UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

February 3, 2011

REPLY TO THE ATTENTION OF:

Dear Resident,

U.S. Environmental Protection Agency and Motors Liquidation Corp. have concluded the first round of sampling that was announced at the September 30, 2010 Public meeting held in the City Council Chambers. At the meeting on Sept. 30, 2010 EPA in the presentation phase of the meeting confirmed that if data collected from the first round of testing were above regulatory levels a second round of testing would be done. The testing would be in the homes in designated locations. We are announcing a new indoor air sampling project for the neighborhood Riverview Platt, southwest of the former General Motors factory. EPA and the current owner of the former GM facilities, Motors Liquidation Corp. (MLC), are planning to begin the sampling this March.

EPA needs your cooperation to perform this important testing. Property owners must sign and return an access agreement before MLC contractors can install the sampling equipment in your home or business. An access form is included with this letter as well as a fact sheet and health information for your review. MLC will pay for the testing so the sampling will NOT cost home and property owners anything. The testing only lasts a day or two, and the equipment is fairly inconspicuous.

A meeting is scheduled Feb. 17, 6:00 to 8:00 p.m., City Council Chambers, 4200 Dryden Road, Moraine, to discuss the upcoming environmental work and reply to questions on the proposed work, and to collect the access agreements that have been signed.

The sampling will verify whether hazardous gases are seeping into homes and buildings at action levels. This environmental issue is called "vapor intrusion." Volatile organic compounds, gases could be coming from underground contamination originating from the former GM plants. Soil gas sampling done along neighborhood streets last fall revealed samples above regulatory levels so officials want to do more sampling inside of buildings.

Officials stress there is no evidence so far that vapor intrusion is actually occurring, but the new round of sampling will determine that for sure. Officials also emphasize the current industrial pollution is NOT affecting Moraine's municipal water supply.

If you have any questions please call EPA Public Affairs Specialist Rafael P. Gonzalez at 312-886-0269 or e-mail gonzalez.rafaelp@epa.gov. EPA Region 5's toll-free number is 800-621-8431, 9:30 a.m. – 5:30 p.m., weekdays.

Sincerely,

Rafael P. Gonzalez
EPA Region 5
Chicago

Motors Liquidation Company
MLC
Access Agreement

Name (please print): _____

Address of property to be sampled _____

Home Phone # _____

Cell Phone # _____

E-Mail address _____

I consent to employees, contractors, and authorized representatives of the Motors Liquidation Company (MLC) and U.S. Environmental Protection Agency (EPA) entering and having continued access to this property for the following purpose:

Conducting air monitoring and air sampling activities;

I realize that these actions taken by MLC are undertaken pursuant to its response and enforcement responsibilities under the Resource Conservation Recovery Act (RCRA) at Sections 3001 to 3019f, and 7003, 42 U.S. C. §§ 6921 to 6939f, and under the direction of the EPA.

This written permission is given by me voluntarily, on behalf of myself and all other co-owners of this property, with knowledge of my right to refuse and without threats or promises of any kind.

Date _____ Signature _____

Sample Location Questions:
1. Are you the Owner __or the Tenant __of the home or building? If you are the owner, go to #3.

2. If you are the Tenant, please write in the owner's name: _____ Go to #3 and write in owner's address and phone number.

3. If you are the owner but live at a different address, write your address below (this is the address where the sample results will be mailed to, otherwise, the results will be mailed to the address at the top of the page):

Owner's Address:_____

_____
Home Phone #

_____
Cell Phone #

_____
E-Mail Address

4. Does the home or building have a basement? Yes__ No___ (If no, you are done)
5. If yes, does the basement have a concrete slab? Yes___ No ____
6. If no, does the basement have a dirt floor? Yes ___ No ___ Partial ___

I DO NOT authorize access by MLC at the above-referenced property.

_____

Print Name Signature Date

EPA
United States
Environmental Protection
Agency

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, C/O BOW Enviromental Solutions, 3400 Deweese Pwy Dayton, OH. 45414

Access Agreement information
Pamela L Barnett, Bow ... address 3400 Deweese Pwy Dayton, OH. 45414 phone #, 937-4788221

Rafael P. Gonzalez
EPA Public Affairs Specialist
Land and Chemicals Division
312-886-0269
gonzalez.rafaelp@epa.gov

For technical questions:
Mirtha Cápiro
EPA Environmental Scientist
Land and Chemicals Division
312-886-7567
capiro.mirtha@epa.gov

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.

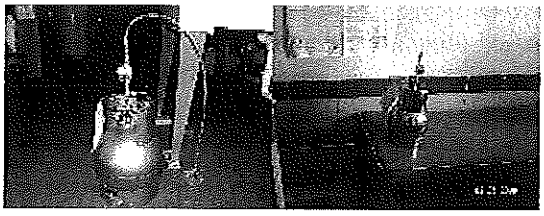
Vapor intrusion is the name given to an environmental issue involving a class of chemicals called volatile organic compounds or VOCs. When VOCs are spilled on the ground, they can soak into underground water supplies (called "ground water" in environmental terms) and then release hazardous vapors. These 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-feet 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.

Bureau of
Environmental Health
Health Assessment Section
"To protect and improve the health of all Ohioans"

Tetrachloroethylene (PCE)

Other names for tetrachloroethylene include PCE, perchloroethylene, PERC or tetrachloroethene.

What is PCE?

Tetrachloroethylene (also known as PCE, PERC or perchloroethylene) is a man-made chemical that is widely used for dry cleaning clothes and degreasing metal. It is also used to make other chemicals and can be found in some household products such as water repellents, silicone lubricants, spot removers, adhesives and wood cleaners. It easily evaporates (turn from a liquid to a gas) into the air and has a sharp, sweet odor. PCE is a nonflammable (does not burn) liquid at room temperature.

How does PCE get into the environment?

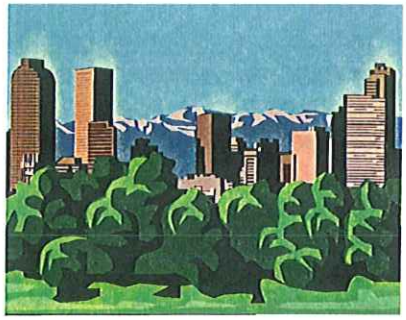
PCE can evaporate into the air during dry cleaning operations and during industrial use. It can also evaporate into the air if it is not properly stored or was spilled. If it was spilled or leaked on the ground, it may find its way into groundwater (underground drinking water).

People can be exposed to PCE from the environment from household products, from dry cleaning products and from their occupation (work). Common environmental levels of PCE (called background levels) can be found in the air we breathe, in the water we drink and in the food we eat. In general, levels in the air are higher in the cities or around industrial areas where it is used more than rural or remote areas.

The people with the greatest chance of exposure to PCE are those who work with it. According to estimates from a survey conducted by the National Institute for Occupational Safety and Health (NIOSH), more than 650,000 U.S. workers may be exposed. However, the air close to dry cleaning business and industrial sites may have levels of PCE higher than background levels. If the dry cleaning business or industry has spilled or leaked PCE on the ground, there may also be contaminated groundwater as well.

What happens to PCE in the environment?

Much of the PCE that gets into surface waters or soil evaporates into the air. However, some of the PCE may make its way to the groundwater. Microorganisms can break down some of the PCE in soil or underground water. In the air, it is broken down by sunlight into other chemicals or brought back to the soil and water by rain. PCE does not appear to collect in fish or other animals that live in water.



How can PCE enter and leave my body?

PCE can enter your body when you breathe contaminated air or when you drink water or eat food contaminated with the chemical. If PCE is trapped against your skin, a small amount of it can pass through into your body. Very little PCE in the air can pass through your skin into your body. Breathing contaminated air and drinking water are the two most likely ways people will be exposed to PCE. How much enters your body depends on how much of the chemical is in the air, how fast and deeply you are breathing, how long you are exposed to it or how much of the chemical you eat or drink.

Most PCE leaves your body from your lungs when you breathe out. This is true whether you take in the chemical by breathing, drinking, eating, or touching it. A small amount is changed by your body (in your liver) into other chemicals that are removed from your body in urine. Most of the changed PCE leaves your body in a few days. Some of it that you take in is found in your blood and other tissues, especially body fat. Part of the PCE that is stored in fat may stay in your body for several days or weeks before it is eliminated.

Can PCE make you sick?

Yes, you can get sick from contact with PCE. But getting sick will depend upon:

- How much you were exposed to (dose).
- How long you were exposed (duration).
- How often you were exposed (frequency).
- General Health, Age, Lifestyle Young children, the elderly and people with chronic (on-going) health problems are more at risk to chemical exposures.

