

COUNTY OF



ALLEGHENY

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**Allegheny County Health Department
Air Quality Program
Monitoring Section
Pittsburgh, Pennsylvania**

Air Monitoring Network Plan for Calendar Year 2021

July 1, 2020



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CERTIFICATION

To the best of my knowledge, this plan has been checked for completeness and the details presented herein are accurate, error-free, legible and representative of the methods employed by the Allegheny County Health Department Air Quality Program Monitoring Section to measure air quality.

David D. Good  Digitally signed by David D. Good
Date: 2020.07.01 10:37:43 -04'00'

David D. Good
Air Monitoring Section Manager

EXECUTIVE SUMMARY

Allegheny County Health Department - Air Quality Program - Monitoring Section (ACHD) operates an air monitoring network. Federal Regulations ([40CFR58.10](#)) require the ACHD to prepare an annual monitoring network plan. The ACHD must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan. Public comments received on the air monitoring plan must be included in the version submitted to the EPA, due annually on July 1. All proposed additions, modifications, and discontinuations of SLAMS monitors in ACHD's air monitoring network plan are subject to EPA approval.

The summary of air monitoring network changes since the previous approval includes:

- Removal of wind speed and direction sensors from Avalon and South Fayette
- Removal of special purpose SO₂ monitors from Clairton and West Mifflin

The summary of *proposed* air monitoring network changes includes:

- Addition of Photochemical Assessment Monitoring Station to Lawrenceville site
 - Monitor for VOCs, carbonyls, true NO₂, and hourly mixing height
- Addition of National Air Toxics Trends Station Monitoring to Lawrenceville site
 - Monitor for VOCs, carbonyls, PAHs, and PM₁₀ metals
- Addition of Enhanced Monitoring Plan network-wide
- Addition of continuous PM₁₀ monitor at Clairton site
- Redesign of the Liberty monitoring station in response to site access restrictions
- Removal of the sulfur dioxide and collocated QA PM_{2.5} FRM monitors at Avalon site
- Removal of filter-based PM₁₀ monitors at Manchester, Liberty, Clairton and South Fayette
- Removal of the PM_{2.5} monitor at North Park site
- Relocation of H₂S monitor from Avalon to North Braddock site
- Relocation of CO monitor from Flag Plaza to North Braddock site
- Relocation of VOC and carbonyls sampling from Flag Plaza to Lawrenceville site

PLAN APPROVAL

The air monitoring network plan for calendar year 2021 is hereby recommended for approval and commits the Allegheny County Health Department, Air Quality Program to present the plan to the EPA for approval.

Allegheny County Health Department, Air Quality Program

- 1) Signature: Jayne Graham Digitally signed by Jayme Graham
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1.0 Annual Air Monitoring Network Plan Requirements

The Allegheny County Health Department, Air Quality Program, Monitoring Section has prepared the public comment version of the 2021 air monitoring network plan. In addition to the federal requirements, effort has been made to document all air monitoring performed in Allegheny County. The body of the plan focuses on the regulatory requirements for our SLAMS sites, whereas Appendix A presents information regarding monitoring activities not required by the plan. Appendix A is included in response to public comments received regarding previous network plans, and provides details about the non-SLAMS, special study monitoring performed in Allegheny County. All monitoring data generated by ACHD is available through a right to know request ([Open Records page](#)).

40 CFR Part 58, §58.10 contains the air monitoring network plan requirements. Each year on July 1, the plan is to be submitted to the USEPA Regional (Region III) Administrator. A summary of the applicable requirements that parallels and condenses the regulatory text follows.

§58.10 (a) requires each agency to prepare an annual plan for an air quality surveillance system that consists of a network of SLAMS monitoring stations that can include FRM, FEM, and ARM monitors that are part of SLAMS, NCORE, CSN, PAMS, and SPM stations. Prior to submittal, the plan must be made available for public inspection and comment for at least 30 days. In addition, the plan shall include:

1. A statement of whether the operation of each monitor meets the requirements of Appendices A, B, C, D, and E of 40CFR58, where applicable.
2. Any proposed SLAMS network modifications (including new or discontinued monitoring sites, new determinations that data are not of sufficient quality to be compared to the NAAQS and changes in identification of monitors as suitable or not suitable for comparison against the annual PM_{2.5} NAAQS). The EPA Regional Administrator has 120 days to approve or disapprove the plan.
3. A plan for making Photochemical Assessment Monitoring Stations (PAMS) measurements as required in 40CFR58, Appendix D, Paragraph 5(a). The PAMS Network Description of Appendix D may be used to meet this requirement. The plan shall provide for the required PAMS measurements to begin by June 1, 2021 (promulgated delay of 2 years from original target date of 2019).
4. An Enhanced Monitoring Plan for O₃ in accordance with the requirements of 40CFR58, Appendix D, Paragraph 5(h). The EMP shall be submitted to the EPA Regional Administrator no later than October 1, 2019. This condition was satisfied in last year's plan (EPA letter dated October 28, 2019).

§58.10 (b) requires that the plan must contain the following information for each existing and proposed site:

1. The Air Quality System (AQS) site identification number.
2. The location, including street address and geographical coordinates.
3. The sampling and analysis method(s) for each measured parameter.
4. The operating schedules for each monitor.
5. Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal.
6. The monitoring objective and spatial scale of representativeness for each monitor.
7. The identification of any sites that are suitable and sites that are not suitable for comparison against the annual PM_{2.5} NAAQS (as described in §58.30).
8. The Metropolitan Statistical Area (MSA), Core Based Statistical Area (CBSA), Combined Statistical Area (CSA) or other area represented by the monitor.
9. The designation of any lead (Pb) monitors as either source-oriented or non-source-oriented (no longer applicable in Allegheny county).
10. The identification of required NO₂ monitors as near-road, area-wide, or vulnerable and susceptible population monitors.
11. The identification of any PM_{2.5} FEMs and/or ARMs used in the monitoring agency's network where the data are not of sufficient quality such that data are not to be compared to the NAAQS.

§58.10 (c) requires that the plan must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan.

§58.10 (d) The local agency shall perform and submit to the EPA Regional Administrator an assessment of the air quality surveillance system every 5 years to determine, at a minimum, if the network meets the monitoring objectives defined in Appendix D, whether new sites are needed, whether existing sites are no longer needed and can be terminated and whether new technologies are appropriate for incorporation into the ambient air monitoring network. The network assessment must consider the ability of existing and proposed sites to support air quality characterization for areas with relatively high populations of susceptible individuals and, for any sites that are being proposed for discontinuance, the effect on data users other than the agency itself, such as nearby states and tribes or health effects studies. The agency must submit a copy of this 5-year assessment along with a revised annual network plan. The next assessment is due to be submitted to the EPA on July 1, 2020 (concurrent with this plan).

§58.10 (e) All proposed additions and discontinuations of SLAMS monitors in annual monitoring network plans and periodic network assessments are subject to approval according to §58.14.

2.0 Changes Since the Last Air Monitoring Network Plan

2.1 Monitor Reductions

2.1.1 Special Purpose Sulfur Dioxide Monitors

An accidental fire occurred at a local plant on December 24, 2018, resulting in damage to its sulfur dioxide control equipment. Sulfur dioxide 1-hour NAAQS violations were measured at the Liberty and North Braddock monitoring sites during the outage and repairs were not projected to be completed to the control equipment until April 15, 2019. Due to community concerns, special purpose sulfur dioxide monitors were deployed in two locations, both locations had increased odor complaints. The locations were Clairton Education Center and New Emerson Elementary School in West Mifflin. Due to the need for rapid deployment and limited options for siting, these monitors did not meet all probe sighting criteria for SLAMS monitors but were exposed to all quality assurance procedures required for SLAMS monitors. Hourly data for both monitors were available on the public website. Neither of the temporary sulfur dioxide monitors exceeded SO₂ NAAQS. The temporary sulfur dioxide monitors were discontinued on December 18, 2019.

2.1.2 Meteorological Monitoring

Wind speed and direction sensors were removed from the Avalon and South Fayette sites.

2.2 Monitoring Additions

There were no additions to the monitoring network since the previous plan approval.

3.0 Proposed Changes to the Air Monitoring Network

The internal expansion and upgrades to Allegheny County's Air Monitoring Network will require significant time and resource commitments that necessitate a critical review of the existing network infrastructure and the utility of the data yielded. The 2021 Air Monitoring Network Plan coincides with the release of the 2020 Five-Year Network Assessment performed by the Planning Section at ACHD. The purpose of the Five-Year Assessment is to analyze the effectiveness and efficiency of the network and to determine if the network is best serving the population using available resources. As required by 40 CFR Part 58, §58.14(a), the Department has leveraged the results of that assessment here in the 2021 Air Monitoring Network Plan to help make objective, data-driven decisions regarding any proposed changes to the network.

3.1 Monitor Additions

3.1.1 PAMS (Photochemical Assessment Monitoring Stations)

ACHD plans to adopt the PAMS network design criteria as contained in 40CFR58, Appendix D, Section 5. PAMS monitoring is required at NCORE sites in Core Based Statistical Areas (CBSAs) with a population of 1,000,000 people or more. The Lawrenceville NCORE site meets the requirements for mandatory expansion to a PAMS air monitoring site. ACHD plans to begin making PAMS measurements at the NCORE location by June 1, 2021.

EPA has promulgated the revised start date from June 1, 2019, to June 1, 2021. The proposed revision gave states two additional years to acquire the necessary equipment and expertise needed to successfully make the required PAMS measurements by the start of the 2021 PAMS season.

The required equipment needed to measure PAMS parameters will be purchased by USEPA using a nationally negotiated contract and delivered to the monitoring agencies. USEPA has announced that the necessary equipment is anticipated to arrive this year. ACHD will work with EPA to begin measurements on or before the revised start date of June 1, 2021. At present, the first four items of equipment (listed below) have not been obtained.

3.1.2 PAMS Monitoring Site Required Parameters

The PAMS monitoring season is three months long (June, July and August). PAMS measurements will include:

- **Hourly Volatile Organic Compounds** using a specifically designed dual column gas chromatograph.
- **Carbonyls** using EPA method TO-11a, DNPH cartridge sampling with subsequent laboratory analysis. Required sampling frequency is every three days at 8-hour intervals.

- **True NO₂ (continuous)** using a new type of monitor that eliminates interference from other oxides of nitrogen species. This monitor will have a USEPA equivalent method designation for ambient NO₂ monitoring.
- **Hourly Mixing Height** using a ceilometer, an instrument that employs an upward facing laser coupled with a lidar receiver to determine atmospheric inversion height on an hourly basis.
- **Meteorological Monitoring** using atmospheric pressure, precipitation, solar radiation and UV radiation sensors. Wind speed, wind direction, ambient temperature and relative humidity are also required, but are currently operated as an NCORE monitoring site requirement.

For information about the national PAMS network see:

<https://www3.epa.gov/ttn/amtic/pamsmain.html>

3.1.3 EMP (Enhanced Monitoring Plan)

Ozone is a regional pollutant, and Pennsylvania is part of the Ozone Transport Region (OTR), a group of northeast states from Virginia to Maine that are jointly addressing the ozone problem. As required in 40CFR58, Appendix D, Section 5(h), states in the OTR must develop an Enhanced Monitoring Plan (EMP) detailing enhanced O₃ and O₃ precursor monitoring activities to be performed. At a minimum, the EMP shall be reassessed and approved as part of the 5-year network assessments required under 40 CFR 58.10(d).

An effective EMP must involve the cooperation of the state of Pennsylvania as well as bordering states, since the ozone concentrations are affected by transport and secondary atmospheric reactions. ACHD's portion of Pennsylvania's EMP is proposed to include the following activities:

1. Continue to operate all three existing ozone monitoring sites on a year-round basis
2. Operate the PAMS true NO₂ monitor on a year-round basis
3. Continue to operate NO₂/NO_x chemiluminescence monitor at the Harrison ozone monitoring site on a year-round basis
4. Continue year-round speciated VOC and carbonyl sampling and analysis at on a 1 in 6-day frequency
5. Operate the PAMS ceilometer on a year-round basis
6. Continue to operate PAMS meteorological sensors on a year-round basis

The ACHD PAMS site is a candidate location for citing a PANDORA spectrometer. The EPA will ultimately decide which candidate sites will be chosen for PANDORA installation and operation. The PANDORA Spectrometer was developed by NASA to measure concentrations of formaldehyde, ozone, sulfur dioxide, BrO, NO₂, and H₂O every 80 seconds. These data can be used to cross reference satellite data for ground comparison. For information about PANDORA, see the following webpage: <https://pandora.gsfc.nasa.gov/>

3.1.4 National Air Toxics Trends Station (NATTS)

The National Air Toxics Trends Station (NATTS) program was developed by the EPA to fulfill the need for long-term hazardous air pollutants (HAP) monitoring data of consistent quality. The Lawrenceville NCORE site has been identified and (tentatively) selected by the EPA for inclusion into the NATTS program. ACHD is currently in the process of finalizing the arrangement before procuring the necessary equipment to begin operations later in 2020.

The NATTS monitoring is year-round on a 1 in 6-day sampling frequency. NATTS sampling will include:

- **Volatile Organic Compounds** using SUMMA canister sampling via EPA Method TO-15.
- **Carbonyls** using DNPH cartridge sampling via EPA Method TO-11A.
- **PAHs** using glass cartridge PUF sampling via EPA Method TO-13A.
- **PM₁₀ Metals** using a HI-VOL PM₁₀ sampler and quartz filters via EPA Method IO 3.5.

ACHD currently monitors VOC and carbonyls at the Flag Plaza site and monitors for TSP metals at the Lawrenceville site. Upon designating the Lawrenceville site as a NATTS site, ACHD would relocate the VOC and carbonyls sampling from Flag Plaza to the Lawrenceville site and discontinue the TSP metals sampler and replace it with a PM₁₀ metals sampler. A PAH sampler that meets the NATTS sampling protocol would be added to the Lawrenceville site to complete the suite of required pollutants to be measured for the program.

3.1.5 Parkway East Secondary Collocated PM_{2.5} FRM

ACHD is planning to add a PM_{2.5} FRM sampler as a collocated QA monitor for the existing PM_{2.5} FEM monitor, as per 40CFR58, Appendix A. At that time the Avalon secondary QA monitor would be removed. This monitor will be on a 1 in 12-day schedule (or more frequent). Ultimately this will yield PM_{2.5} data of higher quality from the Parkway East site while not incurring any additional burden on staff and resources.

3.2 Monitor Relocations/Modifications

3.2.1 Avalon Hydrogen Sulfide

ACHD proposes to relocate hydrogen sulfide (H₂S) monitoring currently performed at the Avalon site to the North Braddock station. The H₂S monitor has demonstrated steady, low concentrations since the shutdown of the Shenango Coke Works battery in January of 2016. Additionally, the shelter that currently houses the analyzer is in poor condition with water damage that presents a hazard to both the equipment and field staff and should be retired immediately. An H₂S monitor at the North Braddock station could provide more valuable data to the community and network overall in identifying local sources of H₂S.

3.2.2 Flag Plaza Carbon Monoxide, VOC and Carbonyls

ACHD proposes to relocate the CO monitor from Flag Plaza to the North Braddock station (pending planned upgrades to the North Braddock site). Flag Plaza has experienced uniform low CO readings and the Department feels that the CO monitor could better serve the community at the North Braddock station.

ACHD also plans to relocate the VOC and carbonyls sampling from Flag Plaza to the Lawrenceville site (see section 3.1.4 above).

3.2.3 Clairton PM₁₀

ACHD proposes to discontinue the intermittent (1 in 6-day) filter-based PM₁₀ FRM sampler at the Clairton site and replace it with a continuous PM₁₀ FEM monitor. A continuous PM₁₀ monitor at Clairton would yield more valuable upwind data in real-time compared to current sampling frequency. This improvement in data collection would also reduce burden on the field and laboratory staff.

3.3 Monitor Reductions

3.3.1 Avalon Sulfur Dioxide and Secondary PM_{2.5} FRM

ACHD proposes to discontinue sulfur dioxide (SO₂) monitoring at the Avalon site. The SO₂ monitor has demonstrated steady, low concentrations since the shutdown of the Shenango Coke Works coke battery in January of 2016. The remaining four SO₂ sites in the network provide dense coverage for the county and far exceed the number of monitors required by 40CFR58, Appendix D, Section 4.4 (see Section 8.4). Additionally, the shelter that currently houses the analyzers is in poor condition with water damage that presents a hazard to both the equipment and field staff and should be retired immediately.

When the secondary QA PM_{2.5} FRM sampler is installed at the Parkway East site, ACHD proposes to eliminate the secondary QA PM_{2.5} FRM sampler at the Avalon site. The FRM and FEM PM_{2.5} monitors at Avalon have demonstrated excellent levels of correlation over

several years now and the data is now redundant. The PM_{2.5} FRM will remain on-site as a backup unit. This reduction will not affect the operation of the continuous PM_{2.5} FEM monitor at Avalon.

3.3.2 South Fayette PM₁₀

ACHD proposes to discontinue the intermittent, filter-based PM₁₀ FRM sampler at South Fayette site. The proposed addition of a continuous PM₁₀ FEM monitor at Clairton (see Section 3.2.3 above) would serve as a better upwind site for PM₁₀. South Fayette already operates a PM_{2.5} FRM sampler on a more frequent basis than the PM₁₀ FRM sampler (1 in 3-day vs 1 in 6-day), and the site could be a candidate for a continuous PM_{2.5} FEM monitor in the near future. The filter-based PM₁₀ monitor at South Fayette produces redundant data and is burdensome on the field and laboratory staff.

3.3.3 Manchester PM₁₀

ACHD proposes to discontinue the intermittent, filter-based PM₁₀ sampler at Manchester (only pollutant measured), and thus the Manchester site from the network. The monitor is considered the least important of the eight (current) PM₁₀ sites in the network and was originally designed to address source-oriented impacts from sources in the Ohio River Valley that have since been controlled, switched fuels, or ceased operations. Since the PM₁₀ standard has been revoked and the nearest PM₁₀ monitor from the Manchester site is less than 3km away, its removal is warranted to alleviate the burden on staff and resources.

3.3.4 Liberty PM₁₀

ACHD proposes to discontinue the intermittent (1 in 3-day and 1 in 6-day) filter-based PM₁₀ FRM sampling at the Liberty site and seeks to have the existing, continuous PM₁₀ FEM monitor designated as the primary SLAMS PM₁₀ monitor for that site. The filter-based PM₁₀ FRM sampling currently at Liberty produces redundant data and is burdensome on the field and lab staff. Filter-based PM_{2.5} FRM sampling at Liberty will not be affected by this proposal.

3.3.5 North Park PM_{2.5}

ACHD proposes to discontinue PM_{2.5} (only pollutant measured) monitoring at North Park, and thus the North Park site from the network. The monitor has consistently demonstrated the lowest concentrations in the network, while correlating strongly with the Avalon PM_{2.5} monitor. The operation and maintenance required are burdensome on staff and resources, and the existing sampler could be better served as a secondary PM_{2.5} monitor for the Parkway East site that experiences significantly higher PM_{2.5} concentrations. Background PM_{2.5} concentrations for the area can be obtained from the South Fayette site and at other monitoring stations just outside of Allegheny County.

3.4 Air Monitoring Site Modifications

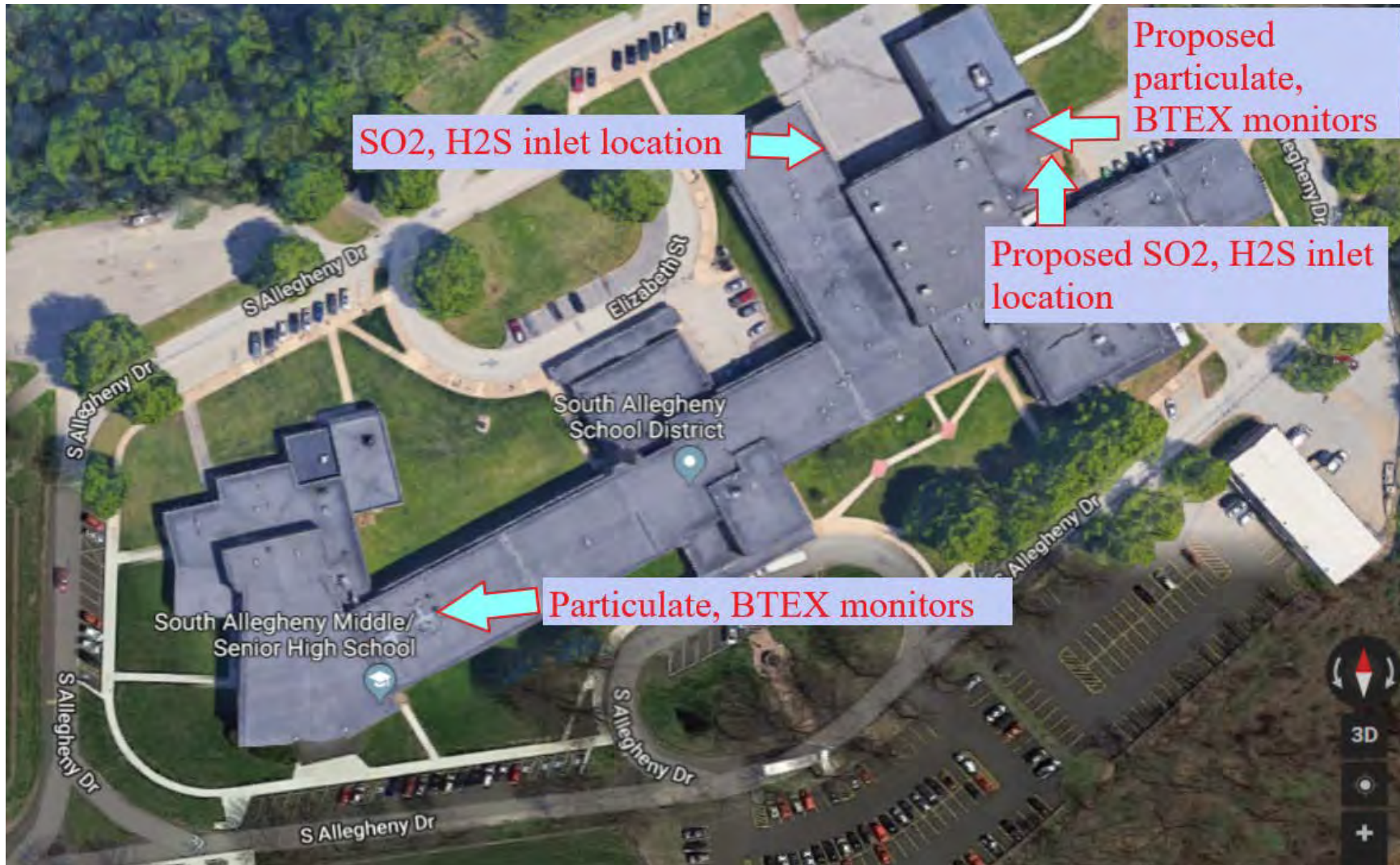
3.4.1 Liberty Air Monitoring Station

The Liberty monitoring station is located at the South Allegheny School District's High School (SASD) in Liberty Borough. Historically, the gaseous analyzers have been operated out of a supply room on the second floor of the school, while the particle monitors have been operated on the roof with access provided by an interior ladder and hatch. Access to these areas requires entry to the school and processing through the district's Raptor verification system as well as the metal detection system. During the process of renewing the letter agreement between ACHD and SASD, school officials indicated that the monitoring site must be redesigned so that ACHD personnel will not have access to the inside of the school. This is in response to increased security policies that are being implemented by the school district.

The proposed solution is to purchase and install a small monitoring trailer (8'x14') to house the gaseous monitors, installing it on a concrete pad adjacent to the west wall of the school. The gaseous monitor probe lines will be affixed to the exterior wall of the school and the inlet funnels will be situated at least 5' above the top of the roof. A preexisting external safety ladder near the new trailer location will provide access to the roof. The particle monitors will be moved to the roof area near this exterior ladder. The roof mounted 10-meter meteorological tower may be upgraded to a new tower with a trolley system, depending on available funds. This new tower would be mounted to a location closer to the new trailer site to facilitate a hardwired connection to the datalogger. The trolley system is an overall improvement to staff safety and requires fewer staff resources to audit and service sensors.

ACHD will complete the Liberty site modifications as soon as possible as requested by the school district. The particulate and BTEX samplers will be moved 570 feet north east. The gas monitor inlets will be moved 160 feet east south east. Gaseous monitor and particle sampler inlets will remain at the same height. (See Figure 3.2 for illustration). The Clean Air Fund request to fund the modifications to the site was approved by the Board of Health in March.

Figure 3.4 Proposed Relocation of Liberty Air Monitors



3.5 Monitor Removal Criteria

One of the criteria that can be met for monitor removal in 40 CFR §58.14(c) specifies that “any PM_{2.5}, O₃, CO, PM₁₀, SO₂, Pb, or NO₂ SLAMS monitor which has shown attainment during the previous five years, that has a probability of less than 10 percent of exceeding 80 percent of the applicable NAAQS during the next three years based on the levels, trends, and variability observed in the past, and which is not specifically required by an attainment plan or maintenance plan.” The methodology demonstrating a less than 10 percent probability of exceeding 80 percent of the applicable NAAQS for any SLAMS monitor proposed to be removed or relocated is shown in the equation below and the results in Table 3 below.

$$X + \frac{t * s}{\sqrt{n}} < 0.8 * NAAQS$$

X is the average design value for the last 5 years

t is the student's *t* value for *n*-1 degrees of freedom at the 90% confidence level

s is the standard deviation of the design values

n is the number of records (i.e., number of design values)

NAAQS is the standard of interest

Table 3 Air Monitoring Network Summary

Site Name (AQS Number)	Pollutant	Averaging Time	Design Values					X	s	t	n	NAAQS	80% of NAAQS	90% Confidence Interval	Pass
			2015	2016	2017	2018	2019								
Avalon (42-003-0002)	SO ₂	1-hr	38	30	21	9	7	21	13.3	2.13	5	75	60	33.7	YES
Flag Plaza (42-003-0031)	CO	1-hr	1.3	2.1	2.1	1.9	2.2	1.9	0.36	2.13	5	35	28	2.3	YES
North Park (42-003-0093)	PM _{2.5}	Annual	8.5	8.2	8.2	7.8	7.4	8.0	0.43	2.13	5	12	9.6	8.4	YES
Manchester (42-003-0092)	PM ₁₀	24-hr	34	58	38	32	42	40.8	10.4	2.13	5	150	120	50.7	YES
South Fayette (42-003-0067)	PM ₁₀	24-hr	32	29	26	22	31	28	4.1	2.13	5	150	120	31.9	YES

4.0 Air Monitoring Network Summary

Figure 4 and Table 4 are provided as overviews of the air monitoring network and presented here to show at a glance the numbers and general types of air monitors currently maintained by the Air Quality Program as well as the general location of each fixed monitoring site. To view live and recent data for all continuous monitors listed in the table, see the Air Quality Program website;

<http://www.achd.net/air/air.html>

Figure 4 Air Monitoring Network Map



Table 4 Air Monitoring Network Summary

	SO ₂	CO	NO ₂	NO _y	O ₃	PM ₁₀	PM _{2.5}	PM coarse	Air Toxics
Lawrenceville NCORE	CT	CT		CT	C		C I(1), IQA(6) SPC(3)	C	TO15(6) TO11(6) PAH M
Liberty	CT					C I(3), IQA(6)	C I(1), IQA(6) SPC(6)		Ch B(a)P H2S
North Braddock	C	CT				C	I(3)		H2S
South Fayette	C				C	I(6)	I(3)		
Clairton						C I(6)	I(6)		
Avalon	C						C IQA(6)		H2S
Flag Plaza		CT				C			TO15(6) TO11(6)
Glassport						C			
Lincoln						C	CN		
Manchester						I(6)			
Harrison			C		C		I(3)		
North Park							I(6)		
Parkway East Near Road		CT	CT				C IQA(12)		Aeth(C)
	SO ₂	CO	NO ₂	NO _y	O ₃	PM ₁₀	PM _{2.5}	PM coarse	Air Toxic
Total (Current Network)	C = 3 CT = 2	CT = 3	C = 1 CT=1	CT = 1	C = 3	C = 5 I = 4 IQA=1	C = 4 CN = 1 I = 7 IQA = 3 SPC=2	C = 1	I = 2 C=1

Tabular Summary Key

I = Intermittent or Filter-Based; C = Continuous; SPC = PM2.5 Speciation; T = Trace Level Monitor
(1), (3), (6), (12) = Sampling Frequency: (1) = daily, (3) = every 3rd day, (6) = every 6th day, (12) = every 12 th day
TO15 = SUMMA TO15; TO11 = Carbonyl TO11; Aeth = <u>Aethalometer</u> : Black Carbon, Ultraviolet PM
QA = Collocated QA monitor; N = Non-FEM monitor (Special Study, non-regulatory use); H2S = Hydrogen Sulfide
PAH = Polycyclic Aromatic Hydrocarbons; M = PM10 HAP Metals; Ch = Charcoal Tube; B(a)P = BenzoAPyrene
Yellow Shading = Planned Monitors, Not Yet Operational; Red Shading = Candidate for Discontinuation/Relocation

5.0 Appendix A Requirements

40CFR58, Appendix A specifies the minimum quality system requirements applicable to SLAMS and other monitor types whose data are intended to be used to determine compliance with the NAAQS. ACHD is the Primary Quality Assurance Organization (PQAO) for this data set. A PQAO is also responsible for demonstrating data quality. ACHD has developed a quality system that is described and approved in quality management plans (QMP) and quality assurance project plans (QAPP). The purpose of these documents is to ensure that the monitoring results provide data of adequate quality for the intended monitoring objectives.

ACHD performs the requisite measurement quality checks that are used to assess data quality. ACHD also performs an internal second level audit as an added measure of the data quality. Data from these checks is submitted to the AQS within the same time frame as routinely-collected ambient concentration data. In addition to performing QA and QC checks, ACHD participates in external performance evaluation programs (which are independent assessments) and technical systems audit conducted by the EPA.

Regarding all data generated by the criteria pollutant monitors described in this network review, no later than May 1 of each year, ACHD submits a letter certifying accuracy and reliability of each previous calendar year's criteria air pollutant monitoring data reported to AQS to the Mid Atlantic Regional Administrator in hard copy. An electronic copy of this information will also be sent to the Mid-Atlantic Region Associate Director, Office of Air Monitoring and Planning.

ACHD's data certification will contain all required reports and will be accompanied with a statement from a responsible official who certifies that;

- All ambient concentration data and quality assurance data have been reported to the AQS database.
- The ambient data are accurate to the best of his or her knowledge taking into consideration all applicable quality assurance findings.

6.0 Appendix B Requirements

40CFR58, Appendix B specifies the minimum quality assurance requirements for the control and assessment of the quality of the ambient air monitoring data submitted to a PSD reviewing authority or the EPA by an organization operating an air monitoring station, or network of stations, operated to comply with Part 51 New Source Review (NSR) - Prevention of Significant Deterioration (PSD).

At present, Appendix B requirements are not applicable since there is no PSD monitoring performed by ACHD nor performed by an external PSD PQAO within the county.

7.0 Appendix C Requirements

40CFR58, Appendix C specifies the criteria pollutant monitoring methods (manual methods or automated analyzers) which must be used in SLAMS, NCORE stations (a subset of SLAMS) and PAMS (to be located at the NCORE site and considered to be another subset of SLAMS).

All criteria pollutant monitoring methods in the air monitoring network used for making NAAQS decisions at a SLAMS site are reference (FRM) or equivalent (FEM) methods. The FRM or FEM designation acceptance tests are performed by the manufacturer in accordance with the requirements of 40CFR50 and 40CFR53.

Methods employed at the Lawrenceville NCORE multipollutant site are either reference or equivalent methods. NCORE multipollutant parameters include SO₂, CO, NO_y, O₃, PM_{2.5} and PM_{10-2.5} (aka PM_{coarse}, Coarse PM or PM_c). NO_y and PM_c do not have an associated NAAQS.

Methods to be employed at the proposed Lawrenceville PAMS site will be either reference or equivalent methods (where applicable). PAMS FEM monitoring parameters include O₃ and true NO₂. PAMS monitoring which do not have FEM nor FRM designation include methods for meteorological measurements and speciated VOC monitoring methodologies which are specified in PAMS guidance documents.

- Meteorological monitoring guidance is provided in QA Handbook, Volume IV - Meteorological Measurements found at <https://www3.epa.gov/ttn/amtic/qalist.html>.
- The Compendium of Methods for the Determination of Toxic Organic (<https://www3.epa.gov/ttn/amtic/airtox.html#compendium>) can be found on EPA's website. Carbonyl sampling and analysis is based upon TO-11A and the automated gas chromatography method is based upon TO-15.

8.0 Appendix D Requirements

40CFR58, Appendix D describes monitoring objectives and general criteria to be applied in establishing the required SLAMS ambient air quality monitoring stations and for choosing general locations for additional monitoring sites. Appendix D also describes specific requirements for the number and location of FRM, FEM, and ARM sites for specific pollutants, NCORE multipollutant sites, PM₁₀ mass sites, PM_{2.5} mass sites, chemically-speciated PM_{2.5} sites, and O₃ precursor measurement sites (PAMS). These criteria are used by EPA to evaluate the adequacy of the ACHD monitoring network.

The ACHD monitoring network provides air pollution data to the public in a timely manner, supports compliance with ambient air quality standards and emissions strategy development and supports air pollution research studies. The location of the monitors in the network were chosen to correctly match the spatial scale represented by the sample of monitored air with the spatial scale most appropriate for the monitoring site type, air pollutant to be measured and the monitoring objective.

General monitoring requirements are based on population density of the monitoring area. For Allegheny County, the Pittsburgh MSA (metropolitan statistical area) is referenced. The latest census (2010) determined the population of the Pittsburgh MSA to be 2,356,285 people. Some monitoring requirements are also based on individual pollutant design values, which are concentrations derived from past data generated by SLAMS monitors in Allegheny County. Air Quality Design Values (DV) referenced in this section are based on tables available at:

<http://www.epa.gov/airtrends/values.html>

Each state is required to operate at least one NCORE site. States may delegate this requirement to a local agency. The NCORE location is leveraged with other multipollutant air monitoring sites including the proposed PAMS site, CSN monitoring and monitoring performed by academia. Site leveraging includes using the same monitoring platform and equipment to meet the objectives of the variety of programs where possible and advantageous.

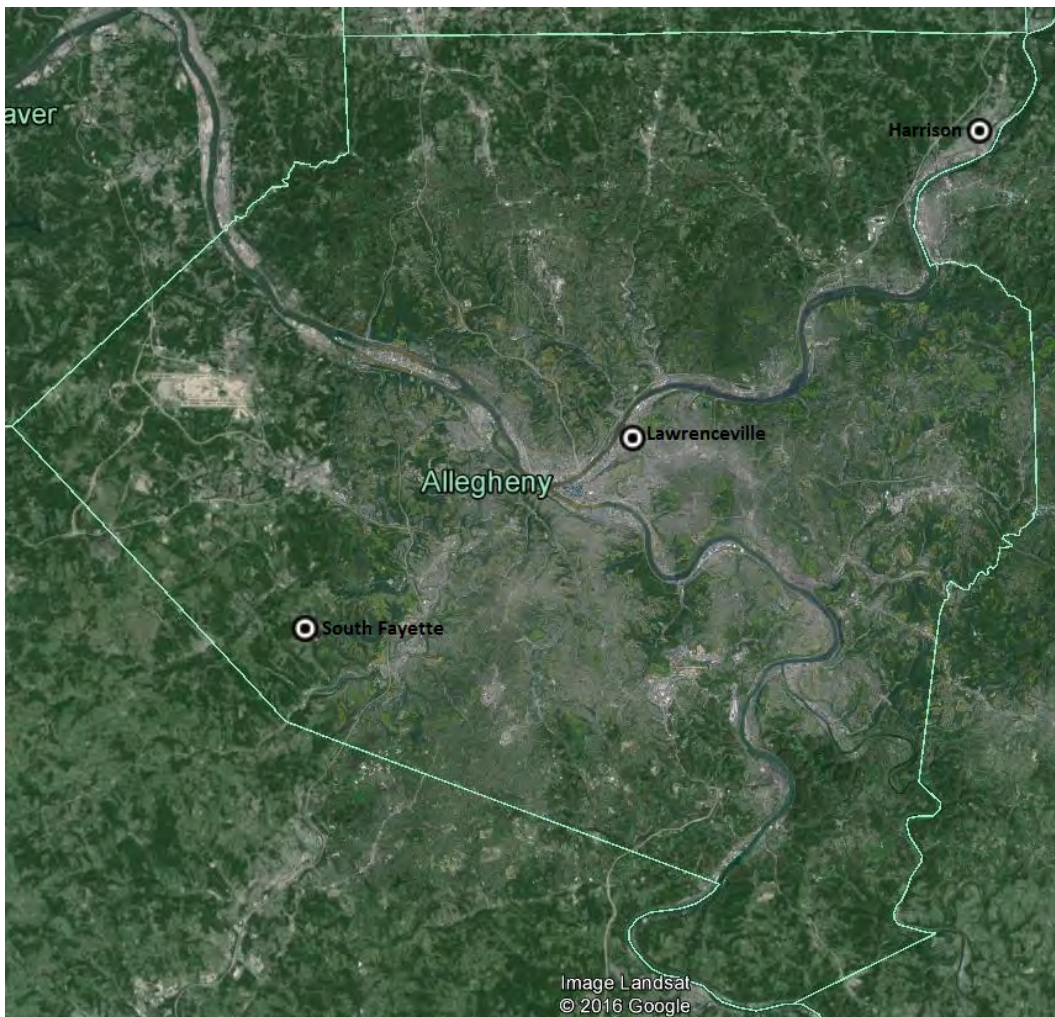
Pollutant specific design criteria for SLAMS sites are codified in 40CFR58, Appendix D, Section 4. EPA updates this document routinely in response to NAAQS revisions and in response to evolving air monitoring network objectives. SLAMS sites are intended to address specific air quality management interests, and as such, are frequently single-pollutant measurement sites. The following sections parallel the CFR citations and provide the current, applicable requirements for each criteria pollutant.

8.1 Ozone Design Criteria

Ozone (O₃) monitoring requirements are determined by the MSA population and ozone design value, as specified in Table D-2 of 40CFR58, Appendix D.

- Based on the population of the Pittsburgh MSA and the latest ozone design value, which is greater than 85% of the ozone NAAQS, ACHD is required to operate two ozone monitors. ACHD satisfies this requirement by operating three ozone monitors.
- Each NCORE site must operate an ozone monitor. ACHD satisfies this requirement by operating an ozone monitor at the Lawrenceville NCORE site.
- Within an ozone network, at least one ozone site for each MSA must be designed to record the maximum concentration for that metropolitan area. The maximum concentration monitor site should be selected in a direction from the city that is most likely to observe the highest ozone concentrations, more specifically, downwind during periods of photochemical activity. The Harrison monitor is assigned this designation.

Figure 8.1 Ozone Monitoring Map

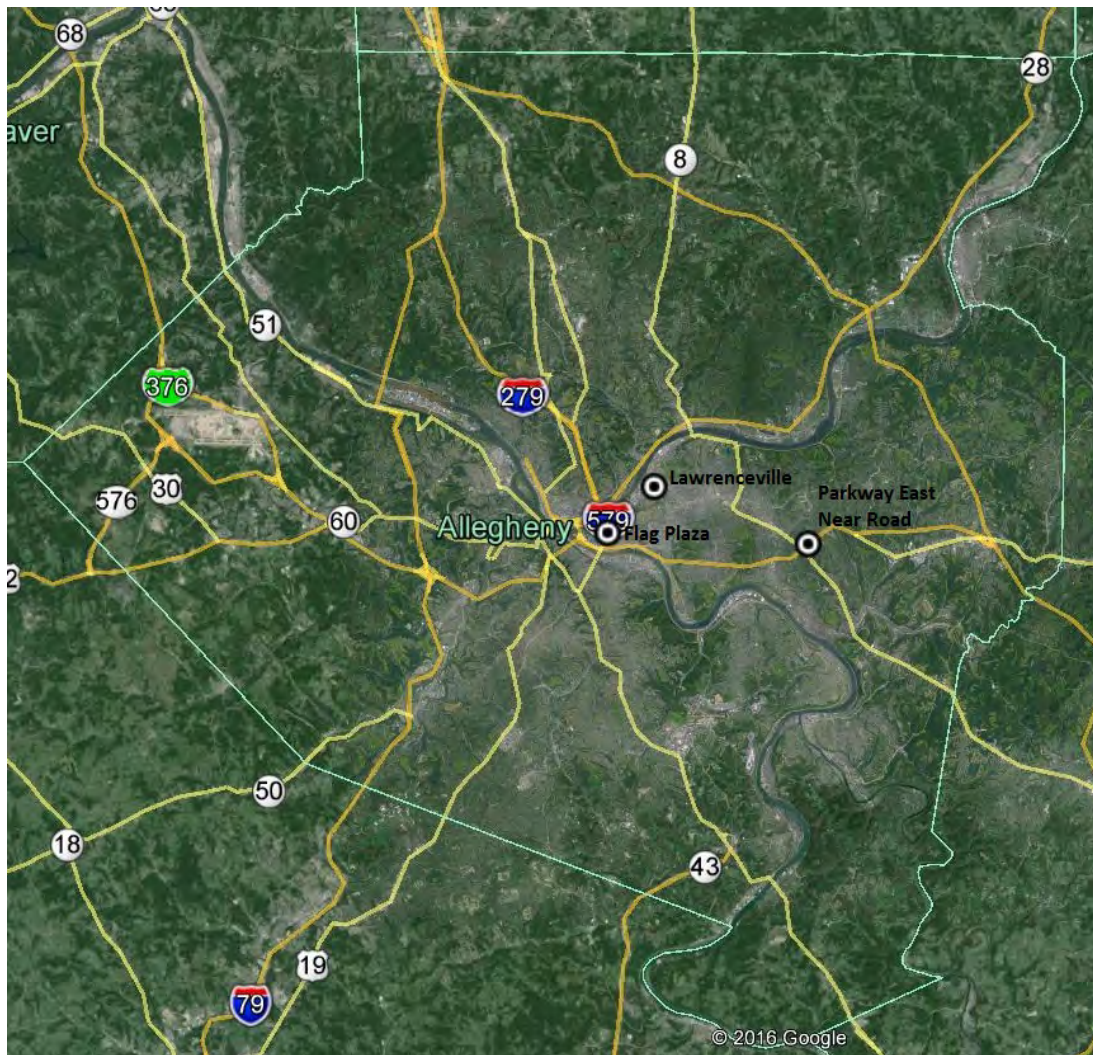


8.2 Carbon Monoxide Design Criteria

EPA revised the minimum monitoring requirements for carbon monoxide (CO) on August 12, 2011 (40CFR58, Appendix D). Applicable requirements are;

- One CO monitor is required to be collocated with a near road NO₂ monitor in urban areas having a population of 1 million or more. ACHD included a CO monitor in the initial configuration of the Parkway East Near Road monitoring site, which was operational on 09/01/2014.
- One CO monitor is required at each NCORE site. ACHD has operated a trace level CO monitor at the Lawrenceville NCORE site since 4/1/2010.
- ACHD operates an additional CO monitor at Flag Plaza. This site is in the Pittsburgh central business district and the CO monitor is operated to assess impact from mobile emissions in this congested area. This monitor is in operation to satisfy a CO maintenance plan that will expire after calendar year 2022.

Figure 8.2 CO Monitors and Major Roadways Map

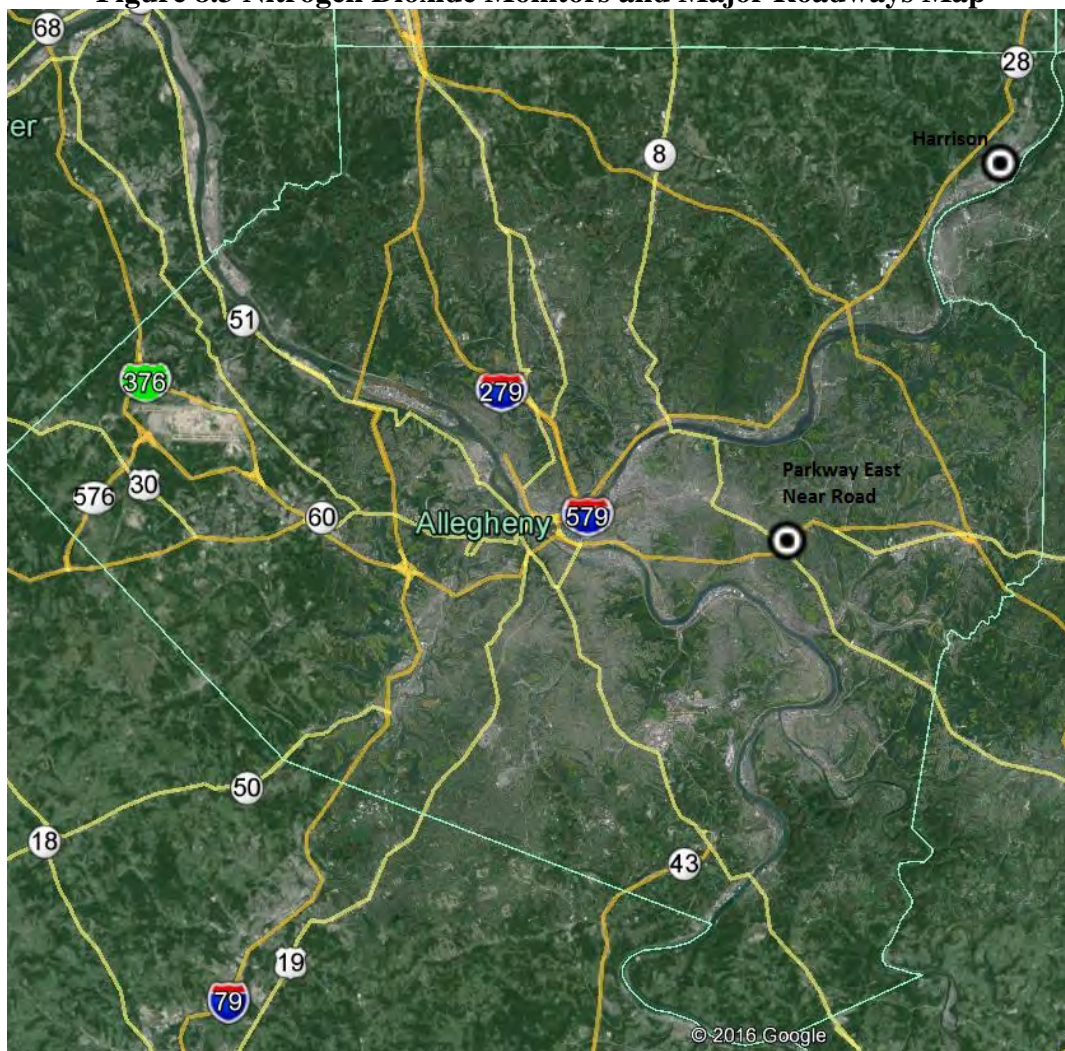


8.3 Nitrogen Dioxide Design Criteria

On January 22, 2010, EPA strengthened the health-based NAAQS for NO₂ by setting a new 1-hour NAAQS at 100 ppb. The existing annual average NAAQS of 53 ppb was retained. In addition, EPA revised the NO₂ monitoring requirements in urban areas. Applicable requirements are as follows;

- One near road NO₂ monitoring site is required in an MSA with a population $\geq 500,000$ and $< 2,500,000$ people. Near-road NO₂ monitoring characterizes the maximum expected hourly NO₂ concentration due to mobile source emissions on major roadways.
- One area wide NO₂ monitor in MSA's with a population > 1 million. The Harrison NO₂ monitor has been in operation at the current location since 02/12/2014.
- Although not shown on the map, the Lawrenceville NCORE site performs NO_y measurements. NO_y measurements produce conservative estimates for NO₂. In addition, the PAMS site (Lawrenceville) will be required to measure true NO₂ starting on the final USEPA revised start date for this network.

Figure 8.3 Nitrogen Dioxide Monitors and Major Roadways Map

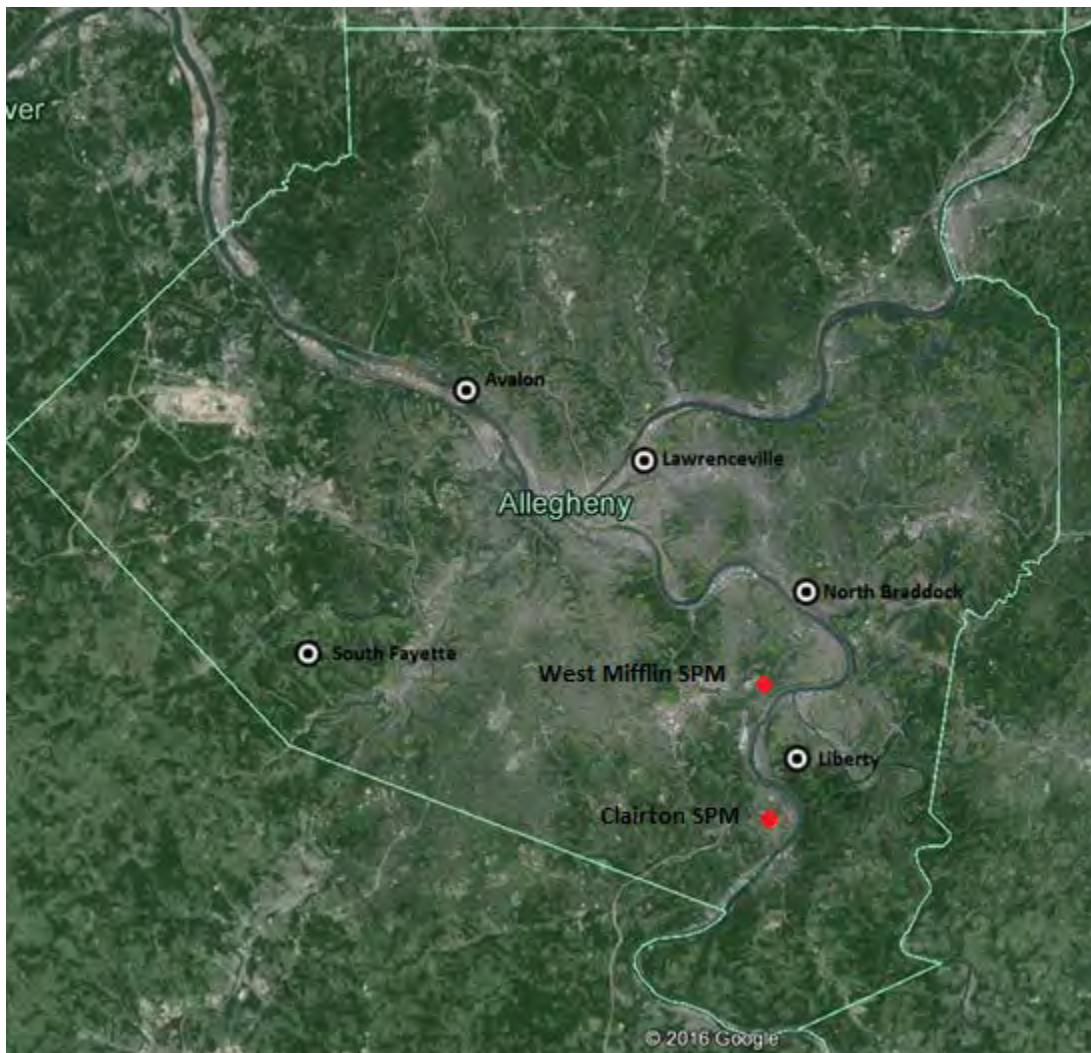


8.4 Sulfur Dioxide Design Criteria

The minimum number of required SO₂ monitors in each MSA is proportional to the product of the total amount of SO₂ emissions in the MSA and its population as specified in 40CFR58, Appendix D, Section 4.4. The resulting value is defined as the Population Weighted Emissions Index (PWEI). Using the ACHD 2014 emission inventory aggregate SO₂ emissions and 2010 census data for the Pittsburgh MSA, the PWEI is calculated at 20,096. SO₂ requirements are as follows;

- For any MSA with a calculated PWEI value equal to or greater than 5,000, but less than 100,000, a minimum of one SO₂ monitor is required within that CBSA. ACHD exceeds this minimum requirement with a total of five SO₂ monitors.
- Each NCORE station must operate an SO₂ monitor. ACHD included an SO₂ monitor as part of the initial configuration of the Lawrenceville NCORE site.

Figure 8.4 Sulfur Dioxide Monitors



8.5 Lead (Pb) Design Criteria

40CFR58, Appendix D, Paragraph 4.5 states that local agencies are required to conduct ambient air Pb monitoring near Pb sources which are expected to or have been shown to contribute to a maximum Pb concentration in ambient air in excess of the NAAQS, considering the logistics and potential for population exposure. At a minimum, there must be one source-oriented SLAMS site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source which emits 0.50 or more tons per year and from each airport which emits 1.0 or more tons per year based on either the most recent National Emission Inventory (<http://www.epa.gov/ttn/chief/einformation.html>) or other scientifically justifiable methods and data (such as improved emissions factors or site-specific data) taking into account logistics and the potential for population exposure.

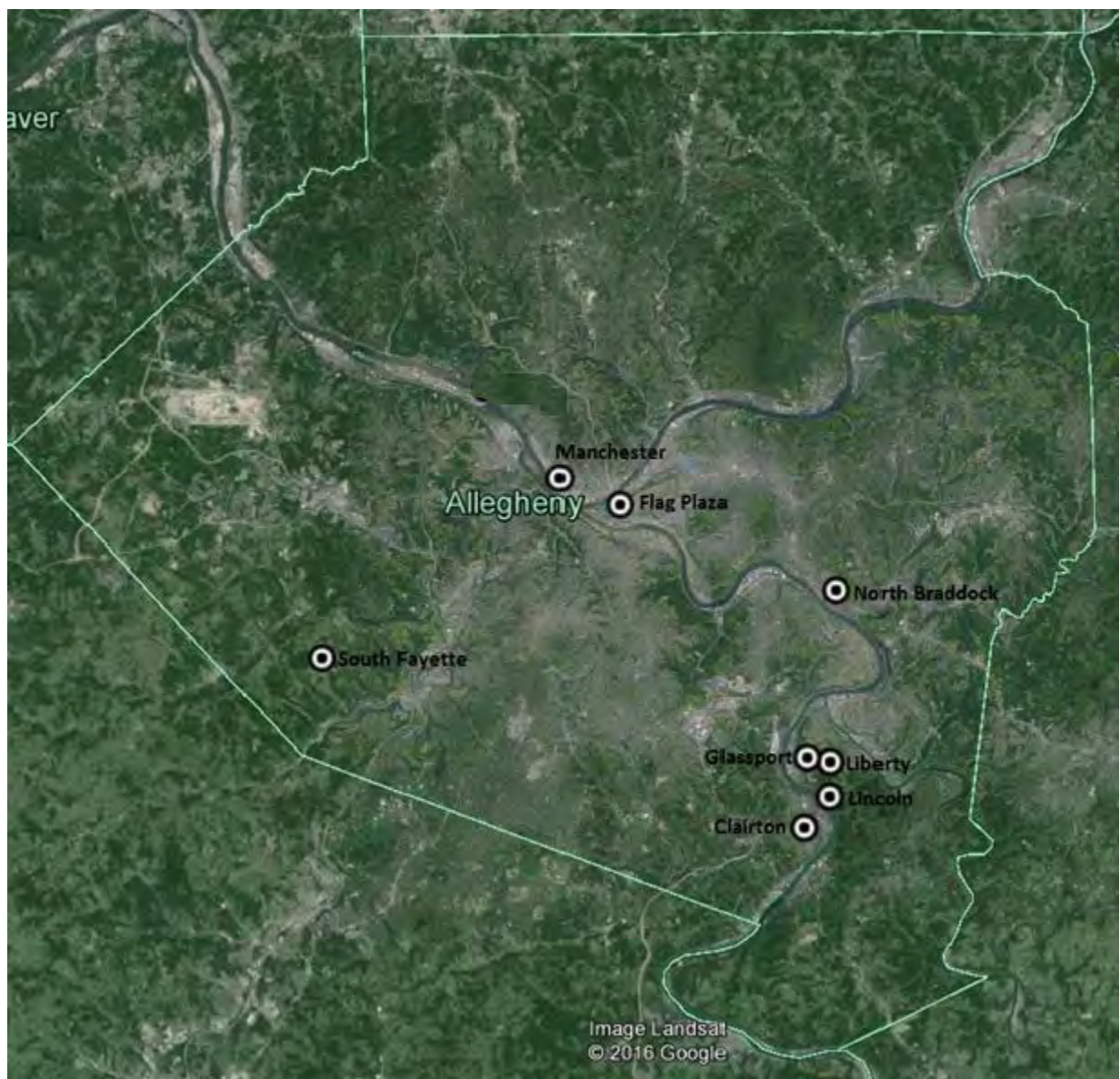
No lead monitoring is performed in Allegheny County. Bridgeville and Lawrenceville sites were discontinued as there are no point sources which emit greater than 0.5 tons per year. EPA approval of the 2018 Annual Network Plan allowed the sampling to end after 2017.

8.6 PM₁₀ Design Criteria

The number of required PM₁₀ monitors in each MSA is determined by the MSA population and design value, as specified in Table D-4 of Appendix D to 40CFR58.

- The Pittsburgh MSA has ambient PM₁₀ concentrations well below 80% of the PM₁₀ NAAQS. Table D-4 indicates that 2 to 4 sites must monitor for PM₁₀. ACHD exceeds this requirement with 8 sites that monitor PM₁₀.
- Collocated sampling for PM₁₀ is only required for manual samplers. A minimum of 15%, or at least one manual PM₁₀ monitor must be collocated as specified in 40CFR58, Appendix A. The Liberty site meets this requirement.

Figure 8.6 PM₁₀ Monitoring Map



8.7 Fine Particulate Matter (PM_{2.5}) Design Criteria

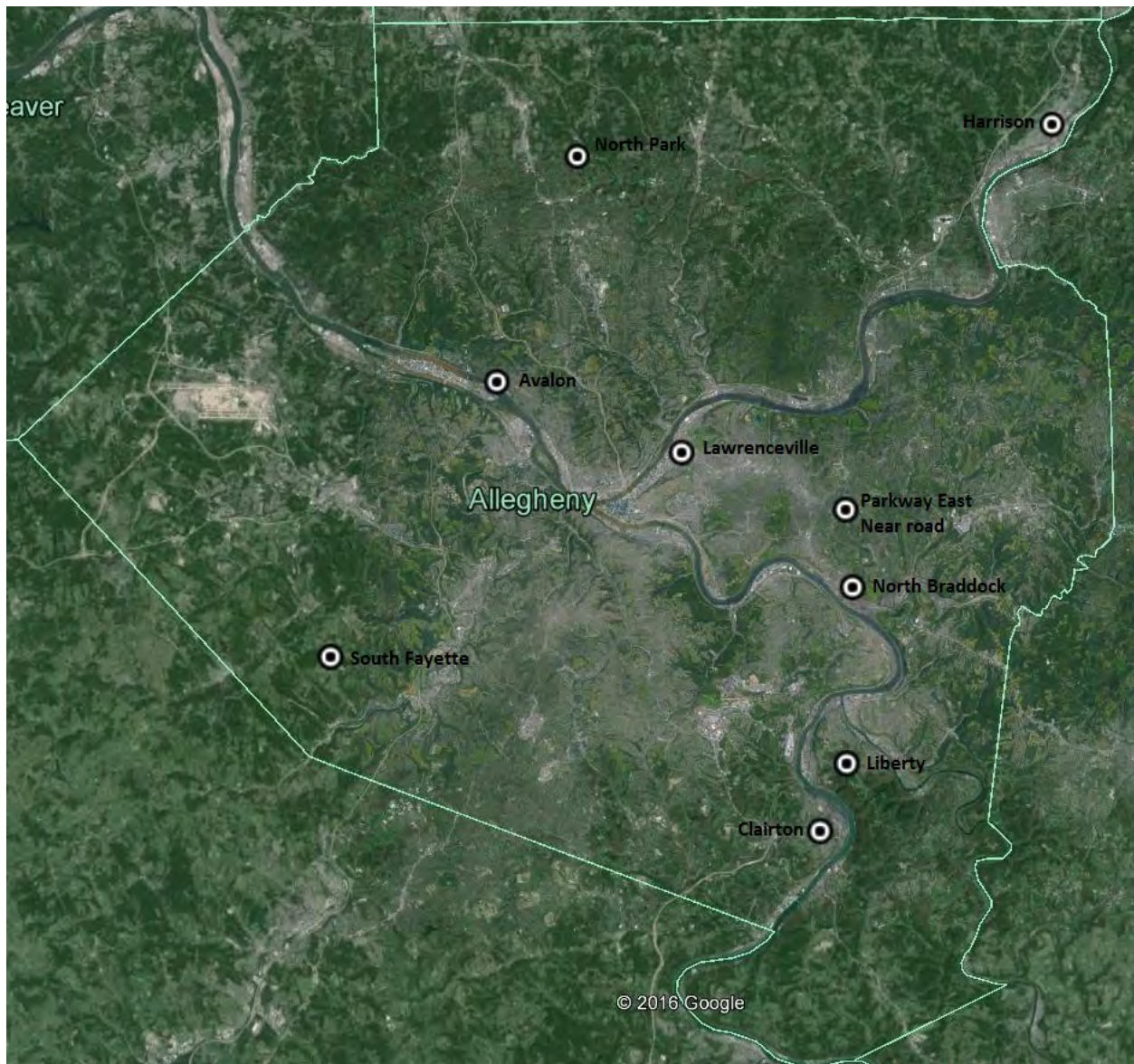
The number of required PM_{2.5} monitors in each MSA is determined by the MSA population and design value, as specified in Table D-5 of 40CFR58, Appendix D.

- Pittsburgh MSA PM_{2.5} 24 hour and annual design values are > 85% of the NAAQS, requiring a minimum of 3 PM_{2.5} sites. ACHD exceeds this requirement with 9 sites that monitor PM_{2.5}.
- Regarding FRM PM_{2.5} samplers (eight sites), a minimum of 15%, or at least one, of the PM_{2.5} monitoring sites must be collocated (rounded to one). ACHD exceeds this requirement by having collocated monitors at Liberty and Lawrenceville (two) sites.
- At least one site (15% is required) that features a primary PM_{2.5} FEM monitor must also operate a collocated PM_{2.5} FRM sampler (40CFR58, Appendix A). This requirement is met at the Avalon site. Avalon and Parkway East have the same PM_{2.5} FEM model.
- At least one half of the minimum number of sites per MSA must operate continuous PM_{2.5} monitors, requiring ACHD to operate 2 continuous PM_{2.5} monitors. ACHD operates 4 continuous PM_{2.5} monitors (Liberty, Lawrenceville, Avalon and Parkway East). See Section 10 for each site’s detailed information.
- For MSA’s above 1,000,000 people, at least one PM_{2.5} monitor must be at a near road site. ACHD conducts continuous PM_{2.5} monitoring at the Parkway East near road site.
- Each monitoring agency shall continue to conduct chemical speciation monitoring and analyses at sites designated to be part of the PM_{2.5} Speciation Trends Network (STN). ACHD continues to conduct PM_{2.5} speciation at Liberty and Lawrenceville sites.
- Each NCORE site must monitor PM_{2.5}. ACHD satisfies this requirement at the Lawrenceville NCORE site using daily filter-based monitoring as well as continuous PM_{2.5} FEM monitoring.
- The required monitoring sites must be located to represent area-wide air quality. These will typically be either neighborhood or urban scale, although micro or middle scale may be appropriate in some urban areas. At least one monitoring site must be neighborhood scale or greater in an area of expected maximum concentration and one site must be sited in an area of poor air quality. At least one PM_{2.5} site must monitor for regional background and at least one PM_{2.5} site must monitor for regional transport. Table 8 shows the PM_{2.5} network site scales and objectives.

Table 8 PM_{2.5} Monitor Scales and Objectives

Site Name	Measurement Scale	Monitor Objective
Lawrenceville	Urban	Population Exposure
Liberty	Neighborhood	Population Exposure, Highest Concentration
North Braddock	Neighborhood	Population Exposure
Harrison Township	Neighborhood	Population Exposure
South Fayette	Neighborhood	Population Exposure, Regional Transport, Upwind Background
Clairton	Neighborhood	Population Exposure, Welfare concerns
Avalon	Neighborhood	Population Exposure
North Park	Neighborhood	Population Exposure, Regional Background
Parkway East Near Road	Microscale	Population Exposure, Source Oriented

Figure 8.7 PM_{2.5} Monitor Map



8.8 Coarse Particulate Matter Design Criteria

The only required monitors for $PM_{10-2.5}$ are those required at NCORE Stations. Note that no NAAQS exists for coarse particulate matter.

Coarse PM monitoring at the Lawrenceville NCORE site employs 2 continuous beta attenuation monitors (BAM). The paired units and the internal algorithms have designation as an approved FEM for PM_c . One unit measures $PM_{2.5}$ and the other PM_{10} . Both units measure separately but are interconnected to share the data. The internal software calculates the PM_c value. The PM_{10} (master unit) internal memory retains the hourly values of $PM_{2.5}$, PM_{10} , $PM_{10-2.5}$ and other meta data.

9.0 Appendix E Requirements

40CFR58, Appendix E contains specific location criteria applicable to SLAMS, NCORE, and PAMS ambient air quality monitoring probes, inlets and optical paths after the general location has been selected based on the monitoring objectives and spatial scale of representation discussed in Appendix D. Adherence to these siting criteria is necessary to ensure the uniform collection of compatible and comparable air quality data.

Appendix E specifies probe and monitoring path siting criteria for ambient air quality monitoring. The key components of Appendix E include the following:

- Horizontal and Vertical Placement
- Spacing from Minor Sources
- Spacing from Obstructions
- Spacing from Trees
- Spacing from Roadways
- Cumulative Interferences on a Monitoring Path
- Maximum Monitoring Path Length
- Probe Material and Pollutant Sample Residence Time
- Waiver Provisions.

Discussion of Appendix E requirements will be contained in the next section.

10.0 Detailed Air Monitoring Site Descriptions

The following air monitoring network description discusses each monitoring site in detail. The first information block is labeled with the site name. Inside of the block is listed site specific information as follows:

- **Street Address**
- **AQS #** - unique 9-digit number used to identify the state, county and site in the AQS data base
- **Municipality** - where site is located
- **MSA** - Metropolitan Statistical Area
- **Latitude (N), Longitude (W)** - Site coordinates, given in WGS84 datum coordinates
- **Comments** - Specific site information of importance

The next blocks are designed to list details of each monitor at the site. Each monitor present at the time of the review is assigned its own block. The following information is listed:

Sensor Type - The name of the pollutant measured by the sampler and to provide further detail, FEM or FRM designation.

Sensor Network Designation - The name of the designated network:

- SLAMS - State or Local Ambient Air Monitoring Station that has EPA reference or equivalent method designation, including Primary, Secondary or Tertiary level of importance, where more than one sensor type is at the site. Waiver provisions.
- OTHER - Monitor that does not have EPA designated reference or equivalent status.

Sensor Purpose Description - The purpose of the sensor:

- Population Exposure, such as the Air Quality Index
- Regulatory Compliance with Federal or State regulation
- Research/Scientific Monitoring
- Specific Location Characterization
- Quality Assurance (Collocated)

Sample Frequency - Specifies how often a sample is taken.

- Continuous (also referred to as “Hourly”) - operates 24/7; applies predominately to gaseous analyzers, although some particulate samplers (TEOM, BAM, Aethalometer) operate continuously.
- Daily - a discrete sample is taken every day; applies to manual method particulate or toxics samplers.
 - Every Third Day - Manual method samplers that run every third day.
 - Every Sixth Day - Manual method or toxics samplers that run every sixth day.
 - Every Twelfth Day - Manual method QA samplers that run every twelfth day.

Appendix A QA Assessment - A “YES” indicates the sensor is maintained in accordance with the Quality Assurance (QA) requirements specified in 40CFR58, Appendix A.

Monitor Start Date - Specifies the start date for the current AQS pollutant parameter code. Note that AQS method codes may change, usually due to a change of manufacturer or monitor model employed at the site.

Appendix C Monitoring Classification - Each ambient air monitor is classified using the EPA “List of Designated Reference and Equivalent Methods”:

- Reference Method - a method of sampling that is specified in 40CFR53.
- Equivalent Method - a method that is designated as equivalent to the reference method, in accordance with 40CFR53 and 40CFR50.
- Automated - after sampling, the analysis results are available immediately.
- Manual - after sampling, a separate analysis at a laboratory is necessary.
- N/A - appears where there is no reference or equivalent method.

Appendix C Monitoring Method - Each ambient air monitor is classified by a specific method number.

Monitoring Method Description - Table 10 provides details about each type of sampler and analyzer utilized in the air monitoring network.

Probe Height - Distance from ground level that ambient air is sampled. 40CFR58, Appendix E lists acceptable probe heights for individual measurement parameters and spatial scales.

Residence Time - The amount of time that ambient air remains in contact with a probe line or manifold, considering total manifold and probe line inner volume and monitor flow rate. Residence time is applicable to reactive gas monitors that use probe lines or manifolds to deliver ambient air to the monitor. Section 7.2.1 of the QA Handbook Volume II recommends a probe residence time of ten seconds or less as optimal and over 20 seconds as unacceptable due to sample concentration loss at higher residence times.

Appendix D Design Criteria - Appendix D requires a certain number of samplers per geographic area. A “YES” indicates that the number of monitors in that area meets or exceeds the requirement of 40CFR58, Appendix D.

Appendix D Scale - The specific “spatial scales of representation” describes the physical dimensions of the air parcel around the monitoring station throughout which actual pollutant concentrations are reasonably similar.

- Microscale - Areas with dimensions up to about 100 meters.
- Middle scale - Areas with dimensions from 100 meters to 0.5 kilometers.
- Neighborhood - Areas with dimensions from 0.5 to 4.0 kilometers and uniform land use.
- Urban scale - Areas with dimensions from 4 to 50 kilometers.
- Regional - Areas with dimensions ranging from tens to hundreds of kilometers and usually a rural area of reasonably homogeneous geography without large sources.
- National and Global Scales - Measurement scales that represent concentrations characterizing the nation and the globe.

Appendix D Objective - Describes the purpose/objective for monitoring at a site.

- Extreme Downwind
- General/Background Concentration
- Highest Concentration
- Maximum Ozone Concentration
- Maximum Precursor Emissions
- Population Exposure
- Regional Transport
- Source Oriented
- Quality Assurance
- Welfare Related

Appendix E Siting Criteria - Describes certain criteria applicable to ambient air quality sampling probes and monitoring paths, such as distances from trees, obstructions, traffic lanes, etc. A “YES” indicates that the sensor at the given site meets or exceeds the requirements of 40CFR58, Appendix E.

Table 10 Monitoring Parameters and Methods

Parameter	Mfg	Model #	Parameter Code	Method Code	Description
PM _{2.5} FRM	R&P	2025	88101	145	Low Volume Sampler (filter) VSCC, very sharp cut cyclone
PM _{2.5} FEM	Thermo	5014i	88101	183	Beta Attenuation Instrumental
	Met One	1020	88101	170	Beta Attenuation Instrumental
PM ₁₀ FRM	Tisch	TE-6070	81102	141	High Volume Sampler (filter)
PM ₁₀ FEM	R&P	1400	81102	79	Gravimetric Instrumental (TEOM)
	Met One	1020	81102	122	Beta Attenuation Instrumental
PM _{2.5} Speciation	Met One SASS	SASS	multiple	812	Trace metals, Sulfate, Nitrate
	URG	3000N	multiple	812	Organic/Inorganic Carbon
PM coarse	Met One	1020 (pair)	86101	185	Beta Attenuation Instrumental
Carbon Monoxide	TAPI	300A/E	42101	93	Gas Filter Correlation
Carbon Monoxide (trace)	TAPI	300 EU	42101	593	Gas Filter Correlation
Carbon Monoxide (trace)	Thermo	48i-TLE	42101	554	Gas Filter Correlation
Nitrogen Dioxide	TAPI	200A/E	42602	99	Chemiluminescence
Nitrogen Dioxide (trace)	TAPI	200EU	42602	599	Chemiluminescence
Reactive Oxides of Nitrogen (NO _y)	TAPI	200EU/501	42600	699	Chemiluminescence
Sulfur Dioxide	Ecotech	9850	42401	92	Ultra Violet Fluorescence
	Thermo	43i	42401	60	Ultra Violet Fluorescence
	TAPI	100E	42401	77	Ultra Violet Fluorescence
Sulfur Dioxide (trace)	TAPI	100EU / T100U	42401	600	Pulsed Fluorescence
Ozone	Ecotech	10	44201	187	Ultra Violet Absorption
	Thermo	49	44201	47	Ultra Violet Absorption
Black Carbon	TAPI	633	84313	894	Aethalometer Instrumental
Air Toxics (VOC)	na	na	multiple	150	6-liter SS canister / TO-15 lab analysis
AIR Toxics (Carbonyl)	na	na	multiple	102	DNPH cartridge / TO-11 lab analysis
Wind Speed/Direction	Met One	50.5	61103/61104	061	Sonic Anemometer
Rainfall	Met One	375	65102	013	Tipping bucket
Relative Humidity	Met One	083E	62201	061	Electronic RH Sensor
Solar / UV Radiation	Met One	094-1/6676	63301/63302	011	Electronic Sensors
Ambient Temperature	Met One	083E	62101	061	Electronic Temperature Sensor

10.1 Lawrenceville

Address	Allegheny County Health Department 301 39 th Street, Building 7 Pittsburgh, PA 15201		
AQS#	42-003-0008	MSA	Pittsburgh
Latitude (N)	40.465420	Longitude (W)	-79.960757
Comments	This is a population-based, community-oriented monitoring site that is an urban area downwind of Central Business District. The Lawrenceville monitoring site was selected as a PM _{2.5} National Trends Site, later as an NCORE site and as the proposed PAMS site in 2019. The most significant local pollution is generated from mobile sources, but light industry scattered throughout the area is also a contributing factor. Lawrenceville is a core PM _{2.5} site that is used to determine compliance with national standards.		

Sensor Type	Ozone	Appendix C Method Code	47
Network Designation	SLAMS	Probe Height Residence Time	12 Meters 4.9 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Urban
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/1/1978	Appendix E Siting Criteria	Yes

Sensor Type	PM_{10-2.5} (coarse)	Appendix C Method Code	185
Network Designation	Other / (NCORE)	Probe Height	12 Meters
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Urban
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	4/1/2011	Appendix E Siting Criteria	Yes

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS Primary	Probe Height	12 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Daily	Appendix D Scale	Urban
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	02/23/1999	Appendix E Siting Criteria	Yes

Lawrenceville, continued

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS Secondary	Probe Height	12 Meters
Purpose	QA/Co-located Monitor	Appendix D Design Criteria	Yes
Sample Frequency	Every six days	Appendix D Scale	Urban
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure / Quality Assurance
Monitor Start Date	1/1/2005	Appendix E Siting Criteria	Yes

Sensor Type	PM_{2.5} FEM	Appendix C Method Code	170
Network Designation	SLAMS Tertiary	Probe Height	12 Meters
Purpose	QA/Co-located Monitor AQI Reporting	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Urban
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	08/07/2015	Appendix E Siting Criteria	Yes

Sensor Type	PM_{2.5} Speciation	Appendix C Method Code	812
Network Designation	Other (CSN)	Probe Height (m)	12 Meters
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	Yes
Sample Frequency	Every Three Days	Appendix D Scale	Not Assigned
Appendix A QA Assessment	Yes	Appendix D Objectives	Unknown
Monitor Start Date	6/30/2001	Appendix E Siting Criteria	Yes

Sensor Type	Carbon Monoxide	Appendix C Method Code	593
Network Designation	SLAMS	Probe Height Residence Time	12 Meters 8.9 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	4/1/2010	Appendix E Siting Criteria	Yes

Lawrenceville, continued

Sensor Type	Sulfur Dioxide	Appendix C Method Code	600
Network Designation	SLAMS	Probe Height Residence Time	12 Meters 13.5 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	4/1/2010	Appendix E Siting Criteria	Yes

Sensor Type	Total Reactive Oxides of Nitrogen (NO_y)	Appendix C Method Code	699
Network Designation	Other (NCORE)	Probe Height Residence Time	12 Meters 13.1 Seconds
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	4/2/2010	Appendix E Siting Criteria	Yes

Sensor Type	HAP Metals / TSP (See Section A2.1)	Appendix C Method Code	N/A
Network Designation	Other (SPM)	Probe Height Residence Time	12 Meters
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	N/A
Sample Frequency	Every Six days	Appendix D Scale	N/A
Appendix A QA Assessment	N/A	Appendix D Objectives	N/A
Monitor Start Date	1/4/2013	Appendix E Siting Criteria	Yes

Lawrenceville Meteorological Sensors

- Wind Speed / Wind Direction
- Solar Radiation
- Total UV Radiation
- Solar Radiation
- Relative humidity
- Rain/Snow amounts
- Ambient Temperature

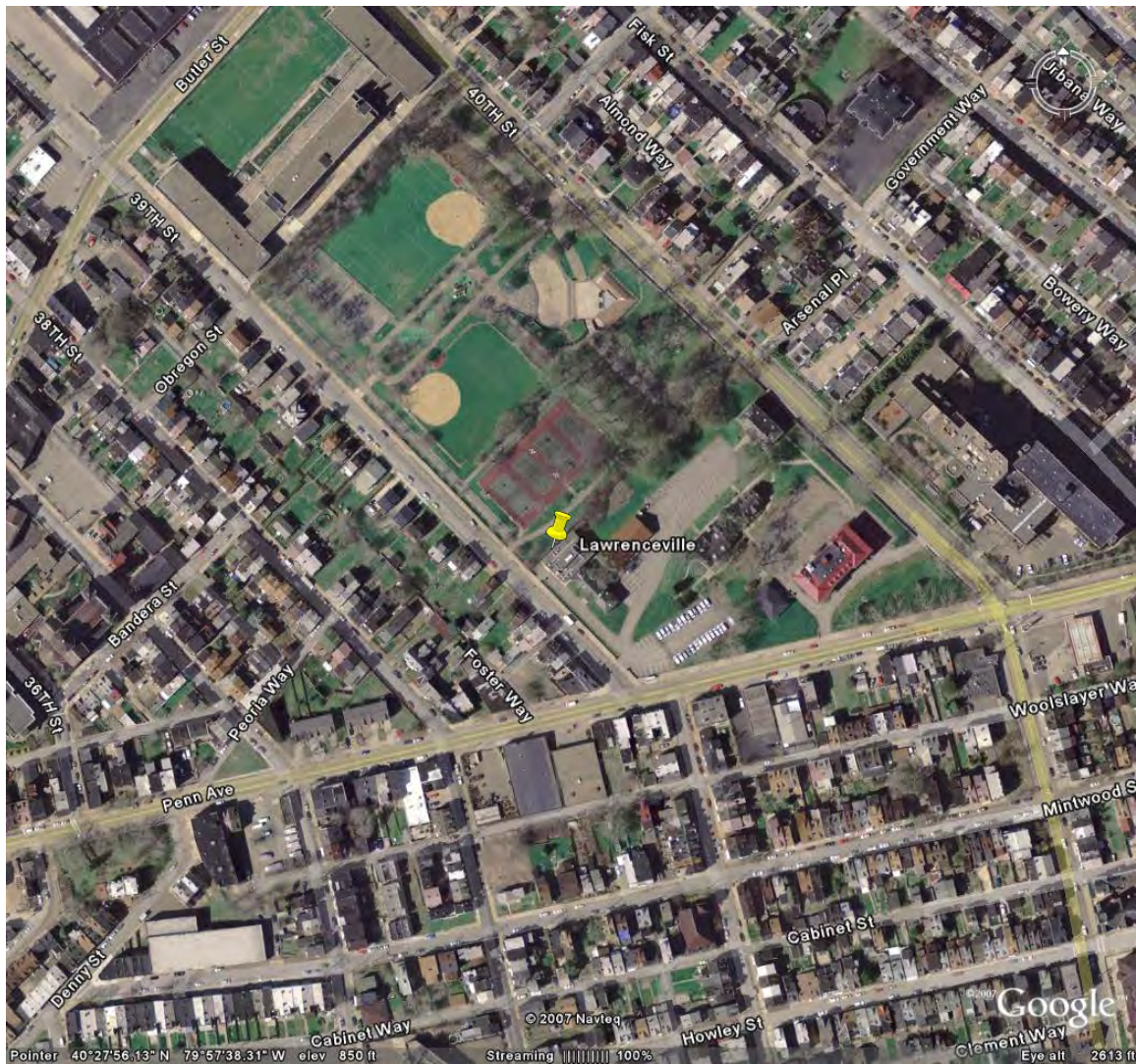
Lawrenceville Area Information

Street Name		Traffic Count (AADT)
39th Street (20 m)		Unavailable
Penn Avenue (86 m)		7,785 (PennDot 2015)
Butler Street (343 m)		7,371 (PennDot 2014)
Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)	
North	Residential	
East	Residential	
South	Residential	
West	Residential	

Direction	Obstructions	Height (m)	Distance (m)
North			
East			
South	Wall	1	2 to 3 m
West			

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North		Flat
East		Flat
South		Flat
West		Flat

Figure 10.1 Lawrenceville Location Map



10.2 Liberty

Address	South Allegheny High School 2743 Washington Blvd McKeesport, PA 15133		
AQS#	42-003-0064	MSA	Pittsburgh
Latitude (N) Particulate and BTEX	40.323761	Longitude (W) Particulate and BTEX	-79.868151
Latitude (N) SO ₂ , H ₂ S	40.324759	Longitude (W) SO ₂ , H ₂ S	-79.867030
Comments	<p>This site is in a suburban area about 3 km downwind of the US Steel Clairton Coke Works. The area around this monitoring site has a long history of higher than average levels of PM_{2.5}, PM₁₀ and sulfur dioxide. Significant ambient levels of benzene have also been measured and documented at this site. Liberty is a core PM_{2.5} site that is used to determine compliance with national standards. See the site configuration, Figure 3.2 on Page 10.</p> <p>At the request of US Steel, telemetry devices have been installed on the PM₁₀, PM_{2.5} and SO₂ monitors that transmit continuous readings via radio signals to a location within the US Steel facility. Other transmitters are also in use: Lincoln PM₁₀ monitor, Glassport PM₁₀ monitor and North Braddock SO₂ monitor and sonic anemometer. This real-time data allows US Steel to minimize fugitive emissions and to adjust production levels to keep particulate levels and gaseous emissions within allowable ambient levels in downwind communities.</p>		

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS Primary	Probe Height	8 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Daily	Appendix D Scale	Neighborhood, Highest Concentration
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/23/1999	Appendix E Siting Criteria	Yes

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS Secondary	Probe Height	8 Meters
Purpose	QA/Co-located Monitor	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days	Appendix D Scale	Neighborhood, Highest Concentration
Appendix A QA Assessment	Yes	Appendix D Objectives	Quality Assurance
Monitor Start Date	1/1/2005	Appendix E Siting Criteria	Yes

Liberty, continued

Sensor Type	PM_{2.5} FEM	Appendix C Method Code	183
Network Designation	SLAMS Tertiary	Probe Height	8 meters
Purpose	QA/Co-located Monitor AQI Reporting	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood, Highest Concentration
Appendix A QA Assessment	Yes	Appendix D Objectives	Neighborhood, Highest Concentration
Monitor Start Date	11/01/2017	Appendix E Siting Criteria	Yes

Sensor Type	PM₁₀ FRM	Appendix C Method Code	141
Network Designation	SLAMS Primary	Probe Height	8 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Every Three Days	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/1/2005	Appendix E Siting Criteria	Yes

Sensor Type	PM₁₀ FRM	Appendix C Method Code	141
Network Designation	SLAMS Secondary	Probe Height	8 Meters
Purpose	QA/Co-located Monitor	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure / Quality Assurance
Monitor Start Date	4/21/1987	Appendix E Siting Criteria	Yes

Sensor Type	PM₁₀ FEM	Appendix C Method Code	79
Network Designation	SLAMS Tertiary	Probe Height	8 Meters
Purpose	Co-located Monitor	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/1/1992	Appendix E Siting Criteria	Yes

Liberty, continued

Sensor Type	PM_{2.5} Speciation	Appendix C Method Code	Multiple
Network Designation	Other (CSN)	Probe Height	8 Meters
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days	Appendix D Scale	Unassigned
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	10/6/2003	Appendix E Siting Criteria	Yes

Sensor Type	Sulfur Dioxide	Appendix C Method Code	600
Network Designation	SLAMS	Probe Height Residence Time	8 Meters 11.5 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/1/1969	Appendix E Siting Criteria	Yes

Sensor Type	Hydrogen Sulfide	Appendix C Method Code	N/A
Network Designation	Special Purpose monitor	Probe Height Residence Time	8 Meters 11.5 Seconds
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	N/A
Sample Frequency	Hourly	Appendix D Scale	N/A
Appendix A QA Assessment	N/A	Appendix D Objectives	N/A
Monitor Start Date	1/1/1981	Appendix E Siting Criteria	Yes

Sensor Type	BTEX / Sorbent Tube See Section A3.1	Appendix C Method Code	N/A
Network Designation	Special Purpose Monitor	Probe Height Residence Time	8 Meters 3.1 Seconds
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	N/A
Sample Frequency	Every Three Days	Appendix D Scale	Undetermined
Appendix A QA Assessment	N/A	Appendix D Objectives	N/A
Monitor Start Date	2/1/2014	Appendix E Siting Criteria	Yes

Liberty Meteorological Sensors

- Wind Speed / Wind Direction
- Ambient Temperature

Liberty Area Information

Street Name	Traffic Count (AADT)
Washington Blvd. (283 m)	2080 (PennDot 2013)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Residential
West	Residential

Direction	Obstructions	Height (m)	Distance (m)
North			
East			
South			
West			

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North	Valley	Rough
East		Rolling
South	Valley	Rolling
West		Rolling

Figure 10.2 Liberty Location Map



10.3 Lincoln

Address	Bellbridge Road Elizabeth, PA 15037		
AQS#	42-003-7004	MSA	Pittsburgh
Latitude (N)	40.308219	Longitude (W)	-79.869134
Comments	This site is at an elevated location, directly across the Monongahela River and downwind from the US Steel Clairton Coke Works. Although this area is not populated, it is upwind of populated areas and it is modeled to be the maximum impact area.		

Sensor Type	PM₁₀ FEM	Appendix C Method Code	79
Network Designation	SLAMS	Probe Height	5 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Middle
Appendix A QA Assessment	Yes	Appendix D Objectives	Highest Concentration
Monitor Start Date	1/15/1993	Appendix E Siting Criteria	Yes

Sensor Type	PM_{2.5} Non-FEM	Appendix C Method Code	716
Network Designation	Other (SPM)	Probe Height	5 Meters
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	N/A
Sample Frequency	Hourly	Appendix D Scale	Middle
Appendix A QA Assessment	N/A	Appendix D Objectives	Highest Concentration
Monitor Start Date	11/01/2011	Appendix E Siting Criteria	Yes

Lincoln Area Information

Street Name	Traffic Count (AADT)
Lincoln Blvd. (238 m)	6931 (PennDot 2014)
Bellbridge Rd. (428 m)	2203 (PennDot 2014)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Industrial
West	Industrial

Direction	Obstructions	Height (m)	Distance (m)
North			
East			
South			
West			
Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)	
North	Valley	Rolling	
East	Valley	Rolling	
South	Hills	Rough	
West	River	Rough	

Figure 10.3 Lincoln Location Map



10.4 Glassport

Address	Water Tower on High Street Glassport, PA 15045		
AQS#	42-003-3006	MSA	Pittsburgh
Latitude (N)	40.326008	Longitude (W)	-79.881703
Comments	Located in a residential area, this site is population oriented and is impacted by the US Steel Clairton Coke Works, the Irvin Works and other sources in the Monongahela river valley. Glassport High Street is the site of the County's last documented exceedance of the federal 24-hour PM ₁₀ standard of 150 µg/m ³ (October 1997).		

Sensor Type	PM₁₀ FEM	Appendix C Method Code	79
Network Designation	SLAMS	Probe Height	2 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/6/1995	Appendix E Siting Criteria	Yes

Glassport Area Information

Street Name	Traffic Count (AADT)
High Street (8m)	Unavailable
Scenic Street (53m)	Unavailable
Washington Blvd (140m)	2080 (PennDot 2013)
Pacific Ave. (202m)	4450 (PennDot 2012)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Residential
West	Residential

Direction	Obstructions	Height (m)	Distance (m)
North	Water Tower	25	9
East			
South			
West			

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North		Flat
East		Flat
South		Flat
West		Flat

Figure 10.4.1 Glassport Location Map



Figure 10.4.2 Liberty, Lincoln and Glassport Location Map



10.5 North Braddock

Address	North Braddock Borough Building 600 Anderson Street Braddock, PA 15104		
AQS#	42-003-1301	MSA	Pittsburgh
Latitude (N)	40.402328	Longitude (W)	-79.860973
Comments	This suburban site is population oriented. The area around this site is impacted by the US Steel Edgar Thomson Works, which is a basic steel production facility, located about 1.5 km away from the monitoring site. North Braddock is a core PM _{2.5} site that is used to determine compliance with national standards.		

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS	Probe Height	7 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Every Three Days	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/30/1999	Appendix E Siting Criteria	Yes

Sensor Type	PM₁₀ FEM	Appendix C Method Code	122
Network Designation	SLAMS	Probe Height	7 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/1/2011	Appendix E Siting Criteria	Yes

Sensor Type	Sulfur Dioxide	Appendix C Method Code	77
Network Designation	SLAMS	Probe Height Residence Time	7 Meters 14.4 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure, Highest Concentration
Monitor Start Date	1/1/2014	Appendix E Siting Criteria	Yes

North Braddock Meteorological Sensors

- Wind Speed / Wind Direction
- Ambient Temperature

North Braddock Area Information

Street Name	Traffic Count (AADT)
Bell Avenue (13 m)	2882 (PennDot 2012)
Anderson St. (40 m)	Unavailable
Braddock Ave. (370 m)	6349 (PennDot 2015)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Residential, Industry
West	Residential

Direction	Obstructions	Height (m)	Distance (m)
North			
East			
South			
West			

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North	Hills	Rolling
East	Hills	Rolling
South	River	Rolling
West		Rolling

Figure 10.5 North Braddock Location Map



10.6 Harrison

Address	Highlands Senior High School 1500 Pacific Avenue Natrona Heights, PA 15065		
AQS#	42-003-1008	MSA	Pittsburgh
Latitude (N)	40.617488	Longitude (W)	-79.727664
Comments	This suburban site is population-based and community oriented. This is a core PM _{2.5} site used to determine compliance with national standards. This ozone monitoring site is positioned downwind of the Pittsburgh Central Business District and is expected to demonstrate maximum ozone concentrations. The nitrogen oxides monitor adds significant value to the ozone data.		

