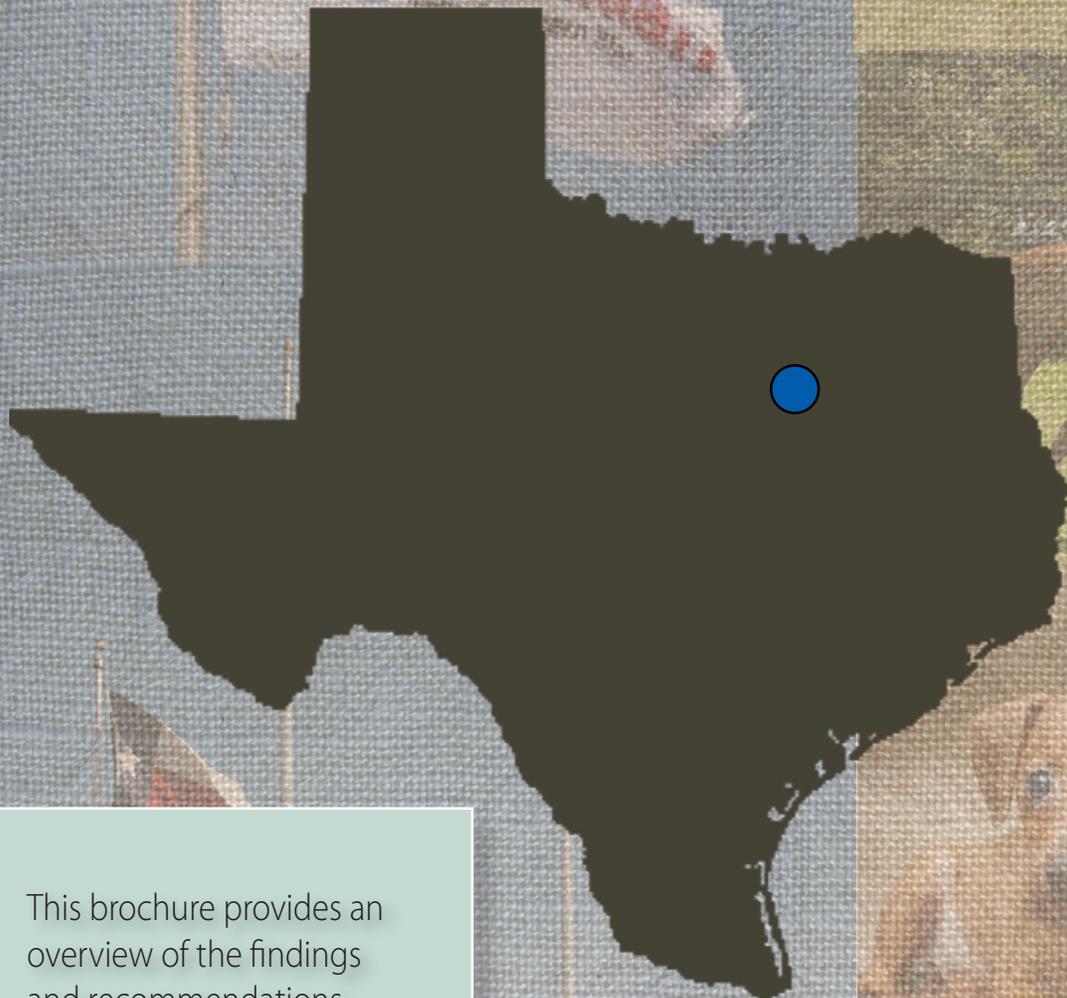


Evaluation of Reported Animal Health Issues *as part of the* Midlothian Area Air Quality Petition Midlothian, Ellis County, Texas



This brochure provides an overview of the findings and recommendations from one of the six health consultations prepared for the Midlothian site, Midlothian, Texas.



Agency for Toxic Substances and Disease Registry
Division of Community Health Investigations



Midlothian Site Midlothian, Texas

The Agency for Toxic Substances and Disease Registry (ATSDR) works with other agencies, states, local governments, and community members to evaluate health risks in communities where people may be exposed to chemicals. For this assessment, ATSDR worked with the Texas Department of State Health Services (DSHS) to determine if chemicals released into the air from three cement plants and a steel mill, in Midlothian, could cause health problems in people and animals. There are six documents drafted or in the process of being drafted to address community concerns in Midlothian. This is a summary of the health consultation on animal health issues.



The Bottom Line

ATSDR provided information on people's concerns about animal health but did not have enough data to look at animal disease rates.

