Technical Support Document:

Chapter 6
Intended Round 4 Area Designations for the 2010 1-Hour SO_2 Primary National Ambient Air Quality Standard for New York

1. Summary

Pursuant to section 107(d) of the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA, we, or us) must designate areas as either "nonattainment," "attainment," or "unclassifiable" for the 2010 1-hour sulfur dioxide (SO_2) primary national ambient air quality standard (NAAQS) (2010 SO_2 NAAQS). The CAA defines a nonattainment area as an area that does not meet the NAAQS or that contributes to a nearby area that does not meet the NAAQS. An attainment area is defined by the CAA as any area that meets the NAAQS and does not contribute to a nearby area that does not meet the NAAQS. Unclassifiable areas are defined by the CAA as those that cannot be classified on the basis of available information as meeting or not meeting the NAAQS. See CAA section 107(d)(1)(A)(i)-(iii).

In this action, EPA defines a nonattainment area as an area that, based on available information including (but not limited to) monitoring data and/or appropriate modeling analyses, EPA has determined either: (1) does not meet the 2010 SO_2 NAAQS, or (2) contributes to ambient air quality in a nearby area that does not meet the NAAQS. An attainment/unclassifiable area is defined as an area that, based on available information including (but not limited to) appropriate monitoring data and/or modeling analyses, EPA has determined meets the NAAQS and does not likely contribute to ambient air quality in a nearby area that does not meet the NAAQS. An unclassifiable area is defined as an area for which the available information does not allow EPA to determine whether the area meets the definition of a nonattainment area or the definition of an attainment/unclassifiable area.

EPA is under a December 31, 2020, deadline to designate all remaining undesignated areas as required by the U.S. District Court for the Northern District of California.[1] This deadline is the final of three deadlines established by the court for EPA to complete area designations for the 2010 SO_2 NAAQS. The remaining undesignated areas are: 1) those areas which, under the court order, did not meet the criteria that required designation in Round 2 and also were not required to be designated in Round 3 due to installation and operation of a new SO_2 monitoring network by January 2017 in the area meeting EPA's specifications referenced in EPA's SO_2 Data Requirements Rule (DRR)[2], and 2) those areas which EPA has not otherwise previously designated for the 2010 SO_2 NAAQS. EPA previously issued guidance on how to appropriately and sufficiently monitor ambient air quality in the "SO_2 NAAQS Designations Source-Oriented Monitoring Technical Assistance Document" (SO_2 NAAQS Designations Monitoring TAD).[3]

[1] *Sierra Club v. McCarthy*, No. 3-13-cv-3953 (SI) (N.D. Cal. Mar. 2, 2015).
[2] *See* 80 FR 51052 (August 21, 2015), codified at 40 CFR part 51 subpart BB.
[3] https://www.epa.gov/sites/production/files/2016-04/documents/so2monitoringtad.pdf

In previous final actions, EPA has issued designations for the 2010 SO_2 NAAQS for most areas of the country.[4] As mentioned, EPA is under a deadline of December 31, 2020, to designate the areas addressed in this technical support document (TSD) as required by the U.S. District Court for the Northern District of California. We are referring to the set of designations being finalized by the deadline of December 31, 2020, as "Round 4" or the final round of the designations process for the 2010 SO_2 NAAQS. After these Round 4 designations are completed, there will be no remaining undesignated areas for the 2010 SO_2 NAAQS.

This TSD addresses designations for all remaining undesignated areas in New York for the 2010 SO_2 NAAQS. Areas with monitored violations of the NAAQS are explicitly evaluated in this TSD. Undesignated areas in New York without monitored violations are referenced in this TSD for completeness but are covered in more detail in Chapter 2.

New York submitted its first recommendation regarding designations for the 2010 1-hour SO_2 NAAQS on June 1, 2011. The State submitted updated recommendations on April 30, 2020 to address more recent air quality monitoring data for monitors that were installed pursuant the DRR but did not include an updated recommendation for St. Lawrence County. In our intended designations, we have considered all the submissions from the State, except where a later submission indicates that it replaces an element of an earlier submission.

Table 1 identifies EPA's intended Round 4 designations and the areas in New York to which they would apply. It also lists New York's current recommendations. EPA intends to designate these areas by December 31, 2020, through an assessment and characterization of air quality based primarily on ambient monitoring data, including data from existing and new EPA-approved monitors that have collected data from January 2017 forward, pursuant to the DRR; however, other available evidence and supporting information, such as air dispersion modeling in certain situations, may also be considered.[5]

[4] Most areas of the U.S. were previously designated in actions published on August 5, 2013 (78 FR 47191), July 12, 2016 (81 FR 45039), December 13, 2016 (81 FR 89870), January 9, 2018 (83 FR 1098) and April 5, 2018 (83 FR 14597). EPA is not reopening these previous designation actions in this current Round 4 of designations under the 2010 SO_2 NAAQS, except where specifically discussed.

[5] Detailed SO_2 monitor information may be found in either the 2016 or 2017 ambient monitoring network plans, or associated addenda.

Table 1. Summary of EPA's Intended Designations and the Designation Recommendations by New York

Area/County	New York's Recommended Area Definition	New York's Recommended Designation	EPA's Intended Area Definition	EPA's Intended Designation
St. Lawrence	Entire County	Attainment	St. Lawrence County Excluding the northern portion of Adirondack State Park within St. Lawrence County	Nonattainment
			Portion of St. Lawrence County Containing the area of Adirondack State Park located in the southern part of the County	Attainment/ Unclassifiable
Cayuga *	Entire County	Attainment	Same as State's recommendation	Attainment/ Unclassifiable
Seneca*	Entire County	Attainment	Same as State's recommendation	Attainment/ Unclassifiable
Tompkins*	Entire County	Attainment	Same as State's recommendation	Attainment/ Unclassifiable

* EPA addresses these areas in Chapter 2 with all other areas which EPA intends to designate "attainment/unclassifiable" or "unclassifiable."

Areas that EPA previously designated in Round 1 (*see* 78 FR 47191), Round 2 (*see* 81 FR 45039 and 81 FR 89870), and Round 3 (*see* 83 FR 1098 and 83 FR 14597) are not affected by the designations in Round 4 unless otherwise noted.

