1 °F	93%	29.89 in	4.0 mi	East	3.5 mph	-	0.01 in	Rain	Rain
1:53 PM	62.1 °F	60.1 °F	93%	29.82 in	7.0 mi	East	6.9 mph	-	0.05 in	Rain	Light Rain
2:53 PM	63.0 °F	61.0 °F	93%	29.78 in	4.0 mi	ESE	8.1 mph	-	0.12 in	Rain	Rain
3:51 PM	62.6 °F	60.8 °F	94%	29.81 in	1.0 mi	West	17.3 mph	29.9 mph	0.18 in	Rain	Rain
3:52 PM	61.0 °F	59.0 °F	93%	29.81 in	1.0 mi	West	18.4 mph	32.2 mph	0.18 in	Rain	Rain
3:55 PM	60.1 °F	57.9 °F	93%	29.82 in	1.5 mi	West	16.1 mph	32.2 mph	0.02 in	Rain	Rain
4:08 PM	59.0 °F	55.9 °F	90%	29.82 in	3.0 mi	WSW	12.7 mph	27.6 mph	0.06 in	Rain	Light Rain
4:53 PM	57.9 °F	55.9 °F	93%	29.81 in	7.0 mi	SSW	5.8 mph	-	0.08 in	Rain	Light Rain
5:53 PM	57.9 °F	55.9 °F	93%	29.76 in	2.5 mi	East	5.8 mph	-	0.07 in	Rain	Light Rain
6:10 PM	57.0 °F	55.9 °F	96%	29.74 in	4.0 mi	East	10.4 mph	-	0.01 in	Rain	Light Rain
6:53 PM	57.0 °F	55.0 °F	93%	29.74 in	7.0 mi	ESE	6.9 mph	-	0.07 in	Rain	Light Rain
7:53 PM	55.9 °F	54.0 °F	93%	29.70 in	3.0 mi	ESE	10.4 mph	-	0.23 in	Rain	Heavy Rain

Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:53 PM	55.9 °F	54.0 °F	93%	29.73 in	10.0 mi	South	8.1 mph	-	0.04 in		Overcast
9:31 PM	57.0 °F	54.0 °F	89%	29.74 in	10.0 mi	South	5.8 mph	-	N/A		Overcast
9:53 PM	57.0 °F	54.0 °F	89%	29.72 in	10.0 mi	SSW	8.1 mph	-	N/A		Overcast
10:53 PM	57.0 °F	54.0 °F	89%	29.73 in	10.0 mi	South	9.2 mph	-	0.01 in		Overcast
11:35 PM	57.0 °F	55.0 °F	93%	29.74 in	10.0 mi	SSW	10.4 mph	-	0.01 in		Overcast
11:53 PM	57.0 °F	54.0 °F	89%	29.74 in	6.0 mi	SW	15.0 mph	21.9 mph	0.01 in	Rain	Light Rain

|



Transform Yourself & Live
a Healthier Life
We Can Help!

Weight Loss Services



Parkersburg, WV 🏠

Wood County Wilson

© 1:36 PM EST on November 16, 2017 (GMT -0500)

Weather History for KPKB - October, 2017

October

24

2017

View

Tuesday, October 24, 2017

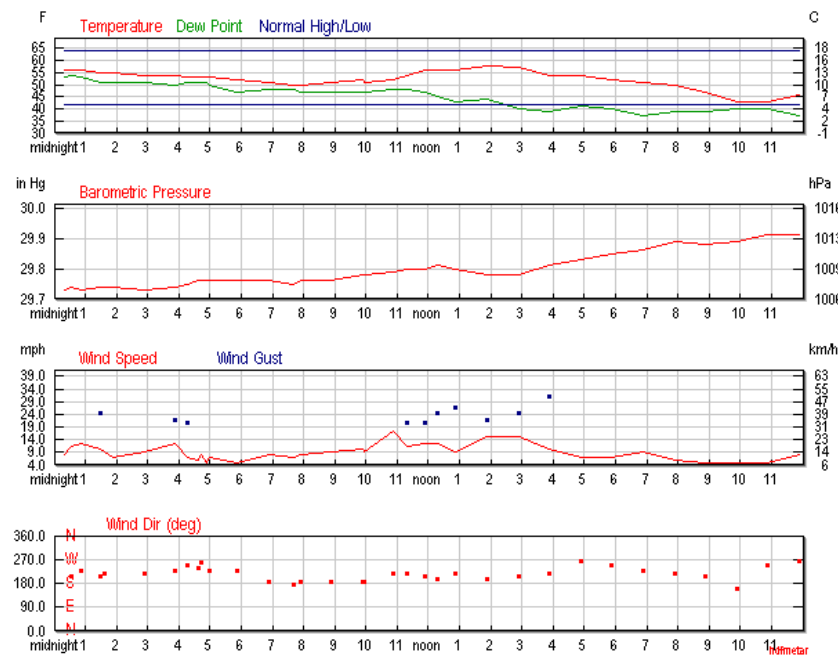
Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				51 °F	53 °F	
Max Temperature				60 °F	64 °F	83 °F (1975)
Min Temperature				41 °F	42 °F	26 °F (1964)
Degree Days						
Heating Degree Days				14	12	
Month to date heating degree days				97	222	
Since 1 July heating degree days				157	298	
Cooling Degree Days				0	0	
Month to date cooling degree days				46	13	
Year to date cooling degree days				973	949	
Moisture						
Dew Point				46 °F		
Average Humidity				72		
Maximum Humidity				93		
Minimum Humidity				51		
Precipitation						
Precipitation				0.03 in	0.09 in	1.26 in (1926)
Month to date precipitation				3.24	2.17	
Year to date precipitation				44.00	34.04	
Sea Level Pressure						
Sea Level Pressure				29.79 in		
Wind						

	Actual	Average	Record
Wind Speed	9 mph (SW)		
Max Wind Speed	23 mph		
Max Gust Speed	34 mph		
Visibility	9 miles		
Events	Rain		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

24

Submit

Astronomy

Oct. 24, 2017	Rise	Set
Actual Time	7:45 AM EDT	6:33 PM EDT
Civil Twilight	7:17 AM EDT	7:01 PM EDT

Oct. 24, 2017	Rise	Set		
Nautical Twilight	6:46 AM EDT	7:32 PM EDT		
Astronomical Twilight	6:15 AM EDT	8:03 PM EDT		
Moon	12:03 PM EDT (10/24)	10:07 PM EDT (10/24)		
Length of Visible Light	11h 43m			
Length of Day	10h 48m			
Waxing Crescent, 21% of the Moon is Illuminated				
Oct 24	Oct 27	Nov 4	Nov 10	Nov 18
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:20 AM	55.9 °F	-	53.1 °F	90%	29.73 in	10.0 mi	SSW	8.1 mph	-	0.01 in		Scattered Clouds
12:34 AM	55.9 °F	-	54.0 °F	93%	29.74 in	9.0 mi	SSW	11.5 mph	-	0.01 in		Mostly Cloudy
12:53 AM	55.9 °F	-	53.1 °F	90%	29.73 in	7.0 mi	SW	12.7 mph	19.6 mph	0.01 in		Overcast
1:28 AM	55.0 °F	-	51.1 °F	86%	29.74 in	10.0 mi	SSW	10.4 mph	24.2 mph	N/A		Overcast
1:37 AM	55.0 °F	-	51.1 °F	86%	29.74 in	10.0 mi	SW	9.2 mph	-	N/A		Overcast
1:53 AM	55.0 °F	-	51.1 °F	86%	29.74 in	10.0 mi	Variable	6.9 mph	-	N/A		Overcast
2:53 AM	54.0 °F	-	51.1 °F	90%	29.73 in	7.0 mi	SW	9.2 mph	18.4 mph	N/A		Overcast
3:53 AM	54.0 °F	-	50.0 °F	86%	29.74 in	9.0 mi	SW	12.7 mph	21.9 mph	N/A		Overcast
4:16 AM	53.1 °F	-	51.1 °F	93%	29.75 in	6.0 mi	WSW	6.9 mph	20.7 mph	N/A		Overcast
4:37 AM	53.1 °F	-	51.1 °F	93%	29.76 in	9.0 mi	WSW	5.8 mph	-	0.00 in	Rain	Light Rain
4:42 AM	53.1 °F	-	51.1 °F	93%	29.76 in	9.0 mi	West	8.1 mph	-	0.00 in		Overcast
4:53 AM	53.1 °F	-	51.1 °F	93%	29.76 in	10.0 mi	Variable	4.6 mph	-	0.00 in		Overcast
5:00 AM	53.1 °F	-	50.0 °F	89%	29.76 in	10.0 mi	SW	6.9 mph	-	N/A		Overcast
5:53 AM	52.0 °F	-	46.9 °F	83%	29.76 in	10.0 mi	SW	4.6 mph	-	N/A		Overcast
6:53 AM	51.1 °F	-	48.0 °F	89%	29.76 in	10.0 mi	South	8.1 mph	-	N/A		Mostly Cloudy
7:42 AM	50.0 °F	-	48.0 °F	93%	29.75 in	10.0 mi	South	6.9 mph	-	N/A		Mostly Cloudy
7:53 AM	50.0 °F	-	46.9 °F	89%	29.76 in	10.0 mi	South	8.1 mph	-	N/A		Overcast
8:53 AM	51.1 °F	-	46.9 °F	86%	29.76 in	10.0 mi	South	9.2 mph	-	N/A		Mostly Cloudy
9:53 AM	52.0 °F	-	46.9 °F	83%	29.78 in	6.0 mi	South	10.4 mph	-	0.01 in	Rain	Light Rain
9:57 AM	51.1 °F	-	46.9 °F	86%	29.78 in	4.0 mi	South	9.2 mph	-	0.01 in	Rain	Rain
10:53 AM	52.0 °F	-	48.0 °F	86%	29.79 in	10.0 mi	SW	17.3 mph	23.0 mph	0.01 in		Overcast
11:18 AM	54.0 °F	-	48.0 °F	80%	29.80 in	7.0 mi	SW	11.5 mph	20.7 mph	N/A		Mostly Cloudy
11:53 AM	55.9 °F	-	46.9 °F	72%	29.80 in	10.0 mi	SSW	12.7 mph	20.7 mph	N/A		Mostly Cloudy
12:17 PM	55.9 °F	-	45.0 °F	67%	29.81 in	10.0 mi	SSW	12.7 mph	24.2 mph	N/A		Mostly Cloudy
12:53 PM	55.9 °F	-	43.0 °F	62%	29.80 in	10.0 mi	SW	9.2 mph	26.5 mph	N/A		Mostly Cloudy
1:53 PM	57.9 °F	-	44.1 °F	60%	29.78 in	10.0 mi	SSW	15.0 mph	21.9 mph	N/A		Mostly Cloudy
2:53 PM	57.0 °F	-	39.9 °F	53%	29.78 in	10.0 mi	SSW	15.0 mph	24.2 mph	0.00 in		Mostly Cloudy

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
3:53 PM	54.0 °F	-	39.0 °F	57%	29.81 in	8.0 mi	SW	10.4 mph	31.1 mph	0.01 in	Rain	Light Rain
4:53 PM	54.0 °F	-	41.0 °F	62%	29.83 in	10.0 mi	West	6.9 mph	-	0.00 in		Overcast
5:53 PM	52.0 °F	-	39.9 °F	63%	29.85 in	10.0 mi	WSW	6.9 mph	-	0.00 in		Scattered Clouds
6:53 PM	51.1 °F	-	37.0 °F	59%	29.86 in	10.0 mi	SW	9.2 mph	-	N/A		Mostly Cloudy
7:53 PM	50.0 °F	-	39.0 °F	66%	29.89 in	10.0 mi	SW	5.8 mph	-	N/A		Overcast
8:53 PM	46.9 °F	-	39.0 °F	74%	29.88 in	10.0 mi	SSW	4.6 mph	-	N/A		Clear
9:53 PM	43.0 °F	40.3 °F	39.9 °F	89%	29.89 in	10.0 mi	SSE	4.6 mph	-	N/A		Clear
10:53 PM	43.0 °F	40.3 °F	39.9 °F	89%	29.91 in	10.0 mi	WSW	4.6 mph	-	N/A		Partly Cloudy
11:53 PM	46.0 °F	41.9 °F	37.0 °F	71%	29.91 in	10.0 mi	West	8.1 mph	-	N/A		Clear

|



New Knee Relief Announced

Your knees, shoulders, hips and fingers can feel like new, starting in as little as 7 days



Vital3.com

Parkersburg, WV

Wood County Wilson

☉ 9:50 AM EST on November 07, 2017 (GMT -0500)

Weather History for KPKB - October, 2017

October

25

2017

View

Wednesday, October 25, 2017

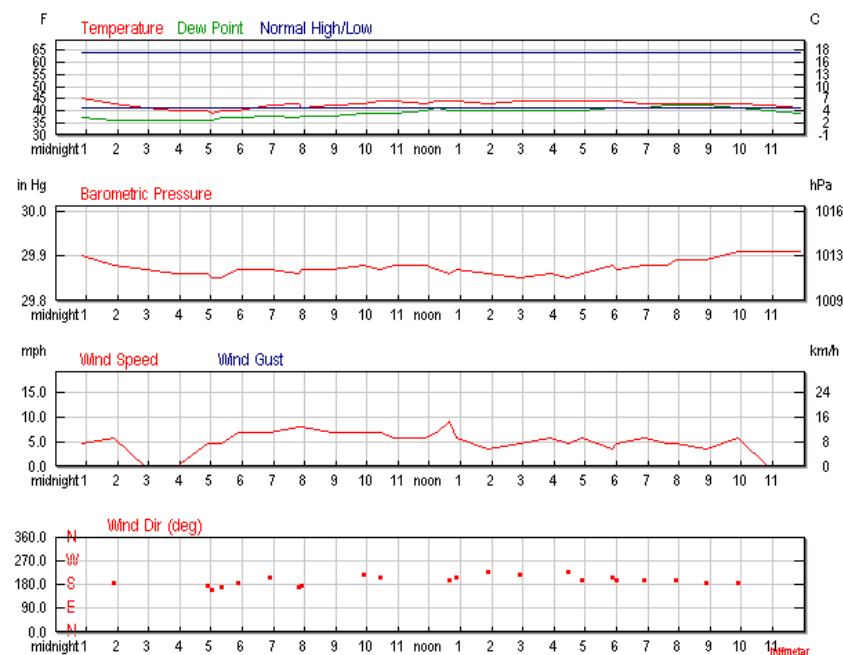
Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				42 °F	53 °F	
Max Temperature				45 °F	64 °F	81 °F (2012)
Min Temperature				38 °F	41 °F	24 °F (1960)
Degree Days						
Heating Degree Days				23	13	
Month to date heating degree days				120	235	
Since 1 July heating degree days				180	311	
Cooling Degree Days				0	0	
Month to date cooling degree days				46	13	
Year to date cooling degree days				973	949	
Moisture						
Dew Point				39 °F		
Average Humidity				86		
Maximum Humidity				96		
Minimum Humidity				76		
Precipitation						
Precipitation				0.05 in	0.10 in	0.72 in (2005)

	Actual	Average	Record
Month to date precipitation	3.29	2.27	
Year to date precipitation	44.05	34.14	
Sea Level Pressure			
Sea Level Pressure	29.87 in		
Wind			
Wind Speed	4 mph (SSW)		
Max Wind Speed	10 mph		
Max Gust Speed	15 mph		
Visibility	8 miles		
Events	Rain		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

25

Submit

Astronomy				
Oct. 25, 2017		Rise		Set
Actual Time		7:46 AM EDT		6:32 PM EDT
Civil Twilight		7:18 AM EDT		7:00 PM EDT
Nautical Twilight		6:47 AM EDT		7:31 PM EDT
Astronomical Twilight		6:16 AM EDT		8:02 PM EDT
Moon		12:52 PM EDT (10/25)		10:54 PM EDT (10/25)
Length of Visible Light		11h 41m		
Length of Day		10h 46m		
Waxing Crescent, 29% of the Moon is Illuminated				
Oct 25	Oct 27	Nov 4	Nov 10	Nov 18
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	45.0 °F	42.6 °F	37.0 °F	74%	29.90 in	10.0 mi	WSW	4.6 mph	-	N/A		Clear
1:53 AM	43.0 °F	39.5 °F	36.0 °F	76%	29.88 in	10.0 mi	South	5.8 mph	-	N/A		Clear
2:53 AM	41.0 °F	-	36.0 °F	82%	29.87 in	6.0 mi	Calm	Calm	-	N/A		Haze
3:53 AM	39.9 °F	-	36.0 °F	86%	29.86 in	10.0 mi	Calm	Calm	-	N/A		Mostly Cloudy
4:53 AM	39.9 °F	36.7 °F	36.0 °F	86%	29.86 in	7.0 mi	South	4.6 mph	-	N/A		Mostly Cloudy
5:02 AM	39.0 °F	35.7 °F	36.0 °F	89%	29.85 in	8.0 mi	SSE	4.6 mph	-	N/A		Mostly Cloudy
5:21 AM	39.9 °F	36.7 °F	37.0 °F	89%	29.85 in	9.0 mi	South	4.6 mph	-	N/A		Mostly Cloudy
5:53 AM	39.9 °F	35.1 °F	37.0 °F	89%	29.87 in	9.0 mi	South	6.9 mph	-	N/A		Overcast
6:53 AM	42.1 °F	37.7 °F	37.9 °F	85%	29.87 in	10.0 mi	SSW	6.9 mph	-	N/A		Overcast
7:50 AM	42.8 °F	38.0 °F	37.4 °F	81%	29.86 in	10.0 mi	South	8.1 mph	-	N/A		Mostly Cloudy
7:53 AM	41.0 °F	35.8 °F	37.9 °F	89%	29.87 in	10.0 mi	South	8.1 mph	-	N/A		Mostly Cloudy
8:53 AM	42.1 °F	37.7 °F	37.9 °F	85%	29.87 in	10.0 mi	Variable	6.9 mph	-	N/A		Overcast
9:53 AM	43.0 °F	38.8 °F	39.0 °F	86%	29.88 in	10.0 mi	SW	6.9 mph	-	N/A		Overcast
10:26 AM	44.1 °F	40.1 °F	39.0 °F	82%	29.87 in	8.0 mi	SSW	6.9 mph	-	N/A		Overcast
10:53 AM	44.1 °F	40.8 °F	39.0 °F	82%	29.88 in	7.0 mi	Variable	5.8 mph	-	N/A		Overcast
11:53 AM	43.0 °F	39.5 °F	39.9 °F	89%	29.88 in	6.0 mi	Variable	5.8 mph	-	0.02 in	Rain	Light Rain
12:15 PM	44.1 °F	40.1 °F	41.0 °F	89%	29.87 in	9.0 mi	Variable	6.9 mph	-	0.00 in	Rain	Light Rain
12:38 PM	44.1 °F	39.0 °F	39.9 °F	85%	29.86 in	10.0 mi	SSW	9.2 mph	-	0.00 in		Overcast
12:53 PM	44.1 °F	40.8 °F	39.9 °F	85%	29.87 in	10.0 mi	SSW	5.8 mph	-	0.00 in		Overcast
1:53 PM	43.0 °F	41.3 °F	39.9 °F	89%	29.86 in	10.0 mi	SW	3.5 mph	-	0.01 in		Overcast
2:53 PM	44.1 °F	41.5 °F	39.9 °F	85%	29.85 in	10.0 mi	SW	4.6 mph	-	0.00 in		Overcast
3:53 PM	44.1 °F	40.8 °F	39.9 °F	85%	29.86 in	10.0 mi	Variable	5.8 mph	-	N/A		Overcast
4:26 PM	44.1 °F	41.5 °F	39.9 °F	85%	29.85 in	7.0 mi	SW	4.6 mph	-	N/A		Overcast
4:53 PM	44.1 °F	40.8 °F	39.9 °F	85%	29.86 in	7.0 mi	SSW	5.8 mph	-	N/A		Overcast
5:53 PM	44.1 °F	42.5 °F	41.0 °F	89%	29.88 in	7.0 mi	SSW	3.5 mph	-	0.01 in	Rain	Light Rain

