



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

October 19, 2020

Rhonda B. Thompson, PE
Chief
Bureau of Air Quality Control
South Carolina Department of Public Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Dear Ms. Thompson:

Thank you for submitting the state of South Carolina's 2020 annual ambient air monitoring network plan (Network Plan) dated July 1, 2020. The Network Plan is required by 40 Code of Federal Regulations (CFR) §58.10. The U.S. Environmental Protection Agency (EPA) Region 4 understands that the South Carolina Department of Health and Environmental Control (SC DHEC) provided the public with a 30-day review period for the draft Network Plan and that no comments were received.

The Network Plan proposes several changes to the South Carolina monitoring network, including:

- Establishment of the Irving Street (AQS ID: 45-019-0021) PM_{2.5}, SO₂, and NO₂ monitoring site in the Charleston area,
- Shutdown of the Long Creek (AQS ID: 45-073-0001) SO₂, PM_{2.5}, and O₃ monitoring site, and
- Conversion of Howard High #3 (AQS ID: 45-043-0011) PM₁₀ monitoring to a rotating schedule.

The SC DHEC did not include information in the Network Plan about the shutdown of the State Hospital site (AQS ID: 45-079-0029) and PM₁₀ monitoring at the Chesterfield site (AQS ID: 45-025-0001). The EPA requests that the SC DHEC submit an addendum to its 2020 Network Plan that outlines these changes. The addendum must be made available for public comment for at least 30 days prior to submission to the EPA for approval, as required by 40 CFR §58.10(a)(1). This addendum should include notifications of termination for the State Hospital Site and PM₁₀ monitoring at the Chesterfield site. If the SC DHEC intends to continue operating under the Congaree Bluff (AQS ID: 45-079-0021) site waiver after 2020, the addendum should also include this request for renewal.

The monitoring in South Carolina meets air monitoring network design criteria except for the recent requirement for a second near-road NO₂ monitor in the Charlotte area, and the recently triggered requirement for a second ozone monitor in the Myrtle Beach area. The EPA is working with the Mecklenburg County Air Quality (MCAQ) program and the SC DHEC, respectively, to meet these requirements.

The EPA approves the proposed monitoring network changes and the Network Plan, except for the near-road NO₂ requirement in the Charlotte area, and the O₃ requirement in the Myrtle Beach area.

Detailed comments on South Carolina's Network Plan are enclosed.

Thank you for working with the EPA Region 4 to monitor air pollution and safeguard healthy air quality in South Carolina and the nation. If you have any questions nor concerns, please contact Gregg Worley at (404) 562-9141 or Adam Friedman at (404) 562-9033.

Sincerely,

For Caroline Y. Freeman
Director
Air and Radiation Division

Enclosure

cc: Renee Shealy, Bureau Chief, BEHS

Connie Turner, Director, Division of Air Quality Analysis, BEHS

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2020 State of South Carolina Ambient Air Monitoring Network Plan U.S. EPA Region 4 Comments and Recommendations

This document contains the U.S. Environmental Protection Agency (EPA) comments and recommendations on the state of South Carolina’s 2020 ambient air monitoring network plan (Network Plan). Ambient air monitoring rules, which include regulatory requirements that address network plans, data certification, and minimum monitoring requirements, among other requirements, are found in 40 CFR Part 58. Minimum monitoring requirements for criteria pollutants are listed in 40 CFR Part 58, Appendix D. Minimum monitoring requirements are listed for Ozone (O₃), particulate matter less than 2.5 microns (PM_{2.5}), particulate matter less than 10 microns (PM₁₀), nitrogen dioxide (NO₂), sulfur dioxide (SO₂) carbon monoxide (CO), and lead (Pb).

The minimum monitoring requirements are based on core based statistical area (CBSA) boundaries as defined by the U.S. Office of Management and Budget (OMB); July 1, 2019, population estimates from the U.S. Census Bureau, and historical ambient air monitoring data. Minimum monitoring requirements for O₃, PM_{2.5}, and PM₁₀ only apply to metropolitan statistical areas (MSAs), which are a subset of CBSAs. OMB currently defines 10 MSAs in the state of South Carolina. The July 1, 2019 population estimates from the U.S. Census Bureau for each MSA in South Carolina and the total population estimates of MSAs shared with North Carolina and Georgia are shown in Table 1.

Table 1: Metropolitan Statistical Areas and July 1, 2019 Population Estimates

MSA Name	Population
Charlotte-Gastonia-Concord NC-SC	2,636,883
Greenville-Anderson, SC	920,477
Columbia, SC	838,433
Charleston-North Charleston-Summerville, SC	802,122
Augusta-Richmond County, GA-SC	608,980
Myrtle Beach-Conway-North Myrtle Beach, SC-NC	496,901
Spartanburg, SC	319,785
Hilton Head Island-Bluffton, SC	222,195
Florence, SC	204,911
Sumter, SC	140,466

Proposed Monitoring Network Changes

The EPA has approval authority for changes to regulatorily required state or local air monitoring stations (SLAMS). SLAMS include the ambient air quality monitoring sites and monitors required by 40 CFR Part 58, Appendix D and are needed to meet the monitoring objectives of Appendix D, including NAAQS comparisons, and may also serve other data purposes. The EPA is not required to approve changes made to special purpose monitors (SPMs). SPMs are monitors designated by the monitoring agency as special purpose and do not count towards minimum monitoring requirements of 40 CFR Part 58. SPMs are required to be identified in the Network Plan for public and the EPA review.

The South Carolina Department of Health and Environmental Control (SC DHEC) proposed changes to its monitoring network for 2020 through 2021. Table 2 summarizes the requested monitor discontinuations and relocations. Information related to each proposed change as well as the EPA’s decision and rationale for approval/disapproval of each proposed change are contained in the following pollutant sections.