2. General Approach and Schedule

An updated designations guidance document was issued by EPA through a September 5, 2019, memorandum from Peter Tsirigotis, Director, U.S. EPA, Office of Air Quality Planning and

Standards, to Regional Air Division Directors, U.S. EPA Regions 1-10.[6] To better reflect the Round 4 designations process, this memorandum supplements, where necessary, prior designations guidance documents on area designations for the 2010 primary SO_2 NAAQS issued on March 24, 2011, March 20, 2015, and July 22, 2016. This memorandum identifies factors that EPA intends to evaluate in determining whether areas are in violation of the 2010 SO_2 NAAQS. The document also contains the factors that EPA intends to evaluate in determining the boundaries for all remaining areas in the country. These factors include: 1) air quality characterization via ambient monitoring and/or dispersion modeling results; 2) emissions-related data; 3) meteorology; 4) geography and topography; and 5) jurisdictional boundaries.

In EPA's September 2019 memorandum, we note that Round 4 area designations will be based primarily on ambient monitoring data, including data from existing and new EPA-approved monitors that have collected data at least from January 2017 forward, pursuant to the DRR. In addition, EPA may evaluate air dispersion modeling submitted by state air agencies for two specific circumstances. First, states may submit air dispersion modeling to support the geographic extent of a nonattainment boundary. Second, states may submit air dispersion modeling to demonstrate that new permanent and federally enforceable SO_2 emissions limits provide for attainment of the NAAQS and represent a more accurate characterization of current air quality at the time of designation than does monitoring of past air quality.

This TSD is organized such that there is a section for each area in New York for which air quality monitoring data indicate a violation of the 2010 SO_2 NAAQS. When modeling information is available, it is evaluated in the context of that section. EPA does not plan to revise this intended designations TSD after consideration of state and public comment on our intended designation. A separate final TSD will be prepared as necessary to document how we have addressed such comments in the final designations.

The following are definitions of important terms used in this document:

1) 2010 SO_2 NAAQS – the primary NAAQS for SO_2 promulgated in 2010. This NAAQS is 75 ppb, based on the 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations. See 40 CFR 50.17.
2) Design Value - a statistic computed according to the data handling procedures of the NAAQS (in 40 CFR part 50 Appendix T) that, by comparison to the level of the NAAQS, indicates whether the area is violating the 2010 SO_2 NAAQS.
3) Intended designated nonattainment area –an area that, based on available information including (but not limited to) monitoring data and/or appropriate modeling analyses, EPA intends to determine either: (1) does not meet the 2010 SO_2 NAAQS, or (2) contributes to ambient air quality in a nearby area that does not meet the NAAQS.
4) Intended designated attainment/unclassifiable area – an area that, based on available information including (but not limited to) appropriate monitoring data and/or appropriate modeling analyses, EPA intends to determine meets the 2010 SO_2 NAAQS and does not likely contribute to ambient air quality in a nearby area that does not meet the NAAQS.

[6] https://www.epa.gov/sites/production/files/2019-09/documents/round_4_so2_designations_memo_09-05-2019_final.pdf

5) Intended designated unclassifiable area – an area for which the available information does not allow EPA to determine whether the area meets the definition of a nonattainment area or the definition of an attainment/unclassifiable area.
6) Modeled violation – a modeled design value impact above the 2010 SO_2 NAAQS demonstrated by air dispersion modeling.
7) Recommended attainment area – an area that a state, territory, or tribe has recommended that EPA designate as attainment.
8) Recommended nonattainment area – an area that a state, territory, or tribe has recommended that EPA designate as nonattainment.
9) Recommended unclassifiable area – an area that a state, territory, or tribe has recommended that EPA designate as unclassifiable.
10) Recommended attainment/unclassifiable (or unclassifiable/attainment) area – an area that a state, territory, or tribe has recommended that EPA designate as attainment/unclassifiable (or unclassifiable/attainment).
11) Violating monitor – an ambient air monitor meeting 40 CFR parts 50, 53, and 58 requirements whose valid design value exceeds 75 ppb, based on data analysis conducted in accordance with Appendix T of 40 CFR part 50.
12) We, our, and us – these refer to EPA.

3. Technical Analysis for the St. Lawrence County Area

3.1. Introduction

EPA must designate the St. Lawrence County area by December 31, 2020, because the area has not been previously designated, and New York (NY) installed and began operating new EPA-approved monitors pursuant to the DRR. This section presents all the available air quality information for the portion of St. Lawrence County that includes the following SO_2 source around which the DRR required the state to characterize air quality:

- The Alcoa Massena facility emits 2,000 tons of SO_2 or more annually. Specifically, Alcoa Massena emitted 2,490 tons of SO_2 in 2014. This source meets the DRR criteria and thus is on the SO_2 DRR Source list, and New York has chosen to characterize it via monitoring.

As seen in Figure 1 below, the Alcoa Massena facility is located in St. Lawrence County within the town of Massena, NY, near the junction of the St. Lawrence and Grass Rivers and approximately 3.2 kilometers from Massena International Airport. Figure 1a shows the Alcoa Massena facility and SO_2 monitors.

