

2008 Lead NAAQS – Frequently Asked Questions

What is the National Ambient Air Quality Standard (NAAQS) for lead (Pb) and what action is KDHE taking today?

The Clean Air Act requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards for six criteria pollutants. Lead is one of the criteria pollutants. On October 15, 2008, the EPA substantially lowered the lead NAAQS from 1.5 $\mu\text{g}/\text{m}^3$ to 0.15 $\mu\text{g}/\text{m}^3$. The new regulation establishing this standard also requires lead ambient air monitors near sources emitting more than 0.5 ton per year.

States submit recommendations to the EPA as to whether or not an area is meeting the lead air quality standard. Recommendations are based on air quality monitoring data. The EPA then makes the final decision to designate an area as attainment or nonattainment for the lead standard. Attainment means that the area meets the standard. Nonattainment means the area does not meet the standard.

KDHE is identifying a portion of Saline County to be designated nonattainment for the 2008 lead air quality standard.

Why was the lead NAAQS lowered in 2008?

The EPA is required by law to review scientific information and the standard for each criteria pollutant every five years and to obtain advice from the Clean Air Scientific Advisory Committee on each review. Based on new scientific evidence from over 6,000 studies published since 1990, the EPA lowered the standard to better protect public health and welfare.

What are the sources of lead emissions into the air?

The largest source of lead emissions in Salina is Exide Technologies (Exide). Exide's Salina facility melts lead in the manufacturing of lead acid batteries for automotive, marine, and lawn and garden equipment. In 2010, Exide reported 4,340 pounds (2.17 tons) of lead emissions into the air. Lead particles emitted into the air can end up in water, soil, and dust. Lead is a persistent pollutant and over time the particles can re-enter the air. Other general sources of lead emissions include: gasoline for piston-engine aircraft, metal industries, manufacturing industries, waste incinerators, and industrial/commercial/utility boilers.

Will lead concentrations and air quality be monitored?

Yes. KDHE installed air quality monitoring equipment near Exide's facility and began monitoring in February 2010. The monitor is sited approximately 300 feet north of Exide's property line and collects a 24-hour particulate sample every six days.

What is going to be done to reduce lead emissions and improve air quality?

KDHE used monitoring and air dispersion modeling to evaluate the lead emissions in the air to determine the geographical extent around the facility where the standard is not being met and to set a nonattainment boundary. KDHE's next step will be to develop a plan for implementation, attainment, maintenance, and enforcement of the lead standard. KDHE will work with Exide to determine what further control measures may be required for lead emission reductions to meet the new standard.

The Exide Salina facility started a five-year control activities project in April 2006 that included the replacement of oxide mills and baghouses and the addition of HEPA filters for each source. Exide has reported that the latest baghouse replacement, one for the highest emitting unit, is scheduled to be completed by July 4. Another baghouse replacement is scheduled for completion by the end of 2011. Both activities will result in additional reductions.

Local officials will continue to provide education and outreach to the community and will provide optional blood lead testing for those who live or work within the designated nonattainment area.

What are the health effects of exposure to lead?

The effects of lead are the same whether it is inhaled directly or ingested after it settles onto surfaces or soils. Ingestion is the main route of exposure. Once in the body, lead is rapidly absorbed into the bloodstream and can result in a broad range of health effects. Children are more vulnerable than adults because their bodies are developing rapidly. Children can suffer from damage to the brain and nervous system, blood anemia, weakened immune system, muscle weakness, headaches, and stomach aches. Adults can suffer from reproductive problems, high blood pressure, cardiovascular disease, decreased kidney function, nerve disorders, memory and concentration difficulty, and muscle and joint pain.

Is there lead in the soils in our neighborhoods?

Results of KDHE's recent soil sample analyses from the Salina area, including residential and school areas north of the Exide facility and other sample locations to the south and to the east, indicate lead levels well below thresholds of public health concern as established by the Centers for Disease Control and Prevention (CDC).

How else can a person be exposed to lead?

Exposure to lead can happen from breathing contaminated air or dust at work or at home, eating contaminated foods, or drinking contaminated water. Another source of lead is lead-based paint found in most homes built before 1950 and many homes built before 1978. Children can be exposed from eating lead-based paint chips or playing in contaminated soil. Older plumbing fixtures and pipe solder may also contain lead and may contaminate drinking water in older homes. Hobbies such as ammunition reloading and casting lead fishing sinkers can also expose a person to lead.

Are there any recommendations for the public in the designated nonattainment and surrounding areas?

Although soil samples from the nonattainment and surrounding areas tested well below thresholds of public health concern, there are steps that can be taken as general good practice to minimize exposure to lead as well as other contaminants:

- Wash your hands after playing outside, after working in the yard, or engaging in hobbies involving lead. Wash children's hands and faces often.
- Wash all fruits and vegetables, either home-grown or store-bought, before consuming them.
- Periodically clean house of dust and tracked-in soil. Wipe shoes before entering the house and remove shoes upon entry.
- Minimize outdoor exposure during periods of high winds with heavily dust laden air.
- Run the water from your faucet for a period of time to flush the line before using it for drinking purposes.
- People who work in and around the designated area should avoid "take-home" exposures by following occupational safety and health policies and practices in place for personnel protection and hygiene.

Where can more information about lead be found?

The following websites provide further detailed information about lead and the effects of exposure to lead:

<http://epa.gov/air/lead/>

<http://www.epa.gov/lead/>

<http://www.atsdr.cdc.gov/toxfaqs/index.asp> (<http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=93&tid=22>)