	Animal health population data were too scarce. Without enough data, we could not draw any conclusions about the cause of reported animal health issues in Midlothian, Texas.
	Chemicals (such as sulfur dioxide, sulfuric acid aerosols, and cement kiln dust) in the air or deposited in the soil can cause physical irritation and may have posed a past, or may pose a present and future health problem for animals within the Midlothian area.
	Metal concentrations in blood samples from ten Midlothian-area dogs were similar to the levels found in ten dogs living outside the Midlothian area.



Green means we don't believe there is a problem.

Yellow means we don't know if there is a problem, or there may have been a problem in the past, currently, or in the future.

Background of the Site

Midlothian is in Ellis County, Texas, about 30 miles south of the Dallas/Fort Worth area. Midlothian is home to large-scale industrial operations, including three cement plants and a steel mill. Operations at these four facilities have changed over the years, including a range of production levels and use of different fuels in their kilns. Community members asked ATSDR and DSHS to more fully investigate chemical releases from these industries and to evaluate possible health risks to humans and animals.

Community Concerns

Starting in 2005, ATSDR and DSHS collected community concerns regarding the Midlothian facilities. The agencies did this through:

- Door-to-door surveys of residents
- Community surveys
- Public meetings
- Public availability sessions (an informal, drop-by meeting where community members meet one-on-one with ATSDR to discuss health and site-related concerns)



The animal health issues community members wanted ATSDR to look at included:

- Dogs with tumors and birth defects
- Horses with reproductive problems and birth defects
- Animals dying suddenly and unexpectedly



Community members also wanted to know if:

- Animal health issues were similar to those found in people
- Animals might be acting as sentinels (early indicators) of human disease

Questions and Answers about This Health Consultation

What did ATSDR do?

In this report, ATSDR:

- Provided information on animal health (this included causes of disease and how common those diseases were).
- Reviewed veterinary literature and looked at disease rates from sources such as the U.S. Department of Agriculture (there was not enough information to determine the disease rates in animals in Midlothian compared with known background rates in animals).
- Did not and could not show links between diseases and exposure to specific chemicals.
- Provided the results from ATSDR's Exposure Investigation (EI) which tested chromium and other metals in the blood and serum of dogs living both inside and outside the Midlothian area.

ATSDR is a public health agency and does not traditionally look at animal health. The community voiced concerns that the illnesses they saw in their animals could indicate potential health problems in people. This influenced ATSDR's decision to investigate animal health issues.

Midlothian Site Midlothian, Texas

What did ATSDR find?

No or limited veterinary or breeding records were available to evaluate rates of disease in animals in Midlothian. There was also not enough information on environmental exposure doses.

There were several ways for potential contaminant exposure to have occurred in the past that could have increased the possible risk of harm to animals in the area.

Animals may have:

- Breathed air pollutants
- Eaten contaminated soil
- Come in direct contact with contaminated soil

There was not enough information on how long or how often the animals were exposed to say that any health problems could have been related to irritant chemicals such as sulfur dioxide, sulfurous acid, or cement kiln dust that was detected in the area.

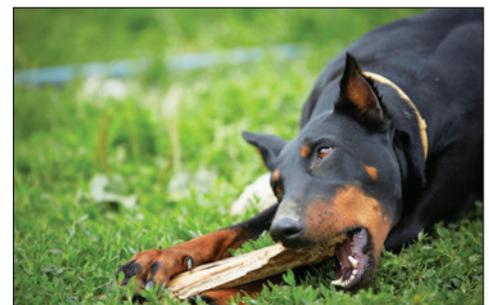
ATSDR found that blood and serum levels of chromium and 16 other metals were similar in the 10 dogs from Midlothian as compared to 10 dogs living outside of the Midlothian area. There was no statistical difference between the levels of chromium between the two groups of dogs.

The following table shows whole blood chromium levels in parts per billion (ppb) in the blood of dogs from Midlothian and outside Midlothian, May 2011.

	Whole Blood Chromium Levels (ppb)	
	Range	Average
Midlothian area	17.3-126.0	41.23
Outside Midlothian	18.8-91.8	44.99



For some sites, ATSDR may conduct an exposure investigation (EI) to obtain biological or environmental sampling data that is not available. ATSDR uses the data obtained from an EI to help reach a public health conclusion about a site.



What are the next steps?

- ATSDR and DSHS will meet with Midlothian residents to share the findings of this Health Consultation and answer questions.
- At this time, ATSDR does not recommend any additional animal blood and serum be collected and analyzed for metals.

To get more information about ATSDR's public health activities in Midlothian, visit our website at: www.atsdr.cdc.gov/sites/midlothian/.