Figure 1. Map of the St. Lawrence County Area Addressing Alcoa Massena

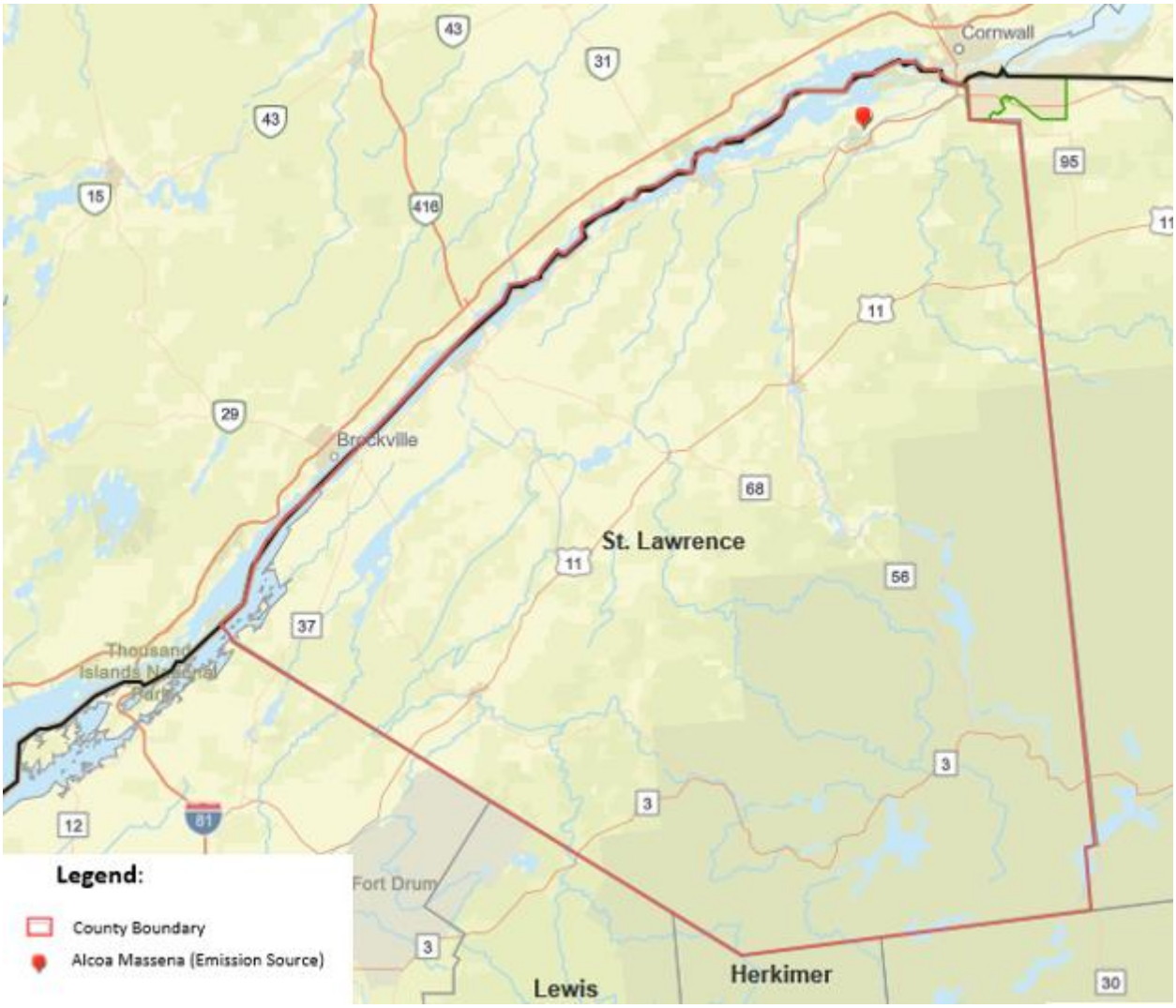
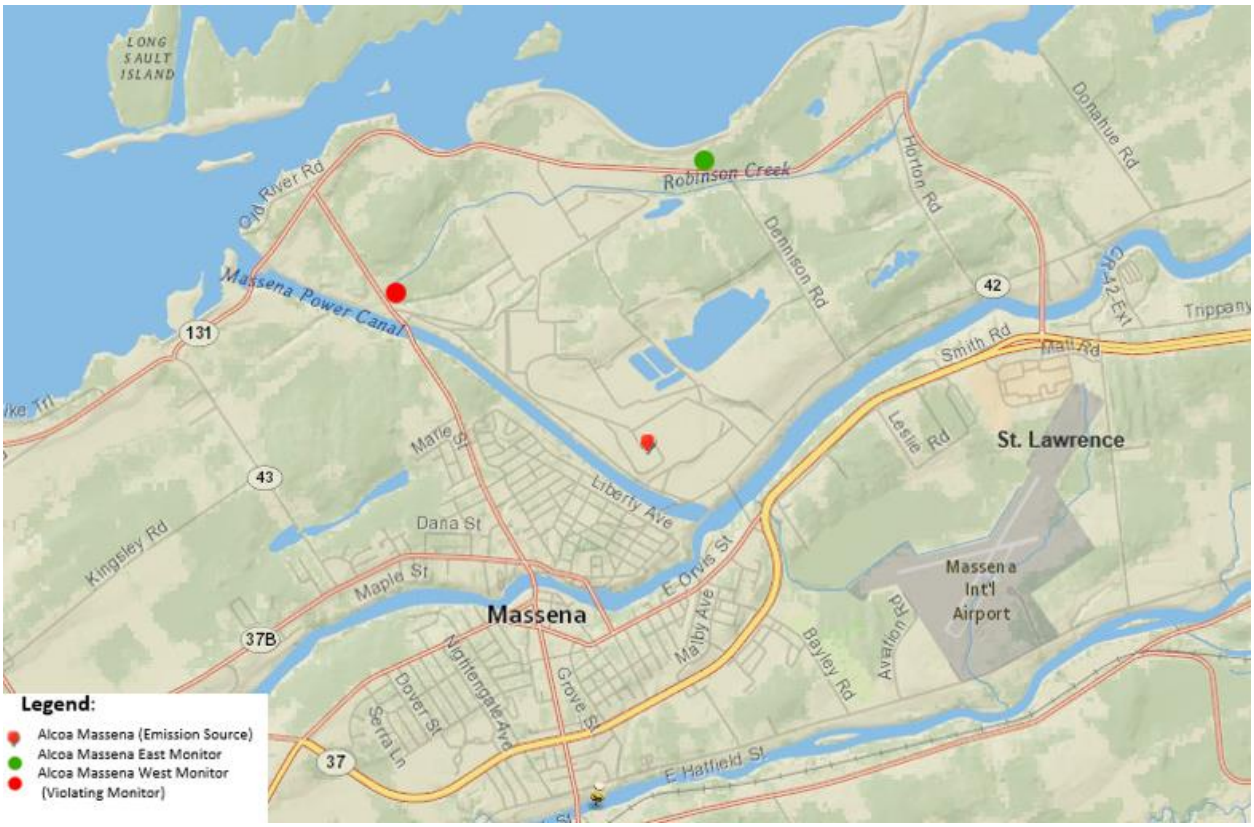


Figure 1a. Map of Massena and Surrounding Area including Alcoa Massena and SO_2 Monitors



In its June 1, 2011 recommendation letter, New York recommended that St. Lawrence County be designated as attainment for the 2010 SO_2 NAAQS. New York, however, provided EPA with this recommendation prior to the installation and operation of EPA-approved monitors, which did not begin operating until January 2017 and did not have a valid three-year design value until the completion of the 2017-2019 monitoring period. EPA does not agree with New York's 2011 recommendation as to the designation category and intends to designate a portion of St. Lawrence County, NY, as described below, as nonattainment for the 2010 SO_2 NAAQS based upon currently available monitoring information for the 2017-2019 period. Our intended boundaries are described below.