How can PCE affect my health?

Exposure to very high concentrations of PCE (particularly in closed, poorly ventilated areas) can cause dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness and even death. Skin irritation may result from repeated or extended contact with it as well. These symptoms occur almost entirely in work (or hobby) environments when people have been accidentally exposed to high concentrations or have intentionally used PCE to get a "high." Normal background levels (or common environmental levels) will not cause these health affects.

Does PCE cause cancer (carcinogen)?

In the United States, the National Toxicology Program (NTP) releases the *Report on Carcinogens* (RoC) every two years. The *Report on Carcinogens* (RoC) identifies two groups of agents: "Known to be human carcinogens" & "Reasonably anticipated to be human carcinogens."

PCE has been shown to cause liver tumors in mice and kidney tumors in male rats. There is limited evidence for the carcinogenicity of PCE in humans. PCE has been studied by observing laundry and dry-cleaning workers, who may also have been exposed to other solvents, especially trichloroethylene (TCE), but also petroleum solvents.

The *Eleventh Report on Carcinogens* (RoC) has determined that PCE may reasonably be anticipated to be a carcinogen.

Reference:

Agency for Toxic Substances and Disease Registry (ATSDR). 1997. Toxicological Profile for tetrachloroethylene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service

Report on Carcinogens, Eleventh Edition; U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, 2006. http://ntp.niehs.nih.gov/ntp/roc/toc11.html

Is there a medical test to show whether you have been exposed to PCE?

One way of testing for PCE exposure is to measure the amount of the chemical in the breath, much the same way breath-alcohol measurements are used to determine the amount of alcohol in the blood. Because PCE is stored in the body's fat and slowly released into the bloodstream, it can be detected in the breath for weeks following a heavy exposure. Also, PCE and trichloroacetic acid (TCA), a breakdown product of PCE, can be detected in the blood. These tests are relatively simple to perform but are not available at most doctors' offices and must be done at special laboratories that have the right equipment. Because exposure to other chemicals can produce the same breakdown products in the urine and blood, the tests for breakdown products cannot determine if you have been exposed to PCE or the other chemicals that produce the same breakdown chemicals.

What has the federal government made recommendations to protect human health?

The EPA maximum contaminant level for the amount of PCE that can be in drinking water is 0.005 milligrams PCE per liter of water (0.005 mg/L).

The Occupational Safety and Health Administration (OSHA) have set a limit of 100 ppm for an 8-hour workday over a 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) recommends that PCE be handled as a potential carcinogen and recommends that levels in workplace air should be as low as possible.

The Ohio Department of Health is in cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), Public Health Service, U.S. Department of Health and Human Services.

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ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

Revised 08-21-06

Bureau of Environmental Health
Health Assessment Section
"To protect and improve the health of all Ohioans

Trichloroethylene (TCE)

(try- klor'oh eth'uh- leen)

Answers to Frequently Asked Health Questions

What is TCE?

TCE is man-made chemical that is not found naturally in the environment. TCE is a non-flammable (does not burn), colorless liquid with a somewhat sweet odor and has a sweet, "burning" taste. It is mainly used as a cleaner to remove grease from metal parts. TCE can also be found in glues, paint removers, typewriter correction fluids and spot removers.

The biggest source of TCE in the environment comes from evaporation (changing from a liquid into a vapor/gas) when industries use TCE to remove grease from metals. But TCE also enters the air when we use common household products that contain TCE. It can also enter the soil and water as the result of spills or improper disposal.

What happens to TCE in the environment?

- TCE will quickly evaporate from the surface waters of rivers, lakes, streams, creeks and puddles.
- If TCE is spilled on the ground, some of it will evaporate and some of it may leak down into the ground. When it rains, TCE can sink through the soils and into the ground (underground drinking) water.
- When TCE is in an oxygen-poor environment and with time, it will break down into different chemicals such as 1,2 Dichloroethene and Vinyl Chloride.
- TCE does not build up in plants and animals.
- The TCE found in foods is believed to come from TCE contaminated water used in food processing or from food processing equipment cleaned with TCE.

How does TCE get into your body?

- TCE can get into your body by breathing (inhalation) air that is polluted with TCE vapors. The vapors can be produced from the manufacturing of TCE, from TCE polluted water evaporating in the shower or by using household products such as spot removers and typewriter correction fluid.
- TCE can get into your body by drinking (ingestion) TCE polluted water.
- Small amounts of TCE can get into your body through skin (dermal) contact. This can take place when using TCE as a cleaner to remove grease from metal parts or by contact with TCE polluted soils.