Table 2: Monitors Proposed for Relocation or Discontinuation

AQS ID	CBSA	Site Name	Pollutant	Type	Comments
45-019-0048	Charleston-North Charleston, SC	FAA	PM _{2.5}	SPM	Acknowledged. PM _{2.5} monitoring for Charleston will be conducted at North Charleston Fire Station (AQS ID: 45-019-0020) by December 31, 2020.
45-019-0049	Charleston-North Charleston, SC	CPW	PM _{2.5} , PM _{2.5} Cont.	SLAMS/SPM	Previously approved. Will be relocated to NCFS (45-019-0020) by December 31, 2020.
45-079-0029	Columbia, SC	State Hospital	Carbonyls, SVOCs	SPM	Acknowledged. Monitoring was discontinued on December 19, 2019. SC DHEC will submit a notification of termination in a Network Plan Addendum.
45-063-0008	Columbia, SC	Irmo	SO ₂	SPM	Acknowledged. SO ₂ Monitoring was discontinued April 22, 2020 due to lost access to this site.
45-007-0005	Greenville-Anderson, SC	Big Creek	O ₃	SLAMS	Not yet approved. The EPA, pending 2020 O ₃ season results, will review and provide a final decision in its response to the next network plan. The monitor will run for one year concurrently with the new Garrison Arena (45-007-0006) site to ensure the data are comparable.
45-077-0002	Greenville-Anderson, SC	Clemson	O ₃	SLAMS	Previously approved. Monitor relocated to Garrison Arena (45-007-0006), on March 2, 2020.
45-077-0003	Greenville-Anderson, SC	Wolf Creek	O ₃	SPM	Acknowledged. Monitor was shut down on November 15, 2019. It consistently measured lower concentrations than other monitors in the MSA.
45-083-0011	Spartanburg, SC	T.K. Gregg	PM _{2.5}	QA Collocated SPM	Acknowledged. The PM _{2.5} sampler was temporarily moved to this site to fulfill collocation requirements and will be moved back to NCFS (45-019-0020) when that site starts, by the end of 2020.
45-073-0001	None	Long Creek	SO ₂ , PM _{2.5} , O ₃	SPM	Acknowledged. The EPA supports this discontinuation due to limited resources and limited usefulness of the data. O ₃ monitoring was discontinued on November 6, 2019; PM _{2.5} monitoring was discontinued on December 4, 2019; SO ₂ monitoring was discontinued on January 22, 2020.
45-043-0011	None	Chesterfield	PM ₁₀	SPM	Acknowledged. PM ₁₀ monitoring was discontinued on March 7, 2020. The SC DHEC will submit a notification of termination in a Network Plan Addendum.

Table 3 summarizes requested monitor startups, as well as the EPA's decision and rationale for approval/disapproval/acknowledgement of each proposed startup.

Table 3: Proposed Changes in Monitoring

AQS ID	CBSA	Site Name	Pollutant	Type	Comments
45-015-1002	Charleston-North Charleston, SC	Moncks Corner National Guard	O ₃	SLAMS	Previously approved. Replacement for Bushy Park (AQS ID: 45-015-0002). Started sampling on March 2, 2020
45-019-0020	Charleston-North Charleston, SC	NCFS	PM _{2.5}	SLAMS	Previously approved. Will meet the PM _{2.5} monitoring requirements for the Charleston area. It will replace the CPW (AQS ID: 45-019-0049) and FAA (AQS ID: 45-019-0048), which do not meet regulatory siting criteria. Expected to start by the end of 2020.
45-019-0021	Charleston-North Charleston, SC	Irving Street	PM _{2.5} , SO ₂ , NO ₂	SPM	Acknowledged. Monitor is operational and started collecting data in June 2020, under agreement with the Port Authority and SC DHEC.
45-007-0006	Greenville-Anderson, SC	Garrison Arena	O ₃	SLAMS	Previously approved relocation of the Clemson O ₃ monitor (AQS ID: 45-077-0002). Started sampling on March 2, 2020.
45-043-0011	None	Howard High #3	PM ₁₀	SPM	Acknowledged startup of rotating PM ₁₀ SPM. Not minimally required monitoring and has measured low PM ₁₀ concentrations.

Operating Schedules**40 CFR § 58.12**

The operating schedules for all of the monitors proposed by the SC DHEC in its Network Plan meet the requirements continuous analyzers and all manual Pb, PM₁₀, PM_{2.5}, and PM_{2.5} Speciation Trends Network (STN).

Air Quality Index (AQI) Reporting**40 CFR § 58.50**

AQI reporting is required in MSAs with populations over 350,000. Six MSAs in the state of South Carolina have populations over 350,000 (see Table 4). SC DHEC reports AQI values for these MSAs and one additional MSA. Mecklenburg County Air Quality reports AQI values for the Charlotte-Concord-Gastonia, NC-SC MSA. Both the Georgia Environmental Protection Division (GA EPD) and the SC DHEC report AQI values for the Augusta-Richmond County GA-SC MSA.

Table 4: AQI Reporting

MSAs Reporting
Greenville-Anderson, SC
Columbia, SC
Charleston-North Charleston, SC
Augusta-Richmond County, GA-SC
Myrtle Beach-Conway-North Myrtle Beach, SC-NC
Florence, SC
Charlotte-Concord-Gastonia, NC-SC

The South Carolina monitoring network satisfies the minimum AQI reporting requirements in 40 CFR Part 58.

National Core (NCore) Monitoring Network
40 CFR Part 58, Appendix D, Section 3.0

A requirement that each state operate at least one NCore site is found in 40 CFR Part 58, Appendix D, Section 3. The NCore site must measure, at a minimum, PM_{2.5} particulate mass using continuous and integrated/filter-based samplers, speciated PM_{2.5}, PM_{10-2.5} particle mass, O₃, SO₂, CO, NO/NO_y, wind speed, wind direction, relative humidity, and ambient temperature. This section requires each state to operate at least one NCore site. The SC DHEC meets the NCore requirement by operating the Parklane site in Columbia.

Table 5: NCore Monitoring Sites

AQS ID	Site Name	CBSA	Requirement Met (Y/N)
45-079-0007	Parklane	Columbia, SC	Y

The NCore monitoring network described in the Network Plan and listed in Table 5 meets all design criteria of 40 CFR Part 58.

O₃ Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.1 and Table D-2

Ambient air monitoring network design criteria for O₃ are found in 40 CFR Part 58, Appendix D, Section 4.1. This section requires state agencies to operate O₃ sites for various locations depending upon area size and typical peak concentrations.

Table 6: Ozone Design Criteria – Minimum Required SLAMS Monitors

CBSA	Minimum Required SLAMS	Number of SLAMS	Number of SPMs or Other Regulatory Monitors	Site Names (AQS IDs) of SLAMS	Requirement Met (Y/N)
Augusta-Richmond County, GA-SC	2	2	0	Jackson Middle School (AQS ID: 45-003-0003) Trenton (AQS ID: 45-037-0001)	Y
Charleston-North Charleston, SC	2	2	1	Moncks Corner National Guard (AQS ID: 45-015-1002) Cape Romain (AQS ID: 45-019-0046)	Y
Charlotte-Concord-Gastonia, NC-SC	2	5	1	York Landfill (AQS ID: 45-091-0008) Crouse (AQS ID: 37-109-0004) ¹ Garinger (AQS ID: 37-119-0041) ² University Meadows (AQS ID: 37-119-0046) ² Rockwell (AQS ID: 37-159-0021) ¹	Y
Columbia, SC(NCore)	2	2	1	Parklane (AQS ID: 45-079-0007) Sandhill (AQS ID: 45-079-1001)	Y
Florence, SC	1	1	0	Pee Dee Exp. Station (AQS ID: 45-031-0003)	Y
Greenville-Anderson, SC	2	3	0	Big Creek (AQS ID: 45-007-0006) Garrison Arena (AQS ID: 45-007-0006) Hillcrest (AQS ID: 45-045-0016)	Y

Myrtle Beach-Conway-North Myrtle Beach, SC-NC	2	1	0	Coastal Carolina (AQS ID: 45-051-0008)	N
Spartanburg, SC	1	1	0	North Spartanburg Fire Station #2 (AQS ID: 45-083-0009)	Y