3.2. Air Quality Monitoring Data for the St. Lawrence County Area

EPA considered design values for air quality monitors in the St. Lawrence County area by assessing the most recent 3 consecutive years (i.e., 2017-2019) of quality-assured, certified ambient air quality data in the EPA Air Quality System (AQS) using data from Federal Reference Method and Federal Equivalent Method monitors that are sited and operated in accordance with 40 CFR parts 50 and 58.[7] Procedures for using monitored air quality data to

[7] SO_2 air quality data are available from EPA's website at https://www.epa.gov/outdoor-air-quality-data. SO_2 air quality design values are available at https://www.epa.gov/air-trends/air-quality-design-values.

determine whether a violation has occurred are given in 40 CFR part 50 Appendix T, as revised in the 2010 SO_2 NAAQS rulemaking.

The 2010 1-hour SO_2 NAAQS is met when the design value is 75 ppb or less. Whenever several monitors are located in an area, the design value for the area is determined by the monitor with the highest valid design value. The presence of one or more violating monitors (i.e., monitors with design values greater than 75 ppb) in a geographic area forms the basis for designating that area as nonattainment.

EPA also used the other remaining factors, described in the next section, to further assist with determining the spatial extent of the intended nonattainment area surrounding the violating monitor. Figure 2 shows a map of the St. Lawrence County area showing the SO_2 monitors addressing Alcoa Massena. Table 2 contains the 2017-2019 design values for the St. Lawrence County area of analysis.

Figure 2. Map of the St. Lawrence County Area Showing Monitors Addressing Alcoa Massena and Tribal Area

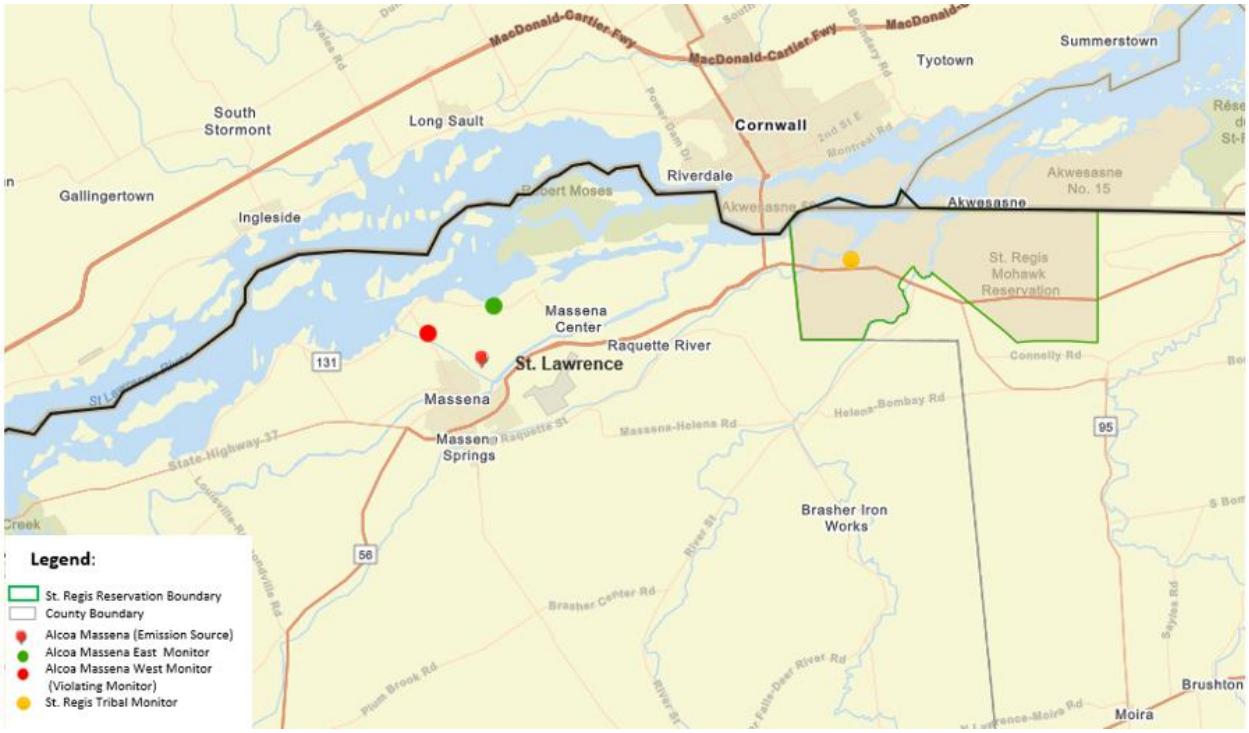


Table 2. 2010 SO_2 NAAQS Design Values for the St. Lawrence County Area

AQS Site ID	Monitor Location	2017 99th Percentile (ppb)	2018 99th Percentile (ppb)	2019 99th Percentile (ppb)	2017-2019 Design Value (ppb)
36-089-0004	Alcoa Massena West Monitor, 327 Pontoon Bridge Rd, St. Lawrence County, NY	90.5	86.5	82.0	**86**
36-089-0005	Alcoa Massena East Monitor, 2019 NY-131, St. Lawrence County, NY	45.2	40.6	42.0	**43**

The Alcoa Massena West and Alcoa Massena East monitors were both sited in the vicinity of Alcoa Massena by New York State to characterize air quality in the area. The monitors began operating in January 2017. The Alcoa Massena West monitor is located less than one-kilometer northwest of Alcoa Massena. The Alcoa Massena East monitor is located approximately two

kilometers northeast of Alcoa Massena. Both monitoring sites were valid for comparison with the NAAQS and were sited and operated in accordance with 40 CFR part 50 and 58.

Air quality data collected from the Alcoa Massena West monitor (AQS 36-089-0004) has indicated a violation of the 2010 1-Hour SO_2 NAAQS. The 2017-2019 design value was 86 ppb, which is above the NAAQS. The Alcoa Massena East monitor (AQS36-089-0005) design value for 2017-2019 was 43 ppb, which was below the level of the NAAQS. Based on the violating Alcoa Massena West monitor, the St. Lawrence County area must be designated nonattainment.

3.3. Intended Designation Boundary Determination

EPA must designate as nonattainment any area that violates the NAAQS and any nearby area that contributes to ambient air quality in the violating area. The St. Lawrence County Area shows a violation of the 2010 SO_2 NAAQS based on data collected between 2017 and 2019, and, therefore, some area around the violating monitor must be designated nonattainment. In this section, we consider the appropriate geographical extent of the nonattainment area.

