

# The State of New Hampshire DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner



November 7, 2011

Mr. Curtis Spalding Regional Administrator U.S. Environmental Protection Agency, Region I 5 Post Office Square, Suite 100 Boston, MA 02109-3912

## Re: Certification of Adequacy for 2008 Lead Standard

Dear Administrator Spalding:

Enclosed for your review and approval is New Hampshire's certification of adequacy for the 2008 National Ambient Air Quality Standard (NAAQS) for lead.

Under sections 110(a)(1) and (2) of the Clean Air Act (Act), after promulgation of a new or revised NAAQS, each state is required to submit a plan to provide for the implementation, maintenance, and enforcement of the NAAQS. States are required to address basic state implementation plan (SIP) requirements, including emissions inventories, monitoring, and modeling, to assure attainment and maintenance of the standards. By statute, SIPs required by sections 110(a)(1) and (2) are to be submitted by states within 3 years after promulgation of a new or revised standard. EPA advises that these section 110(a) "infrastructure" SIPs are due 3 years from the date of signature of the NAAQS, as this represents widespread dissemination and, therefore, promulgation of the NAAQS under 307(d) of the Act. For the 2008 lead standard, the due date was October 15, 2011. New Hampshire was prepared to submit this certification by that date but decided to wait until staff had the opportunity to review EPA's guidance, which was issued on October 14, 2011.

The New Hampshire SIP was originally submitted to EPA on January 27, 1972, and has undergone numerous revisions since that date. For instance, New Hampshire submitted a lead infrastructure SIP on April 15, 1980, which it supplemented with additional information on procedures for reviewing new major sources of lead emissions and reference methods to be used. This SIP amendment was approved by EPA on July 15, 1981.

New Hampshire's EPA-approved SIP, which is published in the Code of Federal Regulations at 40 CFR 52 Subpart EE, explicitly fulfills most of the requirements of sections 110(a) (1) and (2). Other section 110(a) (1) and (2) requirements are fulfilled in applicable chapters and parts from the New Hampshire Revised Statutes Annotated (RSA) pertaining to the duties and powers of the Commissioner of the Department of Environmental Services (DES) and in applicable chapters and parts from the New Hampshire Rules Governing the Control of Air Pollution, NH Administrative Rules Env-A 100 *et seq.* 

There are fourteen elements within sections 110(a) (1) and (2) that New Hampshire is required to meet in the certification of adequacy. The specific statutes and administrative rules of the New Hampshire program that address those elements are identified in the attached table. Please note that New Hampshire is in the process of readopting Chapter Env-A 300, Ambient Air Quality Standards, and will issue the revised chapter by July 1, 2012. Until that time, DES will issue permits based on compliance with the NAAQS for lead.

If you have any questions, please contact me at (603) 271-1088 or Charlie Martone of my staff at (603) 271-1089.

Sincerely,

Robert R. Scott Director, Air Resources Division

cc:

Dave Conroy, EPA Region I Anne Arnold, EPA Region I

# Certification of State Implementation Plan Adequacy Regarding Clean Air Act Section 110(a)(1) and (2) for Lead (Pb)

# November 7, 2011

Prepared by

# The New Hampshire Department of Environmental Services



**Air Resources Division** 

# Certification of New Hampshire's State Implementation Plan Adequacy Regarding Clean Air Act Sections 110(a)(1) and (2) for Lead (Pb)

### Purpose

This document provides certification to the U.S. Environmental Protection Agency (EPA) that New Hampshire's State Implementation Plan (SIP) for air quality meets the "infrastructure" requirements of sections 110(a)(1) and (2) of the Clean Air Act (CAA) for lead (Pb).

On October 15, 2008, EPA revised the primary and secondary Pb NAAQS from 1.5 micrograms per cubic meter ( $\mu$ g/m<sup>3</sup>) to 0.15  $\mu$ g/m<sup>3</sup>. Pursuant to sections 110(a)(1) and 110(a)(2) of the CAA, each State is required to submit a plan to provide for the implementation, maintenance, and enforcement of a newly promulgated or revised NAAQS. The CAA directs states to address basic SIP requirements to ensure attainment and maintenance of the NAAQS. The CAA provides that states are to submit SIPs addressing the requirements of sections 110(a)(1) and 110(a)(2) within three years of promulgation of a new or revised standard.<sup>1</sup>

Accordingly, states are required to review and revise, as appropriate, their existing Pb NAAQS SIPs to ensure that the SIPs are adequate to address the new NAAQS. The applicable EPA regulations governing SIP submittals (40 CFR Part 51) include but are not limited to:

- Subpart I Review of New Sources and Modifications
- Subpart J Ambient Air Quality Surveillance
- Subpart K Source Surveillance
- Subpart L Legal Authority
- Subpart M Intergovernmental Consultation
- Subpart O Miscellaneous Plan Content Requirements
- Subpart P Protection of Visibility
- Subpart Q Reports.

Many of the section 110(a)(2) SIP elements relate to the general information and authorities that constitute the "infrastructure" of a state's air quality management program, and these have been in place since the initial SIPs were submitted in response to the 1970 CAA. To the extent that elements of a state's existing approved infrastructure SIP meet the requirements of sections 110(a)(1) and (2) for the 2008 Pb NAAQS, the SIP submission may cite the applicable provisions in the existing SIP and show how compliance with each such element is achieved.

Section 110(a)(2) of the CAA directs all states to develop and maintain an air quality management infrastructure that includes enforceable emission limitations, an ambient monitoring program, an enforcement program, air quality modeling capabilities, and adequate personnel, resources, and legal authority. Section 110(a)(2)(D) also directs SIPs to prevent emissions from within the state that contribute significantly to nonattainment in any other state, or that interfere with maintenance in any other state, or that interfere with programs under part C of the CAA to prevent significant deterioration of air quality or to protect visibility in any other state.

<sup>1</sup> Although the effective date of the Federal Register notice for the final rule was January 12, 2009, the rule was signed by the Administrator and publicly disseminated on October 15, 2008. Therefore, EPA has stated that the deadline for submittal of infrastructure SIPs for the 2008 Pb NAAQS is October 15, 2011. http://www.epa.gov/oaqps001/lead/fr/20081112.pdf

#### Background

The Clean Air Act requires EPA to set national ambient air quality standards (NAAQS) for "criteria pollutants," which are lead, ozone, nitrogen oxides, carbon monoxide, sulfur oxides, and particulate matter. The law also requires EPA to periodically review the standards and revise them, if appropriate, to ensure that they provide the requisite amount of health and environmental protection.

On October 15, 2008, EPA substantially strengthened the NAAQS for lead, making them 10 times more stringent than the previous (1978) standards. The revised primary (health-based) standard of  $0.15 \ \mu g/m^3$  will improve health protection for at-risk groups, especially children. Like the previous NAAQS, the new standard will be measured as the concentration of lead in total suspended particulate (TSP), reflecting evidence that lead particles of all sizes pose potential health risks.

EPA revised the secondary (welfare-based) standard to be identical in all respects to the primary standard.

Lead is a metal found naturally in the environment and is present in some manufactured products. The major sources of lead air emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Motor vehicle emissions have been dramatically reduced with the phase-out of leaded gasoline, but lead is still used as an additive in general aviation gasoline used in piston-engine aircraft and remains a trace contaminant in other fuels.

Larger industrial sources of lead emissions currently include metals processing, particularly primary and secondary lead smelters. Lead is also emitted from industries such as iron and steel foundries; primary and secondary copper smelting; industrial, commercial, and institutional boilers; waste incinerators; glass manufacturing; and cement manufacturing.

The United States has made tremendous progress in reducing lead concentrations in the ambient air. Nationwide, average concentrations of lead in the air have dropped nearly 94 percent between 1980 and 2007. Much of this dramatic improvement occurred as a result of the permanent phaseout of lead in non-aviation gasoline.

Another indicator of progress in the reduction of airborne lead in the environment is the drop in children's blood lead levels over time. Since the late 1970s, average blood lead concentration for children aged 1 to 5 have dropped significantly, from about 15 micrograms per deciliter ( $\mu$ g/dL) to less than 2  $\mu$ g/dL. However, new studies show that health effects occur even at very low blood lead levels.

The revised standards are based on EPA's review of more than 6,000 studies published since 1990 on lead health effects, environmental effects, and lead in the air. Evidence from health studies shows that adverse effects occur at much lower levels of lead in blood than previously thought. Children are particularly vulnerable to the effects of lead. Exposures to low levels of lead early in life have been linked to effects on IQ, learning, memory, and behavior. There is no known safe level of lead in the body.