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
6:00 PM	44.1 °F	41.5 °F	41.0 °F	89%	29.87 in	6.0 mi	SSW	4.6 mph	-	0.00 in		Overcast
6:53 PM	43.0 °F	39.5 °F	41.0 °F	93%	29.88 in	7.0 mi	SSW	5.8 mph	-	0.00 in	Rain	Light Rain
7:37 PM	43.0 °F	40.3 °F	42.1 °F	97%	29.88 in	7.0 mi	Variable	4.6 mph	-	0.00 in		Overcast
7:53 PM	43.0 °F	40.3 °F	42.1 °F	97%	29.89 in	6.0 mi	SSW	4.6 mph	-	0.01 in	Rain	Light Rain
8:53 PM	43.0 °F	41.3 °F	42.1 °F	97%	29.89 in	9.0 mi	South	3.5 mph	-	0.00 in		Overcast
9:53 PM	43.0 °F	39.5 °F	41.0 °F	93%	29.91 in	9.0 mi	South	5.8 mph	-	N/A		Overcast
10:53 PM	42.1 °F	-	39.9 °F	92%	29.91 in	7.0 mi	Calm	Calm	-	N/A		Clear
11:53 PM	41.0 °F	-	39.0 °F	93%	29.91 in	6.0 mi	Calm	Calm	-	N/A		Partly Cloudy

|

Today's Mortgage Rate

3.04%

APR 15 Year Fixed

Select Loan Amount

\$225,000

Parkersburg, WV

Wood County Wilson

© 9:55 AM EST on November 07, 2017 (GMT -0500)

Weather History for KPKB - October, 2017

October

26

2017

View

Thursday, October 26, 2017

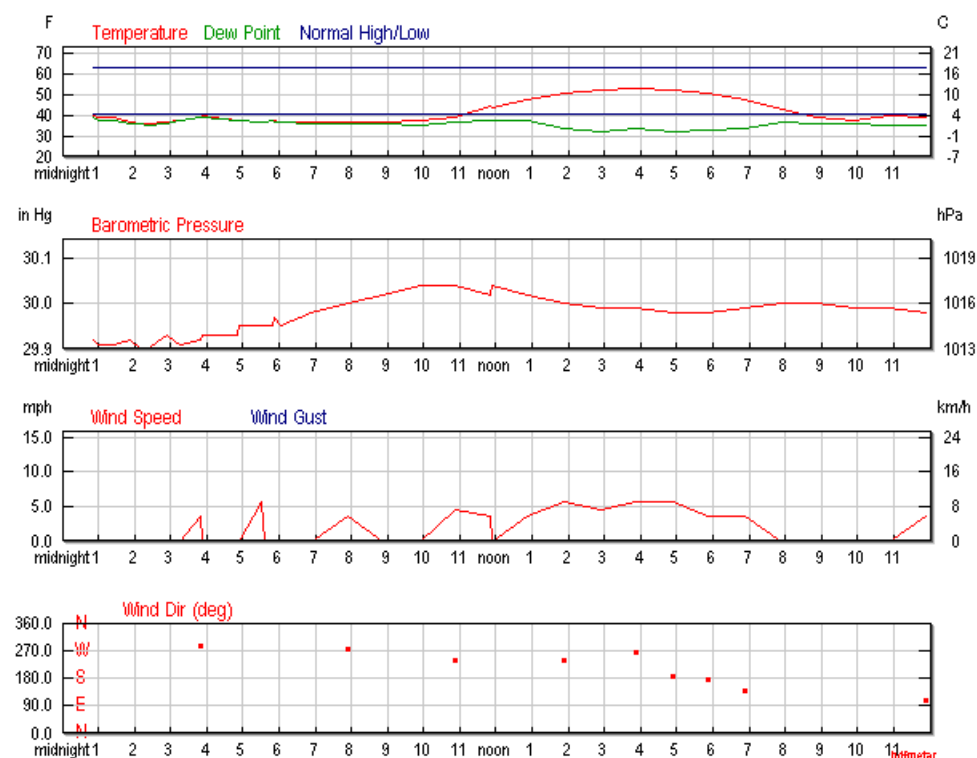
Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				45 °F	52 °F	
Max Temperature				53 °F	63 °F	84 °F (2010)
Min Temperature				36 °F	41 °F	25 °F (1962)
Degree Days						
Heating Degree Days				20	13	
Month to date heating degree days				140	248	
Since 1 July heating degree days				200	324	
Cooling Degree Days				0	0	
Month to date cooling degree days				46	13	
Year to date cooling degree days				973	949	
Moisture						
Dew Point				36 °F		
Average Humidity				73		
Maximum Humidity				100		
Minimum Humidity				46		
Precipitation						
Precipitation				0.00 in	0.09 in	1.13 in (1978)

	Actual	Average	Record
Month to date precipitation	3.29	2.36	
Year to date precipitation	44.05	34.23	
Sea Level Pressure			
Sea Level Pressure	29.97 in		
Wind			
Wind Speed	2 mph (SW)		
Max Wind Speed	10 mph		
Max Gust Speed	15 mph		
Visibility	5 miles		
Events	Fog		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or

windy it might be!

Date:

October

26

Submit

Astronomy

Oct. 26, 2017	Rise	Set		
Actual Time	7:47 AM EDT	6:31 PM EDT		
Civil Twilight	7:19 AM EDT	6:58 PM EDT		
Nautical Twilight	6:48 AM EDT	7:30 PM EDT		
Astronomical Twilight	6:17 AM EDT	8:01 PM EDT		
Moon	1:39 PM EDT (10/26)	11:45 PM EDT (10/26)		
Length of Visible Light	11h 38m			
Length of Day	10h 43m			
Waxing Crescent, 38% of the Moon is Illuminated				
Oct 26	Oct 27	Nov 4	Nov 10	Nov 18
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	39.9 °F	-	39.0 °F	97%	29.92 in	4.0 mi	Calm	Calm	-	N/A		Mostly Cloudy
1:01 AM	39.0 °F	-	37.9 °F	96%	29.91 in	1.8 mi	Calm	Calm	-	N/A		Mostly Cloudy
1:09 AM	39.0 °F	-	37.9 °F	96%	29.91 in	1.0 mi	Calm	Calm	-	N/A		Mostly Cloudy
1:26 AM	39.0 °F	-	37.9 °F	96%	29.91 in	0.5 mi	Calm	Calm	-	N/A	Fog	Fog
1:53 AM	37.0 °F	-	36.0 °F	96%	29.92 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog
2:12 AM	36.0 °F	-	36.0 °F	100%	29.90 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog
2:19 AM	36.0 °F	-	35.1 °F	97%	29.90 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog
2:53 AM	37.0 °F	-	36.0 °F	96%	29.93 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
3:15 AM	37.9 °F	-	37.9 °F	100%	29.91 in	0.5 mi	Calm	Calm	-	N/A	Fog	Fog
3:51 AM	39.2 °F	37.0 °F	39.2 °F	100%	29.92 in	0.2 mi	WNW	3.5 mph	-	N/A	Fog	Fog
3:53 AM	39.9 °F	-	39.0 °F	97%	29.93 in	0.2 mi	Calm	Calm	-	N/A	Fog	Fog
4:50 AM	37.4 °F	-	37.4 °F	100%	29.93 in	0.5 mi	Calm	Calm	-	N/A	Fog	Fog
4:53 AM	37.9 °F	-	37.9 °F	100%	29.95 in	0.5 mi	Calm	Calm	-	N/A	Fog	Fog
5:30 AM	37.0 °F	32.4 °F	37.0 °F	100%	29.95 in	1.5 mi	Variable	5.8 mph	-	N/A		Overcast
5:36 AM	37.0 °F	-	37.0 °F	100%	29.95 in	3.0 mi	Calm	Calm	-	N/A		Overcast
5:49 AM	37.4 °F	-	37.4 °F	100%	29.95 in	2.0 mi	Calm	Calm	-	N/A		Overcast
5:53 AM	37.9 °F	-	37.0 °F	97%	29.97 in	2.5 mi	Calm	Calm	-	N/A		Overcast
6:02 AM	37.0 °F	-	37.0 °F	100%	29.95 in	4.0 mi	Calm	Calm	-	N/A		Overcast
6:53 AM	37.0 °F	-	36.0 °F	96%	29.98 in	5.0 mi	Calm	Calm	-	N/A		Overcast
7:53 AM	37.0 °F	34.5 °F	36.0 °F	96%	30.00 in	3.0 mi	West	3.5 mph	-	N/A		Overcast
8:53 AM	37.0 °F	-	36.0 °F	96%	30.02 in	4.0 mi	Calm	Calm	-	N/A		Overcast
9:53 AM	37.9 °F	-	35.1 °F	89%	30.04 in	6.0 mi	Calm	Calm	-	N/A		Overcast
10:53 AM	39.0 °F	35.7 °F	37.0 °F	93%	30.04 in	9.0 mi	WSW	4.6 mph	-	N/A		Overcast
11:50 AM	44.6 °F	43.1 °F	37.4 °F	76%	30.02 in	10.0 mi	Variable	3.5 mph	-	N/A		Scattered Clouds
11:53 AM	44.1 °F	-	37.9 °F	79%	30.04 in	10.0 mi	Calm	Calm	-	N/A		Scattered Clouds
12:53 PM	48.0 °F	-	37.9 °F	68%	30.02 in	9.0 mi	Variable	3.5 mph	-	N/A		Partly Cloudy
1:53 PM	51.1 °F	-	34.0 °F	52%	30.00 in	10.0 mi	WSW	5.8 mph	-	N/A		Partly Cloudy
2:53 PM	52.0 °F	-	32.0 °F	47%	29.99 in	10.0 mi	Variable	4.6 mph	-	N/A		Clear
3:53 PM	53.1 °F	-	34.0 °F	48%	29.99 in	10.0 mi	West	5.8 mph	-	N/A		Clear
4:53 PM	52.0 °F	-	32.0 °F	47%	29.98 in	10.0 mi	South	5.8 mph	-	N/A		Clear
5:53 PM	51.1 °F	-	33.1 °F	50%	29.98 in	10.0 mi	South	3.5 mph	-	N/A		Clear
6:53 PM	48.0 °F	-	34.0 °F	58%	29.99 in	10.0 mi	SE	3.5 mph	-	N/A		Clear

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
7:53 PM	43.0 °F	-	37.0 °F	80%	30.00 in	10.0 mi	Calm	Calm	-	N/A		Clear
8:53 PM	39.0 °F	-	36.0 °F	89%	30.00 in	10.0 mi	Calm	Calm	-	N/A		Clear
9:53 PM	37.9 °F	-	36.0 °F	93%	29.99 in	10.0 mi	Calm	Calm	-	N/A		Clear
10:53 PM	39.9 °F	-	35.1 °F	83%	29.99 in	10.0 mi	Calm	Calm	-	N/A		Clear
11:53 PM	39.0 °F	36.8 °F	35.1 °F	86%	29.98 in	10.0 mi	ESE	3.5 mph	-	N/A		Clear

|

Wood County Wilson

🕒 4:12 PM EST on December 05, 2017 (GMT -0500)

Friday, October 27, 2017

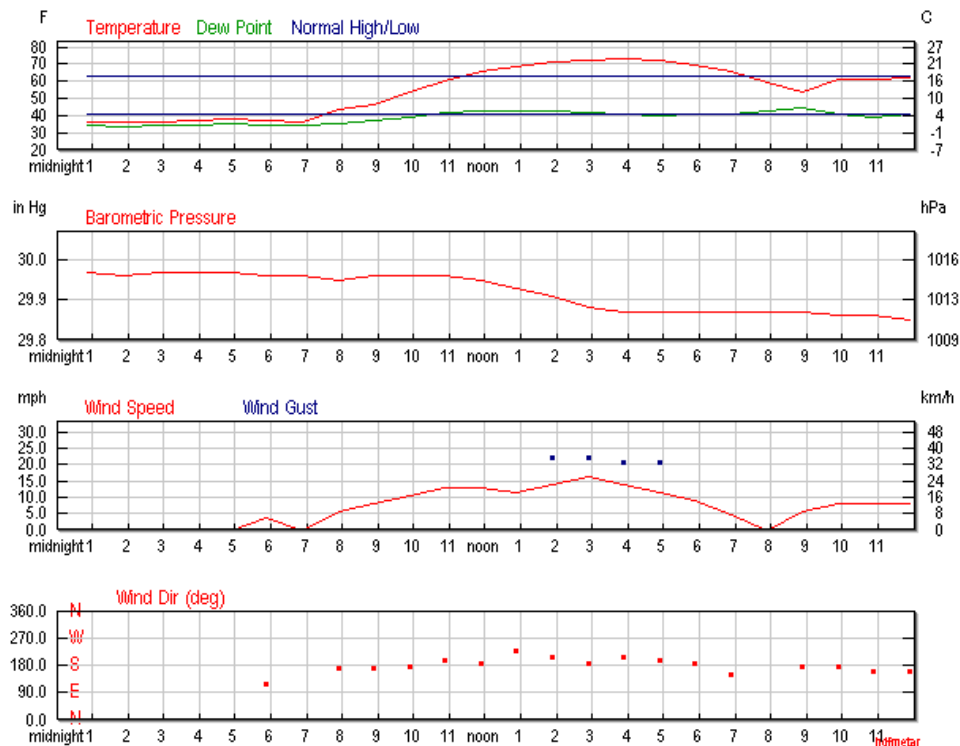
<https://www.wunderground.com/history/airport/KPKB/2017/10/27/DailyHistory.html?req...> 12/5/2017

	Actual	Average	Record
Precipitation	0.00 in	0.10 in	1.20 in (1939)
Month to date precipitation	3.29	2.46	
Year to date precipitation	44.05	34.33	
Sea Level Pressure			
Sea Level Pressure	29.92 in		
Wind			
Wind Speed	7 mph (South)		
Max Wind Speed	21 mph		
Max Gust Speed	29 mph		
Visibility	10 miles		
Events			

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

27

Submit

Astronomy

Oct. 27, 2017	Rise	Set
Actual Time	7:48 AM EDT	6:30 PM EDT
Civil Twilight	7:20 AM EDT	6:57 PM EDT
Nautical Twilight	6:49 AM EDT	7:29 PM EDT
Astronomical Twilight	6:18 AM EDT	8:00 PM EDT
Moon	2:21 PM EDT (10/27)	No Moon Set
Length of Visible Light	11h 36m	
Length of Day	10h 41m	

Waxing Crescent, 48% of the Moon is Illuminated				
Oct 27	Oct 27	Nov 4	Nov 10	Nov 18
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	36.0 °F	-	34.0 °F	93%	29.97 in	10.0 mi	Calm	Calm	-	N/A		Clear
1:53 AM	36.0 °F	-	33.1 °F	89%	29.96 in	10.0 mi	Calm	Calm	-	N/A		Clear
2:53 AM	36.0 °F	-	34.0 °F	93%	29.97 in	10.0 mi	Calm	Calm	-	N/A		Clear
3:53 AM	37.0 °F	-	34.0 °F	89%	29.97 in	10.0 mi	Calm	Calm	-	N/A		Clear
4:53 AM	37.9 °F	-	35.1 °F	89%	29.97 in	10.0 mi	Calm	Calm	-	N/A		Clear
5:53 AM	37.0 °F	34.5 °F	34.0 °F	89%	29.96 in	10.0 mi	ESE	3.5 mph	-	N/A		Clear
6:53 AM	36.0 °F	-	34.0 °F	93%	29.96 in	10.0 mi	Calm	Calm	-	N/A		Clear
7:53 AM	44.1 °F	40.8 °F	35.1 °F	71%	29.95 in	10.0 mi	South	5.8 mph	-	N/A		Clear

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:53 AM	46.9 °F	-	37.0 °F	68%	29.96 in	10.0 mi	South	8.1 mph	-	N/A		Clear
9:53 AM	54.0 °F	-	39.0 °F	57%	29.96 in	10.0 mi	South	10.4 mph	-	N/A		Clear
10:53 AM	60.1 °F	-	42.1 °F	51%	29.96 in	10.0 mi	SSW	12.7 mph	-	N/A		Clear
11:53 AM	66.0 °F	-	43.0 °F	43%	29.95 in	10.0 mi	South	12.7 mph	-	N/A		Clear
12:53 PM	69.1 °F	-	43.0 °F	39%	29.93 in	10.0 mi	SW	11.5 mph	23.0 mph	N/A		Clear
1:53 PM	71.1 °F	-	43.0 °F	36%	29.91 in	10.0 mi	SSW	13.8 mph	21.9 mph	N/A		Clear
2:53 PM	72.0 °F	-	42.1 °F	34%	29.88 in	10.0 mi	South	16.1 mph	21.9 mph	N/A		Clear
3:53 PM	73.0 °F	-	41.0 °F	31%	29.87 in	10.0 mi	SSW	13.8 mph	20.7 mph	N/A		Clear
4:53 PM	72.0 °F	-	39.9 °F	31%	29.87 in	10.0 mi	SSW	11.5 mph	20.7 mph	N/A		Clear
5:53 PM	70.0 °F	-	41.0 °F	35%	29.87 in	10.0 mi	South	9.2 mph	-	N/A		Clear
6:53 PM	66.0 °F	-	41.0 °F	40%	29.87 in	6.0 mi	SSE	4.6 mph	-	N/A		Haze
7:53 PM	59.0 °F	-	43.0 °F	55%	29.87 in	10.0 mi	Calm	Calm	-	N/A		Clear
8:53 PM	54.0 °F	-	45.0 °F	72%	29.87 in	10.0 mi	South	5.8 mph	-	N/A		Clear
9:53 PM	61.0 °F	-	41.0 °F	48%	29.86 in	10.0 mi	South	8.1 mph	-	N/A		Clear
10:53 PM	61.0 °F	-	39.0 °F	44%	29.86 in	10.0 mi	SSE	8.1 mph	-	N/A		Clear
11:53 PM	62.1 °F	-	41.0 °F	46%	29.85 in	10.0 mi	SSE	8.1 mph	-	N/A		Overcast

|



Parkersburg, WV 🏠

Wood County Wilson

🕒 4:00 PM EST on December 05, 2017 (GMT -0500)

Weather History for KPKB - October, 2017

October

28

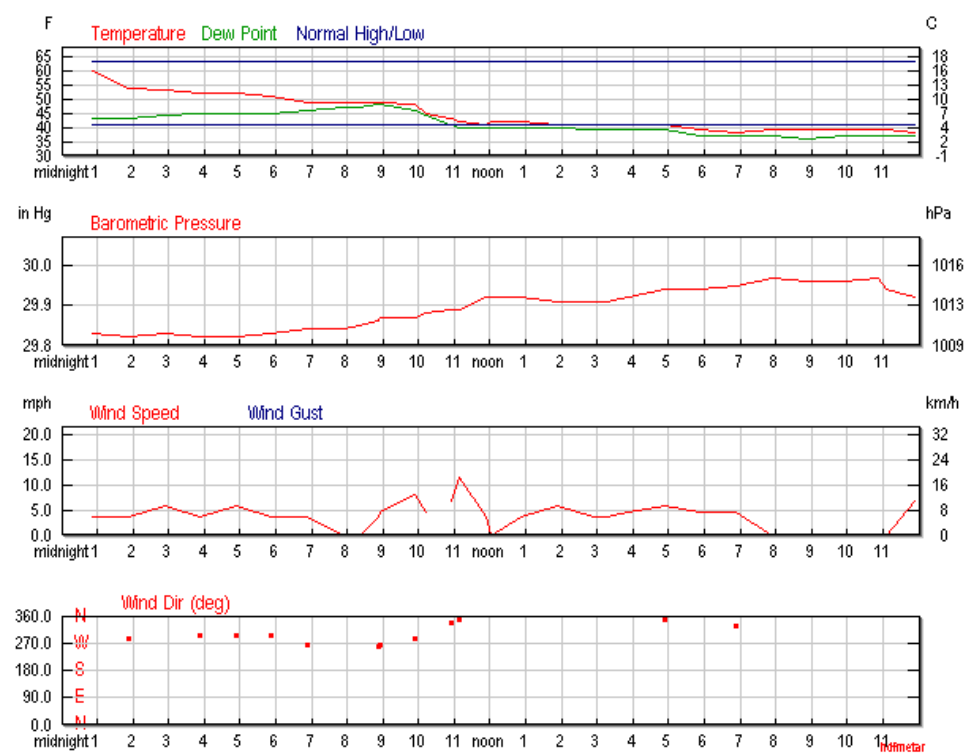
2017

View
Saturday, October 28, 2017

Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				49 °F	52 °F	
Max Temperature				60 °F	63 °F	80 °F (1927)
Min Temperature				38 °F	41 °F	25 °F (1976)
Degree Days						
Heating Degree Days				16	14	
Month to date heating degree days				167	275	
Since 1 July heating degree days				227	351	
Cooling Degree Days				0	0	
Month to date cooling degree days				46	13	
Year to date cooling degree days				973	949	
Moisture						
Dew Point				41 °F		
Average Humidity				76		
Maximum Humidity				100		
Minimum Humidity				51		
Precipitation						
Precipitation				0.50 in	0.10 in	1.18 in (1973)

	Actual	Average	Record
Month to date precipitation	3.79	2.56	
Year to date precipitation	44.55	34.43	
Sea Level Pressure			
Sea Level Pressure	29.89 in		
Wind			
Wind Speed	3 mph (WNW)		
Max Wind Speed	13 mph		
Max Gust Speed	18 mph		
Visibility	7 miles		
Events	Rain		
T = Trace of Precipitation, MM = Missing Value			
Source: NWS Daily Summary			

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy

it might be!