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS	Probe Height	8 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Every Three Days	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	2/13/1999	Appendix E Siting Criteria	Yes

Sensor Type	Ozone	Appendix C Method Code	47
Network Designation	SLAMS	Probe Height Residence Time	10 Meters 4.9 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Urban
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure, Highest Concentration
Monitor Start Date	2/12/2014	Appendix E Siting Criteria	yes

Sensor Type	Oxides of Nitrogen	Appendix C Method Code	99
Network Designation	SLAMS	Probe Height Residence Time	10 Meters 14.7 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	2/12/2014	Appendix E Siting Criteria	Yes

Harrison Area Information

Street Name / Distance	Traffic Count (AADT)
Idaho Ave (31m)	Unavailable
Pacific Ave (103m)	Unavailable
Freeport Road (326 m)	8018 (PennDot 2008)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Residential
West	Industrial

Direction	Obstructions	Height (m)	Distance (m)
North	Wall	3	20
East			
South			
West			

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North		Flat
East		Rough
South	Valley	Rough
West	Valley	Rolling

Figure 10.6 Harrison Location Map



10.7 South Fayette

Address	South Fayette Elementary School 3640 Old Oakdale Road McDonald, PA 15057		
AQS#	42-003-0067	MSA	Pittsburgh
Latitude (N)	40.375644	Longitude (W)	-80.169943
Comments	This suburban site is population-based and is the regional transport site for O ₃ , SO ₂ and PM _{2.5} . Located in the western portion of the county, this site monitors pollution levels entering the County on prevailing winds. South Fayette is a core PM _{2.5} site that is used to determine compliance with national standards. The elevation of this site might suggest that elevated overnight ozone concentrations (atypical) are due to stratospheric intrusion.		

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS	Probe Height	8 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Every Three Days	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure, Regional Transport, Upwind Background
Monitor Start Date	1/1/1995	Appendix E Siting Criteria	Yes

Sensor Type	PM₁₀ FRM	Appendix C Method Code	141
Network Designation	SLAMS	Probe Height	8 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	General/Background
Monitor Start Date	3/27/1987	Appendix E Siting Criteria	Yes

Sensor Type	Sulfur Dioxide	Appendix C Method Code	60
Network Designation	SLAMS	Probe Height Residence Time	8 Meters 5.3 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	General/Background
Monitor Start Date	7/1/1980	Appendix E Siting Criteria	Yes

South Fayette, continued

Sensor Type	Ozone	Appendix C Method Code	47
Network Designation	SLAMS	Probe Height Residence Time	8 Meters 5.3 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Regional
Appendix A QA Assessment	Yes	Appendix D Objectives	General/Background, Regional Transport
Monitor Start Date	1/1/1980	Appendix E Siting Criteria	Yes

South Fayette Area Information

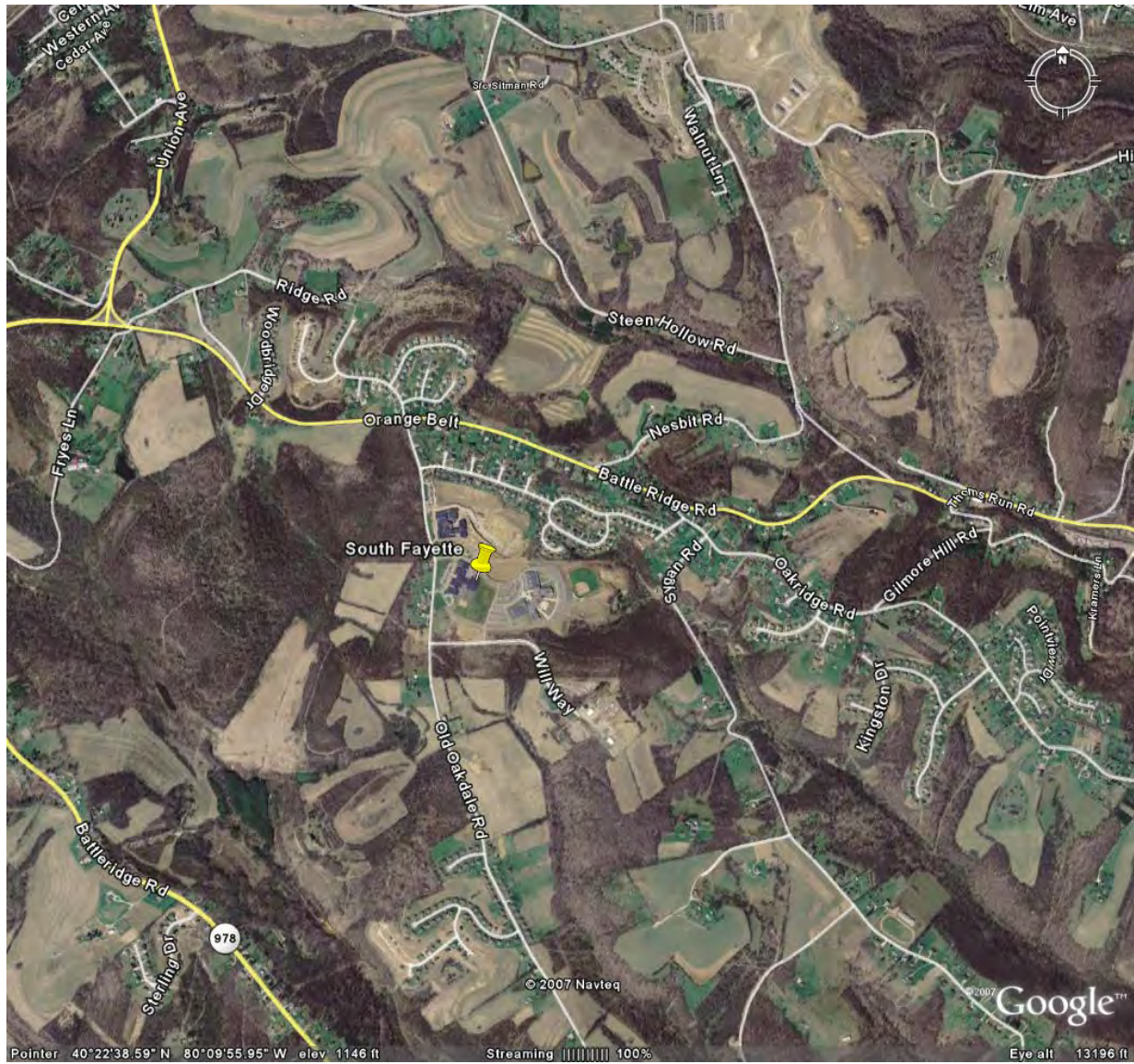
Street Name / Distance	Traffic Count (AADT)
Old Oakdale Rd. (142m)	Unavailable
Cannon Gate Dr. (377m)	Unavailable
Battle Ridge Rd. (554m)	5194 (PennDot 2014)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Agriculture
West	Agriculture

Direction	Obstructions	Height (m)	Distance (m)
North			
East			
South			
West			

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North		Rolling
East		Rolling
South		Rolling
West		Rolling

Figure 10.7 South Fayette Location Map



10.8 Clairton

Address	Clairton Education Center 501 Waddel St. Clairton, PA 15025		
AQS#	42-003-3007	MSA	Pittsburgh
Latitude (N)	40.294341	Longitude (W)	-79.885331
Comments	This is a population-oriented, suburban site that is located within an environmental justice area. Site selection was based on this location being within the Monongahela Valley and generally upwind of the USX Clairton Coke Works. During times of temperature inversions and atypical wind direction, the coke works and other sources in the Monongahela River valley impact this site.		

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS	Probe Height	8 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days Waiver Provision	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure, Welfare Concerns
Monitor Start Date	1/1/2001	Appendix E Siting Criteria	Yes

Sensor Type	PM₁₀ FRM	Appendix C Method Code	141
Network Designation	SLAMS	Probe Height	8 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure, Welfare Concerns
Monitor Start Date	4/8/1992	Appendix E Siting Criteria	Yes

Sensor Type	Sulfur Dioxide	Appendix C Method Code	600
Network Designation	SPM	Probe Height Residence Time	8 Meters 12.5 Seconds
Purpose	Population Exposure	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start/End Date	Start: 01/24/2019 End: 12/18/2019	Appendix E Siting Criteria	No

Clairton Area Information

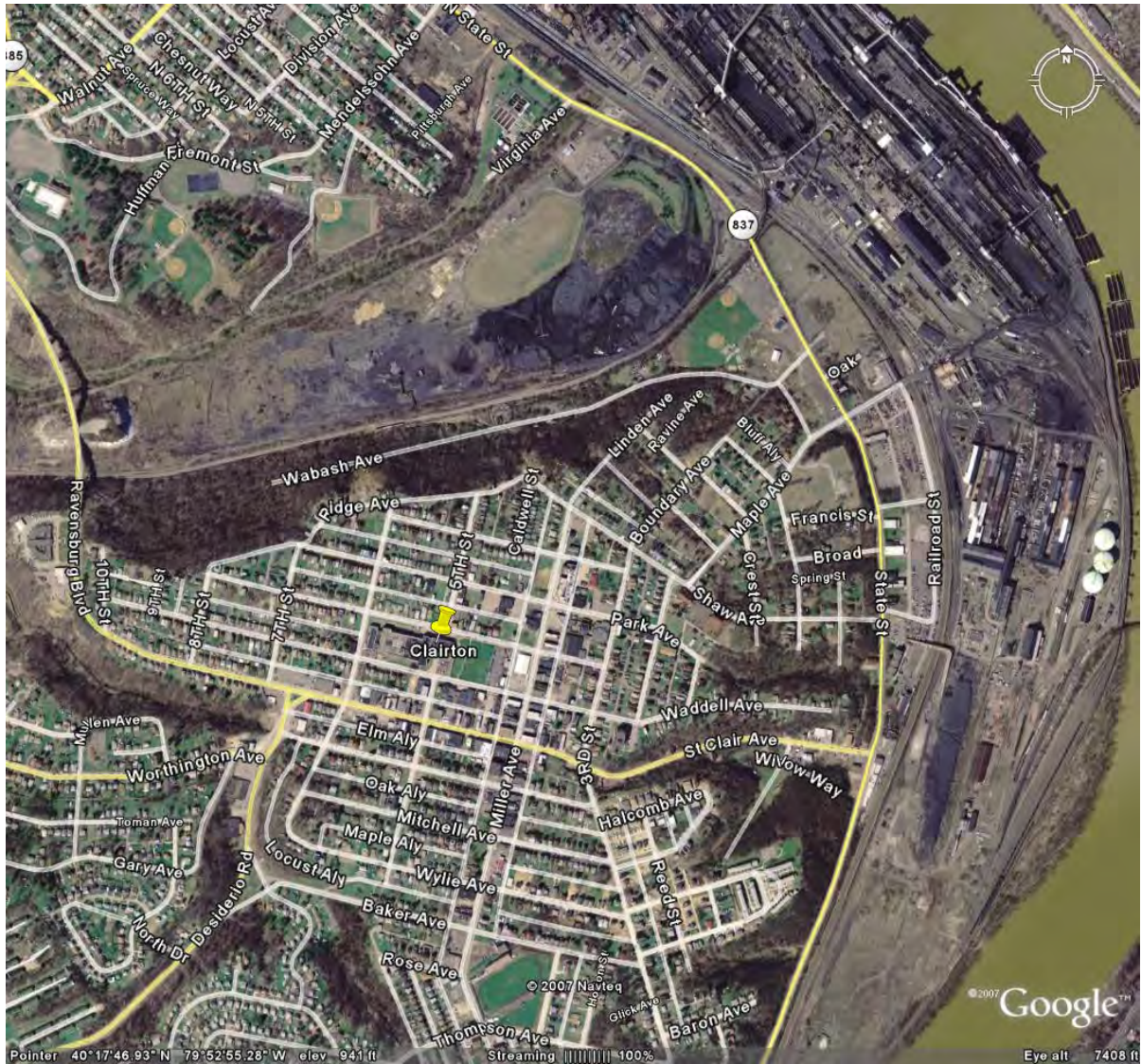
Street Name / Distance	Traffic Count (AADT)
Large Ave (29m)	Unavailable
Waddell Ave. (64m)	Unavailable
6th St. (144m)	Unavailable
Saint Clair Ave. (158m)	1763 (PennDot 2012)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Commercial
West	Residential

Direction	Obstructions	Height (m)	Distance (m)
North			
East			
South			
West			

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North	valley	rolling
East	valley	rolling
South		flat
West	valley	rolling

Figure 10.8 Clairton Location Map



10.9 Avalon

Address	520 Orchard Ave. Avalon, PA 15202		
AQS#	42-003-0002	MSA	Pittsburgh
Latitude (N)	40.499767	Longitude (W)	-80.071337
Comments	This is a population-oriented, suburban site previously impacted by the PM and SO ₂ coke battery emissions. Many odor and air pollution complaints were from communities near this monitoring site. However, the coke work battery permanently ceased operations in 2016. As a result, the 2016 1-hour SO ₂ DV is half the 2010 DV. Avalon is a core PM _{2.5} site that is used to determine compliance with national standards.		

Sensor Type	PM_{2.5} FEM	Appendix C Method Code	183
Network Designation	SLAMS (Primary)	Probe Height	5 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/1/2017	Appendix E Siting Criteria	Yes

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS (Secondary)	Probe Height	5 Meters
Purpose	QA / Co-located Monitor	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	6/8/2011	Appendix E Siting Criteria	Yes

Sensor Type	Sulfur Dioxide	Appendix C Method Code	60
Network Designation	SLAMS	Probe Height Probe Residence	5 Meters 16.2 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/1/2006	Appendix E Siting Criteria	Yes

Avalon, continued

Sensor Type	Hydrogen Sulfide	Appendix C Method Code	N/A
Network Designation	Special Purpose monitor	Probe Height Residence Time	5 Meters 16.2 Seconds
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	N/A
Sample Frequency	Hourly	Appendix D Scale	N/A
Appendix A QA Assessment	N/A	Appendix D Objectives	N/A
Monitor Start Date	1/1/2006	Appendix E Siting Criteria	Yes

Avalon Area Information

Street Name / Distance	Traffic Count (AADT)
Spruce St. (7m)	Unavailable
Orchard Ave. (33m)	Unavailable
South Birmingham Ave. (50m)	Unavailable
Ohio River Blvd. (59m)	14,140 (PennDot 2012)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Commercial
West	Residential

Direction	Obstructions	Height (m)	Distance (m)
North	Building	2	30
East	Building	4	20
South	Building	3	43
West	Building	4	15

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North	Hill	Rolling
East		Flat
South	River	Flat
West		Flat

Figure 10.9 Avalon Location Map



10.10 Flag Plaza

Address	Boy Scouts of America Building 1275 Bedford Avenue Pittsburgh, PA 15219		
AQS#	42-003-0031	MSA	Pittsburgh
Latitude (N)	40.443367	Longitude (W)	-79.990293
Comments	This is an urban-based site located at the Central Business District boundary limits. It is in a downwind position between the Central Business District and a densely populated environmental justice area.		

Sensor Type	PM₁₀ FEM	Appendix C Method Code	79
Network Designation	SLAMS	Probe Height	10 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	4/26/1992	Appendix E Siting Criteria	Yes

Sensor Type	Carbon Monoxide	Appendix C Method Code	593
Network Designation	SLAMS	Probe Height Residence Time	10 Meters 15.7 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	5/5/2003	Appendix E Siting Criteria	Yes

Sensor Type	Air Toxics VOCs/SUMMA canister	Appendix C Method Code	150
Network Designation	Other	Probe Height	10 Meters
Purpose	Population Exposure	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days	Appendix D Scale	Not Assigned
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/1/1995	Appendix E Siting Criteria	Yes

Flag Plaza, continued

Sensor Type	Air Toxics Carbonyls/DNPH cartridge	Appendix C Method Code	102
Network Designation	Other	Probe Height	10 Meters
Purpose	Population Exposure	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days	Appendix D Scale	Not assigned
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	1/1/1995	Appendix E Siting Criteria	Yes

Flag Plaza Area Information

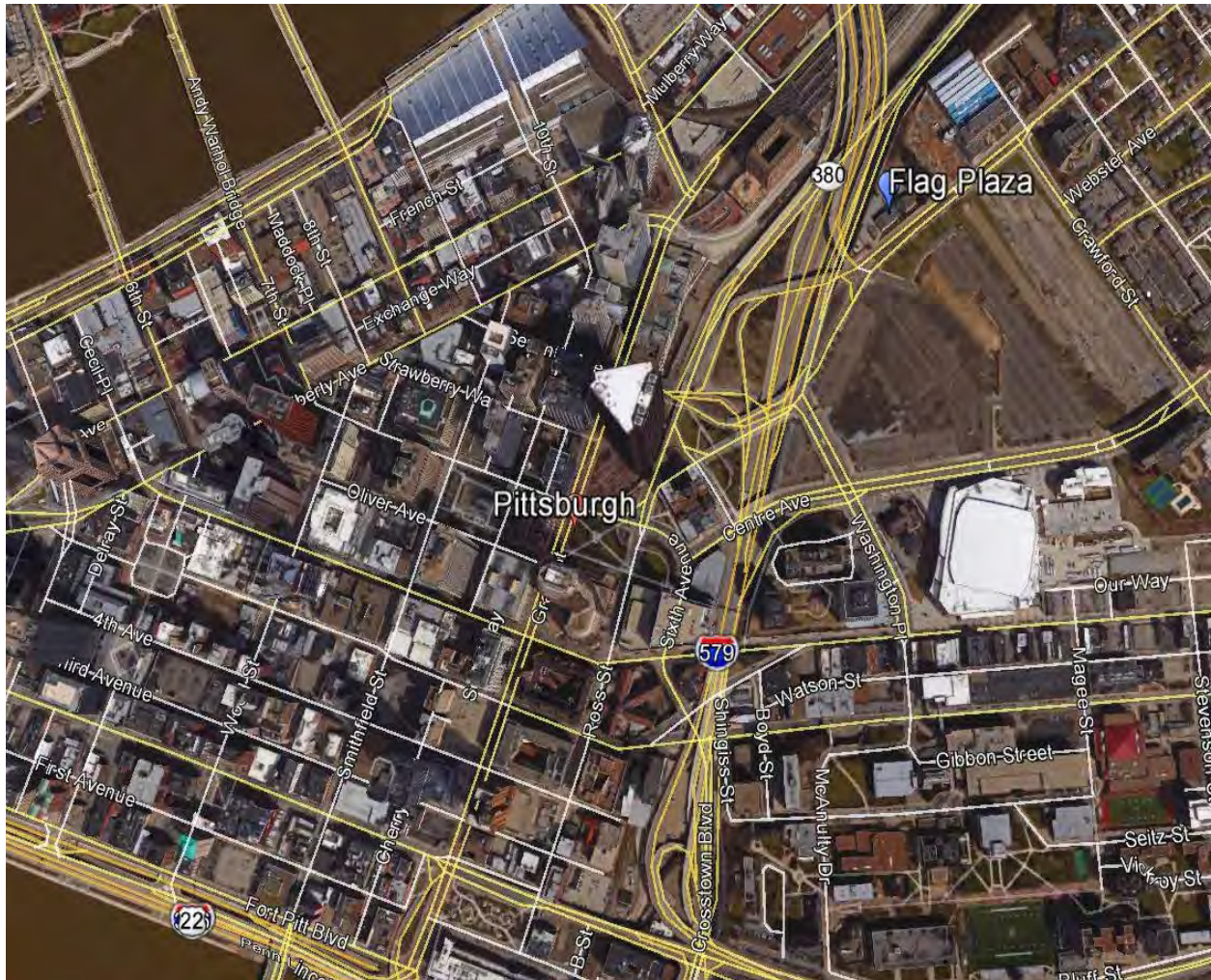
Street Name / Distance	Traffic Count (AADT)
Bedford Ave (17m)	5220 (PennDot 2015)
Rt. 579 (65m)	46,422 (PennDot 2012)
Bigelow Blvd. (105m)	20,221 (PennDot 2015)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Commercial
East	Residential
South	Commercial
West	Commercial

Direction	Obstructions	Height (m)	Distance (m)
North			
East			
South			
West	Building	5	130

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North	River	Flat
East	City	Flat
South	City	Rough
West	City	Rough

Figure 10.10 Flag Plaza Location Map



10.11 Manchester

Address	Manchester Elementary School 1612 Manhattan Street Pittsburgh, PA 15233		
AQS#	42-003-0092	MSA	Pittsburgh
Latitude (N)	40.456427	Longitude (W)	-80.026740
Comments	This population-oriented suburban site is located to the northwest of downtown Pittsburgh. Sources of influences are numerous, as this community is located near various warehouse/light-industrial facilities along Ohio River valley. There is also a significant contribution by mobile sources.		

Sensor Type	PM₁₀ FRM	Appendix C Method Code	141
Network Designation	SLAMS	Probe Height	7 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days	Appendix D Scale	Neighborhood, Welfare Concerns
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	10/24/1989	Appendix E Siting Criteria	Yes

Manchester Area Information

Street Name / Distance	Traffic Count (AADT)
Manhattan St (50m)	Unavailable
Chateau St (220m)	8565 (PennDot 2011)
Ohio River Blvd. (253)	29,100 (PennDot 2010)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Residential
West	Residential

Direction	Obstructions	Height (m)	Distance (m)
North			
East			
South			
West			

10.12 North Park

Address	North Park Golf Course 10200 Kummer Road Wexford, PA 15090		
AQS#	42-003-0093	MSA	Pittsburgh
Latitude (N)	40.606624	Longitude (W)	-80.021669
Comments	Located in the northern residential portion of the County and outside of industrialized river valleys, this suburban site was created as a PM _{2.5} background site and to provide for even geographical distribution of the PM _{2.5} monitoring network.		

Sensor Type	PM_{2.5} FRM	Appendix C Method Code	145
Network Designation	SLAMS	Probe Height	5 Meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Every Six Days Waiver Provision	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure, Regional Background
Monitor Start Date	3/25/1999	Appendix E Siting Criteria	Yes

North Park Area Information

Street Name / Distance	Traffic Count (AADT)
Kummer Rd. (229m)	3583 (PennDot 2014)
Pierce Mill Rd. (580m)	2397 (PennDot 2011)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Agriculture
East	Agriculture
South	Residential
West	Residential

Direction	Obstructions	Height (m)	Distance (m)
North			
East			
South			
West			

North Park, continued

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North		Rolling
East		Rolling
South		Rolling
West		Rolling

Figure 10.12 North Park Location Map



10.13 Parkway East

Address	Hosanna House Event Center 400 Sherwood Road Pittsburgh, PA 15221		
AQS#	42-003-1376	MSA	Pittsburgh
Latitude (N)	40.437430	Longitude (W)	-79.863572
Comments	This site was installed to comply with NO ₂ design criteria. Monitor inlets sample air at 18 meters from the nearest traffic lane of Route 376 (Parkway East). This location was approved by EPA as a near road monitoring site that measures population exposure to roadway emissions. Concentration data for CO and NO ₂ are near network maximums.		

