

North Carolina Certification For Clean Air Act Section 110(a)(1) and (2) 2008 Lead (Pb) Requirements

Under the Clean Air Act (CAA), States must submit State Implementation Plans (SIPs) for areas designated as nonattainment for the National Ambient Air Quality Standards (NAAQS). Sections 110(a)(1) and (2) of the CAA require states to adopt and submit to the U. S. Environmental Protection Agency (USEPA) “infrastructure” SIPs that address basic program elements to implement, maintain, and enforce new or revised standards including requirements for emissions inventories, monitoring, and modeling among other elements. Each of the basic or infrastructure requirements is listed below along with the corresponding State rule or State statute implementing each SIP element. The State rules can be found on the North Carolina Division of Air Quality’s website (www.ncair.org). Attachment 2 contains the North Carolina General Statutes (NCGS) referenced in this document.

Emission limits and other control measures: Section 110(a)(2)(A) of the CAA requires SIPs to include enforceable emission limits and other control measures, means or techniques, schedules for compliance and other related matters. The ambient concentrations of lead are measured through analysis of particulate matter (PM) filters. Since the USEPA often uses PM as a surrogate for metals, North Carolina believes this requirement is satisfied in 15A North Carolina Administrative Code (NCAC) 2D .0500, “*Emission Control Standards*”, which establishes emission limits for PM. Additionally, the USEPA promulgated Maximum Available Control Technology regulations, which often uses PM as a surrogate for air toxics, are automatically adopted by North Carolina through 15A NCAC 2D .1111. The following rules address additional control measures, means and techniques:

- 15A NCAC 2D .0600 “*Monitoring: Recordkeeping: Reporting*”
- 15A NCAC 2D .1200 “*Control of Emissions from Incinerators*”
- 15A NCAC 2D .1600 “*General Conformity*”
- 15A NCAC 2D .1700 “*Municipal Solid Waste Landfills*”
- 15A NCAC 2D .2200 “*Special Orders*”
- 15A NCAC 2D .2600 “*Source Testing*”

NCGS 143-215.107(a)(5), *Air quality standards and classifications*, provides the North Carolina Environmental Management Commission (EMC) with the statutory authority, “To develop and adopt emission control standards as in the judgment of the Commission may be necessary to prohibit, abate, or control air pollution commensurate with established air quality standards.”

Ambient air quality monitoring/data system: Section 110(a)(2)(B) of the CAA requires SIPs to provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to monitor, compile, and analyze data on ambient air quality, and upon request, make such data available to the USEPA. The 2011 Annual Monitoring Network Plan for North Carolina Air Quality (submitted to the USEPA on June 30, 2011) provides for an

ambient air quality monitoring system in the State. This monitoring plan has been approved by the USEPA and addresses the lead monitoring requirement.

NCGS 143-215.107(a)(2), *Air quality standards and classifications*, provides the EMC with the statutory authority “To determine by means of field sampling and other studies, including the examination of available data collected by any local, State or federal agency or any person, the degree of air contamination and air pollution in the State and the several areas of the State.”

Programs for enforcement, Prevention of Significant Deterioration and New Source

Review: Section 110(a)(2)(C) of the CAA requires states to include a program to provide for the enforcement of the measures described in 110(a)(2)(A) and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program. The following rules address this element:

- 15A NCAC 2D .0500 “*Emission Control Standards*”, 2D .0530 “*Prevention of Significant Deterioration*” applies to the construction of any new major stationary source or any project at an existing major stationary source in an area designated as attainment or unclassifiable.
- 15A NCAC 2D .0531 “*Sources in Nonattainment Areas*” applies to the construction of any new major stationary source or major modification at an existing major stationary source in an area designated as nonattainment.
- 15A NCAC 2Q .0300 “*Construction and Operation Permits*”, requires stationary sources, prior to construction or operation, to have an air permit if the source is above an emission threshold or operates air pollutant control devices.
- 15A NCAC 2Q .0500 “*Title V Procedures*”, establishes an air quality permitting program as required under Title V and 40 CFR Part 70.

