

US EPA ARCHIVE DOCUMENT



New Round of Sampling Planned for Treatment Site

Former Koppers Wood-Treating Site

Carbondale, Illinois

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For more information

If you would like more information, have questions or comments about the environmental activities at the Former Koppers Wood-Treating site or would like to be added to the mailing list contact these team members:

Rafael P. Gonzalez

EPA Public Affairs Specialist
Land and Chemicals Division
312-886-0269

gonzalez.rafaelp@epa.gov

Carolyn Bury

EPA Project Manager
Land and Chemicals Division
312-886-3020

bury.carolyn@epa.gov

Region 5 toll-free: 800-621-8431,
8:30 a.m. – 4:30 p.m., weekdays

EPA Region 5
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Information repository

A file containing official documents about the Koppers site is available for your review at the Carbondale Public Library, 405 W. Main St. The complete file is available at the Region 5 EPA Records Center, Seventh Floor, 77 W. Jackson Blvd. Chicago, IL.

The company that owns the Former Koppers Wood-Treating site will be collecting soil samples this summer to test for dioxin contamination in areas outside its property boundaries. Beazer East, Inc. will be collecting the samples from residential and agricultural areas west, south, and north of the Koppers property line. Beazer developed the sampling plan in coordination with the U.S. Environmental Protection Agency.

Between 2006 and 2010, Beazer tested soil for dioxin and other contamination on the Koppers site and in area creeks. Tests determined dioxins are present in soil and creek sediment (bottom mud). The current sampling plan for this summer and recent past dioxin sampling results can be found in the Carbondale Public Library (*see box P. 2 for an explanation of dioxins*).

Upcoming soil sampling

The main purpose of the sampling this summer is to determine whether any dioxin contamination from the Beazer site spread to the neighborhood to the south and to other neighbors. Earlier investigations in the neighborhood completed in 2005 and 2006 by EPA, the Illinois EPA, the City of Carbondale, and Beazer showed that wood-treating compounds did not move off the Koppers property except in some creeks. Soil was not tested for dioxin in these previous investigations. Beazer will collect and test the new samples to provide nearby property owners with up-to-date information. Beazer may contact some homeowners to ask for access to their property for sampling. After the samples are collected, it will take about three months to get the results from the laboratory and share them with property owners and the public.

EPA and Beazer will discuss the results at a public meeting to be scheduled later this year. A separate notice announcing the meeting will be issued once the date and location are established.

Site history

The Former Koppers Wood-Treating plant is located at 1555 N. Marion St. just north of Carbondale in Jackson County. From 1902 until 1991, railroad ties, utility poles, and other wood products were treated at the plant to prevent decay. Beazer became the owner of the facility in the early 1990s and is responsible for the environmental issues on and around the location.

In 2004, EPA issued a set of cleanup actions to be completed by Beazer using its authority under the federal Resource Conservation and Recovery Act. From 2004 to 2010, Beazer completed several cleanup actions in and around the site, including some in 2010 to address dioxin contamination:

- Relocated a stretch of Glade Creek contaminated with creosote (located in the eastern part of the site).
- Excavated creosote-laden sediment from the eastern end of the property downstream to Piles Fork Creek.
- Installed two buried trench systems and a recovery well to remove underground creosote for recycling.
- Built an engineered landfill to safely and permanently dispose of soil and other materials from the site.
- Covered 38 acres of the former process area with clean soil to isolate contamination. A portion of cover included a layer of durable plastic sheeting.

Testing for dioxins

At the direction of EPA, Beazer conducted soil and sediment sampling from 2006 to 2010 to update the original sampling projects from the 1980s and 90s. A 1992 risk assessment document completed for Beazer had determined that dioxin was not a significant problem at the site so the original cleanup plan did not focus on that contamination. In 2005, EPA determined more dioxin testing and new risk analyses were needed using the latest health standards for that chemical compound. Following the sampling and testing this summer, Beazer and EPA will evaluate the

What are dioxins?

Dioxins are a common name for a group of similar chemical compounds more technically known as polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.

Dioxins are found in soil, sediment (creek mud), air, and water all over the world. They are commonly associated with combustion – from forest fires, volcanoes, wood burning, domestic heaters, waste incinerators, energy production, and vehicle exhaust. The single largest emission source of dioxins in the U.S. environment is backyard barrel burning of garbage.

The primary exposure for humans to dioxin is by ingestion of a normal diet including dairy products, beef and fish. Exposure may also occur by incidental swallowing of contaminated soil or consumption of contaminated fish. Dioxins tend to accumulate in fatty tissues of humans where they can cause health problems.

Dioxins are classified as a probable cancer-causing substance in humans and may cause noncancerous problems to the immune and reproductive systems of people.

contamination using the latest health risk guidelines to determine what potential health risks are posed to people and the environment in and around the site.

Sampling results

Since 2006, Beazer has collected and tested nearly 200 soil and sediment samples from the site, nearby creeks, and a railroad right-of-way between the site and the neighborhood to the south. Dioxins were detected in several of the soil samples on the site at levels that are above EPA's health risk guidelines (health standards) for residential and industrial properties. Even though sampling results from the railroad right-of-way near residential neighborhoods to the south of the site were below the dioxin health standards for residential areas, the sampling results on-site prompted this latest round of sampling to confirm that dioxin contamination has not spread beyond the Koppers property boundary.

During the summer of 2008, Beazer collected edible-sized fish from several locations in Crab Orchard Creek, and crayfish from Glade Creek. A laboratory tested the samples for dioxins. While the compound was detected in several of the fish and crayfish samples, the levels were low. EPA will reevaluate the fish data and assess the risk when the health standards become final.

How did dioxins get on the Koppers site?

At the Former Koppers facility, dioxins were not specifically used in the wood-treating process. However, dioxins are commonly produced as a byproduct of pentachlorophenol production. Pentachlorophenol was one of the wood-treating compounds used reportedly from the 1950's until the late 1970s. It is assumed that the source of dioxins at Koppers is from pentachlorophenol spilled around the site contaminating the soil and drainage ditches.

It is unlikely that soil from the site or flooding in the ditches could carry contamination into the neighborhood to the south. The railroad property that lies to the south between Koppers and the neighborhood is elevated higher than the Koppers site, thereby stopping water flow, and the series of drainage ditches near the southern property line intercept rainwater runoff. Also, soil previously tested in the neighborhood did not have contamination from Koppers.

The latest sampling project will help investigators and property owners better understand the extent of the dioxin contamination. EPA and Beazer can then continue to design a site cleanup plan that will protect the health of people and the environment and prepare the property for reuse.