Sensor Type	Oxides of Nitrogen (NO₂) Trace Level	Appendix C Method Code	599
Network Designation	SLAMS	Probe Height Residence Time	3 Meters 5.3 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Microscale
Appendix A QA Assessment	Yes	Appendix D Objectives	Highest Concentration
Monitor Start Date	9/1/2014	Appendix E Siting Criteria	Yes

Sensor Type	Carbon Monoxide (CO) Trace Level	Appendix C Method Code	593
Network Designation	SLAMS	Probe Height Residence Time	3 Meters 3.4 Seconds
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Microscale
Appendix A QA Assessment	Yes	Appendix D Objectives	Highest Concentration
Monitor Start Date	9/1/2014	Appendix E Siting Criteria	Yes

Sensor Type	Black Carbon Monitor 7-channel Aethalometer	Appendix C Method Code	894
Network Designation	Other	Probe Height (m)	4 Meters
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Microscale
Appendix A QA Assessment	Yes	Appendix D Objectives	Highest Concentration
Monitor Start Date	9/1/2014	Appendix E Siting Criteria	Yes

Parkway East, continued

Sensor Type	PM _{2.5} FEM	Appendix C Method Code	183
Network Designation	SLAMS	Probe Height	4 meters
Purpose	Regulatory Compliance	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Microscale
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure, Source Oriented
Monitor Start Date	1/1/2016	Appendix E Siting Criteria	Yes

Parkway East Meteorological Sensors

- Wind Speed / Wind Direction
- Relative Humidity
- Ambient Temperature

Parkway East Area Information

Street Name / Distance	Traffic Count (AADT)
Penn Lincoln Parkway, Rt. I-376 (18 m)	75,971 (PennDot 2014)

Direction	Predominant Land Use (Industry, Residential, Commercial or Agriculture)
North	Residential
East	Residential
South	Residential
West	Residential

Direction	Obstructions	Height (m)	Distance (m)
North			
East	Trees	15	33
South			
West			

Direction	Topographic Features (hills, valleys, rivers, etc.)	General Terrain (flat, rolling, rough)
North		Rolling
East	Hill	Rough
South		Rolling
West		Rolling

Figure 10.13 Parkway East Location Map



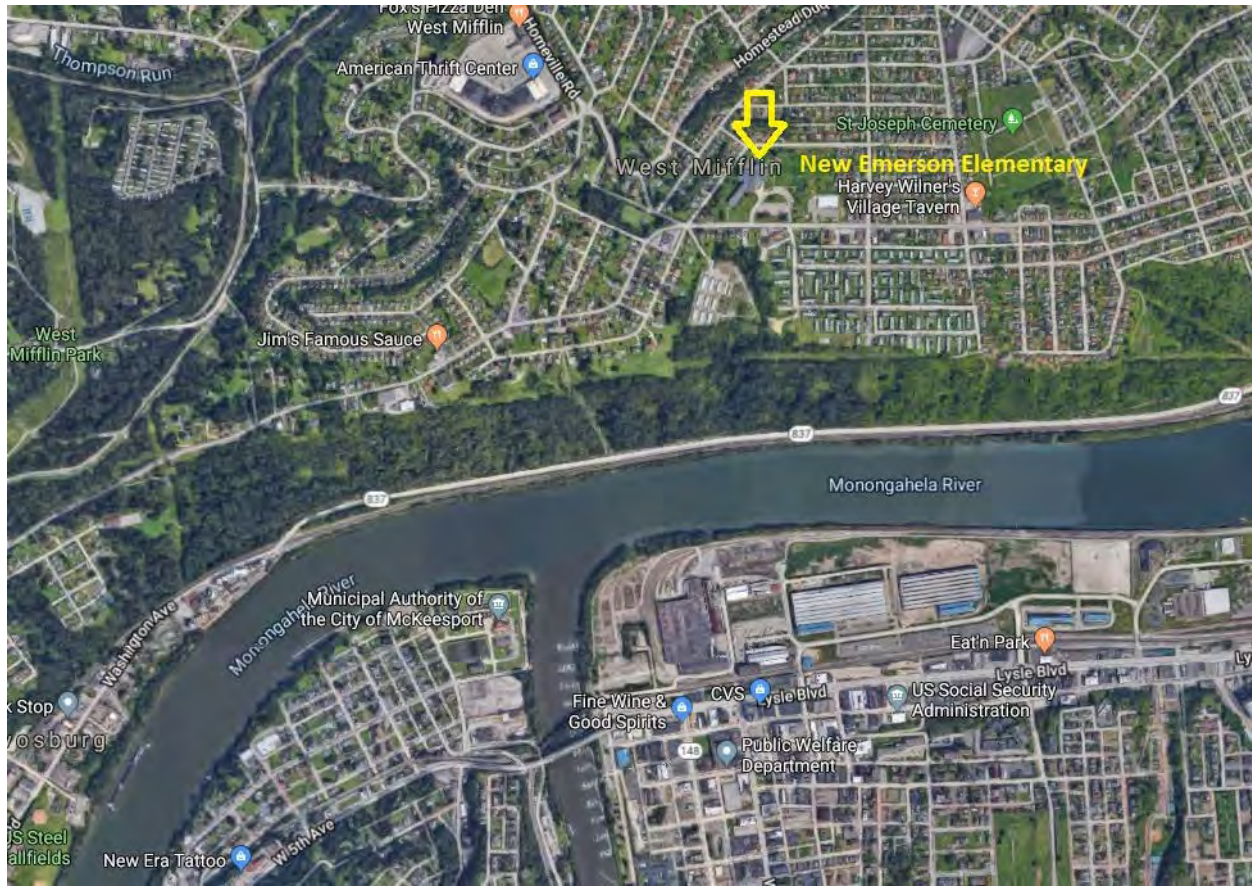
10.14 West Mifflin (Special Purpose Site)

Address	New Emerson Elementary School 1922 Pennsylvania Avenue West Mifflin, PA 15122		
AQS#	N/A	MSA	Pittsburgh
Latitude (N)	40.363144	Longitude (W)	-79.864837
Comments	Installed as a special study site in response to a temporary outage of sulfur dioxide control equipment at a local plant. This site is was discontinued on December 18, 2019.		

Sensor Type	Sulfur Dioxide	Appendix C Method Code	600
Network Designation	SLAMS	Probe Height Residence Time	6 Meters 11 seconds
Purpose	Population Exposure	Appendix D Design Criteria	Yes
Sample Frequency	Hourly	Appendix D Scale	Neighborhood
Appendix A QA Assessment	Yes	Appendix D Objectives	Population Exposure
Monitor Start Date	2/11/2019	Appendix E Siting Criteria	No

Sensor Type	BTEX / Sorbent Tube See Section A3.1	Appendix C Method Code	N/A
Network Designation	Special Purpose Monitor	Probe Height Residence Time	6 Meters 11 Seconds
Purpose	Research/Scientific Monitoring	Appendix D Design Criteria	N/A
Sample Frequency	Every Three Days	Appendix D Scale	Undetermined
Appendix A QA Assessment	N/A	Appendix D Objectives	N/A
Monitor Start Date	2/21/2019	Appendix E Siting Criteria	No

Figure 10.14 West Mifflin Location Map



11.0 GLOSSARY OF TERMS AND ABBREVIATIONS

NAAQS	National Ambient Air Quality Standards. These standards apply only to the six criteria pollutants
Criteria Pollutants	Air pollutants considered harmful to public health and the environment (carbon monoxide, nitrogen dioxide, sulfur dioxide, ozone, lead, particulate matter: PM ₁₀ , PM _{2.5})
FRM	Federal Reference Method. Primary measurement methods designated by the USEPA for measurement of criteria pollutants and determination of compliance with NAAQS.
FEM	Federal Equivalent Method. Secondary methods approved by the USEPA for measurement of criteria pollutants and determination of compliance with NAAQS.
TSP	Total Suspended Particles. TSP samplers are filter based, operate at a high flow rate and have no particle sizing device. An FRM monitoring method further analyzed for metals.
PM₁₀	All suspended particles equal to or smaller than 10 microns.
PM_{2.5}	All suspended particles equal to or smaller than 2.5 microns. Also frequently referred to as fine particulates.
PM (coarse)	All suspended particulates smaller than 10 microns but larger than 2.5 microns, also often referred to as PM _{10-2.5} . EPA has not assigned a NAAQS to this parameter as of the date of this document.
Lead (Pb)	Lead Monitoring. Laboratory analysis of TSP filters. This analysis is performed according to the federal reference method for lead monitoring.
Speciation	PM _{2.5} speciation monitor. Multiple filter-based samples which yield a breakdown of PM _{2.5} composition. Analytes include heavy metals, sulfates, nitrates and various species of carbon. Analysis is conducted by the US EPA national contract lab.
Aethalometer	A continuous monitor designed to measure diesel mobile emissions by quantifying black carbon particles. This is a research instrument and does not determine compliance with NAAQS.
Benzene	C ₆ H ₆ . A six-carbon aromatic ring known to be a carcinogen. Emitted by mobile and industrial sources in Allegheny County.
PAMS	Photochemical Assessment Monitoring Stations
VSCC	Very Sharp Cut Cyclone. A particulate sizing device for use with PM _{2.5} FRM and FEM monitors. The VSCC is commonly used to accomplish the final PM _{2.5} size cut in low flow (16.7 lpm), continuous particulate monitors.
CO	Carbon Monoxide. Measured using a continuous automated analyzer.
SO₂	Sulfur Dioxide. Measured using a continuous automated analyzer.
NO_x	Oxides of nitrogen, including nitric oxide and nitrogen dioxide. Measured using a continuous automated analyzer.

NO_y	Total reactive nitrogen. A collective name for oxidized forms of nitrogen in the atmosphere such as nitric oxide (NO), nitrogen dioxide (NO ₂), nitric acid (HNO ₃), and numerous short lived and reactive organic nitrates (but not NH ₃). These compounds play important roles in atmospheric ozone and ultra-fine particle formation.
O₃	Ozone. Measured using a continuous automated analyzer.
NCORE	National Core Monitoring Network, consisting of multi-pollutant ambient air monitoring sites, and specializing in PM _{2.5} and associated precursor gases. These sites will be known as “CORE” sites starting 2019.
Near Road	Monitoring site designed to measure peak exposure to roadway emissions. Required monitoring parameters are NO ₂ , CO and PM _{2.5} . Installation of near road monitoring sites were required by revisions to the NO ₂ NAAQS during 2010.
SPM	Special Purpose Monitor. An SPM is defined as any network monitor that the agency has designated as a special purpose monitor in its annual monitoring network plan and in AQS. SPMs do not count when showing compliance with the minimum requirements for the number and siting of monitors of various types.
TEOM	(Tapered Element Oscillating Microbalance) this technology is used by the Thermo-Scientific model 1400ab continuous particulate monitor, which has FEM designation for PM ₁₀ measurement. This monitor is also used as a PM _{2.5} non-regulatory monitor (e.g., AQI purposes) by adding a VSCC.
BAM	Beta Attenuation Monitor. This technology is used by the Met One BAM1020 and the Thermo Scientific 5014i continuous particulate monitors, both which have FEM designation for PM ₁₀ measurement and for PM _{2.5} measurement with the addition of a VSCC.
Sonic Anemometer	A method to measure wind speed and wind direction that uses ultrasonic sound waves to precisely measure wind speed and wind direction. This method features much better accuracy, sensitivity and longevity as compared to the traditional “cup and vane” wind sensing method. The sonic anemometers utilized by the department are heated to avoid ice accumulation on the sensors.
AADT	Annual Average Daily Traffic count. This is the unit of measure used in this report to indicate vehicular traffic density as received from Penn Dot (Pennsylvania Department of Transportation) and represents the daily two-way traffic count averaged over a calendar year for the indicated roadway segment. The year that the data was collected is included for each count.
TO15	A method of air toxics sampling employed a Flag Plaza air monitoring site. Operated every 6 days for 24 hours, the sample is collected into a special prepared stainless-steel canister and is then sent to the laboratory at the Maryland Department of the Environment for analysis. The analysis tests for 62 volatile organic compounds.
TO11	A method of air toxics sampling employed a Flag Plaza air monitoring site. Operated every 6 days for 24 hours, the sample is collected into a 2,4-DNPH (dinitrophenylhydrazine) cartridge and is analyzed by Philadelphia Air Monitoring Section Laboratory. This procedure has been written specifically for the sampling and analysis of formaldehyde, the most important carbonyl that participates in ozone formation. However, the analysis also yields acetone, propionaldehyde acetaldehyde, benzaldehyde, methyl ethyl ketone and methyl isobutyl ketone results

12.0 Public Comment Period

This network review was available for public comment beginning on May 11, 2020. Comments can be made by e-mail and conventional mail until the close of business on June 10, 2020. All comments received as well as ACHD responses will be included in the final version submitted to EPA Region III not later than July 1, 2020.

Submit comments by e-mail → David.Good@AlleghenyCounty.US

Submit comments by conventional mail → **David D. Good**
301 39th Street, Building 7
Pittsburgh, PA 15201

12.1 Allegheny County Health Department Press Release

The Allegheny County Health Department issued a press release on May 11th to inform the public of the annual network plan comment period. The press release provides a web link to the draft annual network plan and explains how to submit written comments during the comment period (see figure 12.1).

13.0 Public Comments and Responses

13.1 Group Against Smog and Pollution (GASP)

(See the full comment document as received in Appendix B)

- 1. ACHD must post its 2020 Five-Year Monitoring Network Assessment for public examination and extend public comment on the Draft Plan through at least June 21, 2020.**

Response: The 5-Year Monitoring Network Assessment (Network Assessment) is a statistical analysis of the air monitoring network and is not required (by the EPA) to be posted for public review or comments. That withstanding, the Department made the Network Assessment available to anyone who requested it during the public comment period of the Annual monitoring Network Plan. While the Network Assessment remains a reference for any proposed changes to the network over the next five years, the reasoning for the proposed changes to the 2021 Annual Monitoring Network Plan were all contained within Section 3 of the public comment draft of that document. For those reasons and others, the Department did not extend the public comment period for the 2021 Annual Monitoring Network Plan.

- 2. GASP supports ACHD's effort to establish a National Air Toxics Trends Station ("NATTS") in Lawrenceville but ACHD should address details not discussed in the Draft Plan related to benzo[a]pyrene, access to data and the impact to Flag Plaza.**

Response: The Department appreciates the support of the new NATTS initiative. While the Department's current methodology for analyzing HiVol PM10 filters for benzo[a]pyrene is modeled on EPA Compendium Method TO-13A, the sampling and media and capture procedure differs from the method options prescribed by the NATTS work template. The Department will examine the possibility of collocating a HiVol PM10 sampler alongside the PUF sampler and comparing the data when the latter is up and running.

NATTS data is required to be reported to EPA's Air Quality System (AQS) Database (<https://www.epa.gov/aqs>) on a quarterly schedule within 180 days of completing a data collection quarter. The air toxics data is generated by non-continuous samplers and exposed media must be transported to a laboratory for analysis, which can take months. The Department will make every effort to post air toxics data in a timely manner after it is received from the various laboratories and has passed quality assurance checks.

The air toxics measured at Flag Plaza have generally been low compared to other sites monitored in Allegheny County. The Department feels that air toxics sampling could be better served elsewhere in the network considering the limited financial resources, available field personnel, and its proximity/redundancy with the NATTS site.

- 3. ACHD should undertake a comprehensive benzene monitoring program at US Steel's Clairton Coke Facility.**

Response: The Department is currently investigating enhanced air toxics monitoring options in the Mon Valley region, including the suggested passive sorbent tube sampling per EPA Method 325.

- 4. GASP preliminarily supports the proposed monitor relocations, modifications, and reductions listed in the Draft Plan §§ 3.2 and 3.3, but also requests more time as per comment no. 1.**

Response: See response to comment no. 1. The Department appreciates the (tentative) support of the proposed changes to the monitoring network. In consideration of this comment, a new section (3.5) was added showing the methodology demonstrating that each SLAMS monitor proposed to be removed or relocated as having a less than 10% probability of exceeding 80% of the applicable NAAQS, as per 40 CFR §58.14(c).

13.2 Clean Air Council ("the Council")

(See the full comment document as received in Appendix C)

- 1. The Department should consider the relocation and redeployment of discontinued monitors, rather than placing them in storage.**

Response: The Department is planning to relocate and redeploy most of the monitors that were proposed for discontinuation. The PM_{2.5} monitors will be redeployed as a quality assurance monitor elsewhere in the network or as on-site backup units, while the HiVol, filter-based PM₁₀ monitors can be used for certain air toxics sampling or as a working spare unit (the Department currently has no working spare HiVol PM₁₀ monitors).

No new SO₂ monitoring sites were recommended by the 2020 5-Year Network Assessment. However, the Department will consider the possibility of an additional site while balancing the need for SO₂ monitors that are readily deployable if needed to ensure high data capture in the network or in response to incidents such as the 2018 fire at the U.S. Steel Clairton facility.

- 2. The Department Should Follow the EPA Guidance Document on Preventive Maintenance to Prevent Disrepair at Monitoring Stations.**

Response: The Department is required by the EPA to update and submit standard operating procedures (SOPs) and quality assurance project plans (QAPPs) on a regular basis relating to the field, lab and data validation procedures. The condition of the shelter at Avalon is primarily due to the advanced age (40+ years) of the structure and limited funding that was available to remove or replace the shelter.

Given that the majority of the monitoring sites are in urban locations, the Department primarily uses rooftops on top of leased commercial building property to place monitors and small rooms within those buildings to house analyzers required to be in a temperature/weather-controlled environment. The other shelters that currently house analyzers within the network are located at the North Braddock and Parkway East sites. The North Braddock shelter is slated to be replaced with a new shelter due to the advanced age of the structure. The Parkway East site shelter was installed in 2014 and remains in excellent condition, which further demonstrates that age is the primary determiner of the shelter conditions.

3. The Department should clarify its discussion regarding the fine particulate monitors at the Avalon site, and it should retain the continuous FEM monitor.

Response: Upon further evaluation the Department has decided to end the operation of the secondary collocated quality assurance PM_{2.5} FRM sampler at Avalon. The monitor has achieved its goal of demonstrating excellent correlation of the FEM monitor with an FRM monitor over several years. Additionally, the Department far exceeds the minimum number of required collocated QA monitors in the network. The language in Section 3.3.1 has been updated in response to this comment.

The operation of the continuous FEM monitor is scheduled to continue at the Avalon site. The FEM monitor at Avalon is able to be operated in a small, standalone shelter while FRM samplers do not require an environmental shelter. The PM_{2.5} FRM will remain on-site as a backup unit if the FEM monitor malfunctions and needs repaired or replaced.

4. The Department should clarify and discuss the distinctions between the design requirements for PM_{2.5} and PM₁₀, a criteria pollutant subject to a National Ambient Air Quality Standard.

Response: The distinctions between the design requirements for PM_{2.5}, PM₁₀ and PM_{10-2.5} (PM_{coarse}) were made in Sections 8.7, 8.6 and 8.8, respectively. PM_{2.5}, PM₁₀, and PM_{coarse} are each defined in the glossary located in Section 11, and the measurement methodology for PM_{coarse} is described in detail in Section 8.8. As noted, there are no existing NAAQS or design requirements for PM_{coarse}, but it is nonetheless required to be measured at the Lawrenceville NCore site.

5. The Department should clarify its approach for meteorological data in the proposed plan, which appears to contradict its approach in the context of attainment modeling.

Response: The comment did not demonstrate any contradictory approaches to meteorological data within the air monitoring network. The air monitoring section continues to use meteorological monitoring guidance provided in the QA Handbook, Volume IV. See also response to comment 13.3 below.

6. The Council supports the Department's shift to a continuous monitor for PM₁₀ at the Clairton Site.

Response: The Department appreciates the supportive comment.

13.3 Allegheny County Clean Air Now (ACCAN)

(See the full comment document as received in Appendix D)

1. In addition to the PM_{2.5} monitors which ACHD will continue to have at the Avalon location, ACCAN requests that the wind speed/direction monitor be reinstalled and also requests that VOC and Ozone monitors be installed there. There are many industries on Neville Island that emit VOCs.

Response: Ozone is generally considered to be a regional pollutant due to its formation mechanism and its ability to be transported over long distances. The ozone monitoring requirements are determined by the MSA population and ozone design value (specified in Table D-2 of 40CFR58, Appendix D), which require Allegheny County to operate a minimum of two ozone monitors. Regarding site selection of ozone monitoring, according to Appendix D, Section 4.1: "...maximum concentration monitor site should be selected in a direction from the city that is most likely to observe the highest O₃ concentrations, more specifically, downwind during periods of photochemical activity. In many cases, these maximum concentration sites will be located 10 to 30 miles or more downwind from the urban areas." Additionally, no new ozone monitoring sites were recommended by the 2020 5-Year Network Assessment. The Department has no plans to add an additional ozone monitoring site to the network at this time.

The Department acknowledges the quantity of VOC point source emissions on or around Neville Island. However, VOC monitoring at the Avalon site was discontinued in December 2018 due to low uniform results. The Department does not plan on resuming VOC monitoring at the Avalon site at this time. A more extensive air toxics study that measured for VOC was performed around Neville Island between 2015 and 2017. The results of that study are posted on the website here: [https://alleghenycounty.us/uploadedFiles/Allegheny Home/Health Department/Resource s/Data and Reporting/Air Quality Reports/Neville-Area-Air-Toxics-Study.pdf](https://alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Resource_s/Data_and_Reporting/Air_Quality_Reports/Neville-Area-Air-Toxics-Study.pdf)

In consideration of this comment, the Department will consider reconstructing the meteorological tower that houses the wind speed/direction sensors at the Avalon site. However, due to siting requirements and the current condition of the shelter, the Department cannot site/construct a replacement met tower until the existing shelter is removed from the site. The targeted removal date for the shelter will depend on the EPA's review and approval of the proposals in this document. The Department will notify ACCAN and others if/when a replacement met station is operational.

13.4 Allegheny County Resident

(See the full comment document as received in Appendix E)

- 1. Allegheny County should continue to monitor air quality throughout the county especially in the city of Pittsburgh neighborhoods. I often notice a disturbing stench in my neighborhood located in Observatory Hill just off the Venture Street exit off 279 especially at night and early morning.**

Response: ACHD is responsive to odor complaints and investigates them on a case by case basis. Please see the Air Quality website for instructions about how to file complaints by telephone or directly through the webpage

- 2. I live in Jefferson Hills near Jefferson Hospital. I have called the Health Dept a few times before the Covid Pandemic, to report horrible air quality here. There are mornings that I don't want to let our dog out because it smells so bad. In looking over the proposal, I didn't see any monitor or plan for Jefferson Hills.**

Response: The Air Quality Program will continue to pursue odor assessment and remediation in Allegheny County. Continuing to submit complaints is a way that residents can bring ongoing odor problems in their communities to the attention of ACHD. Due to restrictions in resources, ACHD cannot place air monitoring stations in every community. Additionally, detection and quantification of odors is a challenge to the current science of air monitoring. The human nose is much more sensitive to some odor causing compounds than instruments currently designed to quantify them, thus the Air Quality Program frequently fails to detect measurable quantities of odor causing compounds even when odors are present.

