Salina Air Quality Public Meeting
June 28, 2011

Tom Gross
Bureau of Air

Kansas Department of Health and Environment
Outline

- New air quality standard for lead
- Lead background
- Air monitoring results
- Soil sampling results
- Designation process
- Exide lead emission reduction activities
- State implementation plan
- Next steps

Our Vision – Healthy Kansans living in safe and sustainable environments.
General Background

- Clean Air Act (CAA) requires EPA to –
  - Set National Ambient Air Quality Standards for six air pollutants, including lead
  - Periodically review the standards
  - Determine which counties meet the standards

- October 15, 2008 – EPA lowered the lead standard
  - Old standard: 1.5 micrograms per cubic meter (μg/m³)
  - New standard: 0.15 μg/m³
  - Standard is met when highest 3-month rolling average for 3-year period is less than or equal to 0.15 μg/m³
  - Air monitors required near sources emitting more than one ton of lead per year
General Background (cont’d)

- December 14, 2010 – EPA revised the air monitoring requirements for lead
  - Air monitors required near sources emitting more than one-half ton of lead per year

- Reported emissions for Exide’s Salina facility:
  - 3.31 tons – 2007
  - 2.25 tons – 2008
  - 2.15 tons – 2009
  - 2.17 tons – 2010
Lead

- Emitted into air from industrial sources
  - Lead mining, smelting
  - Lead battery production
  - Leaded aviation gasoline
  - Ammunition manufacturing

- People can get lead in their body if they –
  - Unintentional hand to mouth contact
  - Eat paint chips or soil that contains lead
  - Breathe in lead particles or dust containing lead
  - Drink contaminated water
Health Effects of Lead

- **Children can suffer from:**
  - Brain & nervous system disorders
  - Behavior & learning problems
  - Hearing problems
  - Headaches

- **Adults can suffer from:**
  - Reproductive problems (men & women)
  - High blood pressure
  - Nerve disorders
  - Memory & concentration problems
  - Muscle & joint pain
Early Actions

- Planning meetings between KDHE & Exide
- Computer modeling to site monitor (2009)
- Steps taken by Exide to reduce emissions
  - Replacement of process oxide mills & associated baghouses
  - Addition of HEPA filters to emissions controls
  - Replacement of 2 larger baghouses
  - Current projects include replacement of additional oxide mills & baghouse #4
KDHE’s Salina Monitor

- Began operation February 2010
- Approximately 300 feet north of Exide’s property line
- Collects 24-hour sample every 6 days

<table>
<thead>
<tr>
<th>2010 Lead (mg/m³)</th>
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<tbody>
<tr>
<td>Feb-Apr</td>
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<tr>
<td>Mar-May</td>
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<td>Apr-Jun</td>
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<td>May-Jul</td>
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<td>Oct-Dec</td>
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<td>Nov-Jan</td>
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<td>Dec-Feb</td>
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Looking South from Monitor
Soil Sampling
## Soil Sample Analyses

<table>
<thead>
<tr>
<th>Sample Location</th>
<th>Conc., mg/kg</th>
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<tbody>
<tr>
<td>#1 Coronado</td>
<td>20.0</td>
</tr>
<tr>
<td>#2 Schilling</td>
<td>16.0</td>
</tr>
<tr>
<td>#3 Monitor</td>
<td>158.0</td>
</tr>
<tr>
<td>#4 Ninth Street</td>
<td>14.0</td>
</tr>
<tr>
<td>#5 Water Well</td>
<td>22.0</td>
</tr>
<tr>
<td>#6 Eastside</td>
<td>9.5</td>
</tr>
<tr>
<td>#7 Background</td>
<td>11.0</td>
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- All results are below EPA standard of 400 mg/kg for soil in children’s play areas.
Designation Process

- November 16, 2010 – EPA published “Round 1” of nonattainment designations
  - Only for areas of U.S. with sufficient monitoring data
  - Nearest nonattainment areas in eastern Missouri & northern Texas

- October 2011 – “Round 2” designations
  - “Round 2” will include Kansas

- Types of Designations
  - Attainment: Area is meeting standard evidenced by monitoring data
  - Nonattainment: Area is violating standard per monitoring data or contributes to a violation in a nearby area
Timeline

- October 15, 2008 – Lead air quality standard revised
- June 2011 – Kansas lead designation recommendation announced
- December 2011 – Designations effective
- June 2013 – State implementation plan due to EPA
- December 2016 – Attainment of the standard
KDHE Recommended Nonattainment Boundary
Next Steps

- KDHE performs technical analysis
  - Refine emissions inventory
  - Computer modeling to assess need for additional control measures
- KDHE must develop plan to meet the standard
  - Evaluate control options to reduce lead emissions
  - Rule or Agreement to require emission reductions
- KDHE submits State Implementation Plan to EPA
- Continue to monitor air quality
- Attain the standard by December 2016

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How To Stay Informed

KDHE will post updates at [www.kdheks.gov/bar](http://www.kdheks.gov/bar)

- Lead monitoring data
- State Implementation Plan submittals
- Public notification of proposed and final regulations
- Public meeting notices
- Informational resources for lead and air quality
- Frequently Asked Questions
Points to Remember

- The air quality in Salina has not changed for the worse
- Emissions of lead from the Exide plant have declined
- Blood lead levels in Salina have declined
Questions?

Contact Information:

Tom Gross
Bureau of Air
1000 SW Jackson, Suite 310
Topeka, Kansas 66612
(785) 296-1692
tgross@kdheks.gov

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