Date:

October

28

Submit

Astronomy

Oct. 28, 2017	Rise	Set		
Actual Time	7:49 AM EDT	6:28 PM EDT		
Civil Twilight	7:21 AM EDT	6:56 PM EDT		
Nautical Twilight	6:50 AM EDT	7:27 PM EDT		
Astronomical Twilight	6:19 AM EDT	7:59 PM EDT		
Moon	3:01 PM EDT (10/28)	12:39 AM EDT (10/28)		
Length of Visible Light	11h 34m			
Length of Day	10h 39m			
First Quarter, 57% of the Moon is Illuminated				
Oct 28	Nov 4	Nov 10	Nov 18	Nov 26
First Quarter	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	60.1 °F	-	43.0 °F	53%	29.83 in	10.0 mi	WNW	3.5 mph	-	N/A		Overcast
1:53 AM	54.0 °F	-	43.0 °F	66%	29.82 in	10.0 mi	WNW	3.5 mph	-	N/A		Partly Cloudy
2:53 AM	53.1 °F	-	44.1 °F	71%	29.83 in	10.0 mi	Variable	5.8 mph	-	N/A		Overcast
3:53 AM	52.0 °F	-	45.0 °F	77%	29.82 in	10.0 mi	WNW	3.5 mph	-	N/A		Overcast
4:53 AM	52.0 °F	-	45.0 °F	77%	29.82 in	10.0 mi	WNW	5.8 mph	-	N/A		Overcast
5:53 AM	51.1 °F	-	45.0 °F	80%	29.83 in	10.0 mi	WNW	3.5 mph	-	N/A		Overcast
6:53 AM	48.9 °F	-	46.0 °F	90%	29.84 in	6.0 mi	West	3.5 mph	-	0.01 in	Rain	Light Rain
7:53 AM	48.9 °F	-	46.9 °F	93%	29.84 in	6.0 mi	Calm	Calm	-	0.05 in	Rain	Light Rain

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:20 AM	48.9 °F	-	46.9 °F	93%	29.85 in	4.0 mi	Calm	Calm	-	0.01 in	Rain	Light Rain
8:53 AM	48.9 °F	-	48.0 °F	97%	29.86 in	4.0 mi	West	3.5 mph	-	0.03 in	Rain	Light Rain
8:55 AM	48.9 °F	-	48.0 °F	97%	29.87 in	2.0 mi	West	4.6 mph	-	0.00 in	Rain	Light Rain
9:53 AM	48.0 °F	-	46.0 °F	93%	29.87 in	2.0 mi	WNW	8.1 mph	-	0.00 in		Overcast
10:12 AM	45.0 °F	42.6 °F	44.1 °F	97%	29.88 in	2.0 mi	Variable	4.6 mph	-	N/A		Overcast
10:53 AM	43.0 °F	-	41.0 °F	93%	29.89 in	2.0 mi	North	-	-	N/A		Overcast
10:55 AM	43.0 °F	38.8 °F	41.0 °F	93%	29.89 in	10.0 mi	NNW	6.9 mph	-	N/A		Overcast
11:09 AM	42.1 °F	35.7 °F	39.9 °F	92%	29.89 in	10.0 mi	North	11.5 mph	-	N/A		Overcast
11:53 AM	41.0 °F	39.0 °F	39.9 °F	96%	29.92 in	5.0 mi	Variable	3.5 mph	-	0.01 in	Rain	Light Rain
12:00 PM	42.1 °F	-	39.9 °F	92%	29.92 in	6.0 mi	Calm	Calm	-	0.00 in	Rain	Light Rain
12:53 PM	42.1 °F	40.2 °F	39.9 °F	92%	29.92 in	9.0 mi	Variable	3.5 mph	-	0.03 in	Rain	Light Rain
1:53 PM	41.0 °F	37.1 °F	39.9 °F	96%	29.91 in	10.0 mi	Variable	5.8 mph	-	0.02 in	Rain	Light Rain
2:53 PM	41.0 °F	39.0 °F	39.0 °F	93%	29.91 in	4.0 mi	Variable	3.5 mph	-	0.01 in		Overcast
3:16 PM	41.0 °F	39.0 °F	39.0 °F	93%	29.91 in	2.5 mi	Variable	3.5 mph	-	0.01 in	Rain	Light Rain
3:53 PM	41.0 °F	38.0 °F	39.0 °F	93%	29.92 in	7.0 mi	Variable	4.6 mph	-	0.04 in	Rain	Light Rain
4:53 PM	41.0 °F	37.1 °F	39.0 °F	93%	29.94 in	5.0 mi	North	5.8 mph	-	0.05 in	Rain	Light Rain
5:53 PM	39.0 °F	35.7 °F	37.0 °F	93%	29.94 in	10.0 mi	Variable	4.6 mph	-	0.03 in		Overcast
6:53 PM	37.9 °F	34.4 °F	37.0 °F	97%	29.95 in	8.0 mi	NNW	4.6 mph	-	0.02 in	Rain	Light Rain
7:53 PM	39.0 °F	-	37.0 °F	93%	29.97 in	9.0 mi	Calm	Calm	-	0.02 in	Rain	Light Rain
8:53 PM	39.0 °F	-	36.0 °F	89%	29.96 in	10.0 mi	Calm	Calm	-	0.00 in	Rain	Light Rain
9:53 PM	39.0 °F	-	37.0 °F	93%	29.96 in	5.0 mi	Calm	Calm	-	0.04 in	Rain	Light Rain
10:53 PM	39.0 °F	-	37.0 °F	93%	29.97 in	7.0 mi	Calm	Calm	-	0.05 in	Rain	Light Rain
11:05 PM	39.0 °F	-	37.0 °F	93%	29.94 in	6.0 mi	Calm	Calm	-	0.01 in	Rain	Light Rain
11:53 PM	37.9 °F	32.7 °F	37.0 °F	97%	29.92 in	4.0 mi	Variable	6.9 mph	-	0.03 in	Rain	Light Rain

|



Parkersburg, WV 🏠

Wood County Wilson

🌙 4:01 PM EST on December 05, 2017 (GMT -0500)

Weather History for KPKB - October, 2017

October

29

2017

View

Sunday, October 29, 2017

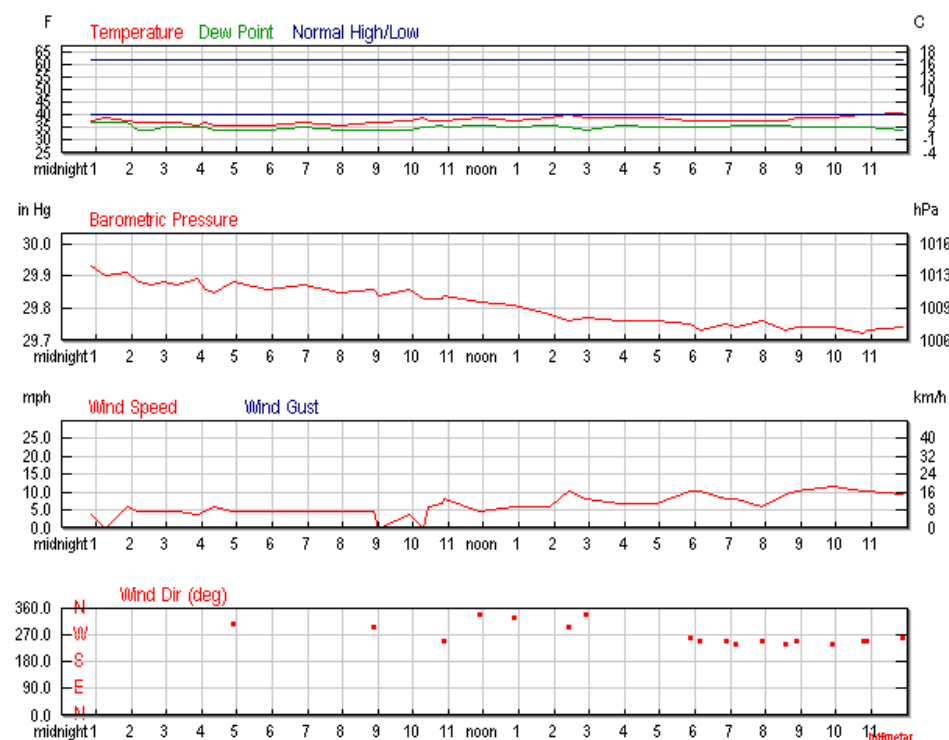
Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				39 °F	51 °F	
Max Temperature				41 °F	62 °F	82 °F (1927)
Min Temperature				36 °F	40 °F	25 °F (2001)
Degree Days						
Heating Degree Days				26	14	
Month to date heating degree days				193	289	
Since 1 July heating degree days				253	365	
Cooling Degree Days				0	0	
Month to date cooling degree days				46	13	
Year to date cooling degree days				973	949	
Moisture						
Dew Point				35 °F		
Average Humidity				87		
Maximum Humidity				100		
Minimum Humidity				73		
Precipitation						
Precipitation				0.05 in	0.10 in	0.87 in (2012)
Month to date precipitation				3.84	2.66	

	Actual	Average	Record
Year to date precipitation	44.60	34.53	
Sea Level Pressure			
Sea Level Pressure	29.81 in		
Wind			
Wind Speed	7 mph (West)		
Max Wind Speed	15 mph		
Max Gust Speed	22 mph		
Visibility	9 miles		
Events	Rain		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

29

Submit

Astronomy				
Oct. 29, 2017		Rise		Set
Actual Time		7:50 AM EDT		6:27 PM EDT
Civil Twilight		7:23 AM EDT		6:55 PM EDT
Nautical Twilight		6:51 AM EDT		7:26 PM EDT
Astronomical Twilight		6:20 AM EDT		7:58 PM EDT
Moon		3:37 PM EDT (10/29)		1:36 AM EDT (10/29)
Length of Visible Light		11h 32m		
Length of Day		10h 36m		
Waxing Gibbous, 67% of the Moon is Illuminated				
Oct 29	Nov 4	Nov 10	Nov 18	Nov 26
Waxing Gibbous	Full	Last Quarter	New	First Quarter

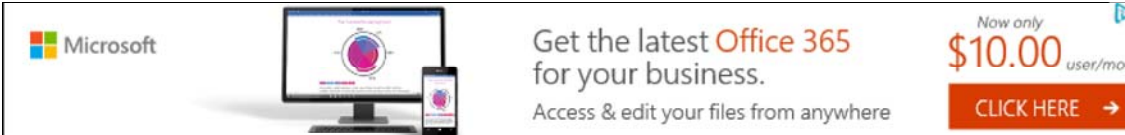
Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	37.9 °F	35.5 °F	37.0 °F	97%	29.93 in	4.0 mi	West	3.5 mph	-	0.05 in	Rain	Light Rain
1:16 AM	39.0 °F	-	37.0 °F	93%	29.90 in	4.0 mi	Calm	Calm	-	0.03 in	Rain	Light Rain
1:53 AM	37.9 °F	33.5 °F	37.0 °F	97%	29.91 in	7.0 mi	Variable	5.8 mph	-	0.05 in	Rain	Light Rain
2:12 AM	37.0 °F	33.3 °F	34.0 °F	89%	29.88 in	10.0 mi	Variable	4.6 mph	-	0.00 in	Rain	Light Rain
2:36 AM	37.0 °F	33.3 °F	34.0 °F	89%	29.87 in	10.0 mi	Variable	4.6 mph	-	0.00 in		Overcast
2:53 AM	37.0 °F	33.3 °F	35.1 °F	93%	29.88 in	10.0 mi	Variable	4.6 mph	-	0.00 in	Rain	Light Rain
3:18 AM	37.0 °F	33.3 °F	35.1 °F	93%	29.87 in	10.0 mi	Variable	4.6 mph	-	0.00 in		Overcast
3:53 AM	36.0 °F	33.3 °F	35.1 °F	97%	29.89 in	10.0 mi	Variable	3.5 mph	-	0.00 in		Overcast
4:07 AM	37.0 °F	33.3 °F	35.1 °F	93%	29.86 in	10.0 mi	Variable	4.6 mph	-	N/A		Overcast
4:21 AM	36.0 °F	31.1 °F	34.0 °F	93%	29.85 in	7.0 mi	Variable	5.8 mph	-	N/A		Overcast

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
4:53 AM	36.0 °F	32.1 °F	34.0 °F	93%	29.88 in	10.0 mi	NW	4.6 mph	-	N/A		Overcast
5:53 AM	36.0 °F	32.1 °F	34.0 °F	93%	29.86 in	10.0 mi	Variable	4.6 mph	-	N/A		Overcast
6:53 AM	37.0 °F	33.3 °F	35.1 °F	93%	29.87 in	10.0 mi	Variable	4.6 mph	-	N/A		Overcast
7:53 AM	36.0 °F	32.1 °F	34.0 °F	93%	29.85 in	10.0 mi	Variable	4.6 mph	-	N/A		Overcast
8:53 AM	37.0 °F	33.3 °F	34.0 °F	89%	29.86 in	10.0 mi	WNW	4.6 mph	-	N/A		Overcast
9:00 AM	37.0 °F	-	34.0 °F	89%	29.84 in	10.0 mi	Calm	Calm	-	N/A		Overcast
9:53 AM	37.9 °F	35.5 °F	34.0 °F	86%	29.86 in	10.0 mi	Variable	3.5 mph	-	0.00 in		Overcast
10:17 AM	39.0 °F	-	35.1 °F	86%	29.83 in	10.0 mi	Calm	Calm	-	N/A		Overcast
10:27 AM	37.9 °F	33.5 °F	35.1 °F	89%	29.83 in	10.0 mi	Variable	5.8 mph	-	N/A		Overcast
10:50 AM	37.4 °F	32.1 °F	35.6 °F	93%	29.83 in	8.0 mi	Variable	6.9 mph	-	0.00 in	Rain	Light Rain
10:53 AM	37.9 °F	32.1 °F	35.1 °F	89%	29.84 in	8.0 mi	WSW	8.1 mph	-	0.00 in	Rain	Light Rain
11:53 AM	39.0 °F	35.7 °F	36.0 °F	89%	29.82 in	9.0 mi	NNW	4.6 mph	-	0.00 in		Overcast
12:53 PM	37.9 °F	33.5 °F	35.1 °F	89%	29.81 in	10.0 mi	NNW	5.8 mph	-	0.00 in		Overcast
1:53 PM	39.0 °F	34.8 °F	36.0 °F	89%	29.78 in	8.0 mi	Variable	5.8 mph	-	N/A		Overcast
2:24 PM	39.9 °F	33.4 °F	35.1 °F	83%	29.76 in	10.0 mi	WNW	10.4 mph	-	N/A		Overcast
2:53 PM	39.0 °F	33.4 °F	34.0 °F	82%	29.77 in	10.0 mi	NNW	8.1 mph	-	N/A		Overcast
3:53 PM	39.0 °F	34.0 °F	36.0 °F	89%	29.76 in	5.0 mi	Variable	6.9 mph	-	N/A		Overcast
4:53 PM	39.0 °F	34.0 °F	35.1 °F	86%	29.76 in	7.0 mi	Variable	6.9 mph	17.3 mph	N/A		Overcast
5:53 PM	37.9 °F	30.9 °F	35.1 °F	89%	29.75 in	10.0 mi	West	10.4 mph	-	0.01 in	Rain	Light Rain
6:09 PM	37.9 °F	30.9 °F	35.1 °F	89%	29.73 in	10.0 mi	WSW	10.4 mph	-	0.00 in	Rain	Light Rain
6:53 PM	37.9 °F	32.1 °F	35.1 °F	89%	29.75 in	10.0 mi	WSW	8.1 mph	-	0.00 in		Overcast
7:10 PM	37.9 °F	32.1 °F	36.0 °F	93%	29.74 in	10.0 mi	WSW	8.1 mph	-	N/A		Overcast
7:53 PM	37.9 °F	33.5 °F	36.0 °F	93%	29.76 in	10.0 mi	WSW	5.8 mph	-	N/A		Overcast
8:33 PM	37.9 °F	31.5 °F	36.0 °F	93%	29.73 in	10.0 mi	WSW	9.2 mph	-	0.00 in		Overcast

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:53 PM	39.0 °F	32.3 °F	35.1 °F	86%	29.74 in	10.0 mi	WSW	10.4 mph	-	0.00 in		Overcast
9:53 PM	39.0 °F	31.8 °F	35.1 °F	86%	29.74 in	10.0 mi	WSW	11.5 mph	-	N/A		Overcast
10:46 PM	39.9 °F	33.4 °F	35.1 °F	83%	29.72 in	10.0 mi	WSW	10.4 mph	-	N/A		Overcast
10:53 PM	39.9 °F	33.4 °F	35.1 °F	83%	29.73 in	10.0 mi	WSW	10.4 mph	-	N/A		Overcast
11:53 PM	41.0 °F	35.2 °F	34.0 °F	76%	29.74 in	10.0 mi	West	9.2 mph	19.6 mph	N/A		Overcast

|



Microsoft

Get the latest Office 365 for your business.

