

Infrastructure Certification for the 2010 One-Hour National Ambient Air Quality Standard for Nitrogen Dioxide

Sections 110(a) (1) and (2) of the Clean Air Act (CAA) provide procedural, timing and infrastructure requirements related to compliance with National Ambient Air Quality Standards (NAAQS). On January 22, 2010, the U.S. Environmental Protection Agency (EPA) revised the primary NAAQS for nitrogen dioxide (NO₂) to include a one-hour average standard for that pollutant. Since states are required to submit State Implementation Plan (SIP) amendments that address 110(a) (1) and (2) issues within three years of promulgation of a new or revised NAAQS, infrastructure SIPs for the amended NO₂ NAAQS are due January 22, 2013. This document, with the accompanying table, will serve as Rhode Island's infrastructure SIP for that NAAQS.

Since the EPA has not issued specific guidance on the preparation of this SIP, Rhode Island relied on guidance issued for infrastructure SIPs for previous NAAQS when preparing this document. Thirteen elements of Sections 110(a)(1) and (2) must be addressed in infrastructure SIPs. Those elements and the sections of the Rhode Island program that are consistent with those elements are identified in the attached table. The Rhode Island SIP, which was approved in May 1972, and its numerous subsequent revisions fulfill most of these requirements. Other Section 110(a)(2) requirements are fulfilled by Sections 23-23, 23-23.1 and 36-14 of the Rhode Island General Laws (RIGL) and by the Rhode Island Air Pollution Control Regulations (APCR) that have been incorporated into or submitted to the EPA for incorporation into the Rhode Island SIP. Applicable sections of the above RIGL are appended to this submittal for incorporation into the SIP.

In a November 19, 2012 memo, EPA stated that it did not intend to issue deficiency findings at this time related to Section 110(a)(2)(D)(i)(I), which addresses the effect of emissions in one state on nonattainment in downwind states, pending the resolution of ongoing litigation related to the vacatur of the Cross-State Air Pollution Rule (CSAPR). Therefore, Rhode Island is not addressing that element in this submittal. Note, however, that the EPA has designated all areas of the United States as unclassifiable/attainment for the 2010 one-hour NO₂ NAAQS based on current monitoring data. Moreover, the NAAQS analysis indicates that monitored violations are most likely to occur in close proximity to major roadways. Therefore, emissions from local mobile sources, rather than interstate transport, are likely to be the significant determinant of elevated short-term NO₂ levels.

A notice of a public comment period and the opportunity to request a public hearing on the infrastructure certification was posted on the web site of the Rhode Island Department of Environmental Management (RI DEM) and sent electronically to the RI DEM Office of Air Resource's mailing list on November 30, 2012. Comments were accepted through December 31, 2012. RI DEM modified this document as necessary in response to comments received from EPA Region I during that period, as delineated in Response to Comments document appended to this submittal. No other comments were received during the public comment period.

Rhode Island's Compliance with CAA Section 110(a)(1) and (2) SIP requirements

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
<p>110(a)(2)(A) Emission limits and other control measures</p>	<p>Include enforceable emission limitations and other control measures, means, or techniques, as well as schedules and timetables for compliance.</p>	<p>RIGL § 23-23-5 “Powers and duties of the director” authorizes the RI DEM Director “to make, issue, and amend rules and regulations ... for the prevention, control, abatement, and limitation of air pollution.... . The director may prohibit emissions, discharges and/or releases and may require specific control technology.” § 23-23-5 and other applicable sections of § 23-23, Rhode Island’s “Clean Air Act,” are appended to this submittal for incorporation into the SIP.</p> <p>Measures that limit emissions of NO₂ and the framework for implementation of those measures are found in the following RI APCR regulations:</p> <p>No. 9 – Air Pollution Control Permits No. 27 – Control of Nitrogen Oxide Emissions No. 29 – Operating Permits No. 34 - Rhode Island Motor Vehicle Inspection/Maintenance Program No. 37 – Rhode Island’s Low Emissions Vehicle Program No. 39 – Hospital/Medical/Infectious Waste Incinerators No. 42 – Heavy-Duty Diesel Standards No. 43 – General Permits for Smaller-Scale Electric Generation Facilities No. 45 – Rhode Island Diesel Engine Anti-Idling Program</p>
<p>110(a)(2)(B) Ambient Air quality monitoring/data system</p>	<p>Provide for establishment and operation of appropriate devices, methods, systems and procedures to monitor, compile and analyze ambient air quality data, and to make these data available to the EPA</p>	<p>Section VI of the 1972 RI SIP specifies requirements for the operation of an Air Quality Surveillance Network.</p> <p>The latest annual air monitoring network plan for Rhode Island was submitted to EPA on August 1, 2012. As specified in that plan, NO₂ is currently measured March –October in E. Providence and W. Greenwich and year-</p>

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		<p>round in Providence. Rhode Island has committed to begin operating an additional NO₂ monitor at a near-road site adjacent to Interstate Route 95 in Providence by January 1, 2014, as required by the NO₂ NAAQS. Data collected by network monitors are reviewed, validated and sent to the EPA air quality system no later than 90 days after the end of a calendar quarter. Air monitoring network plans are compiled and submitted to the EPA annually and include an explanation of proposed changes to the network.</p>
<p>110(a)(2)(C) Program for enforcement, PSD and NSR</p>	<p>Include a program providing for enforcement of all SIP measures and the regulation of construction of new or modified stationary sources to assure that NAAQS are achieved. The program must include permitting requirements that meet prevention of significant deterioration (PSD) and nonattainment New Source Review (NSR) requirements.</p>	<p>§ 23-23-10, 23-23-11 and 23-23-14 of the RIGL provide DEM with civil and criminal enforcement authorities, including the authority to assess penalties.</p> <p>RI APCR No. 9, “Air Pollution Control Permits,” sets forth requirements for new and modified major and minor stationary sources. Section 9.3 of the regulation contains the requirements for new and modified minor sources. Section 9.4 of the regulation contains the new source review requirements applicable to major stationary source or major modifications located in nonattainment areas. Section 9.5 contains the new source review requirements applicable to major stationary sources or major modifications located in attainment or unclassifiable areas (PSD).</p> <p>Regulation No. 9 was amended effective January 31, 2011 to include requirements for permitting greenhouse gas emissions consistent with EPA’s Greenhouse Gas Tailoring Rule. The amended rule was submitted to the EPA as a SIP revision on January 18, 2011.</p> <p>Rhode Island will amend Regulation No. 9 to be consistent with any updates in EPA’s PSD requirements within 3 years of promulgation of the Federal amendments and will incorporate the updated modeling procedures into the State’s “Air Quality Modeling Guidelines” when they are finalized.</p> <p>Regulation No. 9 requires minor source installations and modifications with the potential to emit one hundred pounds or more per day, or ten pounds or more per hour of any air contaminant or combination of air contaminants to</p>

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		obtain a preconstruction permit. Section 9.3.3(a)(1) of that regulation requires BACT for such sources and Section 9.3.3(a)(4) specifies that emissions cannot “cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard.”
110(a)(2)(D)(i)(I) Interstate transport provisions	Include provisions prohibiting any source or other type of emissions activity in one state from contributing significantly to nonattainment, or interfering with maintenance, of the NAAQS in another state.	Due to ongoing litigation, the EPA has advised states that they do not need to address this element in this submittal and that EPA does not intend to make findings of failure to submit for this element at this time. ¹ RI DEM will submit a demonstration of Rhode Island’s adherence to this element in the future when directed to do so by the EPA. Note, however, that the EPA has designated all areas of the US as unclassifiable/attainment for the 2010 one-hour NO ₂ NAAQS based on current monitoring data and the NAAQS analysis indicates that monitored violations are most likely to occur in close proximity to major roadways. Therefore, emissions from local mobile sources, rather than interstate transport, are likely to be the significant determinant of elevated short-term NO ₂ levels.
110(a)(2)(D)(i)(II) Interstate transport provisions- PSD and visibility	Include provisions prohibiting any source or other type of emissions activity in one state from interfering with PSD measures or measures to protect visibility in another state.	RI APCR No. 9, “Air Pollution Control Permits,” sets forth PSD requirements for new and modified stationary sources. The Rhode Island Regional Haze SIP demonstrates that Rhode Island sources do not significantly impact visibility in any downwind Class I area.
110(a)(2)(D)(ii) Interstate and international transport provisions	Provide adequate provisions to prevent endangerment of public health due to interstate and international transport of pollutants.	RI APCR No. 9, “Air Pollution Control Permits,” sets forth PSD requirements for new and modified stationary sources. Section 9.12.3 of this regulation specifies that notice must be provided to any State, Federal Land Manager or Indian Governing Body whose lands may be affected by emissions from a proposed major source