1. Crouse and Rockwell sites are operated by North Carolina Department of Air Quality
2. Garinger and University Meadows sites are operated by Mecklenburg County Air Quality

The EPA approved last year’s network plan that proposed to relocate two O₃ monitors to new O₃ monitoring sites for the 2020 O₃ season. The Moncks Corner National Guard monitor was relocated from the Bushy Park site (AQS ID: 45-015-002) in the Charleston MSA and began collecting data for the 2020 O₃ season on March 2, 2020. The Garrison Arena monitor was relocated from the Clemson site (AQS ID: 45-077-0002) in the Greenville-Anderson MSA. The SC DHEC will evaluate concurrent 2020 O₃ data for the Big Creek site (AQS ID: 45-007-0006) and the Garrison Arena (AQS ID: 45-007-0006) site and compare the data. This comparison will be used to evaluate discontinuation of the Big Creek site after the 2020 O₃ season. The EPA will evaluate the proposed discontinuation of Big Creek in the next network plan. The EPA appreciates that the SC DHEC is operating both the Big Creek and Garrison Arena O₃ monitors concurrently for the 2020 season.

The Coastal Carolina site collected its first complete O₃ design value (DV) in 2019. Its 2017-2019 DV is 0.060 ppm, which is 85.7% of the NAAQS. According to Table D-2 of Appendix D to 40 CFR Part 58, the Myrtle Beach-Conway-North Myrtle Beach SC-NC MSA meets the higher minimum monitoring requirement and would need to have a second O₃ monitor. Since this is the first complete DV for the site, the DV is close to the 85% threshold, and the CBSA boundaries have recently been changed, the EPA is willing to consider additional information before determining whether a second O₃ monitor should be required.

Please note that the lowest annual fourth-highest daily maximum 8-hour concentration over the 2017-2019 period was measured in 2017; therefore, the DV for the Myrtle Beach MSA is likely to continue to be above the threshold for the second monitor requirement. As such, the EPA requests that the SC DHEC and the NC DAQ collaborate to characterize the area of highest O₃ concentrations in the MSA, and to present the results of this investigation in their 2021 Network Plans. If a second monitor is required in the MSA, the results of the investigation should be used to identify any potential areas of expected maximum concentration other than the area near the Coastal Carolina site. If the 2018-2020 O₃ DV remains above 85% of the NAAQS, this characterization of O₃ concentrations in the MSA should be used alongside the 2019-2021 DV to propose a new O₃ monitoring site in the MSA in the 2022 Network Plan.

The O₃ monitoring network outlined in the Network Plan and Table 6 meets the minimum requirements found in 40 CFR Part 58, Appendix D, Table D-2 for all MSAs in South Carolina, except for the Myrtle Beach-Conway-North Myrtle Beach, SC-NC MSA.

CO Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.2

Ambient air monitoring network design criteria for CO are found in 40 CFR Part 58, Appendix D, Section 4.2. CBSAs with populations over one million are required to operate one CO monitor collocated with a near-road NO₂ site. The MCAQ meets the requirement in the one CBSA with a

population over 1,000,000, the Charlotte-Concord-Gastonia, NC-SC CBSA, by operating a CO monitor at its Remount near-road site.

Table 7: CO Design Criteria – Minimum Required SLAMS Near-Road Monitors

CBSA	Minimum Required Near-road CO Monitors	Number of Near-road CO Monitors	Site Names (AQS IDs) of Existing Near-road CO Monitors	Requirement Met (Y/N)
Charlotte-Concord-Gastonia, NC-SC	1	1	Remount (37-119-0045) ¹	Y

1. Remount site is operated by Mecklenburg County Air Quality.

The Regional Administrator monitoring requirements for CO are found in 40 CFR Part 58, Appendix D 4.2.2. The section states, “The Regional Administrators, in collaboration with states, may require additional CO monitors above the minimum number of monitors required in 4.2.1.” The Regional Administrator is not requiring the SC DHEC to operate an additional CO monitor at this time.

Table 8: CO Design Criteria – Minimum Required SLAMS RA Required Monitors

CBSA	Minimum Required RA CO Monitors	Number of RA Required CO Monitors	Site Names (AQS IDs) of Existing RA Required CO Monitors	Requirement Met (Y/N)
None	0	0	None	Y

The CO monitoring network described in the Network Plan meets the design criteria of 40 CFR Part 58 for both near-road and RA required monitors as identified in Tables 7 and 8.

NO₂ Monitoring Requirements 40 CFR Part 58, Appendix D, Section 4.3

Ambient air monitoring network design criteria for NO₂ are found in 40 CFR Part 58, Appendix D, Section 4.3. Three types of NO₂ monitoring are required: near-road, area-wide, and Regional Administrator. These types of NO₂ monitoring are described in Sections 4.3.2, 4.3.3, and 4.3.4, respectively.

Ambient air monitoring design criteria for near-road NO₂ monitoring sites are found in 40 CFR Part 58, Appendix D, Section 4.3.2.

In the Charlotte-Gastonia-Concord, NC-SC CBSA, the MCAQ operates one near-road monitoring site at the Remount site. When the initial near-road monitoring network was funded by the EPA and established, the Charlotte area was below the 2.5 million population threshold for a second near-road NO₂ monitoring site. However, the recent Census population estimate for the Charlotte-Concord-Gastonia, NC-SC CBSA is over 2.5 million people. The EPA is working with the MCAQ to develop a plan to establish a second near-road monitoring site in the Charlotte area.

Table 9: NO₂ Design Criteria – Minimum Required SLAMS Near-road Monitors

CBSA	Minimum Required Near-road NO ₂	Number of Near-road NO ₂	Site Names (AQS IDs) of Existing NO ₂ Near-Road	Requirement Met (Y/N)
Charlotte-Gastonia-Concord, NC-SC	2	1	Remount (AQS ID: 37-119-0045) ¹	Y

1. The Remount site is operated by Mecklenburg County Air Quality. Since recent estimated population increases in the Charlotte area, the EPA is working with MCAQ on funding and establishing a second near-road NO₂ site.

Ambient air monitoring network design criteria for area-wide NO₂ sites are found in Section 4.3.3 of Appendix D to 40 CFR Part 58. The MCAQ operates a NO₂ monitor at its Garinger site to meet the minimum requirement for the Charlotte-Gastonia-Concord, NC-SC

Table 10: NO₂ Design Criteria – Minimum Required SLAMS Area-Wide Monitors

CBSA	Minimum Required Area-Wide NO ₂	Number of Area-Wide NO ₂	Site Names (AQS IDs) of Existing NO ₂ Area-Wide Sites	Requirement Met (Y/N)
Charlotte-Gastonia-Concord, NC-SC	1	1	Garinger (AQS ID: 37-119-0041) ¹	Y

1. The Garinger site is operated by Mecklenburg County Air Quality.

Ambient air monitoring network design criteria for Regional Administrator required NO₂ monitoring, often referred to as RA-40 monitoring, are found in 40 CFR Part 58, Appendix D, Section 4.3.4. Under these provisions, Regional Administrators must require a minimum of 40 additional NO₂ monitoring stations nationwide, with a primary focus on siting these monitors in locations to protect susceptible and vulnerable populations. The full list of NO₂ monitors identified by the EPA’s Regional Administrators can be found on the EPA’s website at <http://www.epa.gov/ttnamti1/svpop.html>. The SC DHEC operates one RA-40 monitor at its Greenville ESC site in the Greenville-Anderson, SC CBSA.