A nonattainment area should contain the area violating the NAAQS (e.g., the area around a violating monitor or encompassing modeled violations), as well as any nearby areas (e.g., counties or portions thereof) that contain emissions sources contributing to ambient air quality in the violating area. (*See* CAA section 107(d)(l)(A)(i)). Accordingly, although EPA considers county boundaries as the analytical starting point for determining SO_2 nonattainment areas, an evaluation of five factors for each area may be considered in determining the geographic scope of a nonattainment boundary.

Thus, boundaries area evaluated on five factors: 1) ambient air quality data or dispersion modeling results; 2) emissions-related data; 3) meteorology; 4) geography and topography; and 5) jurisdictional boundaries, as well as other relevant available information. While the factors are presented individually, they are not independent. Instead, the five-factor analysis process carefully considers their interconnections and the dependence of each factor on one or more of the others.

3.3.1. Factor 1: Ambient Air Quality Data and Dispersion Modeling Results

Ambient air quality data are discussed in the previous section. New York did not provide any source-oriented modeling to assess the geographic extent of the source's impacts that are causing the monitored NAAQS violations in the St. Lawrence County Area. There is no other air quality modeling information available to EPA at this time, so we intend to use the additional analysis factors, described below, to support the intended nonattainment boundary determination.

EPA also considered nearby design values if the data helped inform the spatial extent of the boundaries of the designated nonattainment area. EPA considered air monitoring data in the nearby St. Regis Mohawk Tribal (SRMT) Reservation to help define the boundaries of the nonattainment area.

Table 3 shows 2014-2016 design values for the SRMT Reservation. The SRMT Reservation was included in the Franklin County area and designated Attainment/Unclassifiable in the Round 3 designations. The SRMT Reservation operates a monitoring site which includes a SO_2 monitor (AQS 36-033-7003). The monitor is operated in accordance with an EPA approved Quality Assurance Project Plan (QAPP). The latest QAPP was approved in 2018 and is valid until October 2023. There are no major point sources located near the monitor. The Alcoa Massena facility is the nearest major point source.

Table 3. 2010 SO_2 NAAQS Design Values for the St. Regis Mohawk Reservation

AQS Site ID	Monitor Location	2014 99th Percentile (ppb)	2015 99th Percentile (ppb)	2016 99th Percentile (ppb)	2014-2016 Design Value (ppb)
36-033-7003	St. Regis Monitor, 55 Library Road, Hogansburg, NY	14.6	24.6	8.2	**16**

The SRMT monitor, which is located approximately 15 kilometers northeast of Alcoa Massena (and 14 kilometers east of the Alcoa Massena East monitor) had a 2014-2016 design value of 16 ppb. The 2014-2016 design value was the most recent valid three-year period available for the monitoring location.[8,9] EPA believes that the available data from the SRMT monitor helps define the spatial extent of the designated nonattainment area, along with other factors considered in the TSD.

3.3.2. Factor 2: Emissions-Related Data

New York did not provide information on annual emissions data for point sources in the St. Lawrence County area. EPA believes that it is reasonable to evaluate SO_2 emissions data from EPA's Emissions Inventory System (EIS[10]). Table 4 shows the 2016-2018 EIS emissions data for the facility that is characterized by the SO_2 monitors described previously.

SO_2 emissions are also available in EPA's EIS for 2014 and 2015; the available data is for Alcoa Massena during the St. Regis monitor operation from 2014-2016. SO_2 emissions were 2,490 tons and 2,283 for 2014 and 2015, respectively; a similar trend in emissions is observed through 2018.

Alcoa Massena was the only point source in the area that emitted more than 1 ton of SO_2 through 2017. There are no other nearby SO_2 emissions that would contribute to the violating monitor.

[8] SO_2 air quality data are available from EPA's website at https://www.epa.gov/outdoor-air-quality-data. SO_2 air quality design values are available at https://www.epa.gov/air-trends/air-quality-design-values.
[9] More recent design value information is not available due to instrument malfunction, automated quality control issues, and problems with data conversion and upload. All these issues are currently being addressed by SRMT.
[10] https://eis.epa.gov/eis-system-web/welcome.html

The nearest SO_2 source emitting above 1 ton of SO_2 in 2017 is the Clinton County Landfill in Morrisville, New York, which is over 100 kilometers southeast of Alcoa Massena. Additionally, there are no sources emitting above 1 ton of SO_2 in 2017 located within the Adirondack State Park or within the SRMT Reservation.

Table 4. SO_2 Emissions of Sources in the St. Lawrence County Area

Facility Name	2016 SO_2 Emissions (tons)	2017 SO_2 Emissions (tons)	2018 SO_2 Emissions (tons)
Alcoa Massena	2,368[11]	2,406	2,406

EPA has not received any additional information on emissions reductions resulting from controls put into place after the date of the emissions inventory data provided in the table above.

