

Health Consultation

EAST ST. LOUIS AWNING COMPANY, SITE 160

1901 RIDGE AVENUE

EAST ST. LOUIS, ST. CLAIR COUNTY, ILLINOIS

AUGUST 24, 2007

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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HEALTH CONSULTATION

EAST ST. LOUIS AWNING COMPANY, SITE 160

1901 RIDGE AVENUE

EAST ST. LOUIS, ST. CLAIR COUNTY, ILLINOIS

Prepared By:

Illinois Department of Public Health
under a Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

Purpose

The Illinois Department of Public Health (IDPH) and the Illinois Environmental Protection Agency (Illinois EPA) have collected data for inorganic compounds in soils near the East St. Louis Awning site as part of an area wide investigation of lead in East St. Louis. IDPH reviewed the available data to determine whether exposure to the levels of lead detected in the samples could cause adverse health effects.

Background and Statement of Issues

Site History

The East St. Louis Awning Company is located at 1901 Ridge Avenue in East St. Louis, Illinois in St. Clair County (Figure 1). East St. Louis Awning began operation before 1958 and it is not known when operations ceased (1). The products made at this location were metal awnings and ornamental iron products (1). Parts of the remaining buildings on the site are now used as apartments. The site is surrounded by residences to the north and west, East St. Louis Housing Authority apartments to the south, and a vacant lot and an old industry to the east.

In June 1999 and again in May 2000, IDPH collected residential surface soil samples near East St. Louis Awning. This sampling was conducted as part of the Mississippi Gateway Initiative study (2). In May 2002, the site and surrounding residential areas were screened using an X-ray fluorescence (XRF) device by an Illinois EPA contractor as part of the Metroeast Lead Collaborative Initiative. An additional two yards were screened in November 2002. At the request of Illinois EPA the soil sample results were reviewed by IDPH and 47 letters were written to the owners of the properties that were sampled.

In November and December 2002, the East St. Louis Awning site and nearby properties were remediated by the Illinois EPA contractor (3). The cleanup consisted of removing and replacing lead contaminated soil. The lead cleanup level of 400 parts per million (ppm) was based on the Residential Cleanup Objective established under the Tiered Approach to Corrective Action Objectives (TACO) (4). Approximately 435 tons of soil were removed from twenty properties. Each property was cleared using an XRF. In addition, 6 laboratory samples were collected to confirm the XRF readings.

Sampling Activities

In June 1999, IDPH collected seven residential soil samples near East St. Louis Awning as part of the Mississippi Gateway Initiative (Figure 2). IDPH screened 21 locations with the XRF and collected an additional 28 surface soil samples from nearby yards in May 2000. These thirty-five soil samples were analyzed for lead only. The results of these samples are listed in Table 1.

In May 2002, an Illinois EPA contractor screened the East St. Louis Awning and 43 nearby properties using an XRF. Only the lead concentration was reported. They sampled the site and the 43 surrounding properties using a 10 foot by 20 foot grid pattern (4).

Discussion

Chemicals of Interest

IDPH compared the lead results from each of the soil samples with the appropriate screening comparison value. No other chemicals were analyzed in the soil samples. Soil was the only media that was sampled. Lead was found at levels greater than comparison values and was selected for further evaluation as a chemical of interest in soil near the East St. Louis Awning site.

Exposure Analysis

Exposure to a chemical at a level that exceeds a comparison value does not necessarily mean that adverse health effects will result. The potential for exposed persons to experience adverse health effects depends on –

how much of each chemical a person is exposed to,
how long a person is exposed, and
the health condition of the exposed person.

An exposure pathway consists of a source of contamination, environmental media and transport mechanisms, a point of exposure, and a receptor population. Exposure to a contaminant may have occurred in the past, may be occurring now, or may occur in the future. When all these elements linking the contaminant source to an exposed population are known, a completed exposure pathway exists. When one of these elements is missing, a potential exposure pathway exists.

Soil Exposure

The surface soil lead concentrations surrounding the site have been removed in areas where soil lead concentrations exceeded 400 ppm. Therefore exposure to lead in soil from the site has been greatly reduced and is no longer a hazard.

Child Health Considerations

IDPH recognizes that children are especially sensitive to some chemicals. For this reason, IDPH included children when evaluating exposures at this site. Children are the most sensitive population considered in this health assessment; however, children are not currently being exposed to chemicals from the site at sufficient levels to cause adverse health effects.