Can TCE make you sick?

Yes, you can get sick from TCE. But getting sick will depend on the following:

- How much you were exposed to (dose).
- How long you were exposed (duration).
- How often you were exposed (frequency).
- General Health, Age, Lifestyle Young children, the elderly and people with chronic (on-going) health problems are more at risk to chemical exposures.

How does TCE affect your health?

Breathing (Inhalation):

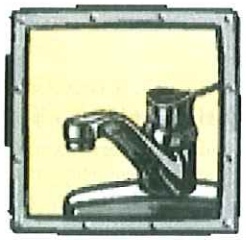
- Breathing high levels of TCE may cause headaches, lung irritation, dizziness, poor coordination (clumsy) and difficulty concentrating.
- Breathing very high levels of TCE for long periods may cause nerve, kidney and liver damage.

Drinking (Ingestion):

- Drinking high concentrations of TCE in the water for long periods may cause liver and kidney damage, harm immune system functions and damage fetal development in pregnant women (although the extent of some of these effects is not yet clear).
- It is uncertain whether drinking low levels of TCE will lead to adverse health effects.

Skin (Dermal) Contact:

- Short periods of skin contact with high levels of TCE may cause skin rashes.



Does TCE cause cancer?

The National Toxicology Program's 11th Report on Carcinogens places chemicals into one of two cancer-causing categories: *Known to be Human Carcinogens* and *Reasonably Anticipated to be Human Carcinogens*.

The11th Report on Carcinogens states TCE is *"Reasonably Anticipated to be Human Carcinogen."*

The category *"Reasonably Anticipated to be Human Carcinogen"* gathers evidence mainly from animal studies. There may be limited human studies or there may be no human or animal study evidence to support carcinogenicity; but the agent, substance or mixture belongs to a well-defined class of substances that are known to be carcinogenic.

There are human studies of communities that were exposed to high levels of TCE in drinking water and they have found evidence of increased leukemia's. But the residents of these communities were also exposed to other solvents and may have had other risk factors associated with this type of cancer.

Animal lab studies in mice and rats have suggested that high levels of TCE may cause liver, lung, kidney and blood (lymphoma) cancers.

As part of the National Exposure Subregistry, the Agency for Toxic Substances and Disease Registry (ATSDR) compiled data on 4,280 residents of three states (Michigan, Illinois, and Indiana) who had environmental exposure to TCE. ATSDR found no definitive evidence for an excess of cancers from these TCE exposures.

The U.S. EPA is currently reviewing the carcinogenicity of TCE.

Is there a medical test to show whether you have been exposed to TCE?

If you have recently been exposed to TCE, it can be detected in your breath, blood, or urine. The breath test, if done soon after exposure, can tell if you have been exposed to even a small amount of TCE.

Exposure to larger amounts is measured in blood and urine tests. These tests detect TCE and many of its breakdown products for up to a week after exposure. However, exposure to other similar chemicals can produce the same breakdown products in the blood and urine so the detection of the breakdown products is not absolute proof of exposure to TCE.

These tests aren't available at most doctors' offices, but can be done at special laboratories that have the right equipment. **Note:** Tests can determine if you have been exposed to TCE but cannot predict if you will experience adverse health effects from the exposure.

Has the federal government made recommendations to protect human health?

The federal government develops regulations and recommendations to protect public health and these regulations can be enforced by law.

Recommendations and regulations are periodically updated as more information becomes available. Some regulations and recommendations for TCE follow:

- The Environmental Protection Agency (EPA) has set a maximum contaminant level for TCE in drinking water at 0.005 milligrams per liter (0.005 mg/L) or 5 parts of TCE per billion parts water (5 ppb).
- The Occupational Safety and Health Administration (OSHA) have set an exposure limit of 100 ppm (or 100 parts of TCE per million parts of air) for an 8-hour workday, 40-hour workweek.
- The EPA has developed regulations for the handling and disposal of TCE.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1997. Toxicological profile for TCE (electronic at http://www.atsdr.cdc.gov/tfacts19.html)

Report on Carcinogens, Eleventh Edition; U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, 2005 (2005 electronic at http://ntp.niehs.nih.gov/ntp/roc/toc11.html)

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