NCGS 143-215.108, *Control of sources of air pollution; permits required*, provides the EMC with the statutory authority to permit sources of air pollution. NCGS 143-215.107(a)(7), *Air quality standards and classifications*, provides the EMC with the statutory authority “To develop and adopt standards and plans necessary to implement programs for the prevention of significant deterioration and for the attainment of air quality standards in nonattainment areas.”

Interstate transport provisions: Section 110(a)(2)(D)(i) of the CAA requires SIPs to contain adequate provisions prohibiting any source or other type of emissions activity in one state from contributing significantly to nonattainment of the NAAQS or interfering with maintenance of the NAAQS.

The USEPA has stated in the lead infrastructure SIP guidance that the physical properties of lead prevent lead emissions from experiencing the same travel or formation phenomena as fine particulate matter or ozone. More specifically, there is a sharp decrease in lead concentrations, at least in the coarse fraction, as the distance from a lead source increases. Accordingly, while it

may be possible for a source in a state to emit lead in a location and in quantities that may contribute significantly to nonattainment in, or interfere with maintenance by, any other state, the USEPA anticipates that this would be a rare situation, e.g., where large sources are in close proximity to state boundaries. For example, the USEPA's experience with initial lead designations suggests that sources that emit less than 0.5 tons per year or that are located more than 2 miles from a state border generally appear unlikely to contribute significantly to nonattainment in another state.

There are two facilities in North Carolina that emit over 0.5 tons per year of lead; Blue Ridge Paper in Buncombe County, and Saint Gobain Containers in Wilson County. In 2009, Blue Ridge Paper reported emitting 0.59 tons of lead and Saint Gobain Containers reported emitting 0.84 tons of lead. Both of these facilities have demonstrated via modeling that they do not cause an exceedance of the standard. The modeling results indicate that ambient lead concentrations at and beyond the fence lines of these facilities are below 0.075 micrograms per cubic meter, or 50 percent of the standard. The modeling results were submitted to the USEPA as part of the 2011 monitoring plan, which has been approved by the USEPA. All other facilities are much smaller than 0.5 tons per year.

Through the lead modeling done to support the North Carolina 2011 Annual Monitoring Network Plan, North Carolina has demonstrated it meets the requirements of Section 110(a)(2)(D)(i) with respect to contributing to nonattainment or interfering with maintenance of the lead NAAQS.

Section 110(a)(2)(D)(i) also requires SIPs to contain adequate provisions prohibiting any source or other type of emissions activity in one state from interfering with measures required to prevent significant deterioration or interfering with the implementation of plans related to regional haze or visibility in another state. The following rules and SIP submittals address prevention of significant deterioration and regional haze:

- 15A NCAC 2D .0530 "*Prevention of Significant Deterioration*"
- 15A NCAC 2D .0531 "*Sources in Nonattainment Areas*"
- Regional Haze SIP submitted to the USEPA on December 17, 2007

Additionally, the USEPA issued a memorandum on November 17, 2011 regarding "The Estimated Contribution of Ambient Lead (Pb) to Class I Area Visibility Impairment." This memorandum concluded that the lead related visibility effects in Class I areas are insignificant in comparison to those associated with sulfate, nitrate and carbon PM.

Section 110(a)(2)(D)(ii) of the CAA requires SIPs to contain adequate provisions insuring compliance with the applicable requirements of Sections 115 or 126 that involve lead emissions relating to interstate and international pollution abatement. The following rules address the requirements of Section 126(a) which directs each SIP to include provisions requiring a new or modified source to notify neighboring states of potential impacts from the source:

- 15A NCAC 2D .0530 "*Prevention of Significant Deterioration*"
- 15A NCAC 2D .0531 "*Sources in Nonattainment Areas*"

According to the USEPA's lead infrastructure SIP guidance, unless a state is the subject of a Section 126(b) or 126(c) petition with respect to lead, the state has no continuing obligation under these sections. North Carolina is not the subject of a Section 126(b) or 126(c) petition. Since there are no pending USEPA actions pursuant to Section 115 of the CAA, there is no expectation that North Carolina would need to submit anything in regards to Section 115 at this time.