3.3.3. Factor 3: Meteorology

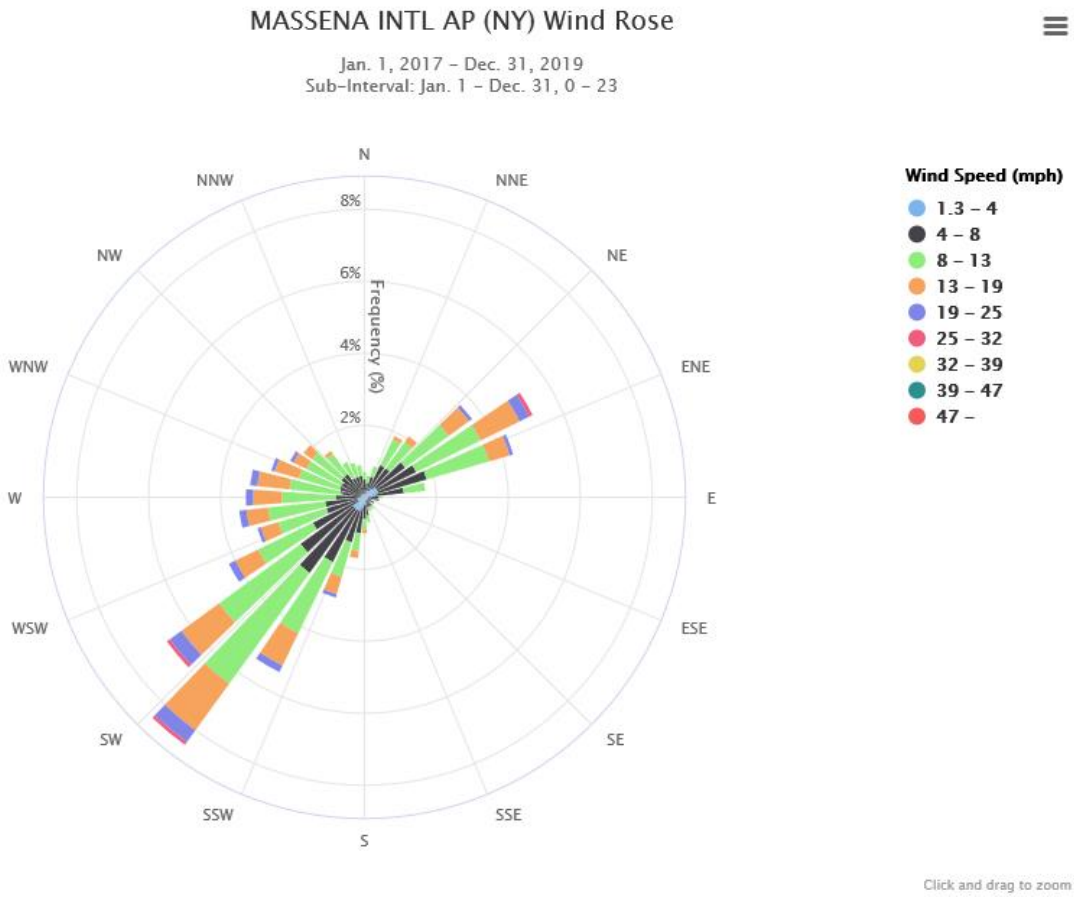
New York did not provide an analysis of the meteorology (*e.g.*, weather and transport patterns) for the St. Lawrence County area. EPA evaluated meteorological data to determine how weather conditions, including wind speed and direction, affect the plume of sources contributing to the ambient SO_2 concentrations.

Evidence of source-receptor relationships between specific emissions sources and high SO_2 concentrations at violating monitors is another important factor in determining the appropriate contributing areas and the appropriate extent of EPA's intended nonattainment area. As shown in Figure 3, meteorological records for the nearest National Weather Service (NWS) meteorological station in Massena International Airport indicate winds blow predominantly from the southwest. This figure was developed using hourly observed data between January 1, 2017 and December 31, 2019 from an application available from the Midwestern Regional Climate Center.[12]

The NWS station and Alcoa Massena share the same airshed; the NWS station is approximately 5 kilometers southeast of the facility. The terrain between the facility and the NWS station is relatively flat. Considering the proximity of the NWS station to the facility and the absence of any complex terrain in between the source and the airport, the NWS station is representative of the area of concern.

[11] 2016 emissions account for the SO_2 emissions from both Alcoa and the Arconic facility whose operations were separated from the main Alcoa operations in 2016. The SO_2 emissions in 2016 were 1,935 tons for Arconic and 433 tons for Alcoa USA Corp.
[12] https://mrcc.illinois.edu/CLIMATE/welcome.jsp

Figure 3: Wind Rose for St. Lawrence County, New York



EPA notes that the violating monitor (i.e., Alcoa Massena West Monitor) is located less than 1 kilometer northwest and not downwind of the prevailing wind direction as identified in the wind rose from Alcoa Massena, while the Alcoa Massena East Monitor, which is located approximately 2 kilometers northeast and downwind of the prevailing wind direction of the Alcoa Massena facility, is attaining the NAAQS. While this appears contradictory, EPA recognizes that air quality concentrations are not just a factor of wind direction, but wind speed, mixing height, stability, and orientation of lined stacks in reference to wind direction as well as distance from sources.

EPA believes the low wind speed from the southeast may be associated with the high SO_2 concentrations at the Alcoa Massena West monitor.

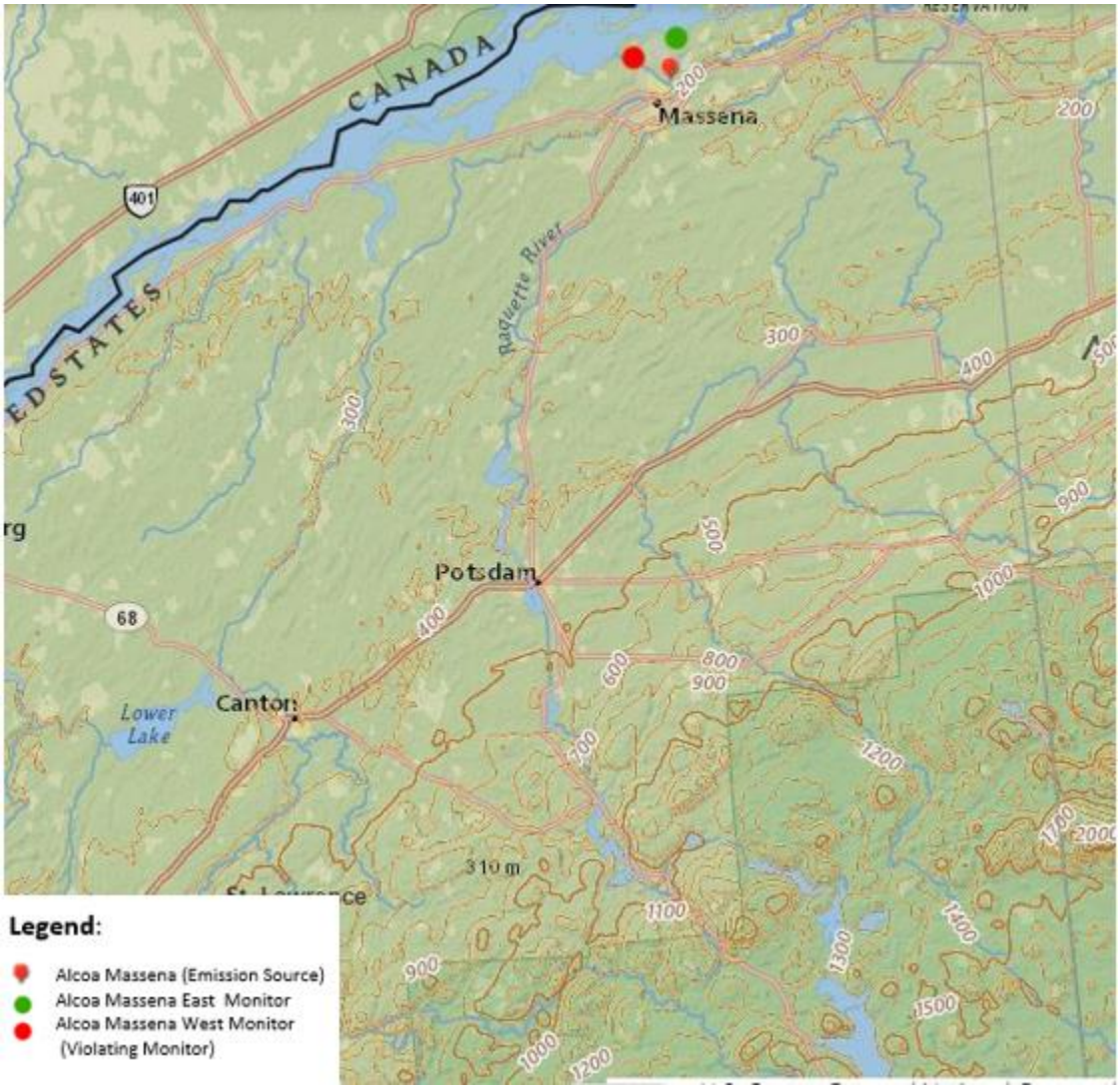
3.3.4. Factor 4: Geography and Topography