Access & edit your files from anywhere

Now only **\$10.00** user/mo.

CLICK HERE →

Parkersburg, WV 🏠

Wood County Wilson

🕒 4:03 PM EST on December 05, 2017 (GMT -0500)

Weather History for KPKB - October, 2017

October

30

2017

View

Monday, October 30, 2017

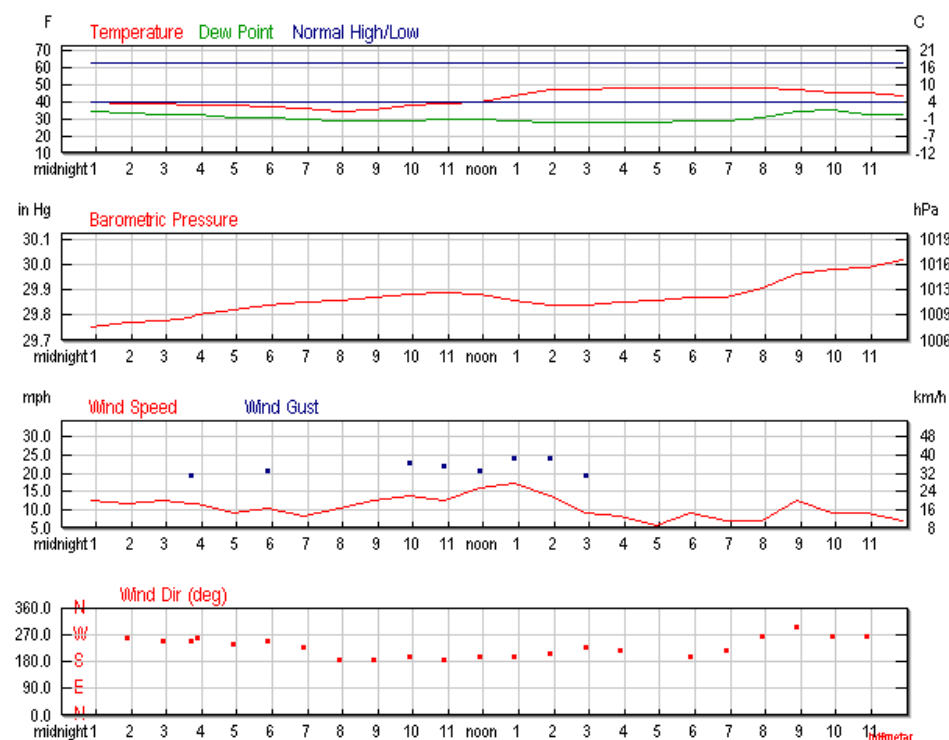
Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				41 °F	51 °F	
Max Temperature				48 °F	62 °F	83 °F (1971)
Min Temperature				34 °F	40 °F	23 °F (1965)
Degree Days						
Heating Degree Days				24	14	
Month to date heating degree days				217	303	
Since 1 July heating degree days				277	379	
Cooling Degree Days				0	0	
Month to date cooling degree days				46	13	
Year to date cooling degree days				973	949	
Moisture						
Dew Point				31 °F		
Average Humidity				64		
Maximum Humidity				82		
Minimum Humidity				46		
Precipitation						
Precipitation				T in	0.10 in	1.60 in (1970)
Month to date precipitation				3.84	2.76	

	Actual	Average	Record
Year to date precipitation	44.60	34.63	
Sea Level Pressure			
Sea Level Pressure	29.87 in		
Wind			
Wind Speed	10 mph (SW)		
Max Wind Speed	20 mph		
Max Gust Speed	27 mph		
Visibility	10 miles		
Events			

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

30

Submit

Astronomy				
Oct. 30, 2017		Rise	Set	
Actual Time		7:51 AM EDT	6:26 PM EDT	
Civil Twilight		7:24 AM EDT	6:54 PM EDT	
Nautical Twilight		6:52 AM EDT	7:25 PM EDT	
Astronomical Twilight		6:21 AM EDT	7:56 PM EDT	
Moon		4:12 PM EDT (10/30)	2:36 AM EDT (10/30)	
Length of Visible Light		11h 30m		
Length of Day		10h 34m		
Waxing Gibbous, 76% of the Moon is Illuminated				
Oct 30	Nov 4	Nov 10	Nov 18	Nov 26
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	39.9 °F	32.5 °F	34.0 °F	79%	29.75 in	10.0 mi	West	12.7 mph	21.9 mph	N/A		Overcast
1:53 AM	39.0 °F	31.8 °F	33.1 °F	79%	29.77 in	10.0 mi	West	11.5 mph	-	N/A		Overcast
2:53 AM	39.0 °F	31.4 °F	32.0 °F	76%	29.78 in	10.0 mi	WSW	12.7 mph	21.9 mph	N/A		Overcast
3:43 AM	37.9 °F	30.5 °F	32.0 °F	79%	29.79 in	10.0 mi	WSW	11.5 mph	19.6 mph	N/A		Overcast
3:53 AM	37.9 °F	30.5 °F	32.0 °F	79%	29.80 in	10.0 mi	West	11.5 mph	-	N/A		Overcast
4:53 AM	37.9 °F	31.5 °F	30.9 °F	76%	29.82 in	10.0 mi	WSW	9.2 mph	19.6 mph	N/A		Overcast
5:53 AM	37.0 °F	29.8 °F	30.9 °F	79%	29.84 in	10.0 mi	WSW	10.4 mph	20.7 mph	N/A		Overcast
6:53 AM	36.0 °F	29.6 °F	30.0 °F	79%	29.85 in	10.0 mi	SW	8.1 mph	-	N/A		Mostly Cloudy
7:53 AM	34.0 °F	26.0 °F	28.9 °F	82%	29.86 in	10.0 mi	South	10.4 mph	-	N/A		Clear
8:53 AM	35.1 °F	26.4 °F	28.9 °F	78%	29.87 in	10.0 mi	South	12.7 mph	20.7 mph	N/A		Clear

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:53 AM	37.9 °F	29.6 °F	28.9 °F	70%	29.88 in	10.0 mi	SSW	13.8 mph	23.0 mph	N/A		Mostly Cloudy
10:53 AM	39.0 °F	31.4 °F	30.0 °F	70%	29.89 in	10.0 mi	South	12.7 mph	21.9 mph	N/A		Overcast
11:53 AM	39.9 °F	31.4 °F	30.0 °F	68%	29.88 in	10.0 mi	SSW	16.1 mph	20.7 mph	N/A		Overcast
12:53 PM	43.0 °F	35.1 °F	28.9 °F	58%	29.86 in	10.0 mi	SSW	17.3 mph	24.2 mph	N/A		Overcast
1:53 PM	46.9 °F	-	28.0 °F	48%	29.84 in	10.0 mi	SSW	13.8 mph	24.2 mph	N/A		Overcast
2:53 PM	46.9 °F	-	28.0 °F	48%	29.84 in	10.0 mi	SW	9.2 mph	19.6 mph	N/A		Overcast
3:53 PM	48.0 °F	-	28.0 °F	46%	29.85 in	10.0 mi	SW	8.1 mph	-	N/A		Overcast
4:53 PM	48.0 °F	-	28.0 °F	46%	29.86 in	10.0 mi	Variable	5.8 mph	-	N/A		Overcast
5:53 PM	48.0 °F	-	28.9 °F	48%	29.87 in	10.0 mi	SSW	9.2 mph	-	N/A		Overcast
6:53 PM	48.0 °F	-	28.9 °F	48%	29.87 in	10.0 mi	SW	6.9 mph	-	N/A		Overcast
7:53 PM	48.0 °F	-	30.9 °F	52%	29.91 in	10.0 mi	West	6.9 mph	-	N/A		Overcast
8:53 PM	46.9 °F	-	34.0 °F	61%	29.96 in	10.0 mi	WNW	12.7 mph	20.7 mph	N/A		Overcast
9:53 PM	45.0 °F	40.1 °F	35.1 °F	68%	29.98 in	10.0 mi	West	9.2 mph	-	0.00 in		Overcast
10:53 PM	45.0 °F	40.1 °F	32.0 °F	60%	29.99 in	10.0 mi	West	9.2 mph	-	N/A		Overcast
11:53 PM	43.0 °F	38.8 °F	32.0 °F	65%	30.02 in	10.0 mi	Variable	6.9 mph	-	N/A		Clear

|



🕒 4:04 PM EST on December 05, 2017 (GMT -0500)

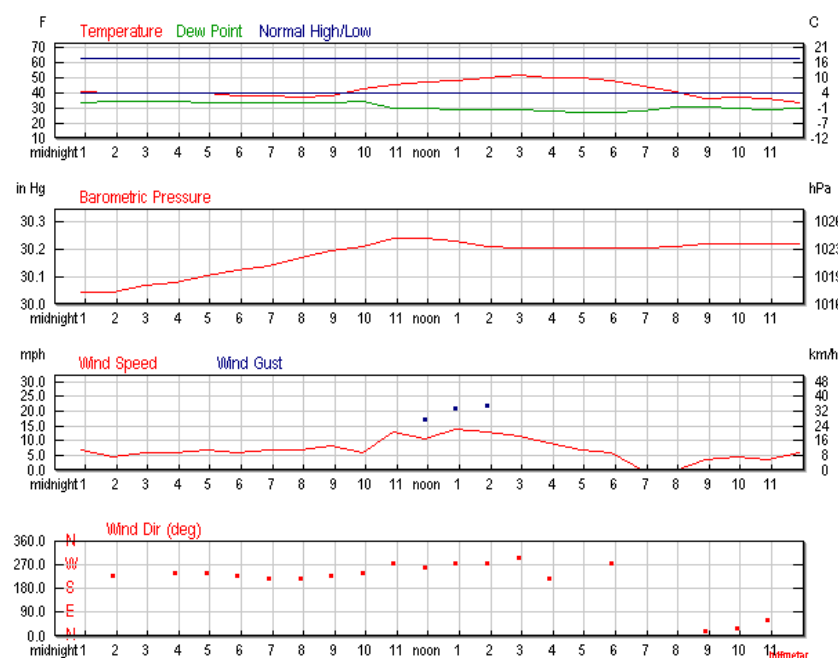
Daily	Weekly	Monthly	Custom
	Actual	Average	Record
Temperature			
Mean Temperature	43 °F	51 °F	
Max Temperature	52 °F	62 °F	83 °F (1950)
Min Temperature	33 °F	40 °F	25 °F (1988)
Degree Days			
Heating Degree Days	22	14	
Month to date heating degree days	239	317	
Since 1 July heating degree days	299	394	
Cooling Degree Days	0	0	
Month to date cooling degree days	46	17	
Year to date cooling degree days	973	953	
Moisture			
Dew Point	31 °F		
Average Humidity	64		
Maximum Humidity	89		
Minimum Humidity	39		
Precipitation			
Precipitation	0.00 in	0.10 in	1.18 in (1942)
Month to date precipitation	3.84	2.86	

	Actual	Average	Record
Year to date precipitation	44.60	34.73	
Sea Level Pressure			
Sea Level Pressure	30.17 in		
Wind			
Wind Speed	7 mph (WSW)		
Max Wind Speed	21 mph		
Max Gust Speed	26 mph		
Visibility	10 miles		
Events			

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

October

31

Submit

Astronomy

Oct. 31, 2017	Rise	Set		
Actual Time	7:52 AM EDT	6:25 PM EDT		
Civil Twilight	7:25 AM EDT	6:53 PM EDT		
Nautical Twilight	6:53 AM EDT	7:24 PM EDT		
Astronomical Twilight	6:22 AM EDT	7:55 PM EDT		
Moon	4:45 PM EDT (10/31)	3:38 AM EDT (10/31)		
Length of Visible Light	11h 27m			
Length of Day	10h 32m			
Waxing Gibbous, 84% of the Moon is Illuminated				
Oct 31	Nov 4	Nov 10	Nov 18	Nov 26
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	41.0 °F	36.4 °F	33.1 °F	73%	30.04 in	10.0 mi	WSW	6.9 mph	-	N/A		Clear
1:53 AM	39.9 °F	36.7 °F	34.0 °F	79%	30.04 in	10.0 mi	SW	4.6 mph	-	N/A		Clear
2:53 AM	39.9 °F	35.8 °F	34.0 °F	79%	30.07 in	10.0 mi	Variable	5.8 mph	-	N/A		Mostly Cloudy
3:53 AM	39.9 °F	35.8 °F	34.0 °F	79%	30.08 in	10.0 mi	WSW	5.8 mph	-	N/A		Clear
4:53 AM	39.9 °F	35.1 °F	33.1 °F	77%	30.10 in	10.0 mi	WSW	6.9 mph	-	N/A		Clear
5:53 AM	37.9 °F	33.5 °F	33.1 °F	83%	30.12 in	10.0 mi	SW	5.8 mph	-	N/A		Clear
6:53 AM	37.9 °F	32.7 °F	33.1 °F	83%	30.14 in	10.0 mi	SW	6.9 mph	-	N/A		Clear
7:53 AM	37.0 °F	31.6 °F	33.1 °F	86%	30.17 in	10.0 mi	SW	6.9 mph	-	N/A		Clear
8:53 AM	37.9 °F	32.1 °F	33.1 °F	83%	30.19 in	10.0 mi	SW	8.1 mph	-	N/A		Clear
9:53 AM	42.1 °F	38.4 °F	34.0 °F	73%	30.21 in	10.0 mi	WSW	5.8 mph	-	N/A		Clear
10:53 AM	45.0 °F	38.9 °F	30.0 °F	56%	30.24 in	10.0 mi	West	12.7 mph	18.4 mph	N/A		Partly Cloudy
11:53 AM	46.9 °F	-	30.0 °F	52%	30.24 in	10.0 mi	West	10.4 mph	17.3 mph	N/A		Scattered Clouds
12:53 PM	48.0 °F	-	28.9 °F	48%	30.23 in	10.0 mi	West	13.8 mph	20.7 mph	N/A		Scattered Clouds
1:53 PM	50.0 °F	-	28.9 °F	44%	30.21 in	10.0 mi	West	12.7 mph	21.9 mph	N/A		Scattered Clouds
2:53 PM	51.1 °F	-	28.9 °F	43%	30.20 in	10.0 mi	WNW	11.5 mph	-	N/A		Scattered Clouds
3:53 PM	50.0 °F	-	28.0 °F	43%	30.20 in	10.0 mi	SW	9.2 mph	18.4 mph	N/A		Partly Cloudy
4:53 PM	50.0 °F	-	27.0 °F	41%	30.20 in	10.0 mi	Variable	6.9 mph	-	N/A		Clear
5:53 PM	48.0 °F	-	27.0 °F	44%	30.20 in	10.0 mi	West	5.8 mph	-	N/A		Clear
6:53 PM	44.1 °F	-	28.0 °F	53%	30.20 in	10.0 mi	Calm	Calm	-	N/A		Clear
7:53 PM	41.0 °F	-	30.9 °F	67%	30.21 in	10.0 mi	Calm	Calm	-	N/A		Clear
8:53 PM	36.0 °F	33.3 °F	30.9 °F	82%	30.22 in	10.0 mi	NNE	3.5 mph	-	N/A		Clear
9:53 PM	37.0 °F	33.3 °F	30.0 °F	76%	30.22 in	10.0 mi	NNE	4.6 mph	-	N/A		Clear

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
10:53 PM	36.0 °F	33.3 °F	28.9 °F	76%	30.22 in	10.0 mi	ENE	3.5 mph	-	N/A		Clear
11:53 PM	33.1 °F	27.7 °F	30.0 °F	89%	30.22 in	10.0 mi	Variable	5.8 mph	-	N/A		Clear

|



Parkersburg, WV

Wood County Wilson

© 4:07 PM EST on December 05, 2017 (GMT -0500)

Weather History for KPKB - November, 2017

November

1

2017

View
Wednesday, November 1, 2017

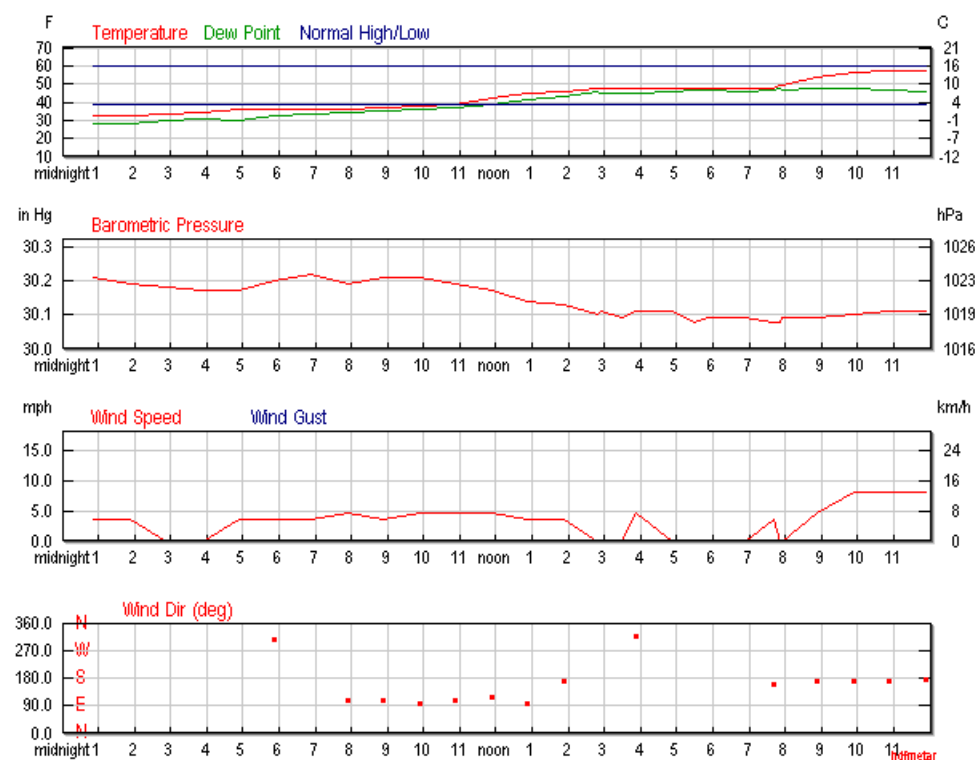
Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				46 °F	50 °F	
Max Temperature				59 °F	61 °F	82 °F (1987)
Min Temperature				32 °F	40 °F	27 °F (2010)
Degree Days						
Heating Degree Days				19	15	
Month to date heating degree days				19	15	
Since 1 July heating degree days				318	409	
Cooling Degree Days				0	0	
Month to date cooling degree days				0	0	
Year to date cooling degree days				973	953	
Moisture						
Dew Point				41 °F		
Average Humidity				84		
Maximum Humidity				100		
Minimum Humidity				67		
Precipitation						
Precipitation				0.14 in	0.11 in	1.24 in (1940)

	Actual	Average	Record
Month to date precipitation	0.14	0.11	
Year to date precipitation	44.74	34.84	
Sea Level Pressure			
Sea Level Pressure	30.14 in		
Wind			
Wind Speed	4 mph (SE)		
Max Wind Speed	10 mph		
Max Gust Speed	14 mph		
Visibility	9 miles		
Events	Rain		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or

windy it might be!