Similarly, a significant number of new studies conducted since 1978 show an association between lead pollution and adverse effects on organisms and ecosystems. However, there was insufficient evidence linking various effects to specific levels of lead in the air for EPA to select a different level for the secondary lead standard at this time.

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# Overview of How New Hampshire's Program Satisfies the CAA<sup>2</sup> Section 110(a)(1) and (2) SIP Requirements for Lead (Pb)

CAA Section and SIP Requirement	New Hampshire Program	Comment
110(a)(2)(A) Emission limits and other control measures	<b>RSA 21-O Department of Environmental Services</b> and <b>RSA 125-C Air Pollution Control.</b> Powers of the Commissioner. Regulations. Fees. General Permits.	
"include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as	New Hampshire Code of Administrative Rules, Department of Environmental Services: The following chapters and parts have general and specific applicability to sources of lead, including sources of particulate matter that contain lead:	
well as schedules and timetables for compliance as may be necessary or appropriate to meet	CHAPTER Env-A 300 Ambient Air Quality Standards, eff. 2-28-04	Because lead is normally associated
the applicable requirements of this Act;"	<ul> <li>- Part Env-A 303 Primary and Secondary Ambient Air Quality Standards for Particulate Matter<sup>3</sup></li> </ul>	with PM, control of the latter is relevant to
	<ul> <li>- Part Env-A 308 Primary and Secondary Ambient Air Quality Standards for Lead<sup>3</sup></li> </ul>	control of lead emissions.
Blue font signifies NH rules with provisions specific to lead.	CHAPTER Env-A 500 Standards Applicable to Certain New or Modified Facilities and Sources of Hazardous Air Pollutants, eff. 1-23-10	
	- Part Env-A 503 New Source Performance Standards	
Green font signifies NH rules without provisions specific to lead but with provisions for particulate	CHAPTER Env-A 600 Statewide Permit System, eff. 4-26-03	
matter that may contain lead.	<ul> <li>- Part Env-A 606 Air Pollution Dispersion Modeling Impact Analysis Requirements, amend. 10-1-10</li> </ul>	
	<ul> <li>- Part Env-A 619 Prevention of Significant Deterioration (PSD) of Air Quality Permit Requirements, amend. 12-21-10</li> </ul>	
	CHAPTER Env-A 700 Permit Fee System, eff. 4-26-11	
	- Part Env-A 702 Application Review and Modeling Fees	
	- Part Env-A 703 Permit Review Fees	
	<ul> <li>Part Env-A 704 Testing and Monitoring Fees for Temporary Permits</li> </ul>	
	- Part Env-A 705 Emission-Based Fee	
	CHAPTER Env-A 800 Testing And Monitoring Procedures, eff. 10-31-10	
	<ul> <li>Part Env-A 802 Compliance Stack Testing for Stationary Sources</li> </ul>	
	- Part Env-A 808 Continuous Emission Monitoring	
	- Part Env-A 809 Approval of Alternate Methods	
· · · ·	- CONTINUED	

 <sup>2</sup> CAA refers to the Clean Air Act. Other abbreviations are as follows: CFR refers to the U.S. Code of Federal Regulations. RSA refers to the New Hampshire Revised Statutes Annotated. Env-A refers to the Administrative Rules Governing the Control of Air Pollution of the New Hampshire Department of Environmental Services NHDES refers to the New Hampshire Department of Environmental Services.
 <sup>3</sup> Standards are being revised to conform to 2008 NAAQS and should be final by July 1, 2012.

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CAA Section and SIP Requirement	New Hampshire Program	Comment	
	CONTINUED -		
	CHAPTER Env-A 1900 Incinerators and Wood Waste Burners (formerly Part Env-A 1201), eff. 2-26-05		
	<ul> <li>- Part Env-A 1904 Particulate Matter Emission Standards for Incinerators and Wood Waste Burners</li> </ul>		
	CHAPTER Env-A 2000 Fuel Burning Devices (formerly Part Env-A 1202), eff. 4-23-05		
·	- Subparts Env-A 2002.06 thru 2002.10 Particulate Emission Standards for Fuel Burning Devices		
	CHAPTER Env-A 2100 Particulate Matter and Visible Emissions Standards (formerly Part Env-A 1203), eff. 11-24-04		
	CHAPTER Env-A 2400 Ferrous and Non-Ferrous Foundries, Smelters, and Investment Casting Operations (formerly Env-A 1206), eff. 11-24-04	For lead smelters, limits SO <sub>2</sub> emissions as proxy for lead.	
	CHAPTER Env-A 3300 Municipal Waste Combustion, eff. 2-2-08	Specifies Pb emission limits.	
	CHAPTER Env-A 3500 Hospital/Medical/Infectious Waste Incineration, eff. 1-5-07	Specifies Pb emission limits.	
	CHAPTER Env-A 4300 Other Solid Waste Incineration, eff. 1-5-07	Specifies Pb emission limits.	
<ul> <li>110(a)(2)(B) Ambient air quality monitoring/data system</li> <li>"provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to –</li> <li>(i) monitor, compile, and analyze data on ambient air quality, and</li> <li>(ii) upon request, make such data available to the Administrator;"</li> </ul>	<ul> <li>40 CFR Part 58 Ambient Air Quality Surveillance: New Hampshire prepares and submits an annual Air Monitoring Network Plan. NHDES collects and reports ambient air quality data for O<sub>3</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO, PM<sub>10</sub> and PM<sub>2.5</sub>. Air quality data for Pb will be included in 2012. The data are reviewed and validated before being sent to the EPA air quality system, no later than 90 days after the end of a calendar quarter.</li> <li>RSA 125-C:6 Powers and Duties of the Commissioner:</li> <li>RSA 125-C:6, IV authorizes the Commissioner to collect and disseminate the results of studies relating to air quality.</li> <li>RSA 125-C:6, V authorizes the Commissioner to consult and cooperate with agencies of the federal government.</li> <li>RSA 125-C:6, XVI authorizes the Commissioner to establish an air quality monitoring equipment replacement program to provide for sufficient annual replacement to meet federal Environmental Protection Agency guidelines and to assure the reliability and accuracy of the network equipment.</li> </ul>	NHDES submitted a 2011/2012 annual network review and plan to EPA on June 21, 2011. New Hampshire has a single Pb monitor, installed at an NCore site in Londonderry. Monitoring for Pb will begin at this location by January 1, 2012.	

CAA Section and SIP Requirement	New Hampshire Program Comment				
110(a)(2)(C) Program for	RSA 125-C:4 Rulemaking Authority; Subpoena Power:	These statutes			
enforcement of control measures	<ul> <li>- RSA 125-C:4, I authorizes rulemaking to control emissions and establish a permit program.</li> </ul>	(RSAs) establish legal authority for the enforcement of New			
the enforcement of the measures described in subparagraph (A), and regulation of the modification and	<b>RSA 125-C:11 Permit Required</b> provides for a permit program, permits with enforceable emission limits, and emission control measures	Hampshire Rules Governing the Control of Air Pollution			
construction of any stationary	RSA 125-C:15 Enforcement:	(Env-A 100 - 4800).			
source within the areas covered by the plan as necessary to assure that national ambient air quality	- <b>RSA 125-C:15, I</b> authorizes NHDES to issue orders to correct violations RSA 125-C.				
standards are achieved, including a permit program as required in parts	- <b>RSA 125-C:15, I-b, II, III and IV</b> provide for penalties for violations of RSA 125-C.				
	CHAPTER Env-A 600 Statewide Permit System, eff. 4-26-03, and amend. 10-1-10, 12-21-10				
	- <b>Part Env-A 619</b> Prevention of Significant Deterioration (PSD) of Air Quality Permit Requirements				
<ul> <li>110(a)(2)(D) Interstate transport</li> <li>"contain adequate provisions –</li> <li>(i) prohibiting, consistent with the provisions of this title, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will</li> <li>(I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard, or</li> <li>(II) interfere with measures required to be included in the applicable implementation plan for any other State under part C to prevent significant deterioration of air quality or to protect visibility,</li> <li>(ii) insuring compliance with the applicable requirements of sections 126 and 115 (relating to interstate and international pollution abatement);"</li> </ul>	<ul> <li>Revision to the New Hampshire State Implementation Plan: SIP revision addressing interstate air pollution transport to fulfill the requirements of CAA section 110(a)(2)(D)(i).</li> <li>RSA 125-C:6. XV and Part Env-A 619 address the prevention of significant deterioration (PSD) of ambient air quality in relation to interstate transport of pollutants and protection of air quality in Class I international parks – see program description for CAA section 110(a)(2)(J).</li> <li>CHAPTER Env-A 600 Statewide Permit System, eff. 4-26-03, and amend. 10-1-10, 12-21-10</li> <li>Part Env-A 619 Prevention of Significant Deterioration (PSD) of Air Quality Permit Requirements</li> </ul>	NHDES submitted this plan to EPA on March 11, 2008. New major sources and modifications of major sources are subject to Env-A 619. Notification requirements of New Hampshire's PSD program are relevant. New Hampshire has no Pb sources within two miles of the NH border that meet or exceed EPA's 0.5 ton-per-year guidance on significant contribution and no single source large enough to cause ambient Pb concentrations to approach the			
		technical attachment to Pb designation request letter, October 15, 2009.)			

