Program Overview

Airport Lead Monitoring

This Program Summary provides a full year of lead concentration data measured at 17 U.S. airport facilities through December 2013.

Concentrations of Lead at Airports

Outdoor concentrations of lead have greatly declined over the past few decades, in large part due to regulations that removed lead from fuels used in cars and trucks. However, lead continues to be emitted into the air from certain sources, such as ore and metal processing and aircraft that use leaded aviation gasoline (avgas). These aircraft are typically used for activities including business and personal travel, instructional flying, aerial surveys, agriculture, firefighting, law enforcement, medical emergencies, and express freight. Lead is not contained in jet fuel, which is used by commercial aircraft.

To protect the public from harmful levels of lead in outside air, the U.S. Environmental Protection Agency (EPA) has established a National Ambient Air Quality Standard (NAAQS) for lead. In late 2008, the EPA substantially strengthened this standard, revising the level from 1.5 micrograms per cubic meter ($\mu g/m^3$), to 0.15 $\mu g/m^3$, for a 3-month average concentration of lead in total suspended particles. This revised standard improves health protection for at-risk groups, especially children.

In conjunction with strengthening the lead NAAQS, in 2010 the EPA improved the existing lead monitoring network by requiring monitors to be placed in areas with sources such as industrial facilities and airports. State and local air quality agencies are now required to monitor near industrial facilities with estimated lead emissions of 0.50 tons or more per year and at airports with estimated emissions of 1.0 ton or more per year, as well as, on a case-by-case basis, in locations where information indicates a significant likelihood of exceeding the standard. The EPA required a 1-year monitoring study of 15 airports with estimated lead emissions between 0.50 and 1.0 ton per year in an effort to better understand how these emissions affect the air at and near airports. Airports for this 1-year monitoring study were selected based on factors such as the level of piston-engine aircraft activity and the predominant use of one runway due to wind patterns, in order to help evaluate airport characteristics that could lead to ambient lead concentrations that approach or exceed the lead NAAQS.

EPA United States Environmental Protection Agency

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As a result of these requirements and those finalized in 2008, lead monitoring has been conducted at 17 airports, and states and local air authorities have collected and certified lead concentration data for at least one year at the 17 airports. The certified data are summarized in the table below. For all but one airport (the Reid-Hillview airport) the design value is unchanged from the EPA's 2013 Program Update on Airport Lead Monitoring, either because no more data were collected or because higher concentrations were not measured. As a result of the concentrations measured, four airports will continue monitoring for lead. Additional information is available at the EPA Region 9 webpage provided below.

Concentrations of Lead at Airports

Airport, State	Lead Design Value,* µg/m³
Auburn Municipal Airport, WA	0.06
Brookhaven Airport, NY	0.03
Centennial Airport, CO	0.02
Deer Valley Airport, AZ	0.04
Gillespie Field, CA	0.07
Harvey Field, WA	0.02
McClellan-Palomar Airport, CA	0.17
Merrill Field, AK	0.07
Nantucket Memorial Airport, MA	0.01
Oakland County International Airport, MI	0.02
Palo Alto Airport, CA	0.12
Pryor Field Regional Airport, AL	0.01
Reid-Hillview Airport, CA	0.10
Republic Airport, NY	0.01
San Carlos Airport, CA	0.33
Stinson Municipal, TX	0.03
Van Nuys Airport, CA	0.06

* Maximum three-month average concentration in the monitoring dataset

The EPA's Actions Regarding Lead Emissions from Aircraft Operating on Leaded Fuel

The EPA is currently conducting the analytical work, including modeling and monitoring, to evaluate under section 231 of the Clean Air Act whether lead emissions from the use of leaded avgas in piston-engine aircraft cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare. Any proposed determination with regard to endangerment would be subject to public notice and comment. Additional details regarding the timing and next steps of the EPA's evaluation are available at: www.epa.gov/otaq/aviation.htm.

If the EPA makes a final positive endangerment finding (i.e., the EPA finds that lead emissions from general aviation cause or contribute to air pollution which may reasonably be anticipated to endanger), the agency would initiate rulemaking to establish standards concerning lead emissions from piston-engine aircraft. The FAA would then be required to prescribe regulations to insure compliance with such standards, and prescribe standards for the composition of aircraft fuel to control or eliminate certain emissions.

For Additional Information

For more information regarding monitoring at the San Carlos Airport and San Diego airports (McClellan-Palomar and Gillespie Field), please visit:

www.epa.gov/region9/air/airport-lead/

For more information on the EPA's actions regarding the endangerment evaluation, please visit:

www.gpo.gov/fdsys/pkg/FR-2010-04-28/pdf/2010-9603.pdf
and
www.epa.gov/otaq/aviation.htm

For access to the rulemaking docket containing documents relevant to the EPA's evaluation, please visit:

www.regulations.gov and enter EPA-HQ-OAR-2007-0294

For information on the FAA's actions to eliminate leaded aviation fuels, please visit:

www.faa.gov/about/initiatives/avgas/
and
www.faa.gov/news/

For information on the FAA's actions to reduce lead concentrations at airports, please visit:

www.faa.gov/airports/environmental/

For more information on how you can reduce your family's risk of lead exposure, please visit:

www.epa.gov/lead/parents.html#

For more information on lead in air, please visit:

www.epa.gov/airquality/lead/

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