Conclusions

Based on the information reviewed, IDPH concludes that the East St. Louis Awning site does not pose a public health hazard. Lead was the chemical of interest at the site. The lead in residential yards near the site has been cleaned up where lead levels exceeded 400 ppm. An x-ray fluorescence instrument was used to ensure that all soil containing more than 400 ppm lead was removed and replaced with clean soil.

Recommendations and Public Health Action Plan

IDPH has no recommendations at this time.

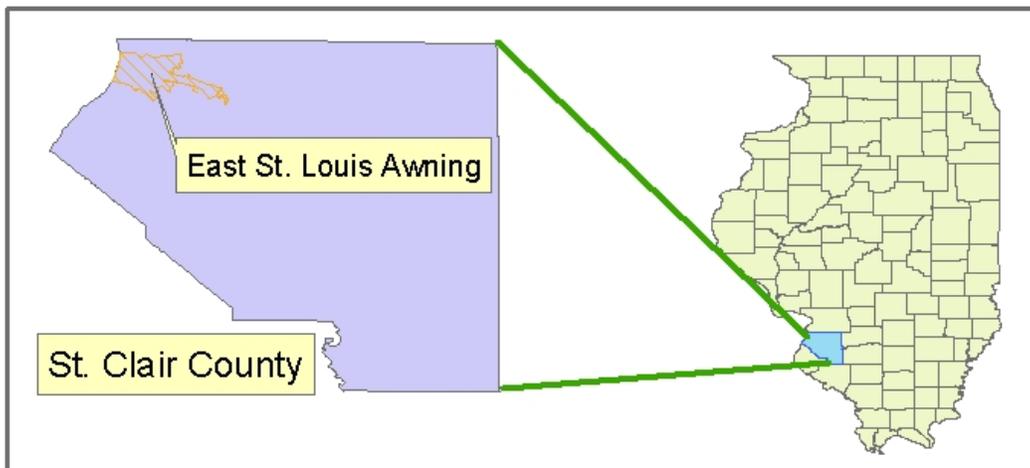
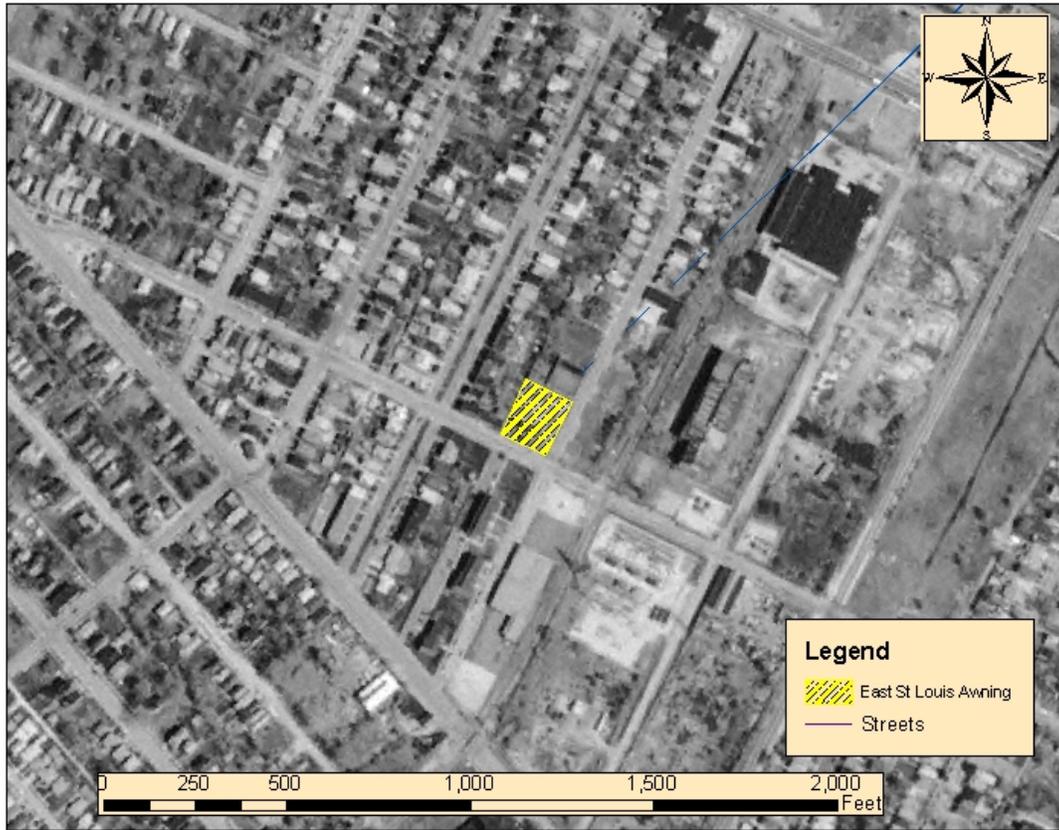
Preparer of Report

David Webb
Environmental Health Specialist
Illinois Department of Public Health

References

1. USEPA. Historical Analysis of Lead Facilities in the Gateway Initiative Area from 1890 to the present, Compact Disc, 1998.
2. IDPH, Preliminary Assessment of Uncontrolled Lead Releases in the Mississippi River Gateway Initiative Area, September 27, 2002.
3. Bodine Environmental Services. Lead Contamination Removal Action Completion Report, East Saint Louis Awning, Site 160, East St. Louis, Illinois, LPC #1630455241. September 2003.
4. Bodine Environmental Services. Lead Contamination Delineation Report and Removal Action Work Plan, East Saint Louis Awning, Site 160, East St. Louis, Illinois, LPC #1630455241. September 2002.

Figure 1 - East St. Louis Awning - Site Location Map



IDPH, 2006

Figure 2 - East St. Louis Awning - Sample Location Map



TABLES

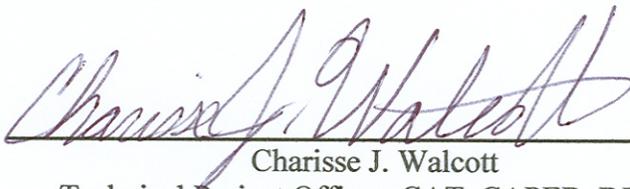
Table 1. Soil Samples Collected by IDPH near the East St. Louis Awning site

Sample Number	Date	Lead Concentration in ppm*
168282	5/24/2000	144
168283	5/24/2000	75
168284	5/24/2000	94
168285	5/24/2000	93
168286	5/25/2000	863
168287	5/25/2000	220
168288	5/25/2000	198
168289	5/25/2000	465
168290	5/24/2000	255
168291	5/24/2000	176
168292	5/24/2000	156
168293	5/24/2000	454
168294	5/24/2000	432
168295	5/24/2000	102
168296	5/25/2000	304
168297	5/25/2000	166
168298	5/25/2000	283
168299	5/25/2000	283
168300	5/25/2000	597
168301	5/25/2000	130
168302	5/25/2000	152
168303	5/25/2000	324
168304	5/25/2000	189
168305	5/25/2000	163
168306	5/25/2000	133
168307	5/25/2000	124
168308	5/24/2000	153
168309	5/24/2000	850
167941	6/23/1999	172
167943	6/23/1999	203
167942	6/23/1999	248
167949	6/23/1999	1350
167920	6/23/1999	1430
167921	6/23/1999	215
167940	6/23/1999	269

* = ppm is parts per million

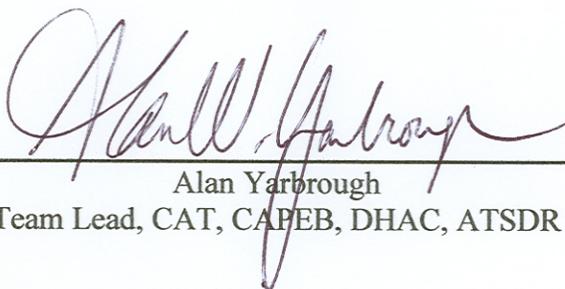
Certification

This East St. Louis Awning Company public health consultation was prepared by the Illinois Department of Public Health under a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR). It was completed in accordance with approved methodologies and procedures existing at the time the health consultation was initiated. Editorial review was completed by the Cooperative Agreement partner.



Charisse J. Walcott
Technical Project Officer, CAT, CAPEB, DHAC

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this health consultation and concurs with its findings.



Alan Yarbrough
Team Lead, CAT, CAPEB, DHAC, ATSDR