CAA Section and SIP Requirement	New Hampshire Program	Comment
<ul> <li>110(a)(2)(E) Adequate resources</li> <li>"provide – <ul> <li>(i) necessary assurances that the State (or, except where the Administrator deems inappropriate, the general purpose local government or governments, or a regional agency designated by the State or general purpose local governments for such purpose) will have adequate personnel, funding, and authority under State (and, as appropriate, local) law to carry out such implementation plan (and is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof),</li> <li>(ii) requirements that the State comply with the requirements respecting State boards under section 128, and</li> <li>(iii) necessary assurances that, where the State has relied on a local or regional government, agency, or instrumentality for the implementation of any plan provision, the State has responsibility for ensuring adequate implementation of such plan provision;"</li> </ul> </li> </ul>	<ul> <li>RSA 125-C:6 Powers and Duties of the Commissioner authorizes the NHDES Commissioner to enforce the state's air laws, establish a permit program, accept and administer grants, and exercise all incidental powers necessary to carry out the law.</li> <li>RSA 125-C:12 Administrative Requirements authorizes the Commissioner to collect fees to recover the costs of reviewing and acting upon permit applications and enforcing the terms of permits issued.</li> <li>The State of New Hampshire Air Quality Implementation Plan (SIP), as originally submitted on January 27, 1972, and subsequently amended, describes the existing organizations, manpower, funding, and physical resources to carry out the plan.</li> <li>RSA 21-O:11 Air Resources Council establishes the NH Air Resources Council, a state board that has the authority to hear enforcement and permit appeals. The Council consists of 11 members, 6 of whom must represent the public interest. Those representing the public interest may not derive any significant portion of their income from persons subject to permits or enforcement orders, and may not serve as attorney for, act as consultant for, serve as officer or director of, or hold any other official or contractual relationship with any person subject to permits or enforcement orders.</li> </ul>	NHDES is the principal agency responsible for carrying out the provisions of New Hampshire's SIP. In FY 2011-2012, total EPA funding support for NHDES's Air Resources Division equals 35% of ARD's operating budget.
<ul> <li>110(a)(2)(F) Stationary source emissions monitoring and reporting</li> <li>"require, as may be prescribed by the Administrator – <ul> <li>(i) the installation, maintenance, and replacement of equipment, and the implementation of other necessary steps, by owners or operators of stationary sources to monitor emissions from such sources,</li> <li>(ii) periodic reports on the nature and amounts of emissions and emissions-related data from such sources, and</li> <li>(iii) correlation of such reports by the State agency with any emission limitations or standards established pursuant to this Act, which reports shall be available at reasonable times for public inspection;"</li> </ul> </li> </ul>	<ul> <li>RSA 125-C:6 Powers and Duties of the Commissioner authorizes the Commissioner to require owners or operators of stationary sources to install, maintain, and use emission monitoring devices and to make periodic reports to the Commissioner on the nature and amounts of emissions from such stationary sources. The Commissioner shall have the authority to make such data available to the public and to require as necessary correlation with any applicable emission standards.</li> <li>CHAPTER Env-A 800 Testing and Monitoring Procedures, eff. 10-31-10, establishes minimum testing and monitoring procedures, calculation procedures, standards, and requirements in order to determine compliance with applicable state and federal statutes and rules. Applicable parts include:</li> <li>Part Env-A 808 Continuous Emission Monitoring</li> <li>Part Env-A 809 Approval of Alternate Methods</li> </ul>	

CAA Section and SIP Requirement	A Section and Requirement New Hampshire Program					
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	<b>CHAPTER Env-A 900 Owner or Operator Recordkeeping</b> <b>and Reporting Obligations</b> , eff. 4-21-07, establishes the requirement that records be kept at sources which discharge air pollutants so that the emissions of such pollutants may be readily calculated or estimated and reported to NHDES for the purposes of demonstrating compliance, compiling emission inventories, and developing air related strategic plans. Applicable parts include:					
	- Part Env-A 902 Availability of Records	•				
	<ul> <li>- Part Env-A 903 General Recordkeeping Requirements, amend. 10-1-10</li> </ul>					
	- Part Env-A 906 Additional Recordkeeping Requirements					
	<ul> <li>- Part Env-A 907 General Reporting Requirements, amend. 10-1-10</li> </ul>					
	- Part Env-A 910 Additional Reporting Requirements					
	<ul> <li>Part Env-A 911 Recordkeeping and Reporting Requirements for Permit Deviations</li> </ul>					
	- Part Env-A 912 Alternative Time Periods					
	Under RSA 125-C:6, VII, emission data is not considered confidential information.					
110(a)(2)(G) Emergency power	RSA 125-C:4 Rulemaking Authority; Subpoena Power:					
"provide for authority comparable to that in section 303 and adequate contingency plans to implement	- <b>RSA 125-C: 4, I(c)</b> requires the Commissioner to adopt rules relative to "procedures to meet air pollution emergencies, as authorized by RSA 125-C:9."	Based on a review of NH's sources of lead and historic ambient monitoring data,				
such authority;"	RSA 125-C:9 Authority of the Commissioner in Cases of Emergency states: "Whenever the commissioner finds that an air pollution emergency exists requiring immediate action to protect the public health, welfare, or safety, he may with consent of the governor and council issue an order reciting the existence of such an emergency and requiring that such action be taken as he deems necessary to meet the emergency. Such order shall be effective immediately. Any person to whom such an order is directed shall comply therewith. The commissioner shall rescind or abate such order as soon as the emergency ceases to exist."	NHDES does not believe that a more specific contingency plan is needed to adequately respond to any lead emergency events.				
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CAA Section and SIP Requirement	New Hampshire Program	Comment
110(a)(2)(H) Future SIP revisions "provide for revision of such plan – (i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditious methods of attaining such standard, and (ii) except as provided in paragraph (3)(C), whenever the Administrator finds on the basis of information available to the Administrator that the plan is substantially inadequate to attain the national ambient air quality standard which it implements or to otherwise comply with any additional requirements established under this Act;"	RSA 125-C:6 Powers and Duties of the Commissioner states: "In addition to the other powers and duties granted herein, the commissioner shall have and may exercise the following powers and duties: II. Developing a comprehensive program and provide services for the study, prevention and abatement of air pollution" In addition to this legal authority, CHAPTER Env-A 200 Procedural Rules, Part Env-A 204 Public Hearings on the State Implementation Plan, eff. 7-28-04, provides procedures for State Implementation Plan hearings.	
110(a)(2)(I) Nonattainment areas "in the case of a plan or plan revision for an area designated as a nonattainment area,"	-	Not applicable to infrastructure SIPs per EPA guidance.
110(a)(2)(J) Consultation with government officials "meet the applicable requirements of section 121 (relating to consultation),"	<ul> <li>RSA 125-C:6 Powers and Duties of the Commissioner states: "In addition to the other powers and duties granted herein, the commissioner shall have and may exercise the following powers and duties:</li> <li>V. Advising, consulting, and cooperating with the cities and towns and other agencies of the state, federal government, interstate agencies, and other affected agencies or groups in matters relating to air quality;</li> <li>VI. Encouraging local units to promote cooperation by the people, political subdivisions, industries, and others in preventing and controlling air pollution in the state;</li> <li>XIII. Coordinating and regulating the air pollution control programs of political subdivisions to plan or implement programs for the control and abatement of air pollution"</li> <li>CHAPTER Env-A 600 Statewide Permit System:</li> <li>Part Env-A 621 Permit Notice and Hearing Procedures: Temporary Permits and Permits to Operate, eff. 7-28-04</li> <li>, specifies the public notice and hearing procedures that apply to all applications for the issuance of, amendment to, or denial of temporary permits, eff. 7-28-04, amend. 10-1-10, specifies the public notice and hearing procedures: Title V Operating Permits, eff. 7-28-04, amend. 10-1-10, specifies the public notice and hearing procedures that apply to all application to or renewal of Title V operating permits files with the department and all requests for Title V operating permits re-openings.</li> </ul>	