New York did not provide an analysis of the geography and topography of the St. Lawrence County area. EPA examined the physical features of the land that may affect the distribution of emissions and may help define nonattainment area boundaries.

The Alcoa Massena facility is in proximity to the Grass River valley, located between the facility and the Massena Airport, see Figure 1a. The valley could cause local complex air flows that can affect the emission impacts and may explain the discrepancy between the wind rose data taken from the meteorological station at Massena airport and the violating monitor located northwest of the facility.

The area south of Alcoa Massena and near the border of the green shaded area in the lower right-hand corner of the map (Adirondack State Park) shows a series of mountains ranging in elevation from 400 feet to approximately 1200 feet (see figure 4). In some cases, mountains provide a barrier limiting air pollution transport within an air shed, which may limit emissions impact to the area.

Figure 4. St. Lawrence County Area Topography



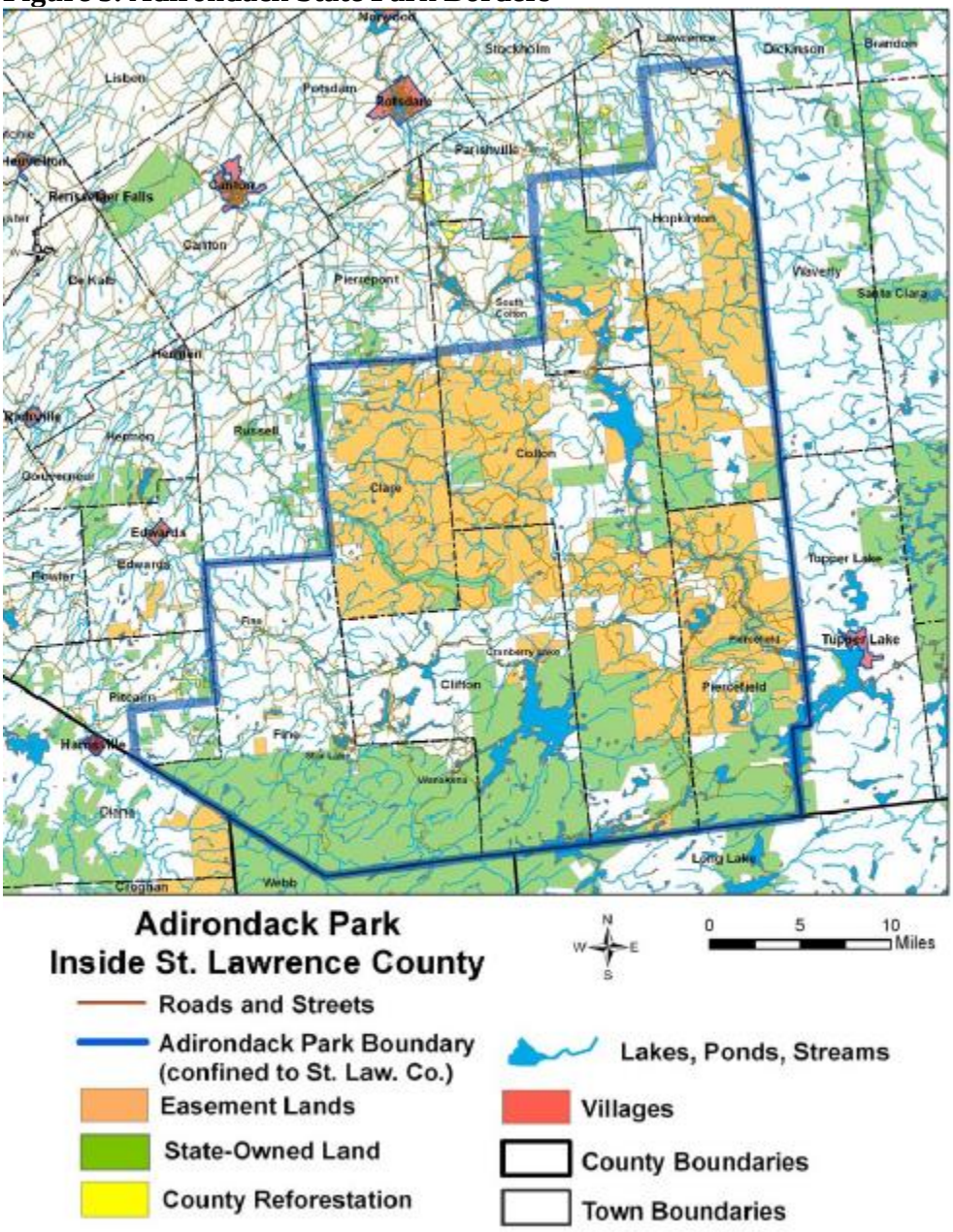
3.3.5. Factor 5: Jurisdictional Boundaries

New York did not provide an analysis of the jurisdictional boundaries to establish the geographic extent of the violating area. EPA considers existing jurisdictional boundaries for the purposes of providing a clearly defined legal boundary for carrying out the air quality planning and enforcement functions for the area. Our goal is to base designations on clearly defined legal boundaries that align with existing administrative boundaries when reasonable. Existing jurisdictional boundaries used to define a nonattainment area must encompass the area that has been identified as meeting the nonattainment definition.

