Salina Air Quality Public Meeting

June 28, 2011

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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

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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 ($\mu g/m^3$)
  - New standard: 0.15 $\mu g/m^3$
  - Standard is met when highest 3-month rolling average for 3-year period is less than or equal to 0.15 $\mu g/m^3$
  - Air monitors required near sources emitting more than one ton of lead per year

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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

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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

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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

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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

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KDHE's Salina Monitor

2010 Lead (mg/m³)	
Feb-Apr	0.097
Mar-May	0.096
Apr-Jun	0.107
May-Jul	**0.231**
Jun-Aug	**0.324**
Jul-Sep	**0.421**
Aug-Oct	**0.358**
Sep-Nov	**0.274**
Oct-Dec	**0.158**
Nov-Jan	0.094
Dec-Feb	0.108

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

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Looking South from Monitor

Soil Sampling

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Soil Sample Analyses

Sample Location	Conc., mg/kg
#1 Coronado	20.0
#2 Schilling	16.0
#3 Monitor	158.0
#4 Ninth Street	14.0
#5 Water Well	22.0
#6 Eastside	9.5
#7 Background	11.0

- All results are below EPA standard of 400 mg/kg for soil in children's play areas.

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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

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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

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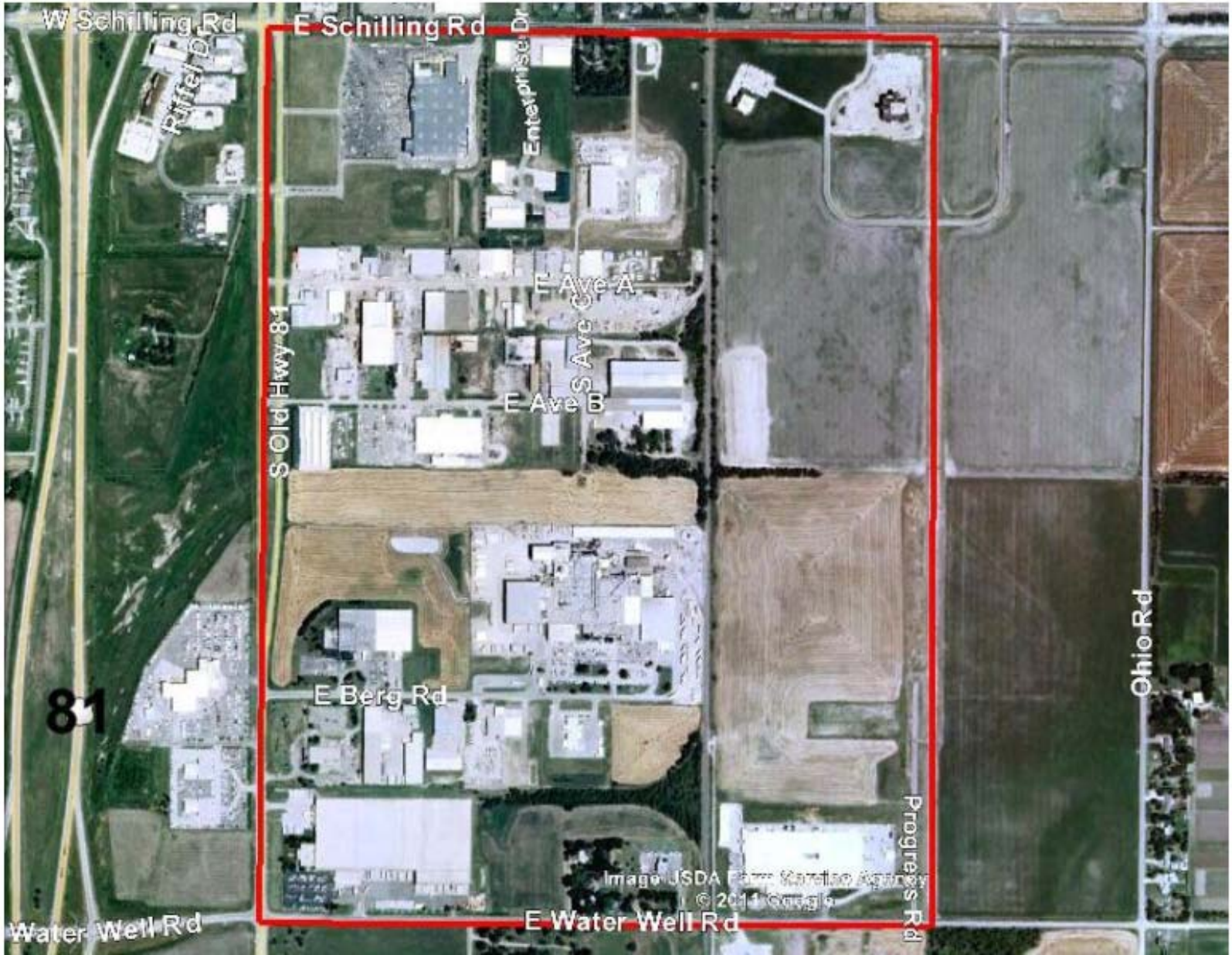
KDHE Recommended Nonattainment Boundary



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

- 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

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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

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Questions?

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