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CAA Section and SIP Requirement	New Hampshire Program	Comment		
110(a)(2)(J) Public notification "meet the applicable requirements ofsection 127 (relating to public	<b>RSA 125-C:6 Powers and Duties of th</b> Commission r states: "In addition to the other powers and duties granted herein, the commissioner shall have and may exercise the following powers and duties:			
notification),…"	IV. Collecting and disseminating the results of studies relating to air quality;			
	V. Advising, consulting, and cooperating with the cities and towns and other agencies of the state, federal government, interstate agencies, and other affected agencies or groups in matters relating to air quality;			
	VI. Encouraging local units to promote cooperation by the people, political subdivisions, industries, and others in preventing and controlling air pollution in the state;"			
	In implementing this authority, NHDES issues press releases and posts warnings on its website, advising people what they can do help prevent NAAQS exceedances and avoid adverse health effects of poor quality air days.			
	NHDES is one of the state partners participating in EPA's AIRNOW and Enviroflash Air Quality Alert programs.			
110(a)(2)(J) PSD and visibility protection "meet the applicable requirements ofpart C (relating to prevention of significant deterioration of air quality and visibility protection);"	RSA 125-C:6 Powers and Duties of the Commissioner states: "In addition to the other powers and duties granted herein, the commissioner shall have and may exercise the following powers and duties: XV. Implementing a program of prevention of significant deterioration of ambient air quality by establishing air quality increments limiting the maximum allowable increases in the amounts of air pollutants provided such increments are not less stringent than those specified in the Clean Air Act and amendments thereto, and in regulations promulgated thereunder;"	Provisions related to visibility protection are not applicable to establishment of a new primary NAAQS per EPA guidance.		
	CHAPTER Env-A 600 Statewide Permit System, Part Env-A 619, eff. 4-26-03, amend. 10-1-10, 12-21-10, Prevention of Significant Deterioration (PSD) of Air Quality Permit Requirements addresses the PSD of air quality and visibility protection, in compliance with the requirements of 40 CFR 51.166, 40 CFR 52.21 and RSA- 125-C.	EPA has not promulgated new PSD requirements relating to lead. Should it do so, NHDES will adopt them as soon as possible.		
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CAA Section and SIP Requirement	New Hampshire Program	Comment
110(a)(2)(K) Air quality	RSA 125-C:4 Rulemaking Authority; Subpoena Power:	
modeling/data "provide for – (i) the performance of such air quality modeling as the	- <b>RSA 125-C: 4, I(a)</b> requires the Commissioner to adopt rules relative to "the prevention, control, abatement, and limitation of air pollution, including, but not limited to, open air source pollution, mobile source pollution, and stationary source pollution."	
Administrator may prescribe for the purpose of predicting the effect on	RSA 125-C:6 Powers and Duties of the Commissioner:	
ambient air quality of any emissions of any air pollutant for which the Administrator has established a	- <b>RSA 125-C:6, I</b> authorizes the Commissioner to <b>e</b> xercise general supervision of the administration and enforcement of New Hampshire's air pollution control laws.	
(ii) the submission, upon request,	<ul> <li>- RSA 125-C:6, II authorizes the Commissioner to develop a comprehensive program and provide services for the study, prevention, and abatement of air pollution.</li> </ul>	
modeling to the Administrator;"	<ul> <li>- RSA 125-C:6, III authorizes the Commissioner to conduct and encourage studies relating to air quality.</li> </ul>	
	<ul> <li>- RSA 125-C:6, IV authorizes the Commissioner to collect and disseminate the results of studies relating to air quality.</li> </ul>	
	<ul> <li>- RSA 125-C:6, V authorizes the Commissioner to consult and cooperate with agencies of the federal government.</li> </ul>	
	<ul> <li>- RSA 125-C:6, X authorizes the Commissioner to exercise all incidental powers necessary to carry out the purposes of New Hampshire's air pollution control laws.</li> </ul>	
	CHAPTER Env-A 600 Statewide Permit System:	
	- Part Env-A 606 Air pollution Dispersion Modeling Impact Analysis Requirements, eff. 4-26-03, specifies the air pollution dispersion modeling impact analysis requirements that shall apply to owners and operators of certain sources and devices in order to demonstrate compliance with the New Hampshire State Implementation Plan, RSA 125-C, RSA 125-I, and any rules adopted thereunder.	
110(a)(2)(L) Permitting fees	RSA 125-C:4 Rulemaking Authority; Subpoena Power:	
"require the owner or operator of each major stationary source to pay to the permitting authority, as a	- <b>RSA 125-C: 4, I(i)</b> requires the Commissioner to adopt rules relative to "fees for permit application and review, as authorized by RSA 125-C:12, IV-d."	
condition of any permit required	RSA 125-C:12 Administrative Requirements states:	
<ul> <li>(i) the reasonable costs of reviewing and acting upon any application for such a permit, and</li> </ul>	"IV. As a condition of any permit or authorization required or any requested applicability determination, the commissioner may require payment of a fee to cover the reasonable costs of reviewing and acting upon the application for a permit	
(ii) if the owner or operator receives a permit for such source, the reasonable costs of implementing	IV-a. The applicant shall pay any cost or expense associated with public notices or notifications in the permit process.	
and enforcing the terms and conditions of any such permit (not including any court costs or other costs associated with any enforcement action), until such fee requirement is superseded with respect to such sources by the	IV-b. As a condition of any permit or authorization required, the commissioner may require payment of an annual emissions fee sufficient to cover the costs of implementing or enforcing the permit program authorized by this chapter including:	
Administrator's approval of a fee		

Page	12
ruge	14

SIP Requirement	New Hampshire Program	Comment
	CONTINUED -	
	<ul> <li>(a) The costs of reviewing and acting upon any permit renewal;</li> <li>(b) Emissions and ambient monitoring, for those costs incurred under the permitting program;</li> <li>(c) Preparing generally applicable rules or guidance;</li> <li>(d) Modeling, monitoring, analyses, and compliance demonstrations;</li> <li>(e) Preparing inventories and tracking emissions; and</li> <li>(f) Inspections and enforcement.</li> </ul>	
	IV-c. In lieu of the annual emissions fee specified in paragraph IV-b, as a condition of any permit or authorization required, the commissioner may require payment of a one- time fee sufficient to cover the costs of implementing or enforcing the permit program authorized by this chapter including the provisions specified in paragraph IV-b.	
·	IV-d. The commissioner shall adopt rules relative to a fee schedule for applicants and the collection of fees under the schedule. All fees and monetary grants, gifts, donations, or interest generated by these funds shall be deposited with the state treasurer in a special nonlapsing fund to be known as the air resources fund and shall be continually appropriated to the department for the administration of this chapter.	
	V. Fees required to be collected from affected sources by the Clean Air Act as authorized under this section shall be deposited in the air resources fund, shall be accounted for separately, and shall be used by the commissioner for the establishment and operation of a statewide system of permitting for the construction, operation, or modification of any new or existing affected source."	•
	<b>CHAPTER Env-A 700 Permit Fee System</b> , eff. 4-26-11: The purpose of this chapter is to establish a fee system requiring the payment of fees to cover the reasonable direct and indirect costs of: reviewing and acting upon applications for the issuance of, amendment to, modification to, renewal of, or any combination of the foregoing actions to a temporary permit, state permit to operate, or Title V operating permit; implementing and enforcing the terms and conditions of any temporary permit, state permit to operate, or Title V operating permit; administering the state permit program; and developing, implementing and administering the Title V operating permit program. In particular, Env-A 705 establishes the emission fee program for Title V and non-Title V sources.	

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CAA Section and SIP Requirement	New Hampshire Program Comment					
110(a)(2)(M) Consultation and participation by affected local entities	<b>RSA 125-C:6 Powers and Duties of the Commissioner</b> states: "In addition to the other powers and duties granted herein, the commissioner shall have and may exercise the following powers and duties:	NHDES is the principal agency responsible for carrying out the				
"provide for consultation and participation by local political subdivisions affected by the plan."	V. Advising, consulting, and cooperating with the cities and towns and other agencies of the state, federal government, interstate agencies, and other affected agencies or groups in matters relating to air quality; VI. Encouraging local units to promote cooperation by the people, political subdivisions, industries, and others in preventing and controlling air pollution in the state; XIII. Coordinating and regulating the air pollution control programs of political subdivisions of the state and entering agreements with said subdivisions to plan or implement programs for the control and abatement of air pollution"	provisions of New Hampshire's SIP. New Hampshire does not rely on any local or regional government, agency, or instrumentality for implementing any aspect of the SIP.				
	CHAPTER Env-A 200 Procedural Rules, Part Env-A 204 Public Hearings on the State Implementation Plan provides procedures for State Implementation Plan hearings.					
	See also program description for section 110(a)(2)(J) requirements.					