EPA recommends designating the portion of St. Lawrence County, excluding the area defined by the boundaries of Adirondack State Park, as nonattainment. EPA believes this area has a clearly defined legal boundary for carrying out the air quality planning and enforcement functions for the nonattainment designation.

EPA believes the borders of Adirondack State Park within St. Lawrence County provide clearly defined legal boundaries and align with existing administrative boundaries. This taken along with the other supportive information such as the lack of sources emitting over 1 ton per year of SO_2 within the Adirondack State Park inside St. Lawrence County, support EPA's intended boundary which excludes the Adirondack State Park from the intended nonattainment area. Figure 5 below shows the boundaries of Adirondack State Park inside St. Lawrence County.

Figure 5. Adirondack State Park Borders[13]



3.4. Other Information Relevant to the Designation of the St. Lawrence County Area

EPA received a letter dated February 11, 2020, from Mark DeLaquil of Baker & Hostetler, LLP, Alcoa's legal representative, regarding the 2010 SO_2 NAAQS designation for the Alcoa Massena area in St. Lawrence County, New York. The letter claims that, during the 2017-2019 monitoring

[13] Map obtained from St. Lawrence County Planning Office's "A User's Guide to the Adirondacks in St. Lawrence County", available at https://www.stlawco.org/Departments/Planning/UsersGuide

period, "there has not been a single 5-minute 200 ppb air quality value monitored at Massena" and suggests that EPA designate the area unclassifiable.

On May 5, 2020, EPA sent a response letter to Mr. DeLaquil reiterating that the 2010 1-hour SO_2 primary NAAQS was a 1-hour standard based on the 3-year average of the annual 99th percentile of the daily maximum 1-hour average concentrations of SO_2. This design value is determined in accordance with appendix T of 40 CFR part 51 and as measured by a reference method based on appendix A or A-1 of part 51 or by a Federal Reference Method designated in accordance with 40 CFR part 53 (75 FR 35520, June 22, 2010, codified at 40 CFR 50.17). This standard protects against short-term exposures ranging from 5-minutes to 24-hours. During the 2010 SO_2 NAAQS review process, the Clean Air Scientific Advisory Committee stated that EPA's rationale for a 1-hour standard was "convincing" and that "a 1-hour standard is the preferred averaging time" (75 FR 35537).[14] Furthermore, as required by the CAA, EPA conducted a periodic review of the SO_2 NAAQS, and on March 18, 2019, the Agency published a decision to retain the 2010 1-hour primary standard (84 FR 9866). EPA notes that even if the form of the SO_2 standard had been changed in 2019 such that an area without any 5-minute ambient concentrations at or above 200 ppb over a three-year period would be attaining the 2019 standard, EPA would still be required to designate areas for the 2010 SO_2 NAAQS according to the form of the 2010 standard.

The 2017-2019 violating design value at the Alcoa Massena monitor meets the averaging criteria established in EPA's 2010 SO_2 NAAQS rulemaking. There is no available information indicating that the monitoring data are not reliable. Moreover, any objections to either the level or the form of the 2010 1-hour primary NAAQS are outside the scope of this designations action. Therefore, EPA cannot support an intended unclassifiable designation for the St. Lawrence County area based on the claims in Mr. DeLaquil's February 11, 2020 letter.

3.5. EPA's Assessment of the Available Information for the St. Lawrence County Area

EPA evaluated the five factors and all available information to determine the geographic extent of the violating area.

A monitor in the St. Lawrence County area is violating the NAAQS based on the 2017-2019 design value. The violating monitor is located in close proximity to Alcoa Massena, less than 1-kilometer northwest of the facility.

The only other monitor in St. Lawrence County, also in close proximity to Alcoa Massena (at approximately two kilometers northeast of the facility) is meeting the NAAQS. A nearby monitor that operated in the SRMT Reservation, approximately 15 kilometers northeast of Alcoa Massena, was attaining the NAAQS based on the most recent data available for that monitor (i.e. 2014-2016 design value).

[14] The 2010 1-hour SO_2 NAAQS and EPA's denial of petitions for reconsideration were challenged and upheld in *National Environmental Development Association's Clean Air Project* v. *EPA*, 686 F.3d 803 (D.C. Cir. 2012).

The SRMT Reservation was designated attainment/unclassifiable in Round 3 of the SO_2 designations. The St. Regis monitor's 2014-2016 design value provides confirmation that violations do not extend into the SRMT Reservation. Per EPA's evaluation of emissions data through 2017, there are also no SO_2 point sources emitting greater than 1 ton per year in the SRMT that would contribute to the nonattainment area boundary.

Based on the information discussed above, Alcoa Massena is the primary contributor to the monitored violations. There is no indication that any other point source in the area contributes to the violating monitor. Alcoa Massena was the only point source in the area that emitted more than 1 ton of SO_2 in 2017.

EPA believes that our intended nonattainment area, St. Lawrence County, excluding the Adirondack State Park, as bounded by the northern Adirondack State Park borders, will have clearly defined legal boundaries, and we intend to find these boundaries to be a suitable basis for defining our intended nonattainment area.

EPA ascertains that based on various factors outlined above, the southern part of St. Lawrence County, as defined by Adirondack State Park, should be designated attainment/unclassifiable. The predominant wind direction is coming from the southwest, which is away from the area of the Park. Additionally, the distance from the park to Alcoa Massena and the violating monitor is indicative of minimal nonpoint contribution to the SO_2 NAAQS violation in St. Lawrence County. Based on the factors discussed above, EPA believes that the portion of St. Lawrence County containing Adirondack State Park neither has violations nor contributes to ambient air quality in an area that violates the NAAQS. Specifically, as previously mentioned, there are no point sources emitting greater than 1 ton per year of SO_2 located in the Adirondack State Park inside St. Lawrence County such that they could be contributing to violations in the intended nonattainment area. Therefore, EPA intends to designate the remainder of St. Lawrence County, as bounded by the Adirondack State Park borders and the St. Lawrence County borders, as attainment/unclassifiable.

3.6. Summary of EPA's Intended Designation for the St. Lawrence County Area

After careful evaluation of supporting information, as well as all available relevant information, EPA intends to designate a portion of St. Lawrence County as nonattainment for the 2010 SO_2 NAAQS. Specifically, the boundaries are comprised of the portion of St. Lawrence County that excludes Adirondack State park. Figure 6 shows the boundary of this intended designated area. EPA intends to designate the remaining portion of the county as attainment/unclassifiable.

Figure 6. Boundary of the St. Lawrence County Intended Nonattainment Area and Intended Attainment/Unclassifiable Area