Date:

November

1

Submit

Astronomy

Nov. 01, 2017	Rise	Set		
Actual Time	7:53 AM EDT	6:24 PM EDT		
Civil Twilight	7:26 AM EDT	6:51 PM EDT		
Nautical Twilight	6:54 AM EDT	7:23 PM EDT		
Astronomical Twilight	6:23 AM EDT	7:54 PM EDT		
Moon	5:18 PM EDT (11/1)	4:42 AM EDT (11/1)		
Length of Visible Light	11h 25m			
Length of Day	10h 30m			
Waxing Gibbous, 91% of the Moon is Illuminated				
Nov 1	Nov 4	Nov 10	Nov 18	Nov 26
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	33.1 °F	30.0 °F	28.9 °F	85%	30.21 in	10.0 mi	Variable	3.5 mph	-	N/A		Clear
1:53 AM	33.1 °F	30.0 °F	28.9 °F	85%	30.19 in	10.0 mi	Variable	3.5 mph	-	N/A		Clear
2:53 AM	34.0 °F	-	30.9 °F	89%	30.18 in	10.0 mi	Calm	Calm	-	N/A		Overcast
3:53 AM	35.1 °F	-	32.0 °F	89%	30.17 in	10.0 mi	Calm	Calm	-	N/A		Overcast
4:53 AM	37.0 °F	34.5 °F	30.9 °F	79%	30.17 in	10.0 mi	Variable	3.5 mph	-	N/A		Overcast
5:53 AM	37.0 °F	34.5 °F	33.1 °F	86%	30.20 in	10.0 mi	NW	3.5 mph	-	N/A		Overcast
6:53 AM	37.0 °F	34.5 °F	34.0 °F	89%	30.22 in	10.0 mi	Variable	3.5 mph	-	0.03 in	Rain	Light Rain
7:53 AM	37.0 °F	33.3 °F	35.1 °F	93%	30.19 in	5.0 mi	ESE	4.6 mph	-	0.06 in	Rain	Light Rain

Time (EDT)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:53 AM	37.9 °F	35.5 °F	36.0 °F	93%	30.21 in	7.0 mi	ESE	3.5 mph	-	0.01 in	Rain	Light Rain
9:53 AM	39.0 °F	35.7 °F	37.0 °F	93%	30.21 in	7.0 mi	East	4.6 mph	-	0.01 in	Rain	Light Rain
10:53 AM	39.9 °F	36.7 °F	37.9 °F	93%	30.19 in	7.0 mi	ESE	4.6 mph	-	0.00 in		Overcast
11:53 AM	43.0 °F	40.3 °F	39.9 °F	89%	30.17 in	10.0 mi	ESE	4.6 mph	-	0.00 in		Overcast
12:53 PM	46.0 °F	44.8 °F	42.1 °F	86%	30.14 in	10.0 mi	East	3.5 mph	-	0.00 in		Overcast
1:53 PM	46.9 °F	-	44.1 °F	90%	30.13 in	8.0 mi	South	3.5 mph	-	0.03 in	Rain	Light Rain
2:48 PM	48.2 °F	-	46.4 °F	93%	30.10 in	10.0 mi	Calm	Calm	-	0.00 in		Overcast
2:53 PM	48.9 °F	-	46.0 °F	90%	30.11 in	10.0 mi	Calm	Calm	-	0.00 in		Overcast
3:28 PM	48.9 °F	-	46.0 °F	90%	30.09 in	10.0 mi	Calm	Calm	-	0.00 in	Rain	Light Rain
3:53 PM	48.9 °F	-	46.0 °F	90%	30.11 in	10.0 mi	NW	4.6 mph	-	0.00 in	Rain	Light Rain
4:53 PM	48.9 °F	-	46.9 °F	93%	30.11 in	10.0 mi	Calm	Calm	-	0.00 in		Overcast
5:28 PM	48.9 °F	-	48.0 °F	97%	30.08 in	6.0 mi	Calm	Calm	-	N/A		Overcast
5:53 PM	48.9 °F	-	48.0 °F	97%	30.09 in	9.0 mi	Calm	Calm	-	N/A		Overcast
6:53 PM	48.9 °F	-	46.9 °F	93%	30.09 in	9.0 mi	Calm	Calm	-	N/A		Overcast
7:40 PM	48.9 °F	-	48.0 °F	97%	30.08 in	2.0 mi	SSE	3.5 mph	-	N/A		Mostly Cloudy
7:51 PM	50.0 °F	-	48.2 °F	94%	30.08 in	5.0 mi	Calm	Calm	-	N/A		Mostly Cloudy
7:53 PM	50.0 °F	-	48.0 °F	93%	30.09 in	6.0 mi	Calm	Calm	-	N/A		Mostly Cloudy
8:53 PM	55.0 °F	-	48.9 °F	80%	30.09 in	10.0 mi	South	4.6 mph	-	N/A		Overcast
9:53 PM	57.0 °F	-	48.9 °F	74%	30.10 in	10.0 mi	South	8.1 mph	-	N/A		Overcast
10:53 PM	57.9 °F	-	48.0 °F	70%	30.11 in	10.0 mi	South	8.1 mph	-	N/A		Overcast
11:53 PM	57.9 °F	-	46.9 °F	67%	30.11 in	10.0 mi	South	8.1 mph	-	N/A		Overcast

|

Z

IMPORTANT SAFETY INFORMATION

•Pevnar 13® should not be given to anyone with a history of severe allergic reaction to any component of Pevnar 13® or any diphtheria toxoid-containing



Parkersburg, WV

Wood County Wilson

© 4:10 PM EST on December 05, 2017 (GMT -0500)

Weather History for KPKB - November, 2017

November

2

2017

View

Thursday, November 2, 2017

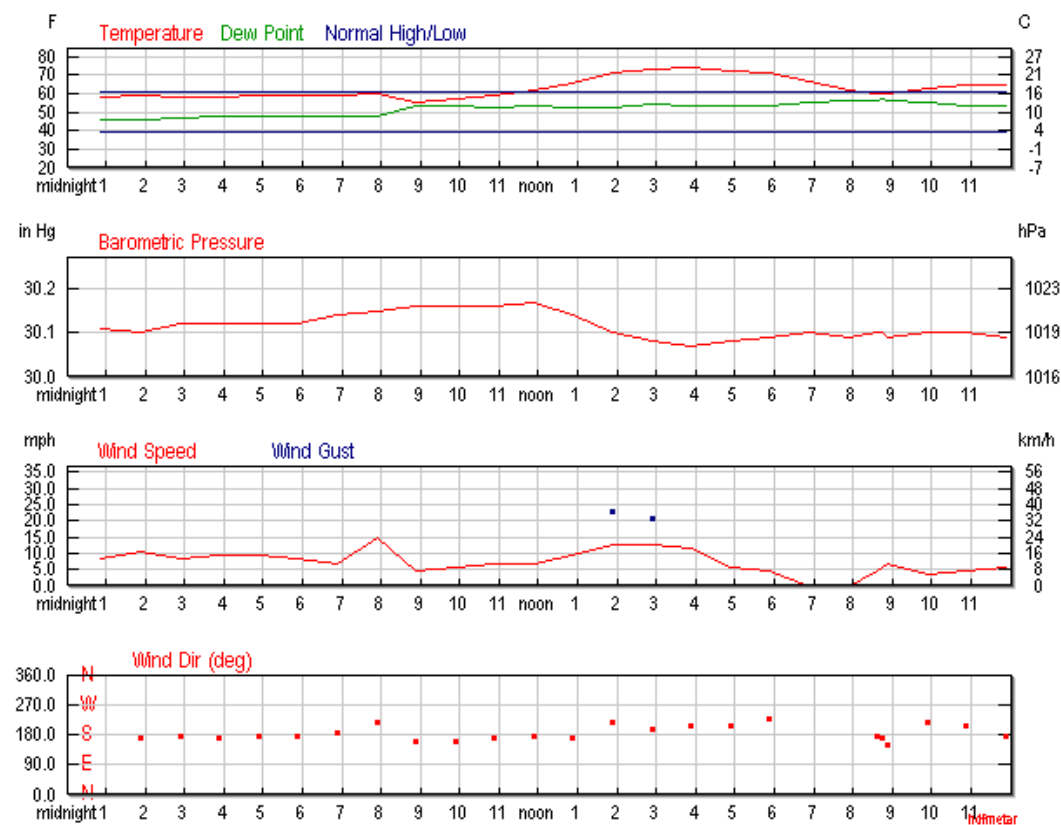
Daily	Weekly	Monthly	Custom			
				Actual	Average	Record
Temperature						
Mean Temperature				65 °F	50 °F	
Max Temperature				74 °F	61 °F	82 °F (1987)
Min Temperature				55 °F	39 °F	24 °F (1913)
Degree Days						
Heating Degree Days				0	15	
Month to date heating degree days				19	30	
Since 1 July heating degree days				318	424	
Cooling Degree Days				0	0	
Month to date cooling degree days				0	0	
Year to date cooling degree days				973	953	
Growing Degree Days				14 (Base 50)		
Moisture						
Dew Point				52 °F		
Average Humidity				71		

	Actual	Average	Record
Maximum Humidity	93		
Minimum Humidity	49		
Precipitation			
Precipitation	0.04 in	0.11 in	1.01 in (1966)
Month to date precipitation	0.18	0.22	
Year to date precipitation	44.78	34.95	
Sea Level Pressure			
Sea Level Pressure	30.11 in		
Wind			
Wind Speed	7 mph (South)		
Max Wind Speed	18 mph		
Max Gust Speed	27 mph		
Visibility	10 miles		
Events	Rain		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KPKB

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

November

2

Submit

Astronomy

Nov. 02, 2017	Rise	Set
Actual Time	7:55 AM EDT	6:22 PM EDT
Civil Twilight	7:27 AM EDT	6:50 PM EDT
Nautical Twilight	6:55 AM EDT	7:22 PM EDT
Astronomical Twilight	6:24 AM EDT	7:53 PM EDT
Moon	5:52 PM EDT (11/2)	5:49 AM EDT (11/2)
Length of Visible Light	11h 23m	
Length of Day	10h 27m	

Waxing Gibbous, 97% of the Moon is Illuminated

Nov 2	Nov 4	Nov 10	Nov 18	Nov 26
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:53 AM	57.9 °F	46.0 °F	65%	30.11 in	10.0 mi	South	8.1 mph	-	N/A		Mostly Cloudy

Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
1:53 AM	59.0 °F	46.0 °F	62%	30.10 in	10.0 mi	South	10.4 mph	-	N/A		Mostly Cloudy
2:53 AM	57.9 °F	46.9 °F	67%	30.12 in	10.0 mi	South	8.1 mph	-	0.00 in	Rain	Light Rain
3:53 AM	57.9 °F	48.0 °F	70%	30.12 in	10.0 mi	South	9.2 mph	-	0.00 in		Overcast
4:53 AM	59.0 °F	48.0 °F	67%	30.12 in	10.0 mi	South	9.2 mph	-	N/A		Overcast
5:53 AM	59.0 °F	48.0 °F	67%	30.12 in	10.0 mi	South	8.1 mph	-	N/A		Overcast
6:53 AM	59.0 °F	48.0 °F	67%	30.14 in	10.0 mi	South	6.9 mph	-	N/A		Overcast
7:53 AM	60.1 °F	48.0 °F	64%	30.15 in	10.0 mi	SW	15.0 mph	26.5 mph	0.00 in	Rain	Light Rain
8:53 AM	55.0 °F	53.1 °F	93%	30.16 in	9.0 mi	SSE	4.6 mph	-	0.04 in	Rain	Light Rain
9:53 AM	57.0 °F	53.1 °F	87%	30.16 in	10.0 mi	SSE	5.8 mph	-	0.00 in		Overcast
10:53 AM	59.0 °F	52.0 °F	78%	30.16 in	10.0 mi	South	6.9 mph	-	N/A		Overcast
11:53 AM	62.1 °F	53.1 °F	72%	30.17 in	10.0 mi	South	6.9 mph	-	N/A		Mostly Cloudy
12:53 PM	66.0 °F	52.0 °F	60%	30.14 in	10.0 mi	South	9.2 mph	19.6 mph	N/A		Mostly Cloudy
1:53 PM	71.1 °F	52.0 °F	51%	30.10 in	10.0 mi	SW	12.7 mph	23.0 mph	N/A		Partly Cloudy
2:53 PM	73.0 °F	54.0 °F	51%	30.08 in	10.0 mi	SSW	12.7 mph	20.7 mph	N/A		Clear
3:53 PM	73.9 °F	53.1 °F	48%	30.07 in	10.0 mi	SSW	11.5 mph	-	N/A		Mostly Cloudy
4:53 PM	72.0 °F	53.1 °F	51%	30.08 in	10.0 mi	SSW	5.8 mph	-	N/A		Overcast
5:53 PM	71.1 °F	53.1 °F	53%	30.09 in	10.0 mi	SW	4.6 mph	-	N/A		Overcast
6:53 PM	66.9 °F	55.0 °F	66%	30.10 in	10.0 mi	Calm	Calm	-	N/A		Overcast
7:53 PM	62.1 °F	55.9 °F	80%	30.09 in	10.0 mi	Calm	Calm	-	N/A		Scattered Clouds
8:37 PM	60.1 °F	55.9 °F	86%	30.10 in	1.8 mi	South	4.6 mph	-	N/A		Mostly Cloudy
8:46 PM	60.1 °F	57.0 °F	90%	30.10 in	10.0 mi	South	5.8 mph	-	N/A		Mostly Cloudy
8:53 PM	60.1 °F	55.9 °F	86%	30.09 in	10.0 mi	SSE	6.9 mph	-	N/A		Mostly Cloudy

Time (EDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:53 PM	63.0 °F	55.0 °F	75%	30.10 in	10.0 mi	SW	3.5 mph	-	N/A		Overcast
10:53 PM	64.9 °F	53.1 °F	65%	30.10 in	10.0 mi	SSW	4.6 mph	-	N/A		Overcast
11:53 PM	64.9 °F	53.1 °F	65%	30.09 in	10.0 mi	South	5.8 mph	-	N/A		Overcast

ATTACHMENT 6



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Final Analytical Report

Site Name.....	AMES Warehouse Fire
Sample Collection Date(s).....	10/26/17 11:11- 11/02/17 22:10
Contact.....	Debbie Lindsey
Report Date.....	12/18/17 09:37
Project #.....	DAS R35254
Work Order.....	1710022

Analyses included in this report:

VOCs by EPA TO-15, TO-15 list

Approved for Release

Karen Costa

OASQA Representative



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

Report Narrative

VOC Air Analysis Note:

This report provides reporting units in ug/m3 and ppbv. Slight rounding errors will occur in the Electronic Data Deliverable (EDD).

Please note that the ARF requested Formaldehyde as a tentatively identified compound (TIC). The laboratory is not able to report formaldehyde even as a TIC since it is not detectable due to mass spectra peaks outside the GC/MS scanning window.

The recovery of vinyl acetate is outside the lower quality control limit in the matrix spike analysis of sample 1710022-01. The quantitation limit for vinyl acetate in sample 1710022-01 is qualified as biased low (UL).

1710022 Final Report_TO_PDF FINAL 12 18 17 DAS R35254

12/18/2017



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Matrix	Date Sampled Begin	Date Sampled End	Date Received
AA-01	1710022-01	Air	10/26/17 00:00	10/26/17 12:03	10/27/17 11:40
AA-04	1710022-02	Air	10/26/17 00:00	10/26/17 13:24	10/27/17 11:40
AA-02	1710022-03	Air	10/26/17 00:00	10/26/17 12:56	10/27/17 11:47
AA-03	1710022-04	Air	10/26/17 00:00	10/26/17 13:00	10/27/17 11:47
AA-05	1710022-05	Air	10/26/17 00:00	10/26/17 11:11	10/27/17 11:55
AA-08	1710022-06	Air	11/02/17 00:00	11/02/17 20:16	11/06/17 10:00
AA-09	1710022-07	Air	11/02/17 00:00	11/02/17 21:35	11/06/17 10:00
AA-10	1710022-08	Air	11/02/17 00:00	11/02/17 20:15	11/06/17 09:45
AA-06	1710022-09	Air	11/02/17 00:00	11/02/17 19:40	11/06/17 10:10
AA-07	1710022-10	Air	11/02/17 00:00	11/02/17 22:10	11/06/17 10:10

AirbillNo: 8023 3815 0026

CHAIN OF CUSTODY RECORD

DAS #: R35254

Cooler #: 2

No: 3-102617-165608-0002

Lab: OASQA

Lab Contact:

Lab Phone: 410-305-3032

[illegible]

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: TO15=VOCs by TO15

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	 <i>Leila</i>	10/26/17 1730 1834	 ESAT	10/27/17 11:47	No temp CP blank 10/27/17



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-01**Lab ID:** 1710022-01**Sample Matrix:** Air**Date Collected:** 10/26/2017

**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	2.5	1.0	0.5		1	11/02/17 13:37	TO-15/R3QA230
Benzene	11.6	3.6	0.5		1	11/02/17 13:37	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
2-Butanone	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Carbon Tetrachloride	1.8	0.3	0.5	J	1	11/02/17 13:37	TO-15/R3QA230
Chlorobenzene	32.3	7.0	0.5		1	11/02/17 13:37	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Chloromethane	1.1	0.5	0.5		1	11/02/17 13:37	TO-15/R3QA230
Cyclohexane	6.2	1.8	0.5		1	11/02/17 13:37	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,2-Dichlorobenzene	3.7	0.6	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,4-Dichlorobenzene	2.7	0.4	0.5	J	1	11/02/17 13:37	TO-15/R3QA230
Dichlorodifluoromethane	2.5	0.5	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Ethanol	1.9	1.0	0.5		1	11/02/17 13:37	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-01**Lab ID:** 1710022-01**Sample Matrix:** Air**Date Collected:** 10/26/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Freon 113	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Heptane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Hexane	0.9	0.3	0.5	J	1	11/02/17 13:37	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Isopropyl alcohol	0.6	0.2	0.5	J	1	11/02/17 13:37	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Propylene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Styrene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Toluene	1.9	0.5	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Trichlorofluoromethane	1.3	0.2	0.5	J	1	11/02/17 13:37	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
Vinyl acetate	U	U	0.5	UL	1	11/02/17 13:37	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230
m,p-Xylene	1.6	0.4	1.0	J	1	11/02/17 13:37	TO-15/R3QA230
o-Xylene	U	U	0.5		1	11/02/17 13:37	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
---------	----------------	---------------------	-----------	---------------------	----------	----------	-------------

Surrogate: Bromofluorobenzene

10.2

102 %

80-120

11/02/17

11/02/17 13:37

TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-04**Lab ID:** 1710022-02**Sample Matrix:** Air**Date Collected:** 10/26/2017