# UNION LEADER CORPORATION

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P O BOX 9513 MANCHESTER, NH 03108

RECEIVED

SEP 3 0 2011

AIR RESOURCES DIVISION

STATE OF NH ST/ AIR RESOURCES COMM ATT VALERIE DAVID PO BOX 95 CONCORD NH 03302-0095

I hereby certify that the legal notice of PUB HEARING 10AM 10/3/11, PO number:BARBARA HOFFMAN was published in the New Hampshire Union Leader and/or New Hampshire Sunday News, newspapers printed at Manchester, NH by the Union Leader Corp. On :

09/02/2011

State of New Hampshire Hillsborough County Subscribed and sworn to before me this

15th day of September, 2011

Notary Public "Internation

STATE OF NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES AIR RESOURCES DIVISION CONCORD, NEW HAMPSHIRE NOTICE OF PUBLIC COMMENT PERIOD AND PUBLIC HEARING In accordance with New Hampshire Administrative Rule Env-A 204.01(b) and Title 40 of the Code of Federal Regulations (CFR) Section 51.102, notice is hereby given that the New Hampshire Department of Environmental Services, Air Resources Division (the Department) has prepared, and intends to submit to the U.S. Environmental Protection Agency, a certification of the adequacy of New Hampshire's State Implementation Plan (SIP) to meet the requirements of the federal Clean Air Act, section 110 (a) (1) and (2), pertaining to infrastructure requirements for federal air quality standards. The federal requirements that New Hampshire and other states must meet are contained in Title 40: Protection of Environment, section 50.12, National Primary and Secondary Air Quality Standards for Lead. This SIP certification is submitted in response to the revised National Ambient Air Quality Standards (NAAQS) for Lead as promulgated by EPA on November 12, 2008. For states such as New Hampshire that are already meeting these air quality standards, EPA expects states to make certification of SIP adequacy within three years after the date of promulgation of the standards. The Department hereby solicits comments and has scheduled a public hearing on this SIP certification. Comments must be submitted in writing or by email to Charles Martone, Air Resources Division, NH Department of Environmental Services, P.O. Box 95, Concord, NH 03302-0095; email Charles.Martone@des.nh.gov. A public hearing at the Department offices has been scheduled for 10:00 a.m., Monday, October 3, 2011, in Room 114 at 29 Hazen Drive, Concord, NH 03301. All comments on the proposed SIP certification must be received by 4:00 p.m. on Monday, October 3, 2011, to be entered into the record. A copy of the SIP certification of adequacy is available for public inspection at the Department's offices at 29 Hazen Drive, Concord, NH, during regular working hours from 8:00 a.m. to 4:00 p.m., Monday through Friday. The main text of the SIP certification may be downloaded from the Department's website at http://des.nh.gov, as above. Robert R. Scott Director, Air Resources Division NH Department of Environmental Services Dated: September 2, 2011

Appeared in: *The Union Leader* on Friday, 09/02/2011

http://nh.mypublicnotices.com/publicnotice.asp?page=publicnoticeprint&adid=2494615



# The State of New Hampshire DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner



## CERTIFICATION OF PUBLIC PROCESS

I hereby certify that:

In accordance with New Hampshire Administrative Rule Env-A 204.01(b) and 40 CFR § 51.102, public notice was given that the New Hampshire Department of Environmental Services, Air Resources Division (DES), intended to submit for the approval of the U.S. Environmental Protection Agency (EPA) a revision to the New Hampshire State Implementation Plan (SIP). This revision was for the purpose of certifying SIP adequacy with respect to Clean Air Act section 110(a)(1) and (2) for lead (Pb), a criteria pollutant.

A public hearing on the SIP revision was held on October 3, 2011, at 10:00 a.m., at the offices of DES, Room 114, at 29 Hazen Drive, Concord, New Hampshire. DES provided opportunity to members of the public to submit oral comments during the hearing and written comments at any time from September 2, 2011, up to 4:00 p.m. on the day of the hearing, for consideration by DES in preparing the final SIP revision. No members of the public appeared for the hearing.

A copy of the draft SIP revision was available for public inspection at DES offices during regular working hours from 8:00 a.m. to 4:00 p.m., Monday through Friday, throughout the comment period. The draft SIP revision was also available for downloading from the DES website at: http://des.nh.gov/organization/commissioner/pip/calendar/2011/documents/20111003-nh-lead-sip.pdf.

The public hearing notice was published in the *Union Leader*, a newspaper of general, statewide circulation, on Friday, September 2, 2011, more than thirty days prior to the date of the hearing.

The above statements are true to the best of my knowledge and belief.

Robert R. Scott Director, Air Resources Division

7 NOV 11

Date

## New Hampshire Lead (Pb) Infrastructure SIP Response to Comments

NHDES received written comments from two sources during the public comment period for the draft lead (Pb) infrastructure SIP. Anne Arnold of the U.S. Environmental Protection Agency (EPA), Region I, provided written comments in a letter dated September 29, 2011. Katie Lajoie, RN, submitted written comments in a letter emailed on October 3, 2011. The following responds to the submitted comments.

#### **EPA Comments**

1. It would be useful to sort the list of New Hampshire state measures shown within the write-up for 110(a)(2)(A) into two parts, with one part listing the rules that specifically mention Pb, such as Env-A 3300, Municipal Waste Combustion, and a second part listing rules that are targeted at control of particulate matter, which sometimes contains lead.

<u>Response</u>: The table has been revised to distinguish rules which apply specifically to lead from those which apply to particulate matter that may contain lead.

2. New Hampshire's primary and secondary standards are located at section Env-A 308, and for Pb provide a level of 1.5 micrograms per cubic meter. This level matches EPA's previous Pb NAAQS which was updated to 0.15 micrograms per cubic meter in 2008. New Hampshire should update section Env-A 308 to be consistent with EPA's revised primary and secondary air quality standards for lead. If such an update does not occur in conjunction with this SIP submittal, or sooner, New Hampshire should evaluate whether any of its air pollution control regulations require compliance with these now outdated state air quality standards, and discuss the results of this analysis in its infrastructure SIP submittal.

<u>Response</u>: The following footnote was added to Page 4: "Standards are being revised to conform to 2008 NAAQS and should be final by July 1, 2012." Also, a statement of assurance was added to the cover letter.

3. The write-up for 110(a)(2)(8) indicates that, "Air Quality data for Pb will be included in 2011." However, the second note in the "Comment" column indicates that monitoring for Pb will not begin until January 1, 2012. This discrepancy should be resolved in the final infrastructure SIP document.

Response: 2011 was corrected to read consistently as 2012.

4. In New Hampshire's write-up for 110(a)(2)(E) regarding funding, there is a caveat that, "Funding to carry out the SIP is contingent on EPA support." EPA recommends that this wording be revised to state that EPA funding complements state's efforts.

<u>Response</u>: The comment was revised to indicate that EPA funding supports New Hampshire's program.

5. Although EPA's draft guidance for Pb infrastructure SIPs did not provide extensive direction to states with regard to section 110(a)(2)(G), Emergency Episodes, our final guidance may contain additional information that New Hampshire should review as it prepares its SIP revision.

<u>Response</u>: NHDES has reviewed the final guidance and added the following note in the comment column: "Based on a review of NH's sources of lead and historic ambient monitoring data, NHDES does not believe that a more specific contingency plan is needed to adequately respond to any lead emergency events."

6. New Hampshire's entry for section 110(a)(2)(J) includes mention of the state's transportation conformity regulation. This can be left out of the final Pb infrastructure submittal, as conformity applies to nonattainment areas and attainment areas with a current maintenance plan for the transportation related pollutants (NOx, SOx, VOC, and the various size fractions of PM).

<u>Response</u>: The paragraph regarding transportation conformity was deleted.

7. Final guidance from EPA for states to use in development of Pb infrastructure SIPs has not been issued at this point. However, Region I notes that we have had discussions with EPA Headquarters regarding re-evaluation of EPA's significant monitoring concentration level for Pb, which currently stands at 0.1 micrograms per cubic meter on a 3 month rolling average {see 40 CFR 51.166(i)(5)(i)(g)}, in light of the lowered NAAQS for lead. Similarly, we have also discussed re-evaluation of the current threshold used for gauging "significance" of emissions increases for Pb, which currently stands at 0.6 tons per year {see 40 CFR 51.166(b)(23)}. We recommend that New Hampshire review EPA's final guidance with regard to these two issues. New Hampshire's Env-A 600, Statewide Permit System, for example, currently cites 0.6 tons per year of lead as the threshold for a significant net emissions increase.