Table 11: NO₂ Design Criteria – Minimum Required SLAMS RA-40 Monitors

CBSA	Minimum Required RA-40 Monitors	Number of RA-40 Monitors	Site Names (AQS IDs) of Existing RA-40 Sites	Requirement Met (Y/N)
Greenville-Anderson, SC	1	1	Greenville ESC (AQS ID: 45-045-0015)	Y

Except for near-road NO₂ monitoring in the Charlotte area, the NO₂ monitoring network described by the Network Plan meets all design criteria of 40 CFR Part 58.

SO₂ Monitoring Requirements **40 CFR Part 58, Appendix D, Section 4.4**

Ambient air monitoring network design criteria for SO₂ are found in 40 CFR Part 58, Appendix D, Section 4.4. This section requires that the population weighted emissions index (PWEI) be calculated by states for each CBSA. As a result, the SO₂ monitoring site(s) required in each CBSA will satisfy minimum monitoring requirements if the monitor(s) is sited within the boundaries of the parent CBSA and is one of the following site types: population exposure, maximum concentration, source-oriented, general background, or regional transport. A SO₂ monitor at an NCore station may satisfy minimum monitoring requirements if that monitor is located within a CBSA with minimally required monitors consistent with Appendix D, Section 4.4

Based upon PWEIs calculated using 2019 population estimates and 2017 emission inventory data, the minimum numbers of monitors required for the CBSAs in South Carolina are summarized in Table 12.

Table 12: SO₂ Design Criteria – Minimum Required SLAMS PWEI Monitors

CBSA	2019 Population Estimate	2017 NEI Emissions (Tons per year)	PWEI	Number of Minimum Required PWEI SO ₂ Monitors	Number of SO ₂ SLAMS	Site Names (AQS IDs) of Existing SO ₂ monitors	Requirement Met (Y/N)
Charlotte-Concord-Gastonia, NC-SC	2,636,883	5,648	14,895	1	1	Garinger (AQS ID:37-119-0041) ¹	Y
Columbia, SC	838,433	3,709	3,110	0	1	Parklane (AQS ID: 45-079-0007)	Y
Charleston-North Charleston, SC	802,122	8,173	6,555	1	1	Jenkins Ave. (AQS ID: 45-019-003)	Y

1. The Garinger site is operated by Mecklenburg County Air Quality.

The SO₂ monitoring network outlined in the Network Plan meets the SO₂ PWEI requirements specified in 40 CFR Part 58, Appendix D, Section 4.4.

The EPA finalized the SO₂ Data Requirements Rule (DRR) on August 10, 2015 (40 CFR Part 51, Subpart BB). This rule requires air quality near sources with SO₂ emissions greater than 2,000 tons per year (tpy) be characterized using ambient air monitoring or modeling. On January 15, 2016, the SC DHEC submitted to the EPA a list of eight sources in the state around which SO₂ air quality must be characterized. These eight sources were characterized using modeling and/or took federally enforceable emissions limits. The SC DHEC does not operate any SO₂ monitoring sites to meet the DRR requirements.

Table 13: SO₂ Design Criteria – Data Requirement Rule Monitors

CBSA	Minimum Required DRR Monitors	Number of DRR Monitors	Site Names (AQS IDs) of Existing DRR Sites	Requirement Met (Y/N)
None	0	0	None	Y

The DRR also requires annual emissions reporting for sources that used modeling to show attainment with the standard under the rule. Forty (40) CFR § 51.1205 (b) requires that:

“For any area where modeling of actual SO₂ emissions serve as the basis for designating such area as attainment for the 2010 SO₂ NAAQS, the air agency shall submit an annual report to the EPA Regional Administrator by July 1 of each year, either as a stand-alone document made available for public inspection, or as an appendix to its Annual Monitoring Network Plan (also due on July 1 each year under 40 CFR §58.10), that documents the annual SO₂ emissions of each applicable source in each such area and provides an assessment of the cause of any emissions increase from the previous year.”

The SC DHEC submitted its 2020 annual emission report with its 2020 Network Plan to meet this requirement. The report applies to areas designated attainment/unclassifiable based on modeling of actual SO₂ emissions for two International Paper facilities, Eastover Mill and Wateree Station, as well as Santee Cooper Cross Generating Station and a Resolute Industries (now New-Indy Catawba) facility.

The EPA has completed the review of the Appendix H pre-hearing submission and has no comments. For the 2020 DRR portion found in Appendix H of the Network Plan, the EPA will respond in a separate correspondence. The next annual SO₂ emissions report for these facilities is due July 2, 2021.

The Regional Administrator may require additional SO₂ monitoring stations above the minimum number of monitors required in 40 CFR Part 58, Appendix D, Section 4.4.2, where the minimum monitoring requirements are not sufficient to meet monitoring objectives. The SC DHEC is not required to operate a SO₂ monitor by the Regional Administrator at this time.

Table 14: SO₂ Design Criteria – Minimum Required SLAMS RA Monitors

CBSA	Minimum Required RA-40 Monitors	Number of RA-40 Monitors	Site Names (AQS IDs) of Existing RA-40 Sites	Requirement Met (Y/N)
None	0	0	None	Y

The SC DHEC operates an additional background SO₂ monitoring network to provide background concentration data. Two years of data are collected every four years at these sites. These are SPMs and do not require approval from the EPA for startup or shutdown. In order to be usable to support the SC DHEC’s prevention of significant deterioration (PSD) modeling and permitting activities, the rotating SO₂ monitoring network must meet the requirements in Appendix B to 40 CFR Part 58, Section 8.3 of Appendix W to 40 CFR Part 51, which discusses using air monitoring data for background concentrations and Appendix B to 40 CFR Part 58, which discusses quality assurance requirements for PSD air monitoring that must be followed for the data to be useable for PSD and permitting purposes.

Table 15 lists the three monitors that the SC DHEC includes in its SO₂ rotating background network. The EPA recommends that the SC DHEC evaluate the listed monitoring objective for Cape Romain, which is currently “source oriented.” The last three design values for the Cape Romain SO₂ monitor have been 4 ppb compared to the standard of 75 ppb. The SO₂ design value of 4 ppb is similar to SO₂ monitors in South Carolina with background or transport monitoring objectives.

Table 15: SO₂ Rotating Background Monitoring

CBSA	Site Name (AQS ID)	Frequency of Operation	Next Expected Years of Operation	Monitoring Objective in Network Plan
Charleston-North Charleston, SC	Cape Romain (AQS ID: 45-019-0046)	Every other 2 years	2020-2021	Source Oriented
Charlotte-Concord-Gastonia, NC-SC	York Landfill (AQS ID: 45-091-0008)	Every other 2 years	2020-2021	Upwind Background
Columbia, SC	Congaree Bluff (AQS ID: 45-079-0021)	Every other 2 years	2022-2023	General Background

The South Carolina SO₂ monitoring network meets the monitoring requirements in 40 CFR Part 58.