Adequate personnel, funding and authority: Section 110(a)(2)(E)(i) of the CAA requires states to provide for adequate personnel, funding and legal authority under State Law to carry out its SIP and related issues. 15A NCAC 2Q .0200 "*Permit Fees*", provides the mechanism by which stationary sources that emit air pollutants pay a fee based on the quantity of emissions emitted. The statutory authority to allow rule making and requiring permit fees can be found in NCGS 143-215.3 *General powers of Commission and Department; auxiliary powers*. Additionally, NCGS 143-215.107(a)(1) *Air quality standards and classifications*, provides the EMC with the statutory authority "To prepare and develop, after proper study, a comprehensive plan or plans for the prevention, abatement and control of air pollution in the State or in any designated area of the State." In general, the elements of 110(a)(2)(E)(i) are met when the USEPA performs a completeness determination for each SIP submittal. Each submittal provides for adequate personnel, funding, and legal authority under State law to carry out the SIPs and related issues. This information is contained in all final SIP submittal packages in the historical record of the rule.

Section 110(a)(2)(E)(ii) of the CAA requires that the state comply with the requirements of Section 128 "State Boards". Section 128 requires 1) any board or body which approves permits or enforcement orders shall have at least a majority of members who represent the public interest and do not derive any significant portion of their income from persons subject to permits or enforcement orders, and 2) any potential conflicts of interest by members of such boards or body or the head of an executive agency with similar powers be adequately disclosed.

The authority to issue permits and administrative enforcement actions resides with the North Carolina Department of Environment and Natural Resources (DENR). If a permit or enforcement action is formally contested, the parties will go before the North Carolina Office of Administrative Hearing (OAH). The OAH decision is brought before the EMC and the EMC makes the final decision before the controversy may be appealed to the General Courts of Justice.

The North Carolina General Statutes (§143B-283) defines the membership of the EMC and directs that 9 of the 13 members appointed by the Governor shall be persons who do not derive any significant portion of their income from persons subject to permits or enforcement orders as required by Section 128 of the CAA. However, the statute also allows 6 members to be appointed by the North Carolina General Assembly without any restriction. Regardless of the appointment, the members selected are subject to North Carolina's State Government Ethics Act (General Statutes, ch. 138A). In the State Government Ethics Act, the Ethics Commission reviews each

member's Statement of Economic Interest and determines whether there is a conflict of interest. Within 30 days of notice of the Commission's determination that a public servant has a disqualifying conflict of interest, the public servant must eliminate the interest that constitutes the disqualifying conflict of interest or resign from the public position. *See* N.C. Gen. Stat. §138A-39. So, although §143B-283 no longer defines a majority of the members appointed as persons who do not derive any significant portion of their income from persons subject to permits and enforcement orders, DENR believes that the EMC has always met the intent of Section 128 of the CAA through the requirements of the State Government Ethics Act.

In addition, recent changes in administrative law may eliminate the EMC's role in the adjudication of permitting and enforcement cases. North Carolina enacted legislation in 2011 (Session Law 2011-398) that removes final decision authority from the EMC for administrative cases commenced no later than June 15, 2012. Under the new law, OAH – not the EMC – will make the final decision on contested cases and parties may seek relief from the decision through judicial review at the Superior Court level.

On February 6, 2012, the USEPA conditionally approved subelement 110(a)(2)(E)(ii) for the 1997 8-hour ozone infrastructure SIP. This conditional approval requires North Carolina to address the subelement 110(a)(2)(E)(ii) SIP deficiency within one year. The submission of the SIP revision addressing subelement 110(a)(2)(E)(ii) for the 1997 8-hour ozone standard will also satisfy the requirement for the 2008 lead standard infrastructure SIP.

Section 110(a)(2)(E)(iii) of the CAA requires the state provide the necessary assurances where the state relied on a local or regional government for the implementation of any plan provision. The state has the responsibility for ensuring adequate implementation of such plan provisions. North Carolina has three local programs that implement the air program. These agencies are located in Buncombe, Forsyth, and Mecklenburg Counties. In order for all submittals to be deemed complete, all local and regional implementation plans must be submitted through the State agency to the USEPA.

Stationary source monitoring and reporting: Section 110(a)(2)(F) of the CAA requires states to establish a system to monitor emissions from stationary sources and to submit periodic emissions and emissions related data reports. The following State rules require monitoring of emissions from stationary sources:

- 15A NCAC 2D .0604 “*Exceptions to Monitoring and Reporting Requirements*”
- 15A NCAC 2D .0605 “*General Recordkeeping and Reporting Requirements*”
- 15A NCAC 2D .0611 “*Monitoring Emissions from Other Sources*”
- 15A NCAC 2D .0612 “*Alternative Monitoring and Reporting Procedures*”
- 15A NCAC 2D .0613 “*Quality Assurance Program*”
- 15A NCAC 2D .0614 “*Compliance Assurance Monitoring*”

15A NCAC 2Q .0207 “*Annual Emissions Reporting*” requires stationary sources to submit periodic emissions reports to the State. NCGS 143-215.107(a)(4) *Air quality standards and*

classifications, provides the EMC with the statutory authority “To collect information or to require reporting from classes of sources which, in the judgment of the [EMC], may cause or contribute to air pollution.”

Emergency episodes: Section 110(a)(2)(G) of the CAA requires states to provide for authority to address activities causing imminent and substantial endangerment to public health, welfare, or the environment, including contingency plans to implement the emergency episode provisions in their SIPs. 15A NCAC 2D .0300 “*Air Pollution Emergencies*” provides the means to implement emergency air pollution episode measures and is authorized under NCGS 143-215.3(a)(1). Although 15A NCAC 2D.0300 does not address lead specifically, this rule does address PM, which can be used as a surrogate for lead. Furthermore, the USEPA acknowledges that an event causing the implementation of such a contingency is unlikely, and that Federal regulations regarding emergency episodes do not apply specifically to lead. Additionally, under NCGS 143-215.3(a)(12) the DENR may declare an emergency when it finds that a generalized condition of air pollution which is causing imminent danger to the health or safety of the public. This statute also allows, in the absence of a generalized condition of air pollution, should the Secretary find “that the emissions from one or more air contaminant sources or the discharge of wastes from one or more sources of water pollution is causing imminent danger to human health and safety or to fish and wildlife, he may with the concurrence of the Governor order the person or persons responsible for the operation or operations in question to immediately reduce or discontinue the emissions of air contaminants or the discharge of wastes or to take such other measures as are, in his judgment, necessary.”

Future SIP revisions: Section 110(a)(2)(H) of the CAA requires states to 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 USEPA finding that the SIP is substantially inadequate. NCGS 143-215.107(a)(1) and (a)(10) provide the authority “To prepare and develop, after proper study, a comprehensive plan or plans for the prevention, abatement and control of air pollution in the State or in any designated area of the State” and “To develop and adopt standards and plans necessary to implement requirements of the federal Clean Air Act and implementing regulations adopted by the United States Environmental Protection Agency”, respectively.

Nonattainment area plan or plan revision under Part D: Section 110(a)(2)(I) of the CAA requires states to meet the applicable requirements of part D (relating to nonattainment areas) as plans or plan revisions for an area designated as a nonattainment area are submitted. This element is met as the USEPA performs a completeness determination for each SIP submittal to ensure all of the appropriate elements listed in part D of the CAA are addressed. NCGS 143-215.107(a)(10) provides the authority “To develop and adopt standards and plans necessary to implement requirements of the federal Clean Air Act and implementing regulations adopted by the United States Environmental Protection Agency”.