- 3. Several commenters expressed air quality concerns and interest for a monitor located within the South Hills – specifically in Mount Lebanon.**

Response: Please see responses to comments 1 and 2 in Section 13.4. Additionally, the 2020 5-Year Network Assessment that was performed to analyze the effectiveness and efficiency of the air monitoring network determined that the monitoring for criteria pollutants was adequate to determine population exposure throughout Allegheny County. That is to say that no additional monitoring sites were recommended at this time. The Department will continue to evaluate potential new monitoring sites and possible network reconfigurations going forward.

- 4. It does not appear that there are any air monitors in the vicinity of the Cheswick/Springdale power generating station. As a resident of a nearby town, I feel that this is a rather large power plant which could very easily affect air quality for a large number of residents in the surrounding areas. I feel that there should be a monitoring station in the vicinity of this power generating station to ensure that data is collected and the air quality is sufficiently monitored and evaluated.**

Response: Please see response to comment 3 in Section 13.4. Additionally, EPA guidance specifies that either modeling or monitoring can be used for air quality characterization. The area surrounding the Cheswick power plant was addressed via a modeling demonstration as part of the 2010 SO₂ NAAQS. Lastly, as part of their Title V air permit the Cheswick Generating Station is required to operate continuous emissions monitoring (CEM) for stack emissions of nitrogen oxides, sulfur dioxide, flue gas dust, PM10 (wet gas particle analyzer), and mercury (as per 40 CFR 63 Subpart UUUUU).

Appendix A: Special Study Projects

A1: Introduction

ACHD frequently conducts investigations and studies using techniques that produce quantifiable results by methods that may not be classified by the USEPA as approved reference or equivalent methods. Often these investigations originate as responses to citizen concerns or complaints. This section briefly describes special studies that are currently ongoing or have been discontinued within the past year. Data from these studies is not submitted to the AQS database, however much of it is available for review on the ACHD webpage or through a right to know request ([Open Records page](#)).

A2: HAP Metals Sampling

A2.1 Lawrenceville NCORE Site Metals

Since 2013, HAP metals are measured at the Lawrenceville NCORE site on a routine and ongoing basis. The sampler is a high-volume TSP sampler that uses high purity quartz filters. Sampling frequency is every six days and each sample is collected for 24 hours. Analysis is conducted by the West Virginia DEP's Guthrie Laboratory using an ICP/MS analytical method. The analysis includes Be, Cr, Mn, Ni, As, Cd and Pb. Data is available upon request.

A2.2 Lawrenceville Toxic Metals Study

A special study was initiated on 04/30/2011 in Lawrenceville in response to public concern about local exposure to toxic metals potentially being released into the community by a local foundry. Activities at this industrial site include an electric arc furnace and a steel foundry that casts railcar couplings. ACHD conducts air sampling on plant property using a USEPA reference method PM₁₀ sampler and high purity quartz filters. Sampling is conducted every three days and each sample operates for 24 hours at 40 cfm. The filter is analyzed by a contracted laboratory for manganese, lead and total chromium. Updated reports are available on the ACHD webpage.

A2.3 Kopp Glass Metals

Upon request by the USEPA, this study was conducted from April 1, 2017 through October 13, 2017 on the property of Kopp Glass, located in Swissvale PA. The initial sampler was located to the northwest of the plant, approximately 283 feet from the main stack to determine emissions of HAP metals during normal operating conditions at the plant. An additional sampler was added on July 30, 2017 and was located to the east southeast of the plant and 205 feet from the main stack. Both samplers were configured to collect PM₁₀ filter samples over a 24-hour period. The exposed samples, along with all relevant flow and sample volume data, were shipped to the EPA contract laboratory (ERG) for analysis by ICP-MS for various HAP metals including Cd, Pb, Co, Mn, Se, As and Cr. The Department began a follow-up study in the nearby community on June 14, 2020.

A3: Volatile Organic Compound (VOC) Sampling

A3.1 Charcoal Tube Sampling

Charcoal tube sampling is used by ACHD routinely to measure ambient concentrations of targeted VOC's. 24-hour average samples are collected at Liberty every three days. Charcoal tube sampling was discontinued after December 2018 at the Avalon site due to uniform low results. Sampling was commenced on an every three-day sampling schedule at the West Mifflin temporary sulfur dioxide monitoring location during February 2019 and ended in December 2019.

Sampling is accomplished using sampling pumps calibrated to 1 liter per minute. Each tube is exposed for 24 hours, from midnight to midnight. The exposed sorbent tubes are sent to the Allegheny County Medical Examiner's Laboratory for analysis by a GC/FID method for benzene, ethyl benzene, toluene and xylenes (BTEX). Charcoal tube samples are also collected by field staff using battery powered personal samplers for shorter durations and higher flow rates during community investigations, usually in response to citizen odor complaints. Data is available upon request.

A3.2 Benzo[a]pyrene Monitoring

Benzo[a]pyrene is a polycyclic aromatic hydrocarbon that is a known human carcinogen and is potentially emitted by the metallurgical coking industry. ACHD currently monitors for this compound using an in-house developed method, analyzing PM₁₀ high volume quartz filter samples using high pressure liquid chromatography (HPLC). PM₁₀ filters from the Liberty air monitoring site are analyzed for benzo[a]pyrene since this site is impacted by emissions from the Clairton Coke Works. South Fayette station PM₁₀ filters are also analyzed for benzo[a]pyrene to serve as an upwind background site. With the addition of benzo[a]pyrene monitoring at Lawrenceville as part of the NATTS program, ACHD will discontinue benzo[a]pyrene monitoring at South Fayette and use the Lawrenceville data for background comparison. Data is available upon request.

A4: Hydrogen Sulfide

Hydrogen Sulfide is an odorous compound that has a very low odor threshold concentration. Expectedly, numerous ongoing community odor complaints are common near industries that release hydrogen sulfide. Traditionally, ACHD has measured H₂S at monitoring sites impacted by the metallurgical coking industry. Hydrogen sulfide is routinely and continuously measured at the Liberty and Avalon air monitoring sites. Recent hourly hydrogen sulfide data is available on the Air Quality Program's portion of the ACHD website and historic data is available to the public upon request. The Department references ambient H₂S standards as listed in the Pennsylvania Code, Title 25, Chapter 131.3 (24-hour average not to exceed 0.005 ppm, 1-hour average not to exceed 0.1 ppm). The Avalon H₂S monitor has seen uniform low results since the 2016 shut down of the nearby Shenango Coke Works battery. ACHD is proposing to relocate the H₂S monitor from Avalon to the North Braddock site where it will better serve the network in identifying local sources of H₂S.

A5: Settled Particulate

Total settled particulate, also commonly referred to as dustfall, is collected and quantified in various locations in Allegheny County using ASTM method D 1793, which yields monthly average concentrations. This simple method is employed in response to complaints of heavy dust deposits in communities. Currently five collectors are maintained at Natrona Heights, Collier Township and West Deer Township. The Department references settled particulate standards as listed in the Pennsylvania Code, Title 25, Chapter 131.3 (12-month average not to exceed 0.8 mg/cm²/month, 30-day average not to exceed 1.5 mg/cm²/month). Data is available upon request.

A6: Lincoln PM_{2.5} Non-FEM

The Lincoln site has historically hosted a continuous non- FEM, PM_{2.5} TEOM operating at 50°C. This non-regulatory monitor was installed for research purposes, with the goal of assessing maximum PM_{2.5} concentrations and PM₁₀ / PM_{2.5} ratios in a middle scale environment. ACHD will discontinue this monitor before the end of 2020. ACHD plans to retain the continuous PM₁₀ FEM monitor at Lincoln as a part of the SLAMS network.

Appendix B: Group Against Smog and Pollution (GASP) Comments



GROUP AGAINST SMOG & POLLUTION

**1133 South Braddock Ave., Suite 1A
Pittsburgh, PA 15218
412-924-0604
gasp-pgh.org**

June 10, 2020

VIA EMAIL (David.Good@AlleghenyCounty.US)

David D. Good
Allegheny County Health Department
Air Quality Program
301 39th Street – Building 7
Pittsburgh, PA 15201

Re: Comments on Draft Air Monitoring Network Plan for Calendar Year 2021

Dear Mr. Good:

Kindly accept the attached comments of the Group Against Smog and Pollution regarding the Allegheny County Health Department's draft Air Monitoring Network Plan for Calendar Year 2021 ("Draft Plan").

Thank you in advance for your consideration of these comments.

Very truly yours,

Very truly yours,

_____/s
Ned Mulcahy
Staff Attorney

attachment

**COMMENTS OF THE GROUP AGAINST SMOG AND POLLUTION (“GASP”)
REGARDING THE ALLEGHENY COUNTY HEALTH DEPARTMENT’S (“ACHD”)
DRAFT AIR MONITORING NETWORK PLAN FOR CALENDAR YEAR 2021**

The Clean Air Act (“CAA”) requires each State Implementation Plan (“SIP”) to “provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to ... monitor, compile, and analyze data on ambient air quality.”¹ Title 40 of the Code of Federal Regulations, Part 58, specifies “requirements for measuring ambient air quality and for reporting ambient air quality data and related information.”² These regulations include design criteria for “[m]inimum ambient air quality monitoring network requirements used to provide support to the [SIPs], national air quality assessments, and policy decisions.”³ In addition, objectives for a monitoring network also include providing “air pollution data to the general public in a timely manner” and supporting “air pollution research studies.”⁴ The total number of monitoring sites within the monitoring network required to serve this “variety of data needs will be substantially higher than these minimum requirements provide.”⁵

Agencies must submit to the EPA “Regional Administrator an annual monitoring network plan which shall provide for the documentation of the establishment and maintenance of an air quality surveillance system.”⁶ In accordance with 40 C.F.R. § 58.10(a)(1), ACHD made its Air Monitoring Network Plan for Calendar Year 2021 (“Plan” or “Draft Plan”) available for public inspection on May 11, 2020.⁷ GASP offers the following comments.

¹ 42 U.S.C. § 7410(a)(2)(B).

² 40 C.F.R. § 58.2(a).

³ 40 C.F.R. § 58.2(a)(5).

⁴ 40 C.F.R. Part 58, App. D § 1.1.

⁵ 40 C.F.R. Part 58, App. D § 1.1.2.

⁶ 40 C.F.R. § 58.10(a)(1).

⁷ Draft Plan, at 81.

I. **ACHD's must post its 2020 Five-Year Monitoring Network Assessment for public examination and extend public comment on the Draft Plan through at least June 21, 2020.**

As noted above, ACHD made its Draft Plan available for public inspection on May 11, 2020. The Plan states the public comments are due June 10, 2020.⁸ The Draft Plan must be submitted to EPA by July 1, 2020.

ACHD must also “perform and submit to the EPA Regional Administrator” by July 1, 2020, “an assessment of the air quality surveillance system ... to determine, at a minimum, if the network meets the monitoring objectives defined in appendix D to [40 C.F.R., Part 58], whether new sites are needed, whether existing sites are no longer needed and can be terminated, and whether new technologies are appropriate for incorporation into the ambient air monitoring network.”⁹ This assessment is completed only once every five years.

Unlike the Draft Plan requirements, 40 C.F.R. § 58.10(d) is silent as to agencies taking public comment on five-year assessments. EPA guidance confirms “[t]here is not a requirement to solicit public comment on a Network Assessment.”¹⁰ However, agencies still may accept public comment on the assessment; the regulations do not require it, but do not forbid it either. Even if an agency chooses not to accept public comment on its five-year assessment, EPA guidance states, “monitoring agencies are encouraged to reach out to data users as well as post their network assessment on their web site.”¹¹ The goal of making both documents available makes good sense in light of the inherent similarities and relationship between them.

⁸ Draft Plan, at 81.

⁹ 40 C.F.R. § 58.10(d).

¹⁰ EPA Ambient Monitoring Technology Information Center (AMTIC), *Designing a Network Assessment for an Ambient Air Monitoring Program*, at 4, <https://www.epa.gov/sites/production/files/2020-01/documents/network-assessment-planning-and-checklist.pdf>.

¹¹ *Id.*

First, the technical analysis contained in the five-year assessment¹² necessarily informs and affects the Draft Plan. EPA guidance is clear on this point: “[t]he annual monitoring network plan is intended to be the yearly update of the planned changes to [the agency’s] network in consideration of the latest assessment your agency has performed.”¹³ Moreover, ACHD stated that it “leveraged the results of that [five-year] assessment here in the 2021 Air Monitoring Network Plan to help make objective, data-driven decisions regarding any proposed changes to the network.”¹⁴

Second, ACHD is required to complete this assessment and submit it “along with a revised annual network plan, to the Regional Administrator,” making the two documents essentially one joint submission. Again, EPA guidance on the five-year assessment is relevant, stating that both the assessment and annual monitoring network plan “can be combined into one document so long as all the requirements of both documents are met.”¹⁵

Finally, in addition to the technical requirements of the network assessment, it must also “consider the ability of existing and proposed sites to support air quality characterization for areas with relatively high populations of susceptible individuals (e.g., children with asthma), and, for any sites that are being proposed for discontinuance, the effect on data users other than the agency itself, such as nearby states and tribes or health effects studies.”¹⁶

In spite of these considerations, ACHD neither made the five-year assessment part of the Draft Plan (and subject to public comment) nor posted it for public inspection concurrently with

¹² See 40 C.F.R. § 58.10(d).

¹³ Amtic, at 5.

¹⁴ Draft Plan, at 11.

¹⁵ Amtic, at 5.

¹⁶ 40 C.F.R. § 58.10(d).

the Draft Plan. This approach defied EPA guidance and frustrates the public’s ability to provide input generally. Even if ACHD takes the position that the five-year assessment itself should not be subject to public comment, ACHD cannot deny the assessment’s essential role in developing the Draft Plan.

The result was that the public’s 30-day period to meaningfully inspect and review the Draft Plan did not begin until after five-year assessment’s completion on or around May 22, 2020.¹⁷ Accordingly, public comments on both documents – but at the very least, the Draft Plan – must be accepted through June 21, 2020.

II. GASP supports ACHD’s effort to establish a National Air Toxics Trends Station (“NATTS”) in Lawrenceville but ACHD should address details not discussed in the Draft Plan.

GASP largely supports ACHD’s participation in EPA’s air toxics monitoring program. Given the region’s legacy of toxic, industrial pollution as well as continued and potentially new sources of air toxics, establishing “long-term hazardous air pollutants (HAP) monitoring data of consistent quality” can only serve the interests of protecting public health.¹⁸ At the same time, ACHD establishing Lawrenceville as a NATTS raises a few potential concerns we believe ACHD should address.

a. Polycyclic Aromatic Hydrocarbons

“Benzo[a]pyrene is a polycyclic aromatic hydrocarbon that is a known human carcinogen and is potentially emitted by the metallurgical coking industry. Currently, ACHD currently

¹⁷ A copy of ACHD’s 2020 Five-Year Monitoring Network Assessment reviewed by GASP was dated May 22, 2020. It is unclear precisely when this document would have been available for public inspection.

¹⁸ Draft Plan, at 13.

monitors for this compound [at the Liberty monitor site] using an in-house developed method”¹⁹
The NATTS will monitor for “PAHs using glass cartridge PUF sampling via EPA Method TO-13A.”²⁰ If ACHD is using two different methods at Liberty and the NATTS will the data from Lawrenceville and Liberty be comparable? If not, would ACHD upgrade the Liberty site to use EPA Method TO-13A?

b. Access to Data

The process of obtaining air toxics data – unless it’s part of an ongoing study that publishes regular updates – currently requires a Right to Know Law request²¹ or navigating complicated EPA data download websites.²² Appendix D to Part 58 requires that “ambient air monitoring networks” be designed to “[p]rovide air pollution data to the general public in a timely manner.”²³ How will ACHD ensure the NATTS data will be made public in a timely manner?

c. Flag Plaza Impact

The Draft Plan indicates that ACHD has been monitoring VOC and carbonyls at Flag Plaza since January 1, 1995.²⁴ The Draft Plan stated that to establish the NATTS site, “ACHD would relocate the VOC and carbonyls sampling from Flag Plaza to the Lawrenceville site.”²⁵ The Draft Plan did not discuss the need or lack there of for continued toxics monitoring in the

¹⁹ Draft Plan, at 82.

²⁰ Draft Plan, at 13.

²¹ See Draft Plan § A3.1 Charcoal Tube Sampling (“Data is available upon request.”).

²² See AMTIC Air Toxics -Data Analysis (<https://www3.epa.gov/ttnamti1/toxdat.html>); Air Quality System (AQS) API (https://aqs.epa.gov/aqsweb/documents/data_api.html); and AQS Pre-Generated Data Files (https://aqs.epa.gov/aqsweb/airdata/download_files.html).

²³ 40 C.F.R. Part 58, App. D § 1.1.

²⁴ Draft Plan § 10.10.

²⁵ Draft Plan, at 13.

downtown Pittsburgh area. Perhaps the interest in establishing the NATTS outweighs such an interest or the distance between the sites will render the move insignificant. In any event, ACHD should offer such an analysis.

III. ACHD should undertake a comprehensive benzene monitoring program at US Steel's Clairton Coke Facility.

The EPA announced its decision to list benzene as a hazardous air pollutant under Section 112 of the Clean Air Act on June 8, 1977, based on reports “strongly suggest[ing] an increased incidence of leukemia in humans exposed to benzene.”²⁶ Despite over forty years of regulations and research aimed at reducing human exposure to benzene, EPA’s Toxic Release Inventory data show U.S. Steel’s Clairton Coke facility emitted over 30,000 pounds of benzene via stack and fugitive emissions in 2018, making it far and away the largest stationary source in Allegheny County.²⁷ Not coincidentally, ACHD reported that the average benzene concentration and 24-hour maximum benzene concentration at the Liberty monitor site in 2018 were both 19 times higher than the levels at the Avalon monitoring site.²⁸ That same report showed that through August 10, 2019, the average benzene concentration for 2019 at Liberty was 60% higher than it was in 2018.²⁹

GASP will readily admit that – based on ACHD data – ambient air concentrations of benzene rarely cross ATSDR non-cancer risk levels even at the Liberty monitor site. But that

²⁶ 42 Fed. Reg. 29332, "National Emission Standards for Hazardous Air Pollutants; Addition of Benzene to List" (June 8, 1977).

²⁷ Data retrieved May 29, 2020 from https://enviro.epa.gov/triexplorer/tri_release.chemical.

²⁸ ACHD, Air Quality Annual Data Summary Criteria Pollutants and Selected Other Pollutants for 2019, at 22, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Resources/Data_and_Reporting/Air_Quality_Reports/2019-data-summary.pdf

²⁹ *Id.*

argument is of little comfort to local community members and in fact, subject to several limitations.

First, ACHD follows a 1-in-3 sampling cycle, meaning that at best, benzene concentrations are only being measured 122 days per year.³⁰ Second, concerns with the methodology and laboratory ACHD uses call into question if the results would stand up to rigorous analysis, as might be required in a legal proceeding. Third, a single fixed monitor site means that if the wind is blowing in any direction other than toward that point, ACHD's monitor cannot account for those emissions. Finally, "[b]enzene is carcinogenic to humans, and no safe level of exposure can be recommended."³¹

Failing to investigate benzene concentrations in the vicinity of Clairton Coke would ignore a plainly obvious public health threat disproportionately affecting predominately high-need environmental justice communities.³² In addition, undertaking additional monitoring would fall squarely within the 40 C.F.R., Part 58 monitoring objectives. Appendix "D" states, "source-oriented monitoring data can provide insight into how well industrial sources are controlling their pollutant emissions."³³ In addition, "[a]ir pollution data from the NCore network can be used to supplement data collected by researchers working on health effects assessments."³⁴

³⁰ Draft Plan, at 82.

³¹ World Health Organization, Exposure to Benzene: A Major Public Health Concern, at 2, <https://www.who.int/ipcs/features/benzene.pdf?ua>

³² US Steel's Clairton Coke facility is located in the City of Clairton. ACHD's Environmental Justice Index map (May 2018) shows the entirety of Clairton as a "high-need" community. See [https://www.alleghenycounty.us/uploadedFiles/Allegheny Home/Health Department/Resources/Data and Reporting/Chronic Disease Epidemiology/HEB-ENV.pdf](https://www.alleghenycounty.us/uploadedFiles/Allegheny%20County/Health%20Department/Resources/Data%20and%20Reporting/Chronic%20Disease%20Epidemiology/HEB-ENV.pdf).

³³ 40 C.F.R. Part 58, App. D § 1.1(b).

³⁴ 40 C.F.R. Part 58, App. D § 1.1(c); benzene is not an nCore pollutant but the goal of supporting health-effects studies is noted throughout Part 58.

To address some limitations of the current monitoring approach noted *supra*, GASP believes ACHD must adopt the BTEX monitoring plan that the PA DEP's Northwest Region is conducting around the former Erie Coke facility in the City of Erie.³⁵ By using an existing EPA sampling method – currently required for the petroleum refining sector – data integrity would be less of an issue. In addition, sampling is constant and the contractor PA DEP uses for analysis provides results every two weeks. There are drawbacks in so far as the monitoring approach limiting the ability to detect spikes but GASP's experience in working with community members around Erie shows that the constant monitoring and transparency might outweigh such restrictions.

IV. GASP preliminarily supports the proposed monitor relocations, modifications, and reductions listed in the Draft Plan §§ 3.2 and 3.3.

Based on GASP's general familiarity with the data produced by the monitors slated to be relocated or eliminated in the Draft Plan, these changes appear to be in the best interest of the air monitoring network. GASP is particularly supportive of Avalon's hydrogen sulfide monitor being redeployed in North Braddock. Hydrogen Sulfide is a regular problem in the Mon Valley we believe this move will provide useful data.

As for the other monitors being moved, left in place, reduced, etc., GASP would appreciate the extra time requested in Section I. *supra* to more fully examine the data establishing those decisions.

³⁵ See <https://www.dep.pa.gov/About/Regional/NorthwestRegion/Community-Information/Pages/Erie-Coke-Benzene.aspx>.

Appendix C: Clean Air Council Comments

Allegheny County Health Department

Air Monitoring Network Plan for Calendar Year 2021 (DRAFT)

June 10, 2020

Written Comments by Clean Air Council

Via e-mail: david.good@alleghenycounty.us

Clean Air Council (“the Council”) appreciates the opportunity to submit these written comments regarding the proposed Air Monitoring Network Plan for Calendar Year 2021, dated May 11, 2020.