<u>Response</u>: EPA's final guidance does not specifically address the significant monitoring concentration or the significant emission level for lead. NHDES added the following statement in the comment column: "EPA has not promulgated new PSD requirements relating to lead. Should it do so, NHDES will adopt them as soon as possible."

### Lajoie Comments

In her letter, Ms. Lajoie cited references to support the position that persistent toxic substances such as lead are dangerous to the environment and to human health, and that there is no safe level of these substances in the environment and in the blood: "This is common sense and should be reflected in air quality standards. The only safe emission level for lead is zero because this pollutant accumulates in the environment and in the human body and causes harm in low doses."

The commenter further stated that, "Air emissions from waste incinerators and coal-fired power plants emit lead in a form that can be easily inhaled and ingested." The commenter observed that end-of-pipe remedies are not an appropriate solution: "The answer to the pollution problem does not involve equipment such as a baghouse or carbon injection system. This equipment still allows a dangerous amount of lead and other pollutants to exit the smokestack, while also shifting pollution to the ash. The ash presents its own set of problems during handling, transport, and disposal."

Ms. Lajoie suggested that NHDES do as follows: "Inform the public that zero is the only safe emission standard for lead and other persistent toxic substances [and] support the phase out of waste incinerators and coal-fired power plants. These major stationary sources release lead in a highly bioavailable form. There are safe alternatives that would protect our air and water from the toxic loading associated with persistent toxic substances."

<u>Response</u>: The NAAQS for lead are consistent with the recommendations of EPA's Clean Air Scientific Advisory Committee (CASAC), which provides independent advice to the EPA Administrator on the technical bases for the NAAQS. By following CASAC's recommendations, EPA revised the lead NAAQS in a manner that is presumably protective of the public health, with adequate safety margin, as is required under section 109(b) of the Clean Air Act. New Hampshire's obligation under the Clean Air Act is to ensure that its SIP will provide for the attainment, maintenance, and enforcement of the National Ambient Air Quality Standards. This SIP revision certifies that New Hampshire's SIP meets that obligation.

MONROE



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1 5 POST OFFICE SQUARE, SUITE 100 BOSTON, MA 02109-3912

RECEIVED NEW HAMPSHIRE

JUN 28 2010

AIR RESOURCES DIVISION

June 14, 2010

The Honorable John H. Lynch Office of the Governor 107 North Main Street State House – Room 208 Concord, NH 03301

Dear Governor Lynch:

Thank you for your recommendations on air quality designations for the revised National Ambient Air Quality Standards (NAAQS) for lead throughout New Hampshire. Reducing levels of lead pollution is an important part of EPA's commitment to a clean, healthy environment. Lead exposure can cause a range of adverse health effects, most notably in children. Exposures to low levels of lead early in life have been linked to effects on IQ, learning, memory and behavior. This letter is to notify you of the U.S. Environmental Protection Agency's (EPA's) response to New Hampshire's designation recommendations, and to inform you of our approach for completing the designations for the revised lead NAAQS.

On October 15, 2008, EPA substantially strengthened the NAAQS for lead. The new standards, set at 0.15 micrograms per cubic meter ( $\mu$ g/m<sup>3</sup>), are10 times tighter than the previous standards. In conjunction with strengthening the lead NAAQS, EPA also established new criteria for siting ambient lead monitors. The pre-existing ambient lead monitoring network was inadequate for determining whether many areas are meeting the revised lead NAAQS. Monitors meeting the new network siting requirements were to begin operation January 1, 2010.

The Clean Air Act (CAA) requires EPA to complete the initial designation process within two years of promulgating a new or revised NAAQS. If the Administrator has insufficient information to make these designations, EPA has the authority to extend the designation process by up to one year. In light of the new monitoring network which will generate additional information in the upcoming year, EPA intends to complete the lead designations in two rounds. In the first round, to be completed by October, 15, 2010, EPA is designating as "nonattainment" any area that is violating the 2008 lead NAAQS based on data from the pre-2010 monitoring network. For all other areas, EPA is extending the deadline for designations by up to one year so that data from the newly deployed monitors can be considered in making appropriate designation decisions. EPA will complete the second round of lead designations no later than October 15, 2011. We have reviewed New Hampshire' October 15, 2009 recommendation letter on air quality designations and all the associated technical information for the 2008 lead NAAQS, including, if available, the most recent air quality data from 2007-2009. However, EPA is not intending to complete the initial area designations for your state at this time. Instead, EPA intends to designate all areas in your state by no later than October 15, 2011, in the second round of lead designations. If you would like to submit updated recommendations for your areas for our consideration in the second round of designations, we request that you do so by December 15, 2010. For the second round of designations, we will notify all states and tribes of our preliminary responses to their recommendations by no later than June 17, 2011.

We look forward to a continued dialogue with you and your staff as we work together to implement the 2008 lead NAAQS. Should you have any questions, please do not hesitate to call me, or have your staff contact Bob McConnell of my staff at 617-918-1046.

Sincerely,

H. Curtis Spalding, Regional Administrator

cc: Thomas S. Burack, Commissioner, DES Robert R. Scott, Air Resources Director, DES bcc: Gina McCarthy, Assistant Administrator for Air and Radiation Steven D. Page, Director, Office of Air Quality Planning and Standards



JOHN H. LYNCH Governor State of New Hampshire OFFICE OF THE GOVERNOR

107 North Main Street, State House - Rm 208 Concord, New Hampshire 03301 Telephone (603) 271-2121 www.nh.gov/governor governorlynch@nh.gov

October 15, 2009

Mr. Ira W. Leighton Acting Regional Administrator U.S. Environmental Protection Agency, Region I One Congress Street, Suite 1100 Boston, MA 02114-2023

#### Re: Designation of Attainment Area Status under the Revised Lead Standard

Dear Mr. Leighton:

As required by the Clean Air Act and the Transportation Equity Act for the 21<sup>st</sup> Century, I hereby request that New Hampshire be designated as in attainment for the 24-hour and annual National Ambient Air Quality Standard (NAAQS) for ground-level lead. All areas of New Hampshire currently attain the standard and there are no areas of the state that exacerbate lead violations in downwind nonattainment areas.

The U.S. Environmental Protection Agency (EPA) issued designation guidance in its memorandum from William Harnett to EPA Regional Administrators, dated August 21, 2009. Accordingly, my recommendation considers measurements of lead air pollution collected between 2006 and 2008. To ensure the appropriateness of proposed designations, we also considered the more recent 2009 data (see Table 1 below), measurements collected in the 2002 to 2003, and emissions of potentially large sources that could develop local high lead air concentrations. No portions of New Hampshire were found to be at risk for exceeding the new lead NAAQS.

In summary, I propose that the entire State of New Hampshire be designated as attainment for the quarterly lead NAAQS. I believe there is sufficient data to support a full designation of attainment throughout the state and that a designation of unclassified is unnecessary. New Hampshire is committed to protecting the health of its citizens by reducing air pollution emissions in efficient and cost-effective ways. New Hampshire Proposed Revised Lead Nonattainment Area Boundaries Page 2 October 15, 2009

I ask that EPA also continue to seek ways to further protect the nation's population by requiring implementation of new and existing air pollution reducing technology as it is developed on a national basis for all source sectors. Nationwide controls will not only benefit those areas where the controls are implemented, but will also provide critical background air pollution reductions in states further downwind, such as New Hampshire. Long-term protection of our citizens and environmental resources will require a collective solution.

Thank you for your consideration of my recommendations. If you have any questions regarding this determination, please contact Thomas Burack, Commissioner of the Department of Environmental Services at (603) 271-3449.