¹ USEPA, Memorandum from Gina McCarthy, Assistant Administrator to Air Division Directors, “Next Steps for Pending Redesignation Requests and State Implementation Plan Actions Affected by the Recent Court Decision Vacating the 2011 Cross-State Air Pollution Rule,” November 19, 2012.

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<p>110(a)(2)(E) Adequate personnel, funding and authority</p>	<p>Provide for adequate personnel, funding and legal authority under state law to carry out the SIP and demonstrate adherence to conflict of interest requirements.</p>	<p>§ 23-23-5 of the RIGL provides the Director of DEM with the legal authority to enforce air pollution control requirements.</p> <p>Section III of the RI SIP specifies the RI DEM’s legal authority to implement SIP measures. No other agency or organization participates in the implementation or enforcement of those measures in Rhode Island.</p> <p>§ 23-23-5 of the RIGL provides for the assessment of operating permit fees from air emissions sources, allows for DEM to assess preconstruction permit fees and establishes a general revenue reserve account within the general fund to finance the state clean air programs.</p> <p>RIAPCR No. 28, “Operating Permit Fees,” requires major sources to pay annual operating permit fees.</p> <p>The RI DEM “Rules and Regulations Governing the Establishment of Various Fees” sets forth permit fee requirements for air emissions sources and the legal authority to collect those fees.</p> <p>In addition to Federal funds and operating permit and preconstruction permit fees, RI DEM receives State funding to implement its air programs, including programs that apply to sources that are smaller than those that are required to obtain operating permits.</p> <p>Air pollution permits and enforcement orders issued by RI DEM are not subject to review or approval of any state board.</p> <p>All Rhode Island public officials and employees are subject to Rhode Island’s” Code of Ethics”, RIGL § 36-14, which includes conflict of interest requirements. RIGL § 36-14 is appended to this submittal for incorporation into the Rhode Island SIP.</p>

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<p>110(a)(2)(F) Stationary source monitoring and reporting</p>	<p>Establish a system to require stationary sources to monitor emissions and to submit periodic emissions reports and for the state to correlate those reports with emission limits and standards.</p>	<p>Section IV of the RI SIP sets forth an emissions surveillance program.</p> <p>APCR No. 6, “Continuous Emissions Monitors,” requires stationary sources specified in Title 40 of CFR Part 51, Appendix P, parts 1-5, “Minimum Emissions Monitoring Requirements,” to install, calibrate, operate, and maintain a continuous emission monitoring system and to record and report the total process operating time of the equipment for each calendar quarter to the RI DEM Office of Air Resources. Regulation No. 6 also specifies that RI DEM will use the resulting CEM data to determine compliance with applicable emission limits and/or operating and maintenance requirements and that the data collected must be kept for at least two years.</p> <p>APCR No. 9, “Air Pollution Control Permits,” allows RI DEM to require emissions testing of a permitted process within 180 days of initial startup and provides that preconstruction permits issued may contain emissions testing requirements. Additionally, the regulation allows RI DEM to require the use of instrumentation to monitor and record emission data. (9.6.2(b) & (f)(4))</p> <p>APCR No. 14 "Record Keeping and Reporting" requires emission sources to report annually emissions and other data to RI DEM.</p> <p>APCR No. 29, “Operating Permits” requires that all permits contain periodic monitoring sufficient to provide a reasonable assessment of the source’s compliance status and, where applicable, compliance assurance monitoring. All records and supporting information, including “all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit” must be retained for at least five years (29.6.4(a)(2)).</p>
<p>110(a)(2)(G) Emergency episodes</p>	<p>Provide for authority to address activities causing imminent and substantial endangerment of public health, including contingency plans to implement the</p>	<p>Section V of the RI SIP specifies RI DEM’s Emergency Episode Authority and Procedures.</p> <p>§ 23-23-16 of the RIGL allows the Director of RI DEM to order a source to</p>