**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	2.3	1.0	0.5		1	11/02/17 10:11	TO-15/R3QA230
Benzene	2.9	0.9	0.5		1	11/02/17 10:11	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
2-Butanone	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Chloromethane	1.0	0.5	0.5		1	11/02/17 10:11	TO-15/R3QA230
Cyclohexane	1.6	0.5	0.5		1	11/02/17 10:11	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Dichlorodifluoromethane	2.4	0.5	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Ethanol	1.2	0.6	0.5		1	11/02/17 10:11	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Freon 113	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-04**Lab ID:** 1710022-02**Sample Matrix:** Air**Date Collected:** 10/26/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Hexane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Isopropyl alcohol	0.7	0.3	0.5	J	1	11/02/17 10:11	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Propylene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Styrene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Toluene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Trichlorofluoromethane	1.3	0.2	0.5	J	1	11/02/17 10:11	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230
m,p-Xylene	U	U	1.0		1	11/02/17 10:11	TO-15/R3QA230
o-Xylene	U	U	0.5		1	11/02/17 10:11	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	10.2		102 %	80-120	11/02/17	11/02/17 10:11	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-02**Lab ID:** 1710022-03**Sample Matrix:** Air**Date Collected:** 10/26/2017

**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	5.6	2.3	0.5		1	11/02/17 11:02	TO-15/R3QA230
Benzene	4.3	1.3	0.5		1	11/02/17 11:02	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
2-Butanone	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Chloromethane	1.1	0.5	0.5		1	11/02/17 11:02	TO-15/R3QA230
Cyclohexane	2.2	0.6	0.5		1	11/02/17 11:02	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Dichlorodifluoromethane	2.5	0.5	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Ethanol	1.1	0.6	0.5		1	11/02/17 11:02	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Freon 113	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-02**Lab ID:** 1710022-03**Sample Matrix:** Air**Date Collected:** 10/26/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Hexane	0.7	0.2	0.5	J	1	11/02/17 11:02	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Isopropyl alcohol	0.6	0.2	0.5	J	1	11/02/17 11:02	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Propylene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Styrene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Toluene	1.3	0.3	0.5	J	1	11/02/17 11:02	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Trichlorofluoromethane	1.3	0.2	0.5	J	1	11/02/17 11:02	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230
m,p-Xylene	U	U	1.0		1	11/02/17 11:02	TO-15/R3QA230
o-Xylene	U	U	0.5		1	11/02/17 11:02	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	10.2		102 % 80-120	11/02/17	11/02/17 11:02	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-03**Lab ID:** 1710022-04**Sample Matrix:** Air**Date Collected:** 10/26/2017

**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	2.1	0.9	0.5		1	11/02/17 11:54	TO-15/R3QA230
Benzene	4.3	1.3	0.5		1	11/02/17 11:54	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
2-Butanone	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Chloromethane	1.1	0.5	0.5		1	11/02/17 11:54	TO-15/R3QA230
Cyclohexane	2.5	0.7	0.5		1	11/02/17 11:54	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Dichlorodifluoromethane	2.5	0.5	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Ethanol	1.2	0.6	0.5		1	11/02/17 11:54	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Freon 113	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-03**Lab ID:** 1710022-04**Sample Matrix:** Air**Date Collected:** 10/26/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Hexane	0.7	0.2	0.5	J	1	11/02/17 11:54	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Isopropyl alcohol	0.4	0.2	0.5	J	1	11/02/17 11:54	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Propylene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Styrene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Toluene	1.2	0.3	0.5	J	1	11/02/17 11:54	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Trichlorofluoromethane	1.3	0.2	0.5	J	1	11/02/17 11:54	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230
m,p-Xylene	U	U	1.0		1	11/02/17 11:54	TO-15/R3QA230
o-Xylene	U	U	0.5		1	11/02/17 11:54	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
<i>Surrogate: Bromofluorobenzene</i>	10.2		102 %	80-120	11/02/17	11/02/17 11:54	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-05**Lab ID:** 1710022-05**Sample Matrix:** Air**Date Collected:** 10/26/2017

**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	2.1	0.9	0.5		1	11/02/17 12:46	TO-15/R3QA230
Benzene	3.3	1.0	0.5		1	11/02/17 12:46	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
2-Butanone	0.5	0.2	0.5	J	1	11/02/17 12:46	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Carbon Tetrachloride	1.0	0.2	0.5	J	1	11/02/17 12:46	TO-15/R3QA230
Chlorobenzene	1.5	0.3	0.5	J	1	11/02/17 12:46	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Chloromethane	1.1	0.6	0.5		1	11/02/17 12:46	TO-15/R3QA230
Cyclohexane	2.2	0.6	0.5		1	11/02/17 12:46	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Dichlorodifluoromethane	2.7	0.5	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Ethanol	1.7	0.9	0.5		1	11/02/17 12:46	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-05**Lab ID:** 1710022-05**Sample Matrix:** Air**Date Collected:** 10/26/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Freon 113	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Heptane	0.6	0.2	0.5	J	1	11/02/17 12:46	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Hexane	0.9	0.2	0.5	J	1	11/02/17 12:46	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Isopropyl alcohol	0.7	0.3	0.5	J	1	11/02/17 12:46	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Propylene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Styrene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Toluene	1.0	0.3	0.5	J	1	11/02/17 12:46	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Trichlorofluoromethane	1.6	0.3	0.5	J	1	11/02/17 12:46	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230
m,p-Xylene	U	U	1.0		1	11/02/17 12:46	TO-15/R3QA230
o-Xylene	U	U	0.5		1	11/02/17 12:46	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
---------	----------------	---------------------	-----------	---------------------	----------	----------	-------------

Surrogate: Bromofluorobenzene

10.2

102 %

80-120

11/02/17

11/02/17 12:46

TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-08**Lab ID:** 1710022-06**Sample Matrix:** Air**Date Collected:** 11/02/2017

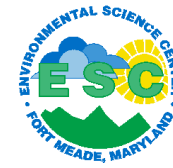
**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	7.0	2.9	0.5		1	11/06/17 13:03	TO-15/R3QA230
Benzene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
2-Butanone	0.9	0.3	0.5	J	1	11/06/17 13:03	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Chloromethane	1.2	0.6	0.5		1	11/06/17 13:03	TO-15/R3QA230
Cyclohexane	2.1	0.6	0.5		1	11/06/17 13:03	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Dichlorodifluoromethane	2.5	0.5	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Ethanol	3.6	1.9	0.5		1	11/06/17 13:03	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Freon 113	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-08**Lab ID:** 1710022-06**Sample Matrix:** Air**Date Collected:** 11/02/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Hexane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Isopropyl alcohol	0.6	0.3	0.5	J	1	11/06/17 13:03	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Propylene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Styrene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Toluene	0.6	0.2	0.5	J	1	11/06/17 13:03	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Trichlorofluoromethane	1.3	0.2	0.5	J	1	11/06/17 13:03	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230
m,p-Xylene	U	U	1.0		1	11/06/17 13:03	TO-15/R3QA230
o-Xylene	U	U	0.5		1	11/06/17 13:03	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	10.1		101 %	80-120	11/06/17	11/06/17 13:03	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-09**Lab ID:** 1710022-07**Sample Matrix:** Air**Date Collected:** 11/02/2017

**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	6.9	2.9	0.5		1	11/06/17 13:54	TO-15/R3QA230
Benzene	2.3	0.7	0.5		1	11/06/17 13:54	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
2-Butanone	1.0	0.4	0.5	J	1	11/06/17 13:54	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Chloromethane	1.3	0.6	0.5		1	11/06/17 13:54	TO-15/R3QA230
Cyclohexane	3.7	1.1	0.5		1	11/06/17 13:54	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Dichlorodifluoromethane	2.5	0.5	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Ethanol	9.2	4.9	0.5		1	11/06/17 13:54	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Ethylbenzene	1.2	0.3	0.5	J	1	11/06/17 13:54	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Freon 113	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-09**Lab ID:** 1710022-07**Sample Matrix:** Air**Date Collected:** 11/02/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	1.3	0.3	0.5	J	1	11/06/17 13:54	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Hexane	1.2	0.3	0.5	J	1	11/06/17 13:54	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Isopropyl alcohol	1.0	0.4	0.5	J	1	11/06/17 13:54	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Propylene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Styrene	0.8	0.2	0.5	J	1	11/06/17 13:54	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Toluene	3.8	1.0	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Trichlorofluoromethane	1.3	0.2	0.5	J	1	11/06/17 13:54	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/06/17 13:54	TO-15/R3QA230
m,p-Xylene	4.0	0.9	1.0	J	1	11/06/17 13:54	TO-15/R3QA230
o-Xylene	0.7	0.2	0.5	J	1	11/06/17 13:54	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery Limits	Prepared	Analyzed	Method/SOP#
<i>Surrogate: Bromofluorobenzene</i>	10.1		101 % 80-120	11/06/17	11/06/17 13:54	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-10**Lab ID:** 1710022-08**Sample Matrix:** Air**Date Collected:** 11/02/2017

**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	5.5	2.3	0.5		1	11/06/17 14:46	TO-15/R3QA230
Benzene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
2-Butanone	0.9	0.3	0.5	J	1	11/06/17 14:46	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Chloromethane	1.2	0.6	0.5		1	11/06/17 14:46	TO-15/R3QA230
Cyclohexane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Dichlorodifluoromethane	2.5	0.5	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Ethanol	3.8	2.0	0.5		1	11/06/17 14:46	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Freon 113	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-10**Lab ID:** 1710022-08**Sample Matrix:** Air**Date Collected:** 11/02/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Hexane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Isopropyl alcohol	1.8	0.7	0.5		1	11/06/17 14:46	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Propylene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Styrene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Tetrachloroethene	1.3	0.2	0.5	J	1	11/06/17 14:46	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Toluene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Trichlorofluoromethane	1.3	0.2	0.5	J	1	11/06/17 14:46	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230
m,p-Xylene	U	U	1.0		1	11/06/17 14:46	TO-15/R3QA230
o-Xylene	U	U	0.5		1	11/06/17 14:46	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	10.2		102 %	80-120	11/06/17	11/06/17 14:46	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-06**Lab ID:** 1710022-09**Sample Matrix:** Air**Date Collected:** 11/02/2017

**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	8.7	3.6	0.5		1	11/06/17 15:37	TO-15/R3QA230
Benzene	0.8	0.3	0.5	J	1	11/06/17 15:37	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
2-Butanone	1.4	0.5	0.5		1	11/06/17 15:37	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Chloromethane	1.2	0.6	0.5		1	11/06/17 15:37	TO-15/R3QA230
Cyclohexane	2.8	0.8	0.5		1	11/06/17 15:37	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Dichlorodifluoromethane	2.5	0.5	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Ethanol	5.2	2.7	0.5		1	11/06/17 15:37	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Freon 113	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-06**Lab ID:** 1710022-09**Sample Matrix:** Air**Date Collected:** 11/02/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	0.8	0.2	0.5	J	1	11/06/17 15:37	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Hexane	0.9	0.2	0.5	J	1	11/06/17 15:37	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Isopropyl alcohol	1.7	0.7	0.5		1	11/06/17 15:37	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Propylene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Styrene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Toluene	2.4	0.6	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Trichlorofluoromethane	1.3	0.2	0.5	J	1	11/06/17 15:37	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230
m,p-Xylene	1.2	0.3	1.0	J	1	11/06/17 15:37	TO-15/R3QA230
o-Xylene	U	U	0.5		1	11/06/17 15:37	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	10.2		102 %	80-120	11/06/17	11/06/17 15:37	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-07**Lab ID:** 1710022-10**Sample Matrix:** Air**Date Collected:** 11/02/2017

**Volatile Organic Compounds
Targets**

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Acetone	7.1	3.0	0.5		1	11/06/17 16:27	TO-15/R3QA230
Benzene	1.2	0.4	0.5	J	1	11/06/17 16:27	TO-15/R3QA230
Benzyl chloride	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Bromodichloromethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Bromoform	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Bromomethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,3-Butadiene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
2-Butanone	1.2	0.4	0.5	J	1	11/06/17 16:27	TO-15/R3QA230
Carbon disulfide	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Carbon Tetrachloride	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Chlorobenzene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Chloroethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Chloroform	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Chloromethane	1.3	0.6	0.5		1	11/06/17 16:27	TO-15/R3QA230
Cyclohexane	4.0	1.1	0.5		1	11/06/17 16:27	TO-15/R3QA230
Dibromochloromethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,2-Dibromoethane (EDB)	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,2-Dichlorobenzene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,3-Dichlorobenzene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,4-Dichlorobenzene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Dichlorodifluoromethane	2.4	0.5	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,1-Dichloroethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,2-Dichloroethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,1-Dichloroethene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
cis-1,2-Dichloroethene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
trans-1,2-Dichloroethene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,2-Dichloropropane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
cis-1,3-Dichloropropene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
trans-1,3-Dichloropropene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Dichlorotetrafluoroethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,4-Dioxane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Ethanol	7.1	3.7	0.5		1	11/06/17 16:27	TO-15/R3QA230
Ethyl Acetate	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Ethylbenzene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
4-Ethyltoluene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Freon 113	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

**Site Name:** AMES Warehouse Fire**Project #:** DAS R35254**Station ID:** AA-07**Lab ID:** 1710022-10**Sample Matrix:** Air**Date Collected:** 11/02/2017

Volatile Organic Compounds
Targets (Continued)

Analyte	Result µg/m3	Result ppbv	Quantitation Limit ppbv	Flags Qualifiers	Dilution	Analyzed	Method/SOP#
Heptane	0.9	0.2	0.5	J	1	11/06/17 16:27	TO-15/R3QA230
Hexachlorobutadiene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Hexane	1.3	0.4	0.5	J	1	11/06/17 16:27	TO-15/R3QA230
2-Hexanone	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Isopropyl alcohol	0.8	0.3	0.5	J	1	11/06/17 16:27	TO-15/R3QA230
Methyl tert-Butyl Ether	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
4-Methyl-2-pentanone	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Methylene Chloride	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Propylene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Styrene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,1,2,2-Tetrachloroethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Tetrachloroethene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Tetrahydrofuran	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Toluene	2.9	0.8	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,2,4-Trichlorobenzene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,1,1-Trichloroethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,1,2-Trichloroethane	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Trichloroethene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Trichlorofluoromethane	1.3	0.2	0.5	J	1	11/06/17 16:27	TO-15/R3QA230
1,2,4-Trimethylbenzene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
1,3,5-Trimethylbenzene	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Vinyl acetate	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
Vinyl chloride	U	U	0.5		1	11/06/17 16:27	TO-15/R3QA230
m,p-Xylene	2.2	0.5	1.0	J	1	11/06/17 16:27	TO-15/R3QA230
o-Xylene	0.7	0.2	0.5	J	1	11/06/17 16:27	TO-15/R3QA230

Surrogates

Analyte	Result ppbv	Flags Qualifiers	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: Bromofluorobenzene	10.2		102 % 80-120	11/06/17	11/06/17 16:27	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-01						
Station ID: AA-01						
Sample Matrix: Air						
Collected: 10/26/2017						
74-98-6	Propane	1.0	T	4.71	11/02/17 13:37	TO-15/R3QA230
109-66-0	Pentane	0.9	T	7.87	11/02/17 13:37	TO-15/R3QA230

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-02						
Station ID: AA-04						
Sample Matrix: Air						
Collected: 10/26/2017						
74-98-6	Propane	0.8	T	4.71	11/02/17 10:11	TO-15/R3QA230
109-66-0	Pentane	0.9	T	7.87	11/02/17 10:11	TO-15/R3QA230

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-03						
Station ID: AA-02						
Sample Matrix: Air						
Collected: 10/26/2017						
NA	None Detected	0.0			11/02/17 11:02	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

Tentatively Identified Compound (TIC) Report

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-04						
Station ID: AA-03						
Sample Matrix: Air						
Collected: 10/26/2017						
109-66-0	Pentane	0.8	T	7.88	11/02/17 11:54	TO-15/R3QA230

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-05						
Station ID: AA-05						
Sample Matrix: Air						
Collected: 10/26/2017						
NA	None Detected	0.0			11/02/17 12:46	TO-15/R3QA230

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-06						
Station ID: AA-08						
Sample Matrix: Air						
Collected: 11/02/2017						
NA	None Detected	0.0			11/06/17 13:03	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

Tentatively Identified Compound (TIC) Report

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-07						
Station ID: AA-09						
Sample Matrix: Air						
Collected: 11/02/2017						
74-98-6	Propane	0.8	T	4.71	11/06/17 13:54	TO-15/R3QA230
106-97-8	Butane	1.0	T	5.73	11/06/17 13:54	TO-15/R3QA230
78-78-4	Butane, 2-methyl-	1.1	T	7.21	11/06/17 13:54	TO-15/R3QA230

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-08						
Station ID: AA-10						
Sample Matrix: Air						
Collected: 11/02/2017						
NA	None Detected	0.0			11/06/17 14:46	TO-15/R3QA230

Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-09						
Station ID: AA-06						
Sample Matrix: Air						
Collected: 11/02/2017						
106-97-8	Butane	1.0	T	5.73	11/06/17 15:37	TO-15/R3QA230
NA	unknown	1.1	T	6.18	11/06/17 15:37	TO-15/R3QA230
78-78-4	Butane, 2-methyl-	0.8	T	7.21	11/06/17 15:37	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

Tentatively Identified Compound (TIC) Report
Volatile Organic Compounds

CAS Number	Compound	Result ppbv	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID: 1710022-10						
Station ID: AA-07						
Sample Matrix: Air						
Collected: 11/02/2017						
74-98-6	Propane	1.0	T	4.70	11/06/17 16:27	TO-15/R3QA230
106-97-8	Butane	1.3	T	5.71	11/06/17 16:27	TO-15/R3QA230
78-78-4	Butane, 2-methyl-	1.1	T	7.19	11/06/17 16:27	TO-15/R3QA230



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch BK70301 - TO air

Blank (BK70301-BLK1)

Prepared: 11/02/17 06:47 Analyzed: 11/02/17 09:07

Acetone	U	0.5	ppbv
Benzene	U	0.5	"
Benzyl chloride	U	0.5	"
Bromodichloromethane	U	0.5	"
Bromoform	U	0.5	"
Bromomethane	U	0.5	"
1,3-Butadiene	U	0.5	"
2-Butanone	U	0.5	"
Carbon disulfide	U	0.5	"
Carbon Tetrachloride	U	0.5	"
Chlorobenzene	U	0.5	"
Chloroethane	U	0.5	"
Chloroform	U	0.5	"
Chloromethane	U	0.5	"
Cyclohexane	U	0.5	"
Dibromochloromethane	U	0.5	"
1,2-Dibromoethane (EDB)	U	0.5	"
1,2-Dichlorobenzene	U	0.5	"
1,3-Dichlorobenzene	U	0.5	"
1,4-Dichlorobenzene	U	0.5	"
Dichlorodifluoromethane	U	0.5	"
1,1-Dichloroethane	U	0.5	"
1,2-Dichloroethane	U	0.5	"
1,1-Dichloroethene	U	0.5	"
cis-1,2-Dichloroethene	U	0.5	"
trans-1,2-Dichloroethene	U	0.5	"
1,2-Dichloropropane	U	0.5	"
cis-1,3-Dichloropropene	U	0.5	"
trans-1,3-Dichloropropene	U	0.5	"
Dichlorotetrafluoroethane	U	0.5	"
1,4-Dioxane	U	0.5	"
Ethanol	U	0.5	"
Ethyl Acetate	U	0.5	"
Ethylbenzene	U	0.5	"
4-Ethyltoluene	U	0.5	"
Freon 113	U	0.5	"
Heptane	U	0.5	"
Hexachlorobutadiene	U	0.5	"



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch BK70301 - TO air

Blank (BK70301-BLK1)

