

US EPA ARCHIVE DOCUMENT



Results Released for Homes and Former Dead Creek Area

East St. Louis Soil Sampling Project

East St. Louis, Illinois

October 2012

For More Information

EPA invites you to review technical reports and plans, and other official documents related to the cleanup of hazardous waste sites in Sauget and Cahokia, IL at the information repository located at:

Cahokia Public Library
140 Cahokia Drive
Cahokia, IL

Documents can be viewed online at:

www.epa.gov/region5/cleanup/rcra/solutia
www.epa.gov/region5/waste/permits/actions.htm#2007
www.epa.gov/region5/sites/saugetarea1
www.epa.gov/region5/sites/saugetarea2

Contact EPA

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Region 5 toll-free: 800-621-8431,
8:30 am - 4:30 pm, weekdays

U.S. Environmental Protection Agency Region 5 has released the results from soil sampling of residential yards and the former Dead Creek area in East St. Louis. EPA collected these samples to find out whether PCBs carried by the wind or released from past industrial activity in the area were present in the soil. This recent work is a follow up to soil sampling conducted in November 2009 where PCBs were found to be present at some residential properties and parks in East St. Louis and Sauget. PCBs are man-made chemicals widely used in electrical equipment and hydraulic fluids. Commercial production of PCBs ended in 1977 but they have been found to accumulate and persist in the environment.

Results show that PCB levels at 8 of the 9 residential properties sampled were at or above screening levels used by EPA to assess health risks to the public. Six of the properties had PCB levels that slightly exceeded the EPA screening level but do not indicate an acute health risk. Two of the properties had PCB levels that somewhat exceeded the EPA screening level. Health risks related to being exposed to these levels over a long time needs to be evaluated. Levels of PCBs at 2 of 7 Dead Creek locations were slightly above the screening levels.

Sample Details

On August 14 and 15, EPA sampled surface soil at 9 residences in East St. Louis. The residences sampled were chosen based on air modeling that suggested PCB contamination could be present in soil from former industrial activities near these neighborhoods. EPA also sampled 7 locations within the former Dead Creek area that extends north of the Village of Sauget into the Rush City community of East St. Louis. The northern end of the former Dead Creek historically extended into East St. Louis. It is now filled and dry. A cleanup was completed in 2009 for the portion of Dead Creek present in the villages of Sauget and Cahokia.

Five soil locations to a depth of 6 inches were collected at each residence and combined into one sample. Samples were taken from the former Dead Creek at varying depths from the upper foot of soil. All the samples were then sent to an environmental laboratory and analyzed for PCBs. Dead Creek samples were also tested for metals like lead.

Exposure to PCBs at elevated levels has been shown to cause a variety of adverse health effects in people and animals. Exposure in soil would be expected to occur mainly through direct contact with skin or by incidental swallowing of dirt particles.

Sample Results

In highly industrialized areas of the United States, no soil, water or air mass is without pollutants of some sort and zero contamination is impossible to achieve. For PCBs in residential area, EPA typically uses a health screening level of one part PCB per million parts of soil (one part

per million of 1 ppm). Sample results show that soil at 8 residential yards was slightly to somewhat above this screening level for PCBs. The 9 residential yards in East St. Louis contained PCBs from 0.6 to 7 ppm. Soil within the former Dead Creek area in East St. Louis contained PCBs from 0.1 to 1.9 ppm and lead was present at three locations above the EPA screening level of 400 ppm for residential areas.

Recommendations

EPA has notified property owners of the sample results. The Agency recommends residents who live on land with contamination levels of PCBs above EPA's health screening level follow the advice from the Illinois Department of Public Health to reduce exposure to soil contaminants. This advice can apply to anyone who may be concerned about contamination where they live. A fact sheet about this has been mailed to area property owners. Residents of properties near industrial areas often find these practices to be useful general safeguards whether or not their specific property has been sampled for contamination. Health Department advice includes:

1) Practice good personal hygiene habits.

- Wash children's hands and faces often, especially before eating and bed time. Keep their fingernails short and clean. Adults should wash their hands before feeding their children, smoking, eating or drinking. Discourage children from placing fingers and non-food items in their mouths.
- Keep toys or objects that children put in their mouths clean.

2) Practice good housekeeping techniques.

- Remove shoes upon entering your home to prevent tracking contaminated soil inside. Store outdoor shoes at entryways.
- Vacuum carpeting, rugs and upholstery often. Regular vacuuming will keep dust from building up.
- Wet mop and wet wipe surfaces where children may play.

3) Create barriers to contaminated soil.

- Maintaining good grass coverage, removing debris, turning the soil over, sodding, covering with plastic or cement, or excavating and

disposing of contaminated soil will reduce exposure. If working with contaminated soil, keep the area moist to reduce dust from forming. Ensure that new soil is not contaminated. Do not disturb contaminated soil on windy days or when children or pregnant women are present.

- Keep windows closed on windy days. This will help to keep dust from being blown inside. Fences, bushes and grass help reduce movement of contaminated soil.

4) Minimize potential exposure during outdoor activities.

- Build a sandbox with a bottom and fill with clean sand to provide children with a safe play area. Keep the sand box securely covered when not in use to prevent contaminated soil from blowing in.
- Wear gardening gloves if digging in contaminated soils and store outside to prevent introducing contaminants into the home.
- Thoroughly wash garden vegetables before eating them.
- Keep pets away from contaminated soil to avoid tracking soil into your home.

The entire fact sheet from Illinois Department of Public Health can be found online at:

www.idph.state.il.us/envhealth/factsheets/leadsoil.htm

Next Steps

EPA will look at whether additional sampling or a health risk evaluation are needed to see if levels of PCBs in soil are safe for residents. We will make sure the community stays informed as work moves along.