Pb Monitoring Requirements 40 CFR Part 58, Appendix D, Section 4.5

The monitoring requirements for Pb found at 40 CFR Part 58, Appendix D, Section 4.5 require that 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.

Although South Carolina has no sources that exceed the emissions thresholds for Pb monitoring, the SC DHEC and Johnson Controls Battery Group conduct source-oriented ambient Pb monitoring at three sites around the Florence Recycling Center in Florence, South Carolina. This monitoring is comparable to the NAAQS. The company and SC DHEC conduct this monitoring under terms of a settlement agreement reached with several petitioners who commented on the construction permit for the facility. Locations for the monitoring sites were selected based upon an agreement between the company and stakeholders.

Table 16: Pb Design Criteria – Minimum Required Source-Oriented Monitors

Source	CBSA	Minimum Required Source-Oriented Pb Sites	Number of Source-Oriented Pb Sites	Site Names (AQS IDs) of Existing Source-Oriented Sites	Requirement Met (Y/N)
Johnson Controls Incorporated ¹	Florence, SC	0	3	JCI Railroad (AQS ID: 45-041-8001) JCI Entrance (AQS ID: 45-041-8002) JCI Woods (AQS ID: 45-041-8003)	Y

1. This monitoring is not required by EPA rules, but is part of a settlement agreement between the SC DHEC, the facility, and community groups. The SC DHEC operates these samplers as SPMs to evaluate Pb NAAQS compliance.

The Pb monitoring collocation requirements are found in 40 CFR Part 58, Appendix A, 3.4.4. These requirements include that 15 percent of the primary monitors are collocated and have at least one collocated quality control monitor (if the total number of monitors is less than three). These collocation requirements are assessed at the PQAQ level. The SC DHEC is required to operate one collocated Pb monitor and it operates it at the JCI Entrance (AQS ID: 45-041-8002) site (see Table 17).

Table 17: Pb Design Criteria – Minimum Required Collocated Monitors

PQAQ	Minimum Required Collocated Monitors	Number of Collocated Monitors	Site Names (AQS IDs) of Existing Collocated Sites	Requirement Met (Y/N)
SC DHEC	1	1	JCI Entrance (AQS ID: 45-041-8002)	Y

The Pb monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

PM₁₀ Monitoring Requirements

40 CFR Part 58, Appendix A, Section 3.3

40 CFR Part 58, Appendix D, Section 4.6 and Table D-4

Ambient air monitoring network design criteria for PM₁₀ are found in 40 CFR Part 58, Appendix D, Section 4.6. Table D-4, in this section, indicates the approximate number of PM₁₀ stations required in MSAs with populations exceeding 100,000 to characterize national and regional PM₁₀ air quality trends and geographical patterns. The SC DHEC, GA EPD and MCAQ are required to operate six PM₁₀ monitors at five sites in CBSA in or abutting the state (see Table 18).

Table 18: PM₁₀ Design Criteria – Minimum Required SLAMS Monitors

CBSA	Minimum Required SLAMS	Number of SLAMS	Number of SPMs or Other Regulatory Monitors	Site Names (AQS IDs) of SLAMS	Requirement Met (Y/N)
Augusta-Richmond County, GA-SC	1	1	0	Augusta (AQS ID: 13-245-0091) ¹	Y
Charleston-North Charleston, SC	1	1	0	Jenkins Ave. Fire Station (AQS ID: 45-019-0003)	Y
Charlotte-Concord-Gastonia, NC-SC	2	2	0	Garinger (AQS ID: 37-119-0041) ² Ramblewood Park (AQS ID: 37-119-0047) ²	Y
Columbia, SC (NCore)	1	1	0	Cayce City Hall (AQS ID: 45-063-0010)	Y
Greenville-Anderson, SC	1	1	0	Greenville ESC (AQS ID: 45-045-0015)	Y

1. The Augusta site is operated by the GA EPD
2. The Garinger and Ramblewood Park sites are operated by the MCAQ

In the Augusta-Richmond County, GA-SC MSA, the Augusta (13-245-0091) PM₁₀ site measured one exceedance of the NAAQS on January 25, 2017. According to information provided by the GA EPD, the exceedance was possibly due to smoke from prescribed burning at Fort Gordon. The manual PM₁₀ sampler that recorded the exceedance was operating on a 1-in-6-day sampling schedule. Because the PM₁₀ NAAQS design value is based on estimated exceedances, this one exceedance resulted in a violating 2016-2018 design value for the site. On October 1, 2017, the GA EPD replaced the manual PM₁₀ sampler at the site with a continuous PM₁₀ sampler. The concentrations have remained low since the continuous sampler began operating.

The PM₁₀ minimum monitoring requirements found in 40 CFR Part 58, Appendix D, Section 4.6, Table D-4 indicate that the minimum number of PM₁₀ monitors for a MSA would increase if the area went from low concentration (areas where ambient PM₁₀ data show ambient concentrations less than 80 percent of the PM₁₀ NAAQS) to medium concentration (exceeding 80 percent of the PM₁₀ NAAQS) or high concentration (exceeding the PM₁₀ NAAQS by 20 percent or more). For the areas of “medium concentration,” four PM₁₀ monitors are required. However, the EPA believes that given the long-term record of low PM₁₀ concentrations in the Augusta CBSA, one PM₁₀ continuous monitor in the area is sufficient, and the EPA considers the Augusta MSA to be an area of low concentration and has been monitoring daily concentrations below 80 percent of the NAAQS since the exceedance. However, should the monitor measure future exceedances or violations of the PM₁₀ NAAQS, the number of required PM₁₀ monitors in the area may need to increase.

It is the EPA’s understanding that the SC DHEC discontinued PM₁₀ monitoring at the Chesterfield site (AQS ID: 45-025-0001) in December 2019 without submitting a notification of termination. The EPA requests that the SC DHEC submit a notification of termination, including monitoring data and rationale, for shutting down the Chesterfield PM₁₀ monitor in an addendum to the 2020 Network Plan.

Regarding the SC DHEC’s rotating PM₁₀ network, it is the EPA’s understanding that the SC DHEC began operating the PM₁₀ monitor at the Howard High School site (AQS ID: 45-043-0011) on a two-year basis from 2021-2022 after shutting down the site from April 3, 2019, through January 1, 2021. After 2022, it is the EPA’s understanding that the SC DHEC will make a decision regarding shutting

down the site after reviewing the latest data. In order to be usable to support the SC DHEC’s PSD modeling and permitting activities, a rotating PM₁₀ monitoring network must meet the requirements in Appendix B to 40 CFR Part 58, Section 8.3 of Appendix W to 40 CFR Part 51, which discusses using air monitoring data for background concentrations and Appendix B to 40 CFR Part 58, which discusses quality assurance requirements for PSD air monitoring that must be followed for the data to be useable for PSD and permitting purposes.