Prepared: 11/02/17 06:47 Analyzed: 11/02/17 09:07

Hexane	U	0.5	ppbv						
2-Hexanone	U	0.5	"						
Isopropyl alcohol	U	0.5	"						
Methyl tert-Butyl Ether	U	0.5	"						
4-Methyl-2-pentanone	U	0.5	"						
Methylene Chloride	U	0.5	"						
Propylene	U	0.5	"						
Styrene	U	0.5	"						
1,1,2,2-Tetrachloroethane	U	0.5	"						
Tetrachloroethene	U	0.5	"						
Tetrahydrofuran	U	0.5	"						
Toluene	U	0.5	"						
1,2,4-Trichlorobenzene	U	0.5	"						
1,1,1-Trichloroethane	U	0.5	"						
1,1,2-Trichloroethane	U	0.5	"						
Trichloroethene	U	0.5	"						
Trichlorofluoromethane	U	0.5	"						
1,2,4-Trimethylbenzene	U	0.5	"						
1,3,5-Trimethylbenzene	U	0.5	"						
Vinyl acetate	U	0.5	"						
Vinyl chloride	U	0.5	"						
m,p-Xylene	U	1.0	"						
o-Xylene	U	0.5	"						
Surrogate: Bromofluorobenzene	9.65		"	10.000		96	80-120		

Blank (BK70301-BLK2)

Prepared: 11/06/17 06:47 Analyzed: 11/06/17 10:04

Acetone	U	0.5	ppbv						
Benzene	U	0.5	"						
Benzyl chloride	U	0.5	"						
Bromodichloromethane	U	0.5	"						
Bromoform	U	0.5	"						
Bromomethane	U	0.5	"						
1,3-Butadiene	U	0.5	"						
2-Butanone	U	0.5	"						
Carbon disulfide	U	0.5	"						
Carbon Tetrachloride	U	0.5	"						
Chlorobenzene	U	0.5	"						
Chloroethane	U	0.5	"						
Chloroform	U	0.5	"						
Chloromethane	U	0.5	"						
Cyclohexane	U	0.5	"						



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch BK70301 - TO air

Blank (BK70301-BLK2)

Prepared: 11/06/17 06:47 Analyzed: 11/06/17 10:04

Dibromochloromethane	U	0.5	ppbv
1,2-Dibromoethane (EDB)	U	0.5	"
1,2-Dichlorobenzene	U	0.5	"
1,3-Dichlorobenzene	U	0.5	"
1,4-Dichlorobenzene	U	0.5	"
Dichlorodifluoromethane	U	0.5	"
1,1-Dichloroethane	U	0.5	"
1,2-Dichloroethane	U	0.5	"
1,1-Dichloroethene	U	0.5	"
cis-1,2-Dichloroethene	U	0.5	"
trans-1,2-Dichloroethene	U	0.5	"
1,2-Dichloropropane	U	0.5	"
cis-1,3-Dichloropropene	U	0.5	"
trans-1,3-Dichloropropene	U	0.5	"
Dichlorotetrafluoroethane	U	0.5	"
1,4-Dioxane	U	0.5	"
Ethanol	U	0.5	"
Ethyl Acetate	U	0.5	"
Ethylbenzene	U	0.5	"
4-Ethyltoluene	U	0.5	"
Freon 113	U	0.5	"
Heptane	U	0.5	"
Hexachlorobutadiene	U	0.5	"
Hexane	U	0.5	"
2-Hexanone	U	0.5	"
Isopropyl alcohol	U	0.5	"
Methyl tert-Butyl Ether	U	0.5	"
4-Methyl-2-pentanone	U	0.5	"
Methylene Chloride	U	0.5	"
Propylene	U	0.5	"
Styrene	U	0.5	"
1,1,2,2-Tetrachloroethane	U	0.5	"
Tetrachloroethene	U	0.5	"
Tetrahydrofuran	U	0.5	"
Toluene	U	0.5	"
1,2,4-Trichlorobenzene	U	0.5	"
1,1,1-Trichloroethane	U	0.5	"
1,1,2-Trichloroethane	U	0.5	"
Trichloroethene	U	0.5	"
Trichlorofluoromethane	U	0.5	"
1,2,4-Trimethylbenzene	U	0.5	"



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch BK70301 - TO air

Blank (BK70301-BLK2)

Prepared: 11/06/17 06:47 Analyzed: 11/06/17 10:04

1,3,5-Trimethylbenzene	U	0.5	ppbv						
Vinyl acetate	U	0.5	"						
Vinyl chloride	U	0.5	"						
m,p-Xylene	U	1.0	"						
o-Xylene	U	0.5	"						
Surrogate: Bromofluorobenzene	9.72		"	10.000		97	80-120		

LCS (BK70301-BS1)

Prepared: 11/02/17 06:47 Analyzed: 11/02/17 17:00

Acetone	5.03300	0.5	ppbv	5.0000		101	70-130		
Benzene	5.33400	0.5	"	5.0000		107	70-130		
Benzyl chloride	5.20200	0.5	"	5.0000		104	70-130		
Bromodichloromethane	5.30000	0.5	"	5.0000		106	70-130		
Bromoform	5.25900	0.5	"	5.0000		105	70-130		
Bromomethane	5.21200	0.5	"	5.0000		104	70-130		
1,3-Butadiene	5.16200	0.5	"	5.0000		103	70-130		
2-Butanone	5.15200	0.5	"	5.0000		103	70-130		
Carbon disulfide	5.13300	0.5	"	5.0000		103	70-130		
Carbon Tetrachloride	5.34600	0.5	"	5.0000		107	70-130		
Chlorobenzene	5.14100	0.5	"	5.0000		103	70-130		
Chloroethane	5.23000	0.5	"	5.0000		105	70-130		
Chloroform	5.26700	0.5	"	5.0000		105	70-130		
Chloromethane	5.25900	0.5	"	5.0000		105	70-130		
Cyclohexane	5.30800	0.5	"	5.0000		106	70-130		
Dibromochloromethane	5.26100	0.5	"	5.0000		105	70-130		
1,2-Dibromoethane (EDB)	5.02700	0.5	"	5.0000		101	70-130		
1,2-Dichlorobenzene	5.16300	0.5	"	5.0000		103	70-130		
1,3-Dichlorobenzene	5.21800	0.5	"	5.0000		104	70-130		
1,4-Dichlorobenzene	5.18200	0.5	"	5.0000		104	70-130		
Dichlorodifluoromethane	5.41200	0.5	"	5.0000		108	70-130		
1,1-Dichloroethane	5.28300	0.5	"	5.0000		106	70-130		
1,2-Dichloroethane	5.21100	0.5	"	5.0000		104	70-130		
1,1-Dichloroethene	5.17300	0.5	"	5.0000		103	70-130		
cis-1,2-Dichloroethene	5.16300	0.5	"	5.0000		103	70-130		
trans-1,2-Dichloroethene	5.10000	0.5	"	5.0000		102	70-130		
1,2-Dichloropropane	5.29600	0.5	"	5.0000		106	70-130		
cis-1,3-Dichloropropene	5.00100	0.5	"	5.0000		100	70-130		
trans-1,3-Dichloropropene	4.77000	0.5	"	5.0000		95	70-130		
Dichlorotetrafluoroethane	5.38300	0.5	"	5.0000		108	70-130		
1,4-Dioxane	4.92300	0.5	"	5.0000		98	70-130		
Ethanol	5.11200	0.5	"	5.0000		102	70-130		
Ethyl Acetate	5.11100	0.5	"	5.0000		102	70-130		



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch BK70301 - TO air

LCS (BK70301-BS1)

Prepared: 11/02/17 06:47

Analyzed: 11/02/17 17:00

Ethylbenzene	5.12700	0.5	ppbv	5.0000		103	70-130		
4-Ethyltoluene	5.24200	0.5	"	5.0000		105	70-130		
Freon 113	5.22800	0.5	"	5.0000		105	70-130		
Heptane	5.40300	0.5	"	5.0000		108	70-130		
Hexachlorobutadiene	5.04600	0.5	"	5.0000		101	70-130		
Hexane	5.36500	0.5	"	5.0000		107	70-130		
2-Hexanone	5.01400	0.5	"	5.0000		100	70-130		
Isopropyl alcohol	4.98300	0.5	"	5.0000		100	70-130		
Methyl tert-Butyl Ether	5.18300	0.5	"	5.0000		104	70-130		
4-Methyl-2-pentanone	5.00600	0.5	"	5.0000		100	70-130		
Methylene Chloride	5.17300	0.5	"	5.0000		103	70-130		
Propylene	5.45000	0.5	"	5.0000		109	70-130		
Styrene	5.20800	0.5	"	5.0000		104	70-130		
1,1,2,2-Tetrachloroethane	5.16200	0.5	"	5.0000		103	70-130		
Tetrachloroethene	5.25200	0.5	"	5.0000		105	70-130		
Tetrahydrofuran	5.11900	0.5	"	5.0000		102	70-130		
Toluene	5.23200	0.5	"	5.0000		105	70-130		
1,2,4-Trichlorobenzene	5.04000	0.5	"	5.0000		101	70-130		
1,1,1-Trichloroethane	5.33700	0.5	"	5.0000		107	70-130		
1,1,2-Trichloroethane	5.20300	0.5	"	5.0000		104	70-130		
Trichloroethene	5.24200	0.5	"	5.0000		105	70-130		
Trichlorofluoromethane	5.18200	0.5	"	5.0000		104	70-130		
1,2,4-Trimethylbenzene	5.19200	0.5	"	5.0000		104	70-130		
1,3,5-Trimethylbenzene	5.13500	0.5	"	5.0000		103	70-130		
Vinyl acetate	4.77200	0.5	"	5.0000		95	70-130		
Vinyl chloride	5.21900	0.5	"	5.0000		104	70-130		
m,p-Xylene	10.3160	1.0	"	10.000		103	70-130		
o-Xylene	5.15200	0.5	"	5.0000		103	70-130		
Surrogate: Bromofluorobenzene	10.2		"	10.000		102	80-120		



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch BK70301 - TO air

LCS (BK70301-BS2)

Prepared: 11/06/17 06:47

Analyzed: 11/06/17 17:18

Acetone	4.88800	0.5	ppbv	5.0000	98	70-130
Benzene	5.30800	0.5	"	5.0000	106	70-130
Benzyl chloride	4.98800	0.5	"	5.0000	100	70-130
Bromodichloromethane	5.23200	0.5	"	5.0000	105	70-130
Bromoform	5.25700	0.5	"	5.0000	105	70-130
Bromomethane	5.08100	0.5	"	5.0000	102	70-130
1,3-Butadiene	4.92000	0.5	"	5.0000	98	70-130
2-Butanone	5.08500	0.5	"	5.0000	102	70-130
Carbon disulfide	5.10600	0.5	"	5.0000	102	70-130
Carbon Tetrachloride	5.31700	0.5	"	5.0000	106	70-130
Chlorobenzene	5.14600	0.5	"	5.0000	103	70-130
Chloroethane	5.11700	0.5	"	5.0000	102	70-130
Chloroform	5.23600	0.5	"	5.0000	105	70-130
Chloromethane	4.89800	0.5	"	5.0000	98	70-130
Cyclohexane	5.27000	0.5	"	5.0000	105	70-130
Dibromochloromethane	5.27400	0.5	"	5.0000	105	70-130
1,2-Dibromoethane (EDB)	5.00300	0.5	"	5.0000	100	70-130
1,2-Dichlorobenzene	5.18200	0.5	"	5.0000	104	70-130
1,3-Dichlorobenzene	5.23200	0.5	"	5.0000	105	70-130
1,4-Dichlorobenzene	5.18600	0.5	"	5.0000	104	70-130
Dichlorodifluoromethane	5.12000	0.5	"	5.0000	102	70-130
1,1-Dichloroethane	5.19500	0.5	"	5.0000	104	70-130
1,2-Dichloroethane	5.15700	0.5	"	5.0000	103	70-130
1,1-Dichloroethene	5.05700	0.5	"	5.0000	101	70-130
cis-1,2-Dichloroethene	5.08200	0.5	"	5.0000	102	70-130
trans-1,2-Dichloroethene	5.03900	0.5	"	5.0000	101	70-130
1,2-Dichloropropane	5.23200	0.5	"	5.0000	105	70-130
cis-1,3-Dichloropropene	4.89700	0.5	"	5.0000	98	70-130
trans-1,3-Dichloropropene	4.55500	0.5	"	5.0000	91	70-130
Dichlorotetrafluoroethane	5.11800	0.5	"	5.0000	102	70-130
1,4-Dioxane	4.83300	0.5	"	5.0000	97	70-130
Ethanol	4.88200	0.5	"	5.0000	98	70-130
Ethyl Acetate	4.91700	0.5	"	5.0000	98	70-130
Ethylbenzene	5.10100	0.5	"	5.0000	102	70-130
4-Ethyltoluene	5.23100	0.5	"	5.0000	105	70-130
Freon 113	5.25300	0.5	"	5.0000	105	70-130
Heptane	5.27900	0.5	"	5.0000	106	70-130
Hexachlorobutadiene	5.04300	0.5	"	5.0000	101	70-130
Hexane	5.25500	0.5	"	5.0000	105	70-130
2-Hexanone	4.95700	0.5	"	5.0000	99	70-130
Isopropyl alcohol	4.83700	0.5	"	5.0000	97	70-130



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch BK70301 - TO air

LCS (BK70301-BS2)

Prepared: 11/06/17 06:47

Analyzed: 11/06/17 17:18

Methyl tert-Butyl Ether	5.06600	0.5	ppbv	5.0000		101	70-130		
4-Methyl-2-pentanone	4.86300	0.5	"	5.0000		97	70-130		
Methylene Chloride	5.09400	0.5	"	5.0000		102	70-130		
Propylene	4.94000	0.5	"	5.0000		99	70-130		
Styrene	5.17500	0.5	"	5.0000		104	70-130		
1,1,2,2-Tetrachloroethane	5.13900	0.5	"	5.0000		103	70-130		
Tetrachloroethene	5.31800	0.5	"	5.0000		106	70-130		
Tetrahydrofuran	5.00000	0.5	"	5.0000		100	70-130		
Toluene	5.25400	0.5	"	5.0000		105	70-130		
1,2,4-Trichlorobenzene	4.85800	0.5	"	5.0000		97	70-130		
1,1,1-Trichloroethane	5.28700	0.5	"	5.0000		106	70-130		
1,1,2-Trichloroethane	5.19800	0.5	"	5.0000		104	70-130		
Trichloroethene	5.19100	0.5	"	5.0000		104	70-130		
Trichlorofluoromethane	5.12800	0.5	"	5.0000		103	70-130		
1,2,4-Trimethylbenzene	5.19200	0.5	"	5.0000		104	70-130		
1,3,5-Trimethylbenzene	5.16300	0.5	"	5.0000		103	70-130		
Vinyl acetate	4.32600	0.5	"	5.0000		87	70-130		
Vinyl chloride	5.01300	0.5	"	5.0000		100	70-130		
m,p-Xylene	10.2920	1.0	"	10.000		103	70-130		
o-Xylene	5.17800	0.5	"	5.0000		104	70-130		
Surrogate: Bromofluorobenzene	10.3		"	10.000		103	80-120		

Matrix Spike (BK70301-MS1)

Source: 1710022-01RE1

Prepared: 11/02/17 06:47

Analyzed: 11/02/17 15:17

Acetone	4.85400	0.5	ppbv	5.0000	0.524000	87	70-130		
Benzene	6.53100	0.5	"	5.0000	1.83500	94	70-130		
Benzyl chloride	4.86100	0.5	"	5.0000	U	97	70-130		
Bromodichloromethane	4.88200	0.5	"	5.0000	U	98	70-130		
Bromoform	4.78100	0.5	"	5.0000	U	96	70-130		
Bromomethane	5.00200	0.5	"	5.0000	U	100	70-130		
1,3-Butadiene	4.74800	0.5	"	5.0000	U	95	70-130		
2-Butanone	4.43600	0.5	"	5.0000	U	89	70-130		
Carbon disulfide	4.87900	0.5	"	5.0000	U	98	70-130		
Carbon Tetrachloride	5.17300	0.5	"	5.0000	U	103	70-130		
Chlorobenzene	7.71300	0.5	"	5.0000	3.62800	82	70-130		
Chloroethane	4.91900	0.5	"	5.0000	U	98	70-130		
Chloroform	4.96900	0.5	"	5.0000	U	99	70-130		
Chloromethane	4.78200	0.5	"	5.0000	0.289000	90	70-130		
Cyclohexane	5.82700	0.5	"	5.0000	0.902000	98	70-130		
Dibromochloromethane	4.84700	0.5	"	5.0000	U	97	70-130		
1,2-Dibromoethane (EDB)	4.63400	0.5	"	5.0000	U	93	70-130		
1,2-Dichlorobenzene	5.24200	0.5	"	5.0000	0.320000	98	70-130		



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch BK70301 - TO air

Matrix Spike (BK70301-MS1)	Source: 1710022-01RE1			Prepared: 11/02/17 06:47		Analyzed: 11/02/17 15:17			
1,3-Dichlorobenzene	4.97000	0.5	ppbv	5.0000	U	99	70-130		
1,4-Dichlorobenzene	5.16800	0.5	"	5.0000	0.231000	99	70-130		
Dichlorodifluoromethane	5.00800	0.5	"	5.0000	0.254000	95	70-130		
1,1-Dichloroethane	4.96700	0.5	"	5.0000	U	99	70-130		
1,2-Dichloroethane	4.85100	0.5	"	5.0000	U	97	70-130		
1,1-Dichloroethene	4.89500	0.5	"	5.0000	U	98	70-130		
cis-1,2-Dichloroethene	4.74700	0.5	"	5.0000	U	95	70-130		
trans-1,2-Dichloroethene	4.78300	0.5	"	5.0000	U	96	70-130		
1,2-Dichloropropane	4.84900	0.5	"	5.0000	U	97	70-130		
cis-1,3-Dichloropropene	4.67600	0.5	"	5.0000	U	94	70-130		
trans-1,3-Dichloropropene	4.35000	0.5	"	5.0000	U	87	70-130		
Dichlorotetrafluoroethane	4.73900	0.5	"	5.0000	U	95	70-130		
1,4-Dioxane	4.79800	0.5	"	5.0000	U	96	70-130		
Ethanol	5.19600	0.5	"	5.0000	0.526000	93	70-130		
Ethyl Acetate	4.24600	0.5	"	5.0000	U	85	70-130		
Ethylbenzene	4.65100	0.5	"	5.0000	U	93	70-130		
4-Ethyltoluene	4.88400	0.5	"	5.0000	U	98	70-130		
Freon 113	4.98800	0.5	"	5.0000	U	100	70-130		
Heptane	4.95700	0.5	"	5.0000	U	99	70-130		
Hexachlorobutadiene	5.06100	0.5	"	5.0000	U	101	70-130		
Hexane	5.07700	0.5	"	5.0000	U	102	70-130		
2-Hexanone	5.11000	0.5	"	5.0000	U	102	70-130		
Isopropyl alcohol	4.81100	0.5	"	5.0000	U	96	70-130		
Methyl tert-Butyl Ether	4.54900	0.5	"	5.0000	U	91	70-130		
4-Methyl-2-pentanone	4.91700	0.5	"	5.0000	U	98	70-130		
Methylene Chloride	4.92300	0.5	"	5.0000	U	98	70-130		
Propylene	5.57400	0.5	"	5.0000	U	111	70-130		
Styrene	4.81200	0.5	"	5.0000	U	96	70-130		
1,1,2,2-Tetrachloroethane	4.77400	0.5	"	5.0000	U	95	70-130		
Tetrachloroethene	4.87800	0.5	"	5.0000	U	98	70-130		
Tetrahydrofuran	4.48800	0.5	"	5.0000	U	90	70-130		
Toluene	5.03100	0.5	"	5.0000	0.255000	96	70-130		
1,2,4-Trichlorobenzene	4.93500	0.5	"	5.0000	U	99	70-130		
1,1,1-Trichloroethane	4.97900	0.5	"	5.0000	U	100	70-130		
1,1,2-Trichloroethane	4.77100	0.5	"	5.0000	U	95	70-130		
Trichloroethene	4.90500	0.5	"	5.0000	U	98	70-130		
Trichlorofluoromethane	5.01500	0.5	"	5.0000	U	100	70-130		
1,2,4-Trimethylbenzene	4.93100	0.5	"	5.0000	U	99	70-130		
1,3,5-Trimethylbenzene	4.81700	0.5	"	5.0000	U	96	70-130		
Vinyl acetate	3.34600	0.5	"	5.0000	U	67	70-130		A
Vinyl chloride	4.72100	0.5	"	5.0000	U	94	70-130		