John H. Lynci

cc: Thomas S. Burack, Commissioner DES Robert R. Scott, Air Resources Director DES Jeffrey T. Underhill, DES

# TABLE 1.Estimated 2006 - 2008 Quarterly Lead Design Values by<br/>Monitor, in micrograms per cubic meter ( $\mu g/m^3$ )

Location	Monitor* ID	2006 Max Quarterly Avg	2007 Max Quarterly Avg	2008 Max Quarterly Ayg	2009 Max Quarterly Avg <sup>1</sup>	2006- 2008 Design Value-	2007- 2009 Design Value <sup>2</sup>	Lead NAAQS ((µg/m <sup>3</sup> )
New Hampshire	None							0.15
Massachusetts		-						0.15
Boston Kenmore Square	250250002	0.01	0.01	0.02	0.011	0.01	0.01 <sup>2</sup>	0.15
Maine	None							0.15
Vermont	None							0.15

# TABLE 2.Proposed Designation of Areas of Quarterly Lead<br/>NAAQS Nonattainment in New Hampshire

NEW HAMPSHIRE – Lead (QUARTERLY STANDARD)

Designated Area	Designation	Classification	
	Туре	Туре	
New Hampshire: None	Nonattainment		
All portions of all counties	Attainment	Attainment	

<sup>&</sup>lt;sup>1</sup> Data for 2009 is presented for illustrative purposes due to being based on preliminary data for the year through September. Final data has not yet been delivered in full from the testing laboratory.

<sup>&</sup>lt;sup>2</sup> Estimated 2007-2009 design value provided for illustrative purposes only.

# **TECHNICAL ATTACHMENT**

The recommendations contained in this letter are fully compliant with Section 107(d)(1)(A) of the Clean Air Act ("CAA") which defines a nonattainment area as any area that (1) does not meet the lead National Ambient Air Quality Standard ("NAAQS"), or (2) contributes to ambient lead violations in a nearby area. This analysis evaluates the most recent 4-years of quality assured monitoring data for lead pertinent to New Hampshire, recent data collected near the state's largest coal-fired power plant, and emissions data for potential major sources, including airports.

Since the late 1970s and early 1980s, the lead monitoring network was significantly reduced due to rapidly declining lead air pollution levels. Of our three neighboring states (Maine, Massachusetts, and Vermont) previous lead concentrations dropped so significantly when leaded gasoline was phased-out that all but the single highest recording lead monitor were discontinued. The remaining lead monitor is located at Kenmore Square in Boston Massachusetts. According to Massachusetts Department of Environmental Protection, this monitor was retained because it represented the highest monitored lead levels in Massachusetts as well as the northern New England region. Current design values at this monitor are less than ten percent of the new lead NAAQS as indicated in Table A1 below. Since New Hampshire is a much more rural state with fewer sources as compared to the Kenmore Square area, previously measured lead concentrations in New Hampshire were below levels measured at Kenmore Square and are expected to still be lower today.

TABLE A1.	Estimated 2006 – 2009 Quarterly Lead Design Values by
	Monitor in micrograms per cubic meter $(\mu g/m^3)$

Location	Monitor fD	2006 Max Quarterly Ayg	2007 Max Quarterly Avg	2008 Max Quarterly Avg	2009 Max Quarterly Avg	2006- 2008 Design Válue	2007- 2009 Design <u>:</u> Valuet	Lead NAAO S (ug/m <sup>3</sup> )
New Hampshire	None							0.15
Massachusetts								0.15
Boston Kenmore Square	250250002	0.01	0.01	0.02	0.011	0.01	0.012	0.15
% of NAAQS		6.7%	6.7%	13.3%		6.7%	6.7%	
Maine	None							0.15
Vermont	None							0.15

In a review of historical lead monitored concentrations in New Hampshire, there was a time prior to the phase-out of leaded gasoline where some locations exceeded the level of the new 2008  $0.15 \,\mu\text{g/m}^3$  lead NAAQS. At the time, the prevailing lead NAAQS was  $1.5 \,\mu\text{g/m}^3$ . Lead monitors were located in Berlin, Concord, Hollis, and Portsmouth New Hampshire. Exceedances of the level of the new 2008 lead NAAQS ended around April of 1980 and concentrations continued to decline to below 10 percent of the new lead NAAQS where it stabilized and is estimated to remain today. Lead monitoring was

<sup>&</sup>lt;sup>1</sup> Data for 2009 is presented for illustrative purposes due to being based on preliminary data for the year through September. Final data has not yet been delivered in full from the testing laboratory.

<sup>&</sup>lt;sup>2</sup> Estimated 2007-2009 design value provided for illustrative purposes only.

New Hampshire Proposed Revised Lead	Page A2
Nonattainment Area Boundaries – Technical Attachment	October 15, 2009

discontinued in New Hampshire because measured levels were less than 1% of the former lead NAAQS. Table A2 below summarizes the most recent year's measured lead data in the state before monitoring was discontinued. Please note, the monitored values are presented as maximum 24-hour concentrations, not quarterly averages. Quarterly average data would normally be significantly lower.

TABLE A2.	Estimated 2006 – 2009 Quarterly Lead Design Values by
	Monitor, in micrograms per cubic meter ( $\mu g/m^3$ )

	Most Recent	24-hour Concentration	New Quarterly (3-month avg)
Monitor	Year	µg/m³	Lead NAAQS
Berlin	1978	0.086	0.15
Concord	1988	0.038	0.15
Hollis	1988	0.010	0.15
Portsmouth	1988	0.019	0.15

To ensure that isolated "hotspots" were not overlooked in the New Hampshire designation review, areas in near proximity to potentially sizable lead sources such as airports, incinerators, and power plants were considered in this designation. Emission rates, stack tests, and in some cases dispersion modeling were used in this assessment. This work found that there is no single source within New Hampshire that is a large enough to cause ambient air lead concentrations to approach the NAAQS. Emissions from large facilities were found to be either well controlled or were low enough to not create notable lead hotspots. Modeling of the state's largest source predicted ambient concentrations of less than ten percent of the NAAQS and average concentrations of one-third of that. Specifics of this analysis are as follows:

In the 2002 to 2003 timeframe, concentrations of various toxic pollutants were measured near the single largest remaining source of lead emissions in the state, Merrimack Station. Merrimack station is the only source in the state that reports emissions of lead greater than 0.05 tons per year. Lead data was collected at two sites near the power plant, Brickett Hill and Exchange Street. Dispersion modeling of the facility assisted when determining the location for these monitors by identifying worst-case locations. In addition to power plant emissions, the monitoring stations in Pembroke are also near the Concord Airport, the second largest airport source of lead emissions in the state (leaded piston aircraft fuel), likely making these sites worst-case locations in New Hampshire. The Exchange Street site is aligned with the power plant and the Concord Airport, enabling it to capture combined impacts from the two facilities.

In nearly two years of data collection, the highest 24-hour lead concentration measured was  $0.0100 \ \mu g/m^3$  (see Table A3). The lead NAAQS is defined as a quarterly average, which is almost always lower than a 24-hour average, or estimated to be less than 0.005  $\mu g/m^3$  or about 3 percent of the NAAQS. Assuming that this maximum value somehow persisted for three continuous months (even though measurements prove this not to be the case), the maximum quarterly value would still be below 10 percent of the lead NAAQS (6.7%). Based on this data, it is safe to conclude that New Hampshire's worst case location is well below the level of the 2008 lead NAAQS and consequently other locations in the state that previously met the new standard and did not see any notable emission increases are also attaining the standard.

New Hampshire Proposed Revised Lead	
Nonattainment Area Boundaries – Technical Attachment	

In summary, historical and more recent lead monitoring data demonstrates New Hampshire is currently meeting the revised quarterly lead NAAQS on a state-wide basis. Historical data geographically spans the state and the most recent measurements, even though 20 to 30 years old, were already safely below the levels of the new 2008 lead NAAQS. Since then large sources have either been controlled, shut down, or not reporting any notable increases in lead emissions anywhere in the state. Recent 2002 to 2003 data collected in Pembroke supports that lead emissions are lower than data reported in the late 1980s. Further, if recent worst-case (Pembroke 24-hour maximum) measurements of lead emissions is less than 10 percent of the new NAAQS, then there is little risk that any location in the state exceeds the 2008 lead NAAQS. As a result, New Hampshire concludes that a state-wide designation of attainment for the 2008 lead NAAQS is justified.

New Hampshire Proposed Revised Lead <u>Nonattainment Area Boundaries – Technical Attachment</u>

TABLE A3.