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	emergency episode provisions of the SIP.	<p>cease operations if it is determined that emissions from the source pose an immediate danger to public health or safety.</p> <p>§ 23-23.1-5 of the RIGL sets forth specifications for the proclamation of air pollution episodes and issuance of orders. § 23-23.1-5 of § 23-23.1, Rhode Island’s "Air Pollution Episode Control Act" is appended to this document for incorporation into the SIP.</p> <p>RI APCR No. 10, “Air Pollution Episodes,” specifies criteria for calling and measures to be implemented during air pollution alerts, warnings and episodes.</p>
110(a)(2)(H) Future SIP revisions	States must have the authority to revise their SIPs in response to changes in the NAAQS, availability of improved methods for attaining the NAAQS, or in response to an EPA finding that the SIP is substantially inadequate.	§ 23-23-5 of the RIGL allows the Director of RI DEM to “make, issue, and amend rules and regulations for the prevention, control, abatement, and limitation of air pollution.”
110(a)(2)(J) Consultation with government officials, public notifications, PSD and visibility protection	Provide a process for consultation with local governments and Federal Land Managers concerning implementation of requirements necessary to attain the NAAQS and to ensure the prevention of significant deterioration of air quality and visibility protection. States must implement procedures to notify the public if a NAAQS is exceeded in an area and to enhance public awareness of measures that can be taken to prevent exceedances.	<p>§ 23-23-5 of the RIGL specifies that the RI DEM Director shall “advise and consult with agencies of the United States, agencies of the state, political subdivisions and industries and any other affected groups in furtherance of the purposes of this chapter.”</p> <p>RI APCR No. 9, “Air Pollution Control Permits,” sets for a procedure for public comment on proposed major source permits. That regulation specifies that notices of public comment periods must be, at a minimum, distributed to: the permit applicant, the Regional Administrator of the EPA, the chief executives of the city or town where the source would be located, any comprehensive regional land use planning agency, and any State, Federal Land Manager or Indian Governing Body whose lands may be affected by emissions from the proposed source.</p>

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		<p>RI APCR No. 10, “Air Pollution Episodes,” specifies criteria for and measures to be implemented during air pollution alerts, warnings and episodes.</p> <p>RI DEM’s website includes near real-time air quality data, air quality predictions and a record of historical data. Hourly data are also sent to EPA’s AIRNOW database and are used to prepare regional and national air quality maps. Alerts are sent by email to a large number of affected parties – emissions sources, concerned individuals, schools, health and environmental agencies and the media. Alerts include information about the health implications of elevated pollutant levels and list actions that reduce emissions.</p> <p>Air Quality Data Summaries summarizing the year’s air quality monitoring results are issued annually. The summaries are sent to a mailing list of interested parties and posted on the RI DEM website.</p> <p>APCR No. 9, “Air Pollution Control Permits,” specifies requirements for PSD and visibility protection.</p>
<p>110(a)(2)(K) Air quality modeling/data</p>	<p>Provide for air quality modeling for predicting effects on air quality of emissions from any NAAQS pollutant and submission of such data to EPA upon request.</p>	<p>APCR No. 9, “Air Pollution Control Permits,” requires the submittal of air quality modeling to evaluate the impacts of new and modified major sources on ambient air quality and specifies that the EPA must receive notice of the public comment period that is mandated prior to issuance of a major source permit.</p>
<p>110(a)(2)(L) Permitting fees</p>	<p>Require each major stationary source to pay permitting fees to cover the cost of reviewing, approving, implementing and enforcing a permit.</p>	<p>§ 23-23-5 of the RIGL provides for the assessment of operating permit fees and preconstruction permit fees for air emissions sources.</p> <p>RIAPCR No. 28, “Operating Permit Fees,” requires major sources to pay annual operating permit fees.</p>

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		<p>The RI DEM “Rules and Regulations Governing the Establishment of Various Fees” sets forth permit fee requirements for air emissions sources and the legal authority to collect those fees.</p>
<p>110(a)(2)(M) Consultation/ Participation by affected local entities</p>	<p>Provide for consultation and participation in SIP development by local political subdivisions affected by the SIP</p>	<p>§ 23-23-5 of the RIGL provides for the RI DEM Director to consult and cooperate with the cities and towns.</p>