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch BK70301 - TO air

Matrix Spike (BK70301-MS1)		Source: 1710022-01RE1		Prepared: 11/02/17 06:47		Analyzed: 11/02/17 15:17	
m,p-Xylene	9.43100	1.0	ppbv	10.000	U	94	70-130
o-Xylene	4.69400	0.5	"	5.0000	U	94	70-130
Surrogate: Bromofluorobenzene	10.3		"	10.000		103	80-120

Matrix Spike Dup (BK70301-MSD1)	Source: 1710022-01RE1			Prepared: 11/02/17 06:47		Analyzed: 11/02/17 16:09			
Acetone	5.01500	0.5	ppbv	5.0000	0.524000	90	70-130	4	25
Benzene	6.62200	0.5	"	5.0000	1.83500	96	70-130	2	25
Benzyl chloride	4.89700	0.5	"	5.0000	U	98	70-130	0.7	25
Bromodichloromethane	4.96500	0.5	"	5.0000	U	99	70-130	2	25
Bromoform	4.78600	0.5	"	5.0000	U	96	70-130	0.1	25
Bromomethane	5.14600	0.5	"	5.0000	U	103	70-130	3	25
1,3-Butadiene	5.15000	0.5	"	5.0000	U	103	70-130	8	25
2-Butanone	4.62700	0.5	"	5.0000	U	93	70-130	4	25
Carbon disulfide	5.01100	0.5	"	5.0000	U	100	70-130	3	25
Carbon Tetrachloride	5.26300	0.5	"	5.0000	U	105	70-130	2	25
Chlorobenzene	7.76200	0.5	"	5.0000	3.62800	83	70-130	1	25
Chloroethane	5.15800	0.5	"	5.0000	U	103	70-130	5	25
Chloroform	5.06900	0.5	"	5.0000	U	101	70-130	2	25
Chloromethane	5.31800	0.5	"	5.0000	0.289000	101	70-130	11	25
Cyclohexane	5.93200	0.5	"	5.0000	0.902000	101	70-130	2	25
Dibromochloromethane	4.87700	0.5	"	5.0000	U	98	70-130	0.6	25
1,2-Dibromoethane (EDB)	4.66600	0.5	"	5.0000	U	93	70-130	0.7	25
1,2-Dichlorobenzene	5.22500	0.5	"	5.0000	0.320000	98	70-130	0.3	25
1,3-Dichlorobenzene	4.93800	0.5	"	5.0000	U	99	70-130	0.6	25
1,4-Dichlorobenzene	5.10500	0.5	"	5.0000	0.231000	97	70-130	1	25
Dichlorodifluoromethane	5.39400	0.5	"	5.0000	0.254000	103	70-130	8	25
1,1-Dichloroethane	5.07300	0.5	"	5.0000	U	101	70-130	2	25
1,2-Dichloroethane	4.96800	0.5	"	5.0000	U	99	70-130	2	25
1,1-Dichloroethene	5.03000	0.5	"	5.0000	U	101	70-130	3	25
cis-1,2-Dichloroethene	4.89400	0.5	"	5.0000	U	98	70-130	3	25
trans-1,2-Dichloroethene	4.97100	0.5	"	5.0000	U	99	70-130	4	25
1,2-Dichloropropane	4.92800	0.5	"	5.0000	U	99	70-130	2	25
cis-1,3-Dichloropropene	4.82400	0.5	"	5.0000	U	96	70-130	3	25
trans-1,3-Dichloropropene	4.51200	0.5	"	5.0000	U	90	70-130	4	25
Dichlorotetrafluoroethane	5.12300	0.5	"	5.0000	U	102	70-130	8	25
1,4-Dioxane	4.86000	0.5	"	5.0000	U	97	70-130	1	25
Ethanol	5.39700	0.5	"	5.0000	0.526000	97	70-130	4	25
Ethyl Acetate	4.41000	0.5	"	5.0000	U	88	70-130	4	25
Ethylbenzene	4.70900	0.5	"	5.0000	U	94	70-130	1	25
4-Ethyltoluene	4.89200	0.5	"	5.0000	U	98	70-130	0.2	25
Freon 113	5.11500	0.5	"	5.0000	U	102	70-130	3	25



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

QC Data
Volatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch BK70301 - TO air

Matrix Spike Dup (BK70301-MSD1)		Source: 1710022-01RE1		Prepared: 11/02/17 06:47		Analyzed: 11/02/17 16:09				
Heptane	5.11300	0.5	ppbv	5.0000	U	102	70-130	3	25	
Hexachlorobutadiene	4.96900	0.5	"	5.0000	U	99	70-130	2	25	
Hexane	5.23100	0.5	"	5.0000	U	105	70-130	3	25	
2-Hexanone	5.16100	0.5	"	5.0000	U	103	70-130	1	25	
Isopropyl alcohol	4.98100	0.5	"	5.0000	U	100	70-130	3	25	
Methyl tert-Butyl Ether	4.73800	0.5	"	5.0000	U	95	70-130	4	25	
4-Methyl-2-pentanone	5.00600	0.5	"	5.0000	U	100	70-130	2	25	
Methylene Chloride	5.05600	0.5	"	5.0000	U	101	70-130	3	25	
Propylene	6.31300	0.5	"	5.0000	U	126	70-130	12	25	
Styrene	4.84000	0.5	"	5.0000	U	97	70-130	0.6	25	
1,1,2,2-Tetrachloroethane	4.79100	0.5	"	5.0000	U	96	70-130	0.4	25	
Tetrachloroethene	4.86800	0.5	"	5.0000	U	97	70-130	0.2	25	
Tetrahydrofuran	4.65800	0.5	"	5.0000	U	93	70-130	4	25	
Toluene	5.08900	0.5	"	5.0000	0.255000	97	70-130	1	25	
1,2,4-Trichlorobenzene	4.98800	0.5	"	5.0000	U	100	70-130	1	25	
1,1,1-Trichloroethane	5.12900	0.5	"	5.0000	U	103	70-130	3	25	
1,1,2-Trichloroethane	4.72600	0.5	"	5.0000	U	95	70-130	0.9	25	
Trichloroethene	4.98600	0.5	"	5.0000	U	100	70-130	2	25	
Trichlorofluoromethane	5.16400	0.5	"	5.0000	U	103	70-130	3	25	
1,2,4-Trimethylbenzene	4.92600	0.5	"	5.0000	U	99	70-130	0.1	25	
1,3,5-Trimethylbenzene	4.80700	0.5	"	5.0000	U	96	70-130	0.2	25	
Vinyl acetate	3.49900	0.5	"	5.0000	U	70	70-130	4	25	
Vinyl chloride	5.15300	0.5	"	5.0000	U	103	70-130	9	25	
m,p-Xylene	9.54200	1.0	"	10.000	U	95	70-130	1	25	
o-Xylene	4.72200	0.5	"	5.0000	U	94	70-130	0.6	25	
Surrogate: Bromofluorobenzene	10.2		"	10.000		102	80-120			



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350



Site Name: AMES Warehouse Fire

Project #: DAS R35254

Notes and Definitions

UL	The analyte was not detected. The quantitation limit is probably higher due to indications of a low bias.
T	Tentatively Identified Compound. Identified as a result of a library search using the EPA/NIST Mass Spectral Library. Standards were not used to verify the identity and quantity of the compound. The reported value is an estimate.
J	The identification of the analyte is acceptable; the reported value is an estimate.
A	Quality control value is outside acceptance limits.
%REC	Percent Recovery
RPD	Relative Percent Difference
U	Analyte included in the analysis, but not detected at or above the quantitation limit.
NR	Not Reported

Quantitation Limit: The lowest concentration of an analyte that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method and that takes into account analytical adjustments made during sample preparation and analysis.

SOLID SAMPLE RESULTS - REPORTING PROTOCOL: Solid samples where % Solids (percent dry wt at 105 degrees C) has been performed, are analyzed wet and converted to a dry weight result for reporting purposes. This is routine for organics and most inorganic analyses. When metals and mercury analyses are requested, solid samples are routinely analyzed and reported on a dry weight basis. Solid samples for metals/mercury are prepared for analysis by an initial drying at 60 degree C and homogenization before digestion. Oil-type samples will be analyzed and reported on a wet weight basis for all analyses because of the nature of the sample. Any exceptions to the protocol will be noted with a qualifier

ATTACHMENT 7

Attachment 7 - Photographic Documentation
Ames Warehouse Fire Site
Parkersburg, Wood County, West Virginia

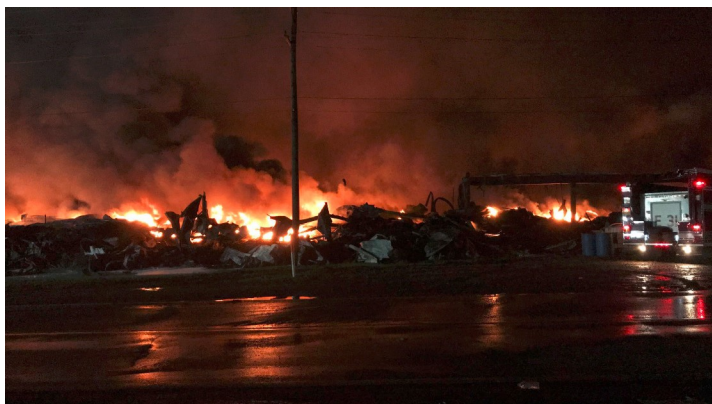


Photo No. IMG_1774; Taken on 10/21/17 at 23:22 hours by START- [REDACTED] Facing E. The view of the destruction and fire at the Ames Warehouse Site.



Photo No. IMG_1781; Taken on 10/22/17 at 7:58 hours by START- [REDACTED] Facing S. The view of the smoke plume from the fire at the Barker Lane monitoring location.



Photo No. IMG_1780; Taken on 10/22/17 at 9:10 hours by START- [REDACTED] Facing E. The view of the destruction and fire upon arrival at the Ames Warehouse Site and efforts of local fire departments to extinguish the fire.



Photo No. IMG_1779; Taken on 10/22/17 at 9:17 hours by START- [REDACTED] Facing SE. The view of the destruction and fire at the Ames Warehouse Site and efforts of local fire departments to extinguish the fire.

Attachment 7 - Photographic Documentation

Ames Warehouse Fire Site

Parkersburg, Wood County, West Virginia



Photo No. IMG_1777; Taken on 10/22/17 at 9:25 hours by START-█. Facing SE. The view of the destruction and fire at the Ames Warehouse Site and efforts of local fire departments to extinguish the fire.



Photo No. IMG_1062; Taken on 10/22/17 at 9:35 hours by START-█. Facing E. The view of the smoke plume from the fire.



Photo No. IMG_1066; Taken on 10/22/17 at 13:52 hours by START-█. Facing NE. The view of the fire and smoke at the Ames Warehouse Site and efforts of local fire departments to extinguish the fire.



Photo No. IMG_1067; Taken on 10/22/17 at 13:54 hours by START-█. Facing N. The view of the smoke plume from the fire and fire fighting efforts.

Attachment 7 - Photographic Documentation

Ames Warehouse Fire Site

Parkersburg, Wood County, West Virginia



Photo No. IMG_1071; Taken on 10/22/17 at 17:51 hours by START-█. Facing E. Site perimeter monitoring station with DataRam deployed. Site and fire/smoke visible in background.



Photo No. IMG_3790; Taken on 10/23/17 at 08:15 hours by START-█. Facing E. The view of the smoke plume from the fire over Little Kanawha River.



Photo No. IMG_3788; Taken on 10/23/17 at 8:20 hours by START-█. Facing SW. The view of the plume from the fire.



Photo No. IMG_3791; Taken on 10/23/17 at 9:12 hours by START-█. Facing E. The view of the destruction and fire at the Ames Warehouse Site and efforts of Mid Ohio Valley Airport equipment to extinguish the fire.

Attachment 7 - Photographic Documentation

Ames Warehouse Fire Site

Parkersburg, Wood County, West Virginia



Photo No. IMG_3792; Taken on 10/23/17 at 9:25 hours by START-[REDACTED] Facing E. The view of the destruction and fire at the Ames Warehouse Site and efforts of local fire departments to extinguish the fire.



Photo No. IMG_1076; Taken on 10/23/17 at 10:07 hours by START-[REDACTED] Facing NE. Drums visible at Site.



Photo No. IMG_1072; Taken on 10/23/17 at 10:55 hours by START-[REDACTED] Facing NE. The view of smoke and building remnants at Site.



Photo No. IMG_1074; Taken on 10/23/17 at 10:57 hours by START-[REDACTED] Facing NE. The view of smoke and destruction at Site.

Attachment 7 - Photographic Documentation
Ames Warehouse Fire Site
Parkersburg, Wood County, West Virginia



Photo No. IMG_1077; Taken on 10/23/17 at 15:57 hours by START-[REDACTED] Facing NE. Excavators being used in fire fighting efforts.



Photo No. IMG_1080; Taken on 10/23/17 at 16:27 hours by START-[REDACTED] Facing N. Excavators being used in fire fighting efforts.



Photo No. IMG_1081; Taken on 10/24/17 at 12:58 hours by START-[REDACTED] Facing N. Excavators being used in fire fighting efforts.



Photo No. IMG_1086; Taken on 10/24/17 at 12:58 hours by START-[REDACTED] Facing S. Field adjacent to Park and Ride at intersection of US 50 and SR 47. Smoke from the fire is visible in the area. Location was selected as new air monitoring location.

Attachment 7 - Photographic Documentation
Ames Warehouse Fire Site
Parkersburg, Wood County, West Virginia



Photo No. IMG_1099; Taken on 10/25/17 at 8:35 hours by START- [REDACTED] Facing NW. Excavators being used in fire fighting efforts to extinguish hotspots.



Photo No. IMG_1100; Taken on 10/25/17 at 8:41 hours by START- [REDACTED] Facing NW. Excavators being used in fire fighting efforts to extinguish hotspots.



Photo No. IMG_1105; Taken on 10/25/17 at 13:41 hours by START- [REDACTED] Facing NE. Excavators being used in fire fighting efforts to extinguish hotspots.



Photo No. IMG_1109; Taken on 10/26/17 at 10:28 hours by START- [REDACTED] Facing SE. View of the Site with smoke.

Attachment 7 - Photographic Documentation

Ames Warehouse Fire Site

Parkersburg, Wood County, West Virginia



Photo No. IMG_1813; Taken on 10/26/17 at 10:28 hours by START-█ Facing N. Air monitoring equipment and summa canister air sampler set up at the Source Area Perimeter monitoring location.



Photo No. IMG_1110; Taken on 10/26/17 at 10:29 hours by START-█ Facing N. Air monitoring equipment and summa canister air sampler set up at the Source Area Perimeter monitoring location.



Photo No. IMG_1808; Taken on 10/26/17 at 10:47 hours by START-█ Facing N. Air monitoring equipment and summa canister air sampler set up at the Park N' Ride monitoring location.



Photo No. IMG_1811; Taken on 10/26/17 at 10:48 hours by START-█ Facing NW. START collecting data from air monitoring equipment at the Park N' Ride monitoring location.

Attachment 7 - Photographic Documentation
Ames Warehouse Fire Site
Parkersburg, Wood County, West Virginia



Photo No. IMG_1112; Taken on 10/26/17 at 10:48 hours by START- [REDACTED] Facing NW. Air monitoring equipment and co-located summa canister air samplers set up at the Park N' Ride monitoring location.



Photo No. IMG_1113; Taken on 10/26/17 at 10:48 hours by START- [REDACTED] Facing S. Air monitoring equipment and co-located summa canister air samplers set up at the Park N' Ride monitoring location. Visible smoke in background.



Photo No. IMG_1114; Taken on 10/26/17 at 10:53 hours by START- [REDACTED] Facing W. Air monitoring equipment and summa canister air sampler set up at the Mine Outfall/Fence monitoring location.



Photo No. IMG_1809; Taken on 10/26/17 at 10:53 hours by START- [REDACTED] Facing SW. Air monitoring equipment set up at the Mine Outfall/Fence monitoring location.

Attachment 7 - Photographic Documentation
Ames Warehouse Fire Site
Parkersburg, Wood County, West Virginia



Photo No. IMG_1810; Taken on 10/26/17 at 10:53 hours by START [REDACTED] Facing W. Air monitoring equipment set up at the Mine Outfall/Fence monitoring location.



Photo No. IMG_1115; Taken on 10/26/17 at 10:54 hours by START [REDACTED] Facing NE. Air monitoring equipment and summa canister air sampler set up at the Mine Outfall/Fence monitoring location.



Photo No. IMG_1124; Taken on 10/31/17 at 12:44 hours by START [REDACTED] Facing SE. North end of the Site after fire was extinguished.



Photo No. IMG_1132; Taken on 11/02/17 at 9:09 hours by START [REDACTED] Facing SE. Air sampling with summa canister at the Park N' Ride monitoring location during second round of air sampling.

Attachment 7 - Photographic Documentation
Ames Warehouse Fire Site
Parkersburg, Wood County, West Virginia



Photo No. IMG_1134; Taken on 11/02/17 at 11:48 hours by START- [REDACTED] Facing N. Air sampling with summa canister at Fairplains Elementary School during second round of air sampling.



Photo No. IMG_1135; Taken on 11/02/17 at 11:56 hours by START- [REDACTED] Facing NE. Air sampling with summa canister at the Broadway Campground location during second round of air sampling.



Photo No. IMG_1136; Taken on 11/02/17 at 12:12 hours by START- [REDACTED] Facing W. Air sampling with summa canister at the Rescare facility location during second round of air sampling.



Photo No. IMG_1137; Taken on 11/02/17 at 12:12 hours by START- [REDACTED] Facing W. Air sampling with summa canister at the Rescare facility location during second round of air sampling.

Attachment 7 - Photographic Documentation
Ames Warehouse Fire Site
Parkersburg, Wood County, West Virginia



Photo No. IMG_1138; Taken on 11/02/17 at 12:20 hours by START-
Facing NE. Air sampling with summa cannister at air sampling location at
Jefferson Elementary School.



Photo No. IMG_1139; Taken on 11/02/17 at 12:21 hours by START-
Air sampling with summa cannister at air sampling location at
Jefferson Elementary School.