	2003	– Pembroke, N
	24-Hr µg/m³	24-Hr µg/m³
Date	Brickett Hill	Exchange Str
09/11/02	0.0035	0.0046
09/23/02	0.0013	0.0020
10/05/02	0.0013	0.0014
10/17/02	0.0007	0.0017
10/29/02	0.0012	0.0011
11/10/02	0.0035	0.0020
11/22/02	0.0051	0.0055
12/04/02	0.0059	
12/16/02	0.0025	0.0021
12/28/02	0.0044	0.0029
01/09/03	0.0017	0.0023
01/21/03	0.0079	0.0020
02/02/03	0.0013	0.0027
02/14/03	0.0042	0.0034
02/26/03	0.0073	0.0059
03/10/03	0.0034	0.0031
03/22/03	0.0100	0.0082
04/03/03	0.0042	0.0037
04/15/03	0.0070	0.0079
04/27/03	0.0019	0.0017
05/09/03	0.0020	0.0036
05/21/03	0.0035	0.0031
06/02/03	0.0015	0.0023
06/14/03	0.0045	0.0035
06/26/03	0.0041	0.0047
07/08/03	0.0030	0.0037
07/20/03	0.0024	0.0024
08/01/03	0.0007	0.0012
08/13/03	0.0023	0.0016
08/25/03	0.0032	0.0026
09/06/03	0.0034	0.0024
09/18/03	0.0009	0.0021
09/30/03	0.0011	0.0045
10/12/03	0.0037	0.0016
10/24/03	0.0008	0.0011
11/05/03	0.0014	0.0062
11/17/03	0.0058	0.0014
12/11/03	0.0004	0.0012
12/23/03	0.0054	0.0087
2002 Avg	0.0029	0.0026
2003 Avg	0.0034	0.0034
NAAOS	0 1500	0 1500
2 vear Ava	0.0033	0.0032
2 year May	0.0000	0.0002
Max %	0.0100	0.0007
NAAQS	6.7%	5.8%

Measured Lead Concentrations Near Major Source (2002 – 2003 – Pembroke, New Hampshire)

LEAD FILE (P)



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY NEW

REGION 1 1 CONGRESS STREET, SUITE 1100 BOSTON, MASSACHUSETTS 02114-2023 RECEIVED NEW HAMPSHIRE

NOV 05 2009

AIR RESOURCES DIVISION

OFFICE OF THE REGIONAL ADMINISTRATOR

November 2, 2009

The Honorable John H. Lynch Governor of New Hampshire 107 North Main Street State House – Room 208 Concord, NH 03301

Dear Governor Lynch:

Thank you for your letter of October 15, 2009, providing recommendations for designating areas in your state with regards to the 2008 revision of the national ambient air quality standard for lead.

Your letter is an important step toward providing citizens in your state with critical information about air pollution levels in their communities. We will carefully review these recommendations and work with the New Hampshire Department of Environmental Services in determining the final area designations. We plan to designate areas in October 2010 and will announce our intended designations no later than 120 days prior to finalizing the designations.

We look forward to working with New Hampshire in the coming months on this important issue. If you have any questions, please do not hesitate to call me or Anne Arnold, Manager of the Air Quality Planning Unit, at (617) 918-1047.

Sincerely,

Bob. bin

Ira W. Leighton Acting Regional Administrator

cc: Thomas S. Burack, Commissioner, NHDES Robert R. Scott, Air Resources Director, NHDES Jeffrey T. Underhill, NHDES



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY RESEARCH TRIANGLE PARK, NC 27711

MAY 1 2008

#### <u>MEMORANDUM</u>

SUBJECT: Revisions to the 2002 NEI for Lead

OFFICE OF AIR QUALITY PLANNING AND STANDARDS

FROM: Thompson G. Pace, OAQPS/AQAD/EIAG

TO: Lead NAAQS Review Docket (EPA-HQ-OAR-2006-0735)

This memo summarizes revisions to the 2002 NEI for lead. The 2002 NEI indicated that more than 180 sources in the 2002 National Emissions Inventory were believed to emit more than 1 ton per year of Pb and Pb compounds. The US EPA's Office of Air Quality Planning and Standards (OAQPS) recently endeavored to verify this emissions information in support of an ongoing analysis of populations living near high lead air quality monitors and large stationary sources of lead emissions. The revisions are contained in the accompanying file: Lead Facility Emissions Revised 04302008. The revised emissions have been summarized by source category in the attached file: Lead Emissions by Source Category Revised 04302008.

#### All Stationary Sources<sup>a</sup> Except Boilers

OAQPS contacted the Regional Office emissions contacts who in turn contacted their state programs regarding these emissions. Many State Agencies and Regional Offices responded with either a correction to the 2002 NEI emission estimates or updated emission estimates for years of record ranging from 2003 - 2007. All updates were at the facility level and almost all emissions changes were reductions from levels reported in the 2002 NEI. Consequently, the estimated annual Pb and Pb Compounds emissions estimate for all stationary sources except boilers lowered by 20%, from 848 tpy to 672 tpy. Note: the emissions data are only useful for general planning; detailed planning that would result in the imposition of emission reductions on specific facilities must be preceded by a review of that source's emissions inventory by the source and the appropriate air regulatory agency.

#### **Boilers**

EIAG revised NEI lead emissions from utility, industrial, commercial and institutional boilers in the point source inventory. Information to revise lead emissions data was provided by EPA's SPPD. Overall, 282 TPY or about 60% of the 458 tpy reduction was due to the adjustment of boiler emissions. The details of this boiler emissions revision are described below.

#### Utility Lead Emissions Methodology

The NEI contains utility boilers that burn coal, oil, natural gas, wood, and other fuels such as coke and wastes. NEI lead data for utility boilers were provided by state and local agencies or estimated by EIAG using fuel data collected from the Department of Energy and EPA's Clean Air Markets Division. The 1998 Utility Report to Congress estimates that a typical coal-fired boiler emits 0.021 tons per year lead and that a typical oil-fired boiler emits 0.014 tons per year lead. These values were based on the EPRI-provided PISCES data. Table 1 presents typical utility boiler lead emissions that were used to evaluate 2002 NEI utility boiler emissions and to default emissions of boilers that had higher values than the typical values.

Fuel Type	Typical Boiler Emissions (tons/year)			
Coal	0.021			
Oil .	0.014			
Natural Gas	0.014			
Wood Or Other Fuels	0.02			

<b>Fab</b>	le	1.	Def	fault	U	tility	Boiler	Lead	Emission	iS
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EIAG compared individual boiler emissions to values in Table 1. If NEI values were higher than the typical values, EIAG revised the estimates to the defaulted values. Emissions of 34% of 2002 v3 NEI utility boilers were higher than the typical values and were revised. This revision resulted in the point source utility boiler emissions estimates decreasing from 168 tons per year (tpy) to 23 tpy.

Industrial/Institutional/Commercial Lead Emissions Methodology

The NEI contains industrial/institutional/commercial boilers that burn coal, oil, natural gas, wood, and other fuels such as lpg and wastes. The NEI contains boiler emissions in both the point and non point sectors. NEI lead point source data for industrial/ institutional/commercial boilers were provided by state and local agencies or estimated by EIAG using particulate matter data for boilers that state and local agencies did not provide lead estimates.

Data collected from the industrial boiler MACT rule-making were used by SPPD to determine typical lead emissions from industrial boilers. Table 2 presents typical industrial boiler lead emissions that were used to evaluate 2002 NEI industrial/institutional/commercial boiler emissions and to default emissions of boilers that had higher values than the typical values. Because not all industrial/institutional/commercial boilers have controls, data were available to estimates typical boiler emissions based on control status. For some boilers, the NEI does not contain information on the control status of boilers. For these boilers, we assumed the boilers were uncontrolled. Also the fuel type was not identified by state and local agencies for some boilers. For boilers where the fuel was unspecified, we assumed that the boilers were burning oil or natural gas because there are more oil and natural gas boilers in the inventory than coal, wood and other fuel boilers in the NEI.

Fuel Type	<b>Control Status of Boiler</b>	Typical Boiler Emissions (tons/year)
Coal	Controlled	0.03
Coal	Uncontrolled	0.032
Coal	Unknown	0.032
Natural Gas	Controlled	0.002
LPG		
Natural Gas	Uncontrolled	0.02
LPG		
Natural Gas	Unknown	0.02
LPG		
Oil	Controlled	0.002
Oil	Uncontrolled	0.02
Oil	Unknown	0.02
Wood	Controlled	0.02
Wood Or Other	Uncontrolled	0.22
Fuels		
Wood Or Other	Unknown	0.22
Fuels		
Unknown	Controlled	0.002
Unknown	Uncontrolled	0.2
Unknown	Unknown	0.2

Table 2. Default Industrial/Institutional/Commercial Boiler Lead Emissions

EIAG compared individual boiler emissions to values in Table 2. If NEI values were higher than the typical values, EIAG revised the estimates to the defaulted values. Emissions of 3% of 2002 v3 NEI industrial/institutional/commercial boilers were higher than the typical values and were revised. This revision resulted in a decrease in the point source industrial, commercial and institutional boiler emissions estimates from 123 tpy to 34.4 tpy. The non point industrial, commercial and institutional boiler estimates were decreased proportionally, from 67 tpy to 18.9 tpy.

(a) Stationary sources do not include emissions from aircraft