The Council is a non-profit environmental organization headquartered at 135 South 19th Street, Suite 300, Philadelphia, Pennsylvania, 19103. The Council maintains an office in Pittsburgh. For over 50 years, the Council has worked to improve air quality across Pennsylvania. The Council has members throughout the Commonwealth who support its mission to protect everyone’s right to a healthy environment. The Council has approximately 8,000 paying members and 30,000 activists.

1. The Department Should Consider the Relocation and Redeployment of Discontinued Monitors, Rather than Placing them in Storage.

The Department proposes the removal or discontinuation of several monitors, without redeployment. *See* Proposed Plan, pages 6, 19 (Table 4 -- Air Monitoring Network Summary). These include the monitor for sulfur dioxide (SO₂) at the Avalon site, and the PM_{2.5} monitor at the North Park site. *See id.*, pages 14, 15. The Council believes these monitors and the data they are capable of collecting are far too important to be left in storage. For example, the sulfur dioxide monitor at the Avalon site could provide useful source-specific data at the Lincoln Monitor, which lies almost directly downwind of the Clairton Coke Works. *See id.*, page 46 (identifying a PM₁₀ FEM monitor and a PM_{2.5} non-FEM monitor, but no sulfur dioxide monitor). Wherever possible, the Department should relocate and redeploy discontinued monitors at locations in the network where there is a need for monitoring.

The 5-year Network Assessment document indicates that the software used to analyze the effectiveness of the network has the capability to assess the usefulness of potential additions to the network:



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Harrisburg 107 N. Front Street | Suite 112 | Harrisburg, PA 17101 | 717-230-8806 | Fax 717-230-8806
Wilmington Community Service Building | 100 W. 10th Street | Suite 106 | Wilmington, DE 19801 | 302-691-0112

www.cleanair.org
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www.twitter.com/cleanaircouncil

Section 2.2. Assessment Tools

...

New Site – *Allows the user to add a hypothetical or a known future site to the network.* Once the new site is added to the network, the area served tool can be reprocessed for a revised potential network.

See Attachment 1, 2020 Five-Year Monitoring Network Assessment (May 22, 2020), page 3 (bold italics added for emphasis). Accordingly, the Department should state whether any siting assessment was performed for relocating and redeploying these monitors at other prospective locations.

Because monitors represent a significant investment and gather important data, the Department should make sure that it makes the most of discontinued monitors. Simply mothballing them would be a waste.

2. The Department Should Follow the EPA Guidance Document on Preventive Maintenance to Prevent Disrepair at Monitoring Stations.

The state of disrepair of the shelter for the monitors for hydrogen sulfide and sulfur dioxide at the Avalon site is a concern. See Proposed Plan, page 14 (Section 3.2.1 Avalon Hydrogen Sulfide) (“the shelter that currently houses the analyzer is in poor condition with water damage that presents a hazard to both the equipment and field staff and should be retired immediately”), page 15 (Section 3.3.1 Avalon SO₂), page 15 (same statement for multiple analyzers).

It is unclear whether these are two separate shelters, or the same shelter. It is not clear whether that shelter also houses the fine particulate monitor. The Department does not repeat this statement when discussing the monitor for fine particulates. See *id.*, page 15 (Section 3.3.1 Avalon SO₂). The Department should clarify the extent of this condition of disrepair, with respect to all sensors or analyzers.

The Department has an obligation to properly maintain monitors that have been installed. See 40 CFR part 58, Appendix D, Section 4.4.3 (“The Regional Administrator and the responsible State or local air monitoring agency shall work together to design and/or maintain the most appropriate SO₂ network to provide sufficient data to meet monitoring objectives.”), <https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol6/pdf/CFR-2019-title40-vol6-part58.pdf>.

Under the regulations, “[p]rimary quality assurance organizations are encouraged to develop and maintain quality systems more extensive than the required minimums.” *Id.*, 40 CFR part 58, Appendix A, Section 1.1(b). The regulations specify that “[a]dditional guidance for the requirements reflected in this appendix can be found in the “Quality Assurance Handbook for

Air Pollution Measurement Systems,” Volume II (see reference 10 of this appendix)” *Id.* See *id.*, 40 CFR part 58, Appendix A, Section 6(10) (“Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Quality Monitoring Program Quality System Development. EPA-454/B-13-003. <http://www3.epa.gov/ttn/amtic/qalist.html>.”). That guidance document was issued in 2013. That guidance document was revised in 2017. See Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II (EPA-454/B-13-003 May, 2013), <https://tisch-env.com/wp-content/uploads/2015/05/QA-Handbook-Vol-II.pdf>.

Section 11.2 of the revised guidance document is titled “Preventive Maintenance.” See Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II (2017), Section 11.0, pages 5-8, <https://www3.epa.gov/ttn/amtic/files/ambient/pm25/qa/Final%20Handbook%20Document%2017.pdf>. The guidance document contemplates preventative maintenance activities on a daily, monthly, quarterly, semi-annual and annual basis:

Every monitoring organization should develop a preventive maintenance program. Preventive maintenance is what its name implies: maintaining the equipment within a network to prevent downtime, costly repairs, and data loss. ***Preventive maintenance is an ongoing element of quality control and is typically enveloped into the daily routine. In addition to the daily routine, scheduled activities must be performed monthly, quarterly, semi-annually and annually.*** Often the standard operating procedures and/or operation manuals will provide preventative maintenance activities for the particular instrument/method.

Id., page 5. The guidance document also states that “[i]t is suggested that these sections be assembled into a preventative maintenance document that could be kept at each site and accessed electronically, so that maintenance can be implemented and documented in a consistent manner.” *Id.*

Monthly station maintenance is an element of preventive maintenance. *Id.*, Section 11.2.1. The guidance document recognizes “visual inspection of probes and meteorological gear” as part of “station maintenance.” See *id.*, page 6. Presumably, such inspections would be helpful in preventing stormwater damage to monitor shelters at Avalon and other sites.

To facilitate station maintenance, the guidance document includes a list of maintenance items that should be checked (pages 5-6, Section 11.2.1) as well as a sample checklist for inspections (page 6, Section 11.2.2).

The cited material from the 2017 guidance document is substantially the same as the material in the 2013 guidance document.

The Department should explain what caused the Avalon site to fall into disrepair, and whether its approach to preventive maintenance for the site was different from its approach at

other sites. The Department should clarify whether it has a preventive maintenance plan for all sites or for individual sites. It should also make its preventive maintenance plan or plans available to the public.

3. The Department Should Clarify its Discussion Regarding the Fine Particulate Monitors at the Avalon Site, and It Should Retain the Continuous FEM Monitor.

The Department states that “[w]hen the collocated QA PM2.5 FRM sampler is installed at the Parkway East site, ACHD proposes to reduce the operation of the collocated QA PM2.5 FRM sampler at Avalon site to an alternating 1 in 6-day schedule (see section 3.1.5 above).” *See Proposed Plan*, page 15, Section 3.3.1. This statement appears to be redundant. Apparently, the Department already made this change in last year’s proposed plan:

2.1.1 Avalon PM2.5 FRM (sampling frequency)

ACHD reduced the sampling frequency of the Avalon PM2.5 FRM monitor. This monitor is a secondary collocated monitor that supports the primary PM2.5 FEM continuous monitor at that site. *The FRM sampling frequency was reduced from every three days to every six days, which is consistent with the other PM2.5 FRM collocated samplers in the network and exceeds minimum EPA requirements for collocated samplers.*

See 2020 Air Monitoring Network Plan, page 6 (July 1, 2019), https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Resources/Data_and_Reporting/Air_Quality_Reports/ANP2020-draft.pdf. Therefore, there does not appear to be a reason for the Department to shade in red the notation “IQA(6)” in Table 4, implying that this monitor will be discontinued. *See Proposed Plan*, page 19, Table 4 -- Air Monitoring Network Summary.

Beneath that notation shaded in red, the Department has shaded in yellow the notation “IQA(12)”, implying that it will install a new monitor involving sampling every twelfth day. *See id.* But there does not appear to be a substantive discussion of such a proposal in the proposed plan. The Department should explain what it means by this yellow citation.

In discussing the shift to a collocated QA PM2.5 FRM sampler to an alternating 1 in 6-day schedule (which already happened), the Department states that “[t]his modification will not affect the operation of the continuous PM2.5 FEM monitor at Avalon.” *See Proposed Plan*, page 15, Section 3.3.1. The Council agrees that it is important to maintain a continuous monitor at the Avalon site, for several reasons.

First, there continue to be a number of stationary sources on Neville Island, including the Brunot Island Generating Station, which has a diesel starter engine and diesel fire pump. *See Title V Permit for Brunot Island Generating Station*, pages 56-59 (August 26, 2019), <https://gasp-pgh.org/wp-content/uploads/Brunot-Island-tvop.pdf>. The Title V permit contains an annual emissions limit of 102.6 tpy of fine particulates. *See id.*, page 64.

Second, in 2017 the Department of Environmental Protection issued a plan approval for a power plant for Robinson Power in Washington County, near the southeastern county line shared with Allegheny County. (Following an application for a modification of the final plan approval, there is a proposed plan approval open for public comment. *See* 50 Pa. B. 2760-2762 (May 30, 2020), <http://www.pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol50/50-22/709a.html&search=1&searchunitkeywords=robinson>). The potential to emit for that project is 144.50 tpy of fine particulates. *See id.* at 2760; *see also* Department of Environmental Protection’s Review Memorandum, page 15 (May 30, 2020), <http://files.dep.state.pa.us/RegionalResources/SWRO/SWROPortalFiles/Community%20Info/RobinsonPower/PA-63-00922D%20Robinson%20Review%20Memo%20May%202020%20rev3%20signed.pdf>). Assuming that project goes forward, this presents another reason for retaining the continuous monitor for fine particulates at Avalon. The location of that project is approximately 12 miles away, upwind in a southwest direction. *See* Attachment 2 -- Google Earth Image of Allegheny County, with Robinson Power (40°24’33”N, 80°17’53”W)¹ and Avalon (40.499767, - 80.071337) prepared and highlighted by Clean Air Council.

Finally, the Department has analyzed the data at the Avalon monitoring station and has indicated that it would be good for modeling purposes. *See* Attachment 1, 2020 Five-Year Monitoring Network Assessment (May 22, 2020), page 31 (“[t]he Avalon FEM is showing good comparability to the FRM over the timeframe of 2017-2019”).

4. The Department Should Clarify and Discuss the Distinctions Between the Design Requirements for PM_{2.5} and PM₁₀, a Criteria Pollutant Subject to a National Ambient Air Quality Standard.

While the Department addresses the design requirements for fine particulates in some detail (*See* Proposed Plan, page 29, Section 8.7), it does not provide much detail regarding the design requirements for coarse particulates (*See* Proposed Plan, page 31, Section 8.8). Presumably, this is because the Department states that “no NAAQS exists for coarse particulate matter.” *See id.* *See also* Proposed Plan, page 21 (“NO_y and PM_c [PM_{10-2.5}] do not have an associated NAAQS.”). This statement is an error. The national ambient air quality standard for coarse particulates (PM₁₀) is 150 micrograms per cubic meter, 24-hour average concentration:

§ 50.6 National primary and secondary ambient air quality standards for PM 10.

(a) *The level of the national primary and secondary 24-hour ambient air quality standards for particulate matter is 150 micrograms per cubic meter (µg/m³), 24-hour average concentration.* The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³, as determined in accordance with appendix K to this part, is equal to or less than one.

¹ For the Robinson Power coordinates (40°24’33”N, 80°17’53”W), *see* 50 Pa. B. 2760, col. 2.

(b) [Reserved]

(c) For the purpose of determining attainment of the primary and secondary standards, *particulate matter shall be measured in the ambient air as PM10 (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers)* by:

(1) A reference method based on appendix J and designated in accordance with part 53 of this chapter, or

(2) An equivalent method designated in accordance with part 53 of this chapter.

[52 FR 24663, July 1, 1987, as amended at 62 FR 38711, July 18, 1997; 65 FR 80779, Dec. 22, 2000; 71 FR 61224, Oct. 17, 2006],

40 C.F.R. 50.6, <https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol2/pdf/CFR-2019-title40-vol2-sec50-6.pdf> (bold italics added for emphasis)

Because coarse particulates are a criteria pollutant, the federal regulations contain design requirements for them. See 40 CFR part 58, Appendix D, Section 4.6 (“Particulate Matter (PM 10) Design Criteria”), <https://www.govinfo.gov/content/pkg/CFR-2019-title40-vol6/pdf/CFR-2019-title40-vol6-part58.pdf>. The Department should revise Section 8.8 on page 31 of the proposed plan to address these design requirements.

There may be some confusion due to the blurring of the notations PM₁₀ and PM_{10-2.5}. To be fair, the Department provides a discussion of “PM10 Design Criteria” in Section 8.6, page 28. But this cannot refer to coarse particulates, which are defined by the Department as PM_{10-2.5} elsewhere. If the Department is characterizing PM10 as total suspended particulates, it should make this clear, and clarify any apparent inconsistencies.

5. The Department Should Clarify its Approach for Meteorological Data in the Proposed Plan, Which Appears to Contradict its Approach in the Context of Attainment Modeling.

In the 5-year network assessment, the Department notes the usefulness of meteorological data collected at individual sites, for a number of purposes:

The meteorological stations can show unique wind patterns at the different local sites and can be useful for modeling, source culpability, and other studies.

See Attachment 1, 2020 Five-Year Monitoring Network Assessment (May 22, 2020), page 109. The distinctive features of the terrain of Allegheny County can be important in analyzing air pollution. See 2020 Five-Year Monitoring Network Assessment (May 22, 2020), page 109 (“Parkway East and North Braddock are only 3.9 km apart but show significantly different wind patterns”).

The Department should clarify its internal policy and guidance for addressing the distinctive features of the terrain in multiple contexts, including both the air monitoring network context and the attainment demonstration context, indicating where there are similarities and differences.

6. The Council Supports the Department's Shift to a Continuous Monitor for Coarse Particulates at the Clairton Site.

The Department's shift to a continuous monitor for coarse particulates at the Clairton site is an improvement to the data collection capabilities of the network. *See Proposed Plan*, page 14 (Section 3.2.3) ("ACHD proposes to discontinue the intermittent (1 in 6-day) filter-based PM₁₀ FRM sampler at the Clairton site and replace it with a continuous PM₁₀ FEM monitor").

Hopefully, the anticipated increase in available data will allow more in-depth analysis of small scale trends within the network, and allow for more accurate tracking of source-specific exceedances.

Thank you for your consideration of the comments of the Council.



Joseph Otis Minott, Esq.
Christopher D. Ahlers, Esq.
Clean Air Council
135 S. 19th St., Suite 300
Philadelphia, PA 19103
215-567-4004 x116
joe_minott@cleanair.org
cahlers@cleanair.org

Attachment 1: 5-Year Network Assessment

Attachment 2: Google Earth Image

Appendix D: Allegheny County Clean Air Now (ACCAN) Comments

From: [Angelo Taranto](#)
To: [Good, David](#)
Cc: [Karen Grzywinsky](#); [Kenneth Holmes](#); [William Doran](#); [Thaddeus Popovich](#); [Kathleen Krebs](#); [Jessica Pachuta](#); [Tim Fitchett](#); [Rachel Filippini](#); [Matthew Mehalik](#)
Subject: ACCAN's Comments on the 2021 Air Monitoring Network Plan
Date: Tuesday, June 9, 2020 7:24:30 PM

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David,

On behalf of ACCAN (Allegheny County Clean Air Now) I am submitting the following comments on the 2021 Air Monitoring Network Plan as it relates to ACHD's Avalon monitoring location.

Comments on ACHD's 2021 Air Monitoring Network Plan

"While the Shenango coke works has closed, there are many other pollution sources on Neville Island that generate air pollution that impacts Neville Island and neighboring communities. In 2018, we identified twenty-seven major and minor sources of air pollution either on Neville Island or in close proximity to it. ACCAN continues to monitor those industries and having monitors at the ACHD's Avalon site provides useful information.. In addition to the PM 2.5 monitors which ACHD will continue to have at the Avalon location, ACCAN requests that the wind speed/direction monitor be reinstalled and also requests that VOC and Ozone monitors be installed there. There are many industries on Neville Island that emit VOCs."

Angelo Taranto, ACCAN co-founder and Secretary/Treasurer

Appendix E: Allegheny County Citizen Comments

From: [Judy Callaghan](#)
To: [Good, David](#)
Subject: 2021 Air Monitoring Network Plan
Date: Monday, May 11, 2020 3:26:52 PM

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

Allegheny County should continue to monitor air quality throughout the county especially in the city of Pittsburgh neighborhoods. I often notice a disturbing stench in my neighborhood located in Observatory Hill just off the Venture Street exit off 279 especially at night and early morning.

Judith Callaghan
3619 Baytree St, Pittsburgh, PA 15214
412 538-8272
Callajudy@gmail.com

From: [Judy Callaghan](#)
To: [Good, David](#)
Subject: 2021 Air Monitoring Network Plan
Date: Monday, May 11, 2020 3:26:52 PM

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

Allegheny County should continue to monitor air quality throughout the county especially in the city of Pittsburgh neighborhoods. I often notice a disturbing stench in my neighborhood located in Observatory Hill just off the Venture Street exit off 279 especially at night and early morning.

Judith Callaghan
3619 Baytree St, Pittsburgh, PA 15214
412 538-8272
Callajudy@gmail.com

From: [Jenn Rick](#)
To: [Good, David](#)
Subject: Add county air quality monitors in the south hills
Date: Wednesday, June 10, 2020 11:13:56 AM

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Hello,

I have previously inquired with the ACHD and again would like to urge the ACHD to place a county air quality monitor in the heart of the south hills, such as Mt Lebanon or Upper St. Clair. The citizens of our communities have no nearby official air quality monitors, but yet account for a high number of air quality complaints. Given the health implications of poor air quality and as county tax payers, it seems reasonable to request local monitoring in the south hills.

In addition, the Mt Lebanon community is a walking school district and there are several times in which the air is so foul that the students are negatively impacted. The principals at our schools also use air quality data when necessary to make decisions about outdoor recess for elementary school children. A local monitor would best capture the more immediate air quality data and allow for fact based decision making impacting the health of our children and residents.

Thank you,
Jennifer Rick
104 Sunridge Dr, Pittsburgh, PA 15234

From: [Meghan](#)
To: [Good, David](#)
Subject: Air Monitor Mt. Lebanon
Date: Wednesday, May 27, 2020 12:30:00 AM

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

I would like to request an air quality monitor be placed in Mt. Lebanon. There have been many instances of foul smells and other disturbances in our area. I have first hand smelled many of these. We also have a lot of bad air quality days and I am worried for my family, friends, and neighbors.

Thank you!
Meghan

From: janiek4@gmail.com
To: [Good, David](#)
Subject: Air quality monitoring
Date: Tuesday, May 26, 2020 2:24:41 PM

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Wanted to submit a comment requesting an air quality monitoring network closer to where I live in Mt. Lebanon. There are a lot of complaints in our area of suspiciously bad odors, and poor air quality warnings on weather apps. Around Christmas of 2019, there was odd fog that hung around and prevented my family and I from wanting to go outside.

Thank you,
Jane Casella

Sent from my iPhone

From: [Tess Carter](#)
To: [Good, David](#)
Subject: Air quality plan comment
Date: Tuesday, May 26, 2020 9:47:55 PM

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Hello!

I would like to request a monitor location somewhere in the South Hills area. Myself and neighbors in Mt Lebanon have noticed and reported many days of concerning air quality and smells in our immediate area (as well as neighboring areas like Dormont and Bethel Park. It is concerning to me that there is no official monitor in our immediate area and yet we seem to have a concerning number of days with noticeable air issues.

Thank you-
Tess Carter
931 Miami Ave, Pittsburgh, PA 15228

From: [Elaine Giarrusso](#)
To: [Good, David](#)
Subject: comment on 2021 Air Monitoring Network Plan
Date: Tuesday, May 26, 2020 2:44:58 PM

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I want ACHD to consider placing an air quality monitor in the heart of the South Hills, for example, Dormont or Mt. Lebanon. We have no nearby official monitors but we account for a high number of air quality complaints.

Elaine Giarrusso
1147 Washington Road
Pittsburgh, PA 15228
(412) 344-1012

From: [Dave Matlin](#)
To: [Good, David](#)
Subject: Public Comment on 2021 Air Monitoring Network Plan
Date: Saturday, May 23, 2020 9:28:38 PM

Warning! This email was sent from an external source. Please be sure you recognize the sender and use caution when clicking on links and/or opening attachments.

To whom it may concern:

I would like to offer public comment on the 2021 Air Monitoring Network Plan. My comment is that it does not appear that there are any air monitors in the vicinity of the Cheswick/Springdale power generating station. As a resident of a nearby town, I feel that this is a rather large power plant which could very easily affect air quality for a large number of residents in the surrounding areas. I feel that there should be a monitoring station in the vicinity of this power generating station to ensure that data is collected and the air quality is sufficiently monitored and evaluated.

Thank you for your consideration.

Sincerely,
Dave Matlin
722 Brunot St
Verona, PA 15147



ALLEGHENY COUNTY

ALWAYS INSPIRING

FOR IMMEDIATE RELEASE

May 11, 2020

Contact: Ryan Scarpino
Public Health Information Officer
412-578-8312 (office)
412-339-7995 (cell)
Ryan.Scarpino@AlleghenyCounty.us

Health Department Seeks Comment on Annual Air Monitoring Network Plan

PITTSBURGH – The Allegheny County Health Department (ACHD) is requesting public comment on its 2021 Air Monitoring Network Plan, an annual report which provides a detailed description of how and where air pollution is monitored in Allegheny County.

The [2021 Air Monitoring Network Plan](#) is a document required by the U.S. Environmental Protection Agency (EPA). It provides the specific location of each monitoring station, siting criteria, monitoring methods and objectives, frequency of sampling, pollutants measured at each station and aerial photographs showing their physical location.

The network includes the following 13 locations within the county: Avalon, Clairton, Flag Plaza (Downtown), Glassport, Harrison, Lawrenceville, Liberty, Lincoln, Manchester, North Braddock, North Park, Parkway East (Wilkinsburg) and South Fayette.

One or more of the following pollutants is measured at each site: Sulfur dioxide, Carbon monoxide, Nitrogen oxides, total reactive nitrogen, Ozone, PM10, PM2.5, and other air toxics.

All correspondence must include first and last name and a complete mailing address. Comments will be accepted until **4:30 p.m. on Monday, June 10, 2020.**

Comments may be submitted via e-mail to david.good@alleghenycounty.us or by mail to:

Allegheny County Health Department
Attention: David D. Good
Air Quality Program
301 39th Street
Pittsburgh, PA 15201

###

Debra Bogen, MD, Director
Allegheny County Health Department – Public Information Office
542 Fourth Avenue | Pittsburgh, PA 15219
Phone: 412-687-ACHD (2243) | Fax: 412-578-8325 | www.alleghenycounty.us/healthdepartment

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