Consultation with government officials, public notification, PSD, and visibility protection: Section 110(a)(2)(J) of the CAA requires states to provide a process for consultation with local governments, designated organizations and federal land managers (FLMs) carrying out NAAQS implementation requirements pursuant to section 121 relative to consultation. 15A NCAC 2D .1600 “*General Conformity*” address the consultation requirements for the general conformity process. 15A NCAC 2D .0530 “*Prevention of Significant Deterioration*” and 15A NCAC 2D .0531 “*Sources in Nonattainment Areas*” address consultation requirements with the FLMs when permitting stationary sources. Additionally, the consultation process used to develop separate implementation plans are outlined in the plan submittal and provide for continued consultation with government officials. For example, the Regional Haze Implementation Plan submitted on December 17, 2007, discussed the consultation process between appropriate state, local, and tribal air pollution control agencies as well as the corresponding FLMs.

Section 110(a)(2)(J) of the CAA further requires states to notify the public if NAAQS are exceeded in an area and to enhance public awareness of measures that can be taken to prevent exceedances. NCGS 143.215.3(a)(12) allows DENR to declare an emergency when it finds that a generalized condition of air pollution which is causing imminent danger to the health or safety of the public.

Finally, section 110(a)(2)(J) of the CAA requires states to meet applicable requirements of Part C related to prevention of significant deterioration and visibility protection. These requirements are addressed through 15A NCAC 2D .0530 “*Prevention of Significant Deterioration*” and the regional haze implementation plan, submitted to the USEPA on December 17, 2007. Although the regional haze SIP has not been approved by the USEPA to date, it is expected to be approved by June 2012. Additionally, the USEPA issued a memorandum on November 17, 2011 regarding “The Estimated Contribution of Ambient Lead (Pb) to Class I Area Visibility Impairment.” The conclusions in this memorandum is that the lead related visibility effects in Class I areas are insignificant in comparison to those associated with sulfate, nitrate and carbon PM. NCGS 143-215.107(a)(7) provides the authority “To develop and adopt standards and plans necessary to implement programs for the prevention of significant deterioration and for the attainment of air quality standards in nonattainment areas.”

Air quality modeling/data: Section 110(a)(2)(K) of the CAA requires that SIPs provide for performing air quality modeling so that effects on air quality of emissions from NAAQS pollutants can be predicted and submission of such data to the USEPA can be made. All current attainment demonstrations submitted to the USEPA provide air quality modeling for the purpose of predicting the effect of emission sources on the ambient air quality. Additionally, 15A NCAC 2D .0530 “*Prevention of Significant Deterioration*” and 15A NCAC 2D .0531 “*Sources in Nonattainment Areas*” require that air modeling be conducted. NCGS 143-215.107(a)(4) provides the statutory authority for conducting air quality modeling.

Permitting fees: Section 110(a)(2)(L) of the CAA requires states to require each major stationary source to pay permitting fees to cover the costs of reviewing, approving,

implementing, and enforcing a permit. 15A NCAC 2Q .0200 "*Permit Fees*", provides the mechanism by which stationary sources that emit air pollutants pay a fee based on the type of permit and the quantity of emissions emitted. These fees cover the costs of reviewing, approving, implementing and enforcing a permit. The statutory authority to allow permit fees can be found in NCGS 143-215.3 *General powers of Commission and Department; auxiliary powers*.

Consultation/participation by affected local entities: Section 110(a)(2)(M) of the CAA requires states to provide for consultation and participation in SIP development by local political subdivision affected by the SIP. 15A NCAC 2D .0530 "*Prevention of Significant Deterioration*" requires that the Department notify the public of the application, preliminary determination, degree of incremental consumption, and the opportunity for comment prior to making a final permitting decision. All attainment demonstrations, redesignation demonstrations, and maintenance plans go through a public notification process prior to submittal to the USEPA for inclusion in the SIP. Additionally, the Regional Haze State Implementation Plan went through an extensive consultation process between appropriate state, local, and tribal air pollution control agencies as well as the corresponding FLMs. All State regulations go through the public review process as defined in the North Carolina Administrative Procedures Act (NCGS 150B-21.1 and 150B-21.2). Finally, the Division of Air Quality organizes stakeholder meetings to support SIP development and rule-making efforts.