

US EPA ARCHIVE DOCUMENT

# Sampling to Check Indoor Air in Buildings

**MLC Moraine Facilities (formerly Delphi Harrison, GM  
Engine and Assembly Plants)**

Moraine, Ohio

February 2011

## You are invited

EPA will hold a public meeting  
Thursday, Feb. 17, 2011, at **6:00  
p.m.** – 8:00 p. m. City Council  
Chambers, 4200 Dryden Road,  
Moraine, to discuss the latest  
sampling project.

EPA emphasizes it needs access  
agreements from property owners  
before the indoor sampling can take  
place. EPA urges the Riverview  
Platt property owners to sign the  
access agreement and return them to  
MLC . Access forms will be  
available at the meeting too. Send  
them to Pamela L. Barnett, BOW  
Environmental Solutions, 3400  
Deweese Pwy Dayton, OH. 45414

### Access Agreement information

**Pamela L Barnett**, BOW ...  
address 3400 Deweese Pwy Dayton,  
OH. 45414 phone #, 937-4788221

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For technical questions:

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Region 5 toll-free: 800-621-8431,  
9:30 a.m. – 5:30 p.m., weekdays  
Information repository located at  
the Montgomery County Library,  
Main Branch, 215 E. Third St.,  
Dayton, Ohio. Phone: 937-227-  
9500.

Motors Liquidation Co., under the supervision of U.S. Environmental Protection Agency Region 5, will conduct an indoor vapor intrusion investigation in about 60 homes and buildings southwest of the former General Motors manufacturing complex. The tests involve “sub-slab” and indoor air sampling. MLC needs access agreements from property owners before conducting the tests that will check whether hazardous vapors are seeping into homes and buildings. MLC plans to begin to start the sampling in March.

Vapor intrusion is the name given to an environmental issue involving a class of chemicals called volatile organic compounds or VOCs. When VOCs are spilled on the ground, they can soak into underground water supplies (called “ground water” in environmental terms) and then release hazardous vapors. These gases can then rise through the soil to the surface or seep through basement cracks and contaminate indoor air during the vapor intrusion process.

VOCs released at the former GM plants have been carried by underground water 2,000 feet southwest of the facilities toward the Great Miami River. While the plants released several different VOCs, the two of most concern are called TCE (trichloroethylene) and PCE (tetrachloroethylene).

Soil gas sampling along city streets last fall revealed regulatory exceedence of VOC levels. Officials now need to move the testing indoors to make sure residents are safe. They stress there is no evidence of actual vapor intrusion problems occurring in homes, but the new round of sampling will determine that for sure. The municipal drinking water system remains safe from VOC pollution.

## Sampling method

Officials try to make the sampling as inconspicuous as possible. The equipment will be in homes only a day or two. In sub-slab sampling, a 5/8-inch diameter hole is drilled through the slab or basement floor and a probe inserted into the soil underneath. After the hole is sealed, the probe will feed vapor samples into a collection tank. Buildings with crawl spaces will have a canister collecting air samples near the center of the space.



*Photos show sub-slab sampling equipment (left)  
and an indoor air sampling canister (right).*

Indoor air samples are taken by a collection tank placed in the basement or first floor of a building or house. No holes or drilling are required for indoor air testing.

Both methods are needed in most structures to provide a check on results. Indoor air samples alone can be thrown off by the presence of common household products such as paint and solvents that contain VOCs. Sub-slab sampling measures the actual amount of gas trapped in the soil underneath a building. If that amount is excessive the potential for vapor intrusion is high.

Under the authority of the federal Resource Conservation and Recovery Act (RCRA), EPA reviews environmental work plans for cleanup activities performed by MLC at the Moraine site. The latest sampling is at no cost to property owners. If the tests show a home or building contains an indoor air pollution problem, a simple vapor removal system can be installed, again at no cost to the resident.

### Site background

The MLC site covers 465 acres along Dryden, Stroop and Springboro roads in Moraine and includes former manufacturing sites for Delphi Harrison Thermal Systems, the GM Truck Group Assembly Plant and the GM Powertrain Group Engine Plant. Frigidaire, a GM division, also produced appliances on the site from the late 1920s until 1979. Delphi ceased operations in 2003, and GM stopped all manufacturing in late 2008. Many of the buildings have been torn down, but the giant 4 ½ million-square-foot assembly plant remains. In 2001 the DMAX Engine Plant was built at 3100 Dryden Road on the northwest corner of the complex.

MLC was formed out of the 2009 GM bankruptcy and took over most of GM's nonproductive assets. MLC was given a budget to clean up the automaker's former properties and then sell or dispose of the land for redevelopment or reuse.

EPA and state partner Ohio EPA have been involved with the site since the environmental regulators issued the first of many legal orders in 1991.

### Public outreach

The properties in the Riverview Platt neighborhood included for indoor sampling are 60 homes and two

businesses and a church. The structures sit on Portage Road, Old Sellars Road, Lakehurst Court, Dryden Road, Telhurst Road and Hoylake Court, southwest of the former GM facilities.

Residents in this neighborhood will receive a packet of information including an access agreement to sign and return. Officials cannot stress enough the importance of signing the access agreement and allowing the sampling to be fully completed.

Before the sampling equipment is installed, MLC contractors will visit with property owners and occupants to survey the structure. Occupants will be requested to avoid using household products such as cleaners, paints and solvents that potentially contain VOCs and also refrain from smoking during the testing, which again, only lasts a day or two.

It takes about three to four weeks to analyze the samples. Results will be mailed to property owners. If indoor air contamination is found to be excessive, officials will explain how the health risks can be lowered by removing or containing the pollutants.

### Future steps

The public meeting on Feb. 17 (see front-page box) is a good way to learn more about the pollution situation in and around MLC. Access agreement forms will be available at the meeting.

The vapor intrusion investigation remains just one part of possible future cleanup actions for the MLC site. GM installed several ground water capture and treatment technologies over the years. However, the upper and lower "aquifers" remain contaminated with excessive levels of VOCs. An aquifer is a layer of permeable rock or sand containing enough water to supply wells and springs.

EPA could require current owner MLC to meet drinking water standards in the aquifers, which would mean expanded, long-term cleanup systems.

MLC submitted proposed corrective measures in 08, revised 2010, for a comprehensive cleanup plan for the Moraine facilities under review by EPA. The public will then get a chance to review and comment on the proposed cleanup plan before it becomes final.