

**Alaska Department of
Environmental Conservation**



**Amendments to State Air Quality Control Plan
Volume II: Analysis of Problems, Control Action
Section III.H.1. “Interstate Transport of Lead Pollution”**

Public Review Draft

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**Sean Parnell
Governor**

**Larry Hartig
Commissioner**

This page serves as a placeholder for two-sided copying.

**Amendments to State Air Quality Control Plan, Volume II,
Section III.H, Subpart H.1 “Interstate Transport of Lead Pollution”
(A new section to be inserted in section III.H.)**

4. PROVISIONS PROHIBITING REGIONAL TRANSPORT OF AIR POLLUTANTS

Pursuant to the requirements of the 1990 Clean Air Act (CAA) Amendments, Sections 110(a)(2)(D)(i) (I)&(II), Alaska’s State Implementation Plan (SIP) must “contain adequate provision prohibiting ...any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will—

- 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
- II.** interfere with measures required to be included in the applicable implementation plan for any other State... to prevent significant deterioration of air quality or to protect visibility.

Alaska meets the requirements of CAA Section 110(a)(2)(D)(i)(I)&(II) as follows:

I.A. Alaska does not contribute to nonattainment in any other State with respect to the 2008 lead primary or secondary national ambient air quality standards (NAAQS). This statement is based on the following information:

- At the present time (winter 2012), there are no designated lead nonattainment areas in Alaska or the Pacific Northwest (i.e., Washington, Oregon and Idaho).
- Potential sources of atmospheric lead in Alaska are due primarily to the burning of aviation gasoline, which contains tetraethyl-lead, in piston-engine aircraft. Aviation gasoline is not refined or produced in Alaska. Alaska imports all of its aviation gasoline from one or two west coast refineries. The State of Alaska Department of Revenue’s Tax Division estimate for annual aviation gasoline sold in Alaska ranged between 16.5 million gallons in 2005 and 12.3 million gallons in 2010.¹ The majority of Alaska’s aviation gasoline is shipped into Alaska by tanker ship from Chevron’s Richmond, California oil refinery through Chevron’s shipping terminal and bulk fuel storage facility located in Anchorage.² From there, the aviation gasoline is distributed by truck to airports in Anchorage and Fairbanks and other interior Alaska airports located on the road system.

Merrill Field airport is the largest general aviation airport in Alaska and is located within the Municipality of Anchorage. Merrill Field airport has the greatest potential for public health impacts due to lead emissions from piston-engine aircraft in Alaska because of its close proximity to Anchorage’s population center and its heavy piston-

¹ State of Alaska, Department of Revenue, Tax Division, 2005-2009 Annual Reports.

<http://www.tax.alaska.gov/programs/sourcebook/index.aspx>

² : ADEC staff personal communication with Kirk Payne, Vice President, Delta Western, May 12th, 2010.

engine aircraft traffic. Merrill Field averaged 91,063 landings and takeoffs between 2002 and 2009.³ Average, annual aviation gasoline consumption for this same time period was 590,493 gallons. This results in an average, annual total lead emission rate of 0.7 short tons (~1,400 pounds) per year for Merrill Field.

Ambient air quality data with regards to lead in Alaska are scarce. EPA and DEC, in conjunction with the Municipality of Anchorage, began monitoring for lead at the Merrill Field airport to determine if lead emissions from aviation gasoline used by piston-engine aircraft are a concern for local residents. Lead monitoring at the Merrill Field airport commenced on October 18, 2011.

Source specific ambient lead monitoring related to operations at the Red Dog Mine, located in Noatak, has been initiated by DEC to address federal lead monitoring requirements. A copy of DEC's 2012 Noatak lead monitoring plan can be found at DEC's website: http://www.dec.state.ak.us/air/am/am_airmonplan.htm .

- The Yukon Territory and the Province of British Columbia, Canada lie between Washington State and the border of Alaska. The southern border of Southeast Alaska is separated from the border of Washington State by over 500 nautical miles or 600 statute miles. The Municipality of Anchorage and Fairbanks North Star Borough have the highest emissions of regulated air pollutants and are located approximately 1,435 statute miles (1,247 nautical miles) and 2,244 statute miles (1,950 nautical miles) from Seattle, Washington, respectively.
- In Alaska, the regional, predominant low pressure wind patterns emanate from the Gulf of Alaska in the west and travel inland towards the east, circulating in a counterclockwise direction. These predominant low pressure wind patterns would not generally be expected to transport lead air pollutants long distances from Alaska to Washington State or the Pacific Northwest. DEC concludes that Alaska does not contribute to nonattainment in any other State with respect to the 2008 lead primary or secondary NAAQS due to the distances involved, predominant weather patterns and scarcity of stationary lead emission sources in Alaska.

I.B. Alaska does not interfere with maintenance by any other State with respect to the 2008 lead primary or secondary NAAQS. This statement is based on the following information:

- Currently (winter 2012), there are no ambient lead monitoring data available in Alaska to conclude whether or not Alaska interferes with maintenance of the 2008 lead NAAQS in any other state.
- Alaska would not be expected to interfere with maintenance of the 2008 lead NAAQS in any other state because the southern border of southeast Alaska is separated from the border of Washington State by over 500 nautical miles or 600 statute miles. The

³ : ADEC staff personal communication with Darlene Sivyer, Office Manager, Merrill Field, May 11, 2010.

Municipality of Anchorage and Fairbanks North Star Borough have the highest emissions of regulated air pollutants and are located approximately 1,435 statute miles (1,247 nautical miles) and 2,244 statute miles (1,950 nautical miles) from Seattle, Washington, respectively.

- In Alaska, the regional, predominant low pressure wind patterns emanate from the Gulf of Alaska in the west and travel inland towards the east, circulating in a counterclockwise direction. These predominant low pressure wind patterns would not generally be expected to transport lead air pollutants long distances from Alaska to points south in Washington State or the Pacific Northwest. DEC concludes that Alaska does not interfere with maintenance by any other State with respect to the 2008 lead primary or secondary NAAQS due to the distances involved, predominant weather patterns and scarcity of stationary lead emissions sources in Alaska.

II.A. Alaska does not interfere with measures required to be included in the applicable implementation plan for any other State... to prevent significant deterioration of air quality. This statement is based on the following information:

- Alaska has a fully approved PSD/NSR program originally approved on February 16, 1995 (60 FR 8943), and most recently approved on August 14, 2007 (72 FR 45378). Alaska adopted the 2008 lead NAAQS on February 17, 2010; this regulation became effective on April 1, 2010. DEC concludes that there are no stationary lead emission sources in Alaska that would contribute to the significant deterioration of air quality in another state due to the distances involved, predominant weather patterns and scarcity of these sources in Alaska.

II.B. Alaska does not interfere with measures required to be included in the applicable implementation plan for any other State... to protect visibility. This statement is based on the following information:

- Alaska submitted its Regional Haze SIP to EPA, in conjunction with its PM_{2.5} and Ozone Interstate Transport SIP, in a transmittal letter dated March 29, 2010 to meet the requirements of federal Regional Haze regulations found at 64 FR 35714 (July 1, 1999); and to meet the requirements of EPA's "Finding of Failure To Submit State Implementation Plans Required by the 1999 Regional Haze Rule" as published in 74 FR 2392 (January 15, 2009). DEC concludes that there are no new visibility protection obligations under CAA §110(a) (2) (D) or (J) as a result of the 2008 lead NAAQS.