Both the Chesterfield PM₁₀ monitor and Howard High School site are SPM monitors and do not require the EPA’s approval to discontinue. The SC DHEC discussed these changes with the EPA staff in July 2020 to save monitoring resources while maintaining an efficient PM₁₀ monitoring network.

The PM₁₀ collocation requirements for manual methods are found in 40 CFR Part 58, Appendix A, Section 3.3.4. Those requirements include that fifteen percent of each network of manual PM₁₀ methods (at least one site) must be collocated and the sites with collocated monitors should be among those measuring annual mean concentrations in the highest 25 percent of the network. These collocation requirements are assessed at the PQA level. The SC DHEC is not required to operate any PM₁₀ collocated monitors.

Table 19: PM₁₀ Design Criteria – Minimum Required Collocated Monitors

PQAO	Sites with Manual PM ₁₀ Method	Minimum Required Collocated Monitors	Number of Collocated PM ₁₀ Monitors	Site Names (AQS IDs) of Collocated Sites	Requirement Met (Y/N)
SC DHEC	0	0	0	None	Y

The proposed PM₁₀ monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

PM_{2.5} Monitoring Requirements

40 CFR Part 58, Appendix A, Section 3.2

40 CFR Part 58, Appendix D, Section 4.7 and Table D-5

Ambient air monitoring network design criteria for PM_{2.5} are found in 40 CFR Part 58, Appendix D, Section 4.7. This section requires that state and, where applicable, local agencies must operate the minimum number of required PM_{2.5} SLAMS sites listed in Appendix D, Table D-5. The SC DHEC, GA EPD and MCAQ are required to operate six PM_{2.5} monitors at five sites in CBSAs in or abutting the state. Instead, they operate 13 PM_{2.5} monitors at eight sites in CBSAs in or abutting the state. They also operate 12 SPMs at eight sites (see Table 20).

Table 20: PM_{2.5} Design Criteria – Minimum Required SLAMS Monitors

CBSA	Minimum Required SLAMS	Number of SLAMS	Number of SPMs or Other Regulatory Monitors	Site Names (AQS IDs) of SLAMS	Requirement Met (Y/N)
Augusta-Richmond County, GA-SC	1	1	1	Augusta (AQS ID: 13-245-0091) ¹	Y
Charleston-North Charleston, SC	1	2	3	CPW (AQS ID: 45-019-0049) NCFS (AQS ID: 45-019-0020) ² Cape Romain (AQS ID: 45-019-0046)	Y

Charlotte-Concord-Gastonia, NC-SC	2	3	2	Garinger (AQS ID: 37-119-0041) ³ Remount (AQS ID: 37-119-0045) ³ Rockwell (37-159-0021) ⁴ Friendship Park (AQS ID: 37-119-0048) ³	Y
Columbia, SC (NCore)	1	2	2	Irmo (AQS ID: 45-063-0008) Parklane (AQS ID: 45-079-0007)	Y
Greenville-Anderson, SC	1	2	1	Greenville ESC (AQS ID: 45-045-0015) Hillcrest (AQS ID: 45-045-0016)	Y
Florence, SC	0	1	1	Williams Middle School (AQS ID: 45-041-0003)	Y
Spartanburg, SC	0	1	2	T.K. Gregg (AQS ID: 45-083-0011)	Y
None	0	1	1	Chesterfield (AQS ID: 45-025-0001)	Y

1. The Augusta site is operated by the GA EPD
2. NCFS will be established by December 31, 2020 and serve as the SLAMS for the Charleston area
3. The Garinger, Remount, and Friendship Park sites are operated by the MCAQ
4. The Rockwell site is operated by the NC DAQ

The 2019 Network Plan proposed to establish a new PM_{2.5} monitoring site in the Charleston-North Charleston, SC MSA, the North Charleston Fire Station (NCFS) site (AQS ID: 45-019-0020), which will replace existing PM_{2.5} sites in the area. The EPA previously approved shutdown of the CPW site and startup of the NCFS site. The FAA site (AQS ID: 45-019-0048) has an SPM and the SC DHEC does not require EPA approval to shut it down. Once the NCFS site is established, the FAA monitor will run concurrently so that the data can be compared. While the NCFS site is being established, the PM_{2.5} sampler has been temporarily collocated with the T.K. Gregg monitor in the Spartanburg, SC MSA to meet collocation requirements. Once the NCFS site has been established, the sampler will be moved back to the Charleston-North Charleston, SC MSA.

Forty (40) CFR Part 58, Appendix A, Section 3.2.3 states that fifteen percent of each network of manual PM_{2.5} methods (at least one site) must be collocated. Section 3.2.3.1 states for each distinct monitoring method designation (FRM or FEM) that a PQAO is using for a primary monitor, the PQAO must have fifteen percent of the primary monitors of each method designation collocated and have at least one collocated quality control monitor. The first collocated monitor must be a designated FRM monitor.

Section 3.2.3.2 states for each primary monitor designated as an FEM used by the PQAO, fifty percent of the monitors designated for collocation (or the first if only one collocation is necessary) shall be collocated with a FRM quality control monitor and fifty percent of the monitors shall be collocated with a monitor having the same method designation as the FEM primary monitor. The SC DHEC is required to operate two collocated PM_{2.5} monitors but it operates five (see Table 21).

Table 21: PM_{2.5} Design Criteria – Minimum Required Collocated Monitors

PQAO	Method	AQS Method Code	Number of Primary Monitors	Minimum Required Collocated Monitors	Number of Collocated Monitors	Site Names (AQS IDs) of Collocated Sites	Requirements Met (Y/N)
SC DHEC	FDMS w/ SCC	183	3	1	2	Irmo (AQS ID: 45-063-0008) Greenville ESC (AQS ID: 45-045-0015)	Y
SC DHEC	FRM Gravimetric w/ VSCC	145	9	1	3	T.K. Gregg (AQS ID: 45-083-0011) Hillcrest	Y

						(AQS ID: 45-045-0016) Parklane (AQS ID: 45-079-0007)	
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The proposed PM_{2.5} monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

PM_{2.5} Near-Road Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.7.1(b)(2)

Regulatory requirements in 40 CFR Part 58, Appendix D, Section 4.1.1(b)(2) require that “CBSAs with a population of 1,000,000 or more persons, at least one PM_{2.5} monitor is to be collocated at a near-road NO₂ station.” One CBSA with a population of 1,000,000 or more persons is partially in the State of South Carolina, the Charlotte-Gastonia-Concord, NC-SC CBSA, and MCAQ operates the required PM_{2.5} near-road monitor at the Remount site.

Table 22: PM_{2.5} Design Criteria – Minimum Required SLAMS Near-Road Monitors

CBSA	Minimum Required Near-road PM _{2.5}	Number of Near-road PM _{2.5}	Site Names (AQS IDs) of Existing PM _{2.5} Near-Road	Requirement Met (Y/N)
Charlotte-Gastonia-Concord, NC-SC	1	1	Remount (37-119-0045) ¹	Y

1. The Remount site is operated by the MCAQ

The near-road PM_{2.5} monitoring network described in the Network Plan meets the design criteria of 40 CFR Part 58.

PM_{2.5} Continuous Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.7.2

Regulatory requirements for continuous PM_{2.5} continuous monitoring require that “...State, or where appropriate, local agencies must operate continuous PM_{2.5} analyzers equal to at least one-half (round up) the minimum required sites listed in Table D-5 of this appendix. At least one required continuous analyzer in each MSA must be collocated with one of the required FRM/FEM/ARM (federal reference method/federal equivalent method/approved regional method) monitors, unless at least one of the required FRM/FEM/ARM monitors is itself a continuous FEM or ARM monitor in which case no collocation requirement applies.”

Five MSAs listed in Table 23, below, are required to have continuous monitors. Seven MSAs in or partially in South Carolina have continuous PM_{2.5} monitors. The requirements are met in all MSAs in the state.

Table 23: PM_{2.5} Design Criteria – Continuous Monitors

MSA	Minimum Required Continuous PM _{2.5}	Number of Continuous PM _{2.5} Monitors	Site Names (AQS IDs) of Existing PM _{2.5} Monitors	Requirement Met (Y/N)
Augusta-Richmond County, GA-SC	1	1	Trenton (AQS ID: 45-037-0001)	Y
Charleston-North Charleston, SC	1	3	Irving Street (AQS ID: 45-019-0021) Cape Romain (AQS ID: 45-019-0046)	Y

			CPW (AQS ID: 45-019-0049)	
Charlotte-Concord-Gastonia, NC-SC	1	5	Garinger (AQS ID: 37-119-0041) ¹ Friendship Park (AQS ID: 37-119-0048) ¹ Remount (AQS ID: 37-119-0045) ¹ Rockwell (AQS ID: 37-159-0021) ² Catawba Longhouse (AQS ID: 45-091-8801) ³	Y
Columbia, SC (NCore)	1	2	Irmo (AQS ID: 45-063-0008) Parklane (AQS ID: 45-079-0007)	Y
Florence, SC	0	1	Williams Middle School (AQS ID: 45-041-0003)	Y
Greenville-Anderson, SC	1	1	Greenville ESC (AQS ID: 45-045-0015)	Y
Spartanburg, SC	0	1	T.K. Gregg (AQS ID: 45-083-0011)	Y
Remainder of State	0	1	Chesterfield (AQS ID: 45-025-0001)	Y

1. The Garinger, Friendship Park, and Remount sites are operated by the MCAQ
2. The Rockwell site is operated by North Carolina Department of Air Quality
3. The Catawba Longhouse site is operated by Catawba Indian Nation (CIN)

PM_{2.5} Background and Transport Sites 40 CFR Part 58, Appendix D, Section 4.7.3

Monitoring requirements in 40 CFR Part 58, Appendix D, Section 4.7.3 state that each state shall install and operate at least one PM_{2.5} site to monitor for regional background concentrations and at least one PM_{2.5} site to monitor for regional transport concentrations.

Table 24: PM_{2.5} Regional Background and Transport Monitors

Requirement	Minimum Required	Number of Monitors	Site Names (AQS IDs) of SLAMS	Requirement Met (Y/N)
Background	1	1	Cape Romain (AQS ID: 45-019-0046)	Y
Transport	1	1	Chesterfield (AQS ID: 45-025-0001)	Y

As identified in Table 24, the SC DHEC meets the requirements of 40 CFR Part 58 by operating one background site and one transport site.

PM_{2.5} Chemical Speciation Network (CSN) 40 CFR Part 58, Appendix D, Section 4.7.4

Monitoring requirements in 40 CFR Part 58, Appendix D, Section 4.7.4 require that each state shall conduct chemical speciation monitoring and analyses at sites designated to be part of the PM_{2.5} Speciation Trends Network (STN). The selection and modification of these STN sites must be approved by the Administrator. The PM_{2.5} CSN includes STN stations and supplemental speciation stations that provide chemical species data of fine particulate.

The EPA funds one CSN monitor in South Carolina at the Parklane site (see Table 25).

Table 25: PM_{2.5} Chemical Speciation Network – Non-SLAMS Monitors

CBSA	Site Name (AQS ID) of CSN Monitor
Columbia, SC	Parklane (AQS ID: 45-079-0007)

Photochemical Assessment Monitoring Stations (PAMS) 40 CFR Part 58, Appendix D, Section 5.0

With the promulgation of a new O₃ NAAQS on October 1, 2015, the EPA finalized changes to the PAMS requirements. The 2015 regulations required the new PAMS network to be operating by June 1, 2019. On December 20, 2019, the EPA revised the start date for the updated stations. The revision was published in the Federal Register on January 8, 2020 and extends the date by which the stations are to begin operating to June 1, 2021. South Carolina's NCore site at Parklane is not required to operate PAMS monitoring since the Columbia, SC CBSA's population is less than one million. Thus, the state is not required to meet the PAMS requirement.

Air Toxics Monitoring Network

As part of the National Air Toxics Trends Station (NATTS) network, the SC DHEC samples for metals, semi-volatile organic compounds, carbonyls, and volatile organic compounds at the Chesterfield monitoring site (AQS ID: 45-025-0001). The SC DHEC has not begun reporting ethylene oxide at Chesterfield as recently required under the NATTS program. The EPA acknowledges that the SC DHEC will begin collecting ethylene oxide data at the Chesterfield NATTS site before December 31, 2020. The SC DHEC also collects samples for air toxics in the Columbia, SC MSA at the Parklane (AQS ID: 45-079-0020) and Congaree Bluff (AQS ID: 45-079-0021) sites, and used to collect air toxics samples at State Hospital (AQS ID: 45-079-0020) until its shutdown on December 19, 2019. The collection and analysis of air toxics samples at Chesterfield is conducted in accordance with the SC DHEC's EPA approved NATTS quality assurance project plan (QAPP). Air toxics sampling at Parklane and Congaree Bluff is conducted at the SC DHEC's discretion and not collected under an EPA approved QAPP. The EPA recommends that the SC DHEC develop a QAPP for this sampling if there currently is not one.

Non-SLAMS Monitoring

The Network Plan also includes the following non-SLAMS monitoring summarized in Table 26. These monitors include criteria pollutant monitoring comparable to the NAAQS, continuous PM_{2.5} monitoring used for the AQI, air toxics monitoring, and/or tribal air monitoring.

Table 26: Non-SLAMS Monitors

CBSA	Pollutant(s)	Site Name (AQS ID) of Non-SLAMS Monitor	Monitor Type	NAAQS Comparable
Augusta-Richmond County, GA-SC	PM _{2.5}	Trenton (AQS ID: 45-037-0001)	SPM	Y
Charleston-North Charleston, SC	NO ₂	Jenkins Ave. Fire Station (AQS ID: 45-019-0003)	SPM	Y
Charleston-North Charleston, SC	PM _{2.5} Cont., SO ₂ , NO ₂	Irving Street (AQS ID: 45-019-0021)	SPM	Y
Charleston-North Charleston, SC	SO ₂ Rotating, NO ₂	Cape Romain (AQS ID: 45-019-0046)	SPM	Y for NO ₂ , N for SO ₂
Charleston-North Charleston, SC	PM _{2.5}	FAA (AQS ID: 45-019-0048)	SPM	Y
Charleston-North Charleston, SC	PM _{2.5} Cont.	CPW (AQS ID: 45-019-0049)	SPM	Y
Charlotte-Concord-Gastonia, NC-SC	PM _{2.5} Cont., O ₃	Catawba Longhouse (AQS ID: 45-091-8801) ¹	Tribal	Y
Charlotte-Concord-Gastonia, NC-SC	SO ₂ Rotating	York Landfill (AQS ID: 45-091-0008)	SPM	N
Columbia, SC	PM _{2.5} Cont.	Irmo (AQS ID: 45-063-0008)	SPM	Y
Columbia, SC	SVOC, Precipitation Chemicals	Parklane (AQS ID: 45-079-0007)	SPM	N/A

Columbia, SC	O ₃ , SO ₂ Rotating, Precipitation Chemicals	Congaree Bluff (AQS ID: 45-079-0021)	SPM	Y for Congaree NP only, N for SO ₂
Florence, SC	Pb	JCI Railroad (AQS ID: 45-041-8001) JCI Entrance (AQS ID: 45-041-8002) JCI Woods (AQS ID: 45-041-8003)	SPM	Y
Greenville-Anderson, SC	PM _{2.5} Continuous	Greenville ESC (AQS ID: 45-045-0015)	SPM	Y
Spartanburg, SC	PM _{2.5} Continuous for AQI	T.K. Gregg (AQS ID: 45-083-0011)	SPM	N
Not in an MSA	O ₃ , Metals, Carbonyls, SVOCs, VOCs, Precipitation	Chesterfield (AQS ID: 45-025-0001)	SPM	Y for O ₃ , N/A for all else
Not in an MSA	PM ₁₀ Rotating	Howard High School #3 (AQS ID: 45-043-0011)	SPM	N

1. The Catawba Longhouse site is operated by the CIN

Memoranda of Agreement (MOA) with Neighboring State and Local Air Monitoring Agencies 40 CFR Part 58, Appendix D, 2(e)

Section 2(e) of Appendix D to 40 CFR Part 58 states:

“The EPA recognizes that State or local agencies must consider MSA/CSA boundaries and their own political boundaries and geographical characteristics in designing their air monitoring networks. The EPA recognizes that there may be situations where the EPA Regional Administrator and the affected State or local agencies may need to augment or to divide the overall MSA/CSA monitoring responsibilities and requirements among these various agencies to achieve an effective network design. Full monitoring requirements apply separately to each affected State or local agency in the absence of an agreement between the affected agencies and the EPA Regional Administrator.”

The SC DHEC maintains MOAs to address minimum monitoring requirements with the GA EPD, the NC DAQ, and the MCAQ. These MOAs are summarized in Table 27.

Table 27: MOAs to Meet Monitoring Requirements for CBSAs Crossing Jurisdictional Boundaries

CBSA	Agencies on the MOA	Pollutants	Date of Agreement	Expiration
Augusta-Richmond County, GA-SC	SC DHEC, GA EPD	PM ₁₀ , PM _{2.5} , O ₃ , and other criteria pollutants as necessary	January 2017	Every 10 years
Charlotte-Concord-Gastonia, NC-SC	SC DHEC, NC DAQ, MCAQ	Criteria pollutant monitoring required by 40 CFR 58, Appendix D	July 1, 2016	Every 10 years
Myrtle Beach-Conway-North Myrtle Beach, SC MSA	SC DHEC, NC DAQ	O ₃ and other criteria pollutants as necessary	July 1, 2015	Every 10 years

The EPA approves of the SC DHEC agreements to share regulatory monitoring requirements for the Charlotte, Myrtle Beach, and Augusta areas. The EPA encourages the SC DHEC to work with the NC DAQ to investigate possible locations for a second required ozone monitor in the Myrtle Beach-Conway-North Myrtle Beach, SC MSA. Preference should be given to possible O₃ maximum

concentration areas in the MSA. The EPA requests that findings of this investigation be included in the state’s 2021 Network Plan.

Monitoring Siting Criteria and Site Assessments
40 CFR Part 58, Appendix E

In reference to the Network Plan, 40 CFR § 58.10(a)(1) states:

“The plan shall include a statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E of this part, where applicable. The Regional Administrator may require additional information in support of this statement.”

The Network Plan includes assessment information for all monitoring sites. The EPA appreciates the inclusion of this information and the work that the SC DHEC has done to evaluate siting criteria at all its monitoring sites. The EPA understands that the SC DHEC is still working to resolve siting criteria issues identified by its own assessments and in recent EPA audits and appreciates the SC DHEC’s continued progress in resolving these issues.

The EPA approved a waiver for the Congaree Bluff site (AQS ID: 45-079-0021) for spacing from obstructions, spacing from trees, and drip line requirements in 2018. If the SC DHEC intends to renew this waiver beyond 2020, it must submit a request in an addendum to the Network Plan. The addendum requesting a waiver should include the information outlined in the U.S. EPA Region 4 Guidance on Ambient Air Monitor Siting Criteria Waivers (September 2018). The EPA also approved a waiver for the JCI Woods site (AQS ID: 45-041-8003) for spacing from obstructions in 2020. Since the JCI Woods waiver was approved in April 2020, the waiver for siting requirements does not need to be renewed until 2025.

Waivers of Requirements

The EPA’s air monitoring regulations allow for the waiver of requirements in specific instances. The EPA requires ongoing waivers to be renewed every five years as part of the network assessment. Waivers of specific requirements for the South Carolina air monitoring network are discussed in more detail above in the monitoring siting criteria section. Since the JCI Woods waiver was approved in April 2020, the waiver for siting requirements at the JCI Woods site does not need to be renewed until 2025. If the SC DHEC intends to continue operating under the Congaree Bluff site waiver after 2020, it is required to submit a request for renewal in a Network Plan Addendum. The approved waivers are also summarized in the Table 28 below.

Table 28: Summary of EPA Approved Waivers of Requirements

CBSA	Monitoring Site(s) Affected	Pollutant (s)	CFR Requirement Waived	EPA Waiver Authority/Rationale	Year Waiver First Granted	Waiver Expiration Date	Comments
Columbia, SC	Congaree Bluff (AQS ID: 45-079-0021)	O ₃ , SO ₂	40 CFR Part 58, Appendix E, Section 4 & 11	40 CFR Part 58, Appendix E, Section 10.1.2	2018	2020	Approval of spacing from trees and drip-line requirements
Florence, SC	JCI Woods (AQS ID: 45-041-8003)	Pb	40 CFR Part 58, Appendix E, Section 4	40 CFR Part 58, Appendix E, Section 10.1.1	2020	2025	Approval of spacing from obstacles

