NEW YORK STATE DEPARTMENT OF

ENVIRONMENTAL CONSERVATION

Dear Interested Citizen:

The purpose of this Fact Sheet is to announce the start of a Remedial Investigation and Feasibilty Study at the Modock Road Springs site. If you have any questions or would like more information, please do not hesitate to contact:

Mr. Jason Pelton
Project Manager
NYSDEC
625 Broadway
Albany, NY 12233-7013
(518) 402-9818 or
(888) 459-8667
jmpelton@gw.dec.state.ny.us

-or locally-

Mr. Jim Craft
NYSDEC
6274 E. Avon-Lima Rd.
Avon, NY 14414
(585) 226-5352
jhcraft@gw.dec.state.ny.us

For site-related health questions, please contact:

Ms. Krista Anders
NYSDOH
547 River Street
Troy, New York 12180
(800) 458-1158 ext. 27860
beei@health.state.ny.us

FACT SHEET

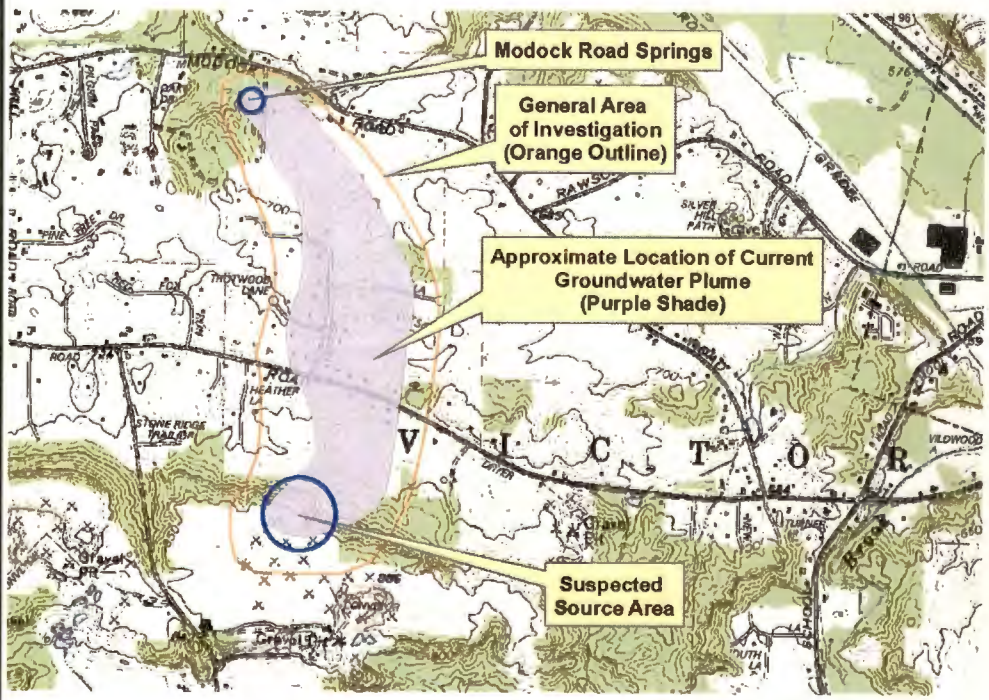
ENVIRONMENTAL INVESTIGATION TO BEGIN AT MODOCK ROAD SPRINGS - DLS SAND & GRAVEL, INC. SITE - VICTOR, NY

Inactive Hazardous Waste Site# 8-35-013

JANUARY 2006 7

Introduction

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) are issuing this fact sheet to announce the start of an environmental investigation at the Modock Road Springs - DLS Sand & Gravel, Inc. site, located in the Town of Victor, Ontario County, New York (see orange outline on map). As described below, sampling of community water supplies in 1990 identified contamination in groundwater discharging at the Modock Road Springs. Following identification, the Village of Victor connected to the Monroe County Water Authority for a water supply and the NYSDEC completed several investigations to identify a source, to define limits, and to assess possible exposures to the contamination. Starting in early 2007, the NYSDEC and the NYSDOH will be performing additional investigation work at the Modock Road Springs Site as part of what is called a Remedial Investigation/Feasibility Study (RI/FS).



Remedial Investigation/Feasibility Study

The Remedial Investigation, or RI phase of the upcoming RI/FS will determine the nature and extent of contamination as well as potential threats to public health and the environment. As part of the investigation, various

environmental media (including groundwater, surface water, soil, air, and soil vapors) will be sampled and analyzed by a laboratory. Based on data collected during the RI, the Feasibility Study or FS will evaluate possible approaches to cleanup the site. At the conclusion of the RI/FS, the NYSDEC will propose a remedy to address clean up of site contamination. Following consideration of public comments on the proposed cleanup plan and its alternatives, the NYSDEC will select a remedy and implement it. Copies of the workplan describing the RI/FS in more detail are located in the Document Repositories listed at the end of this Fact Sheet.

As part of the upcoming RI, the following field activities are expected between January - August 2007:

1. Indoor Air Sampling - Complete indoor, sub-slab, and ambient (outdoor) air sampling and analysis to evaluate indoor air quality at buildings located near the groundwater plume. This is likely to be completed during February - March, 2007;
2. Shallow Soil Vapor Monitoring - Complete a shallow soil vapor survey to assist with defining the contamination source area;
3. Drilling Program - Complete subsurface soil testing and installation of groundwater monitoring wells to determine the presence of contaminants, define a specific source area, and determine the area's geologic and hydrogeologic characteristics; and
4. Groundwater Sampling Program - Collection and laboratory analysis of groundwater and surface water samples to assess contaminant distribution and migration and to define the groundwater plume limits.

Site History and Environmental Background

The following provides a brief historical overview of the Modock Road Springs Site and some of the major findings from previous environmental investigations at the site:

- In 1990, NYS-mandated sampling of community water supplies revealed the presence of trichloroethene (TCE), 1,1,1-trichloroethane (TCA) and 1,1-dichloroethene (DCE) in the eastern springs on Modock Road. These compounds are types of degreasing solvents that have commonly been used for industrial purposes;
- Following discovery of the contamination, the Village of Victor connected to the Monroe County Water Authority (MCWA) drinking water supply. Lake Ontario represents the source for the MCWA drinking water supply;
- The NYSDEC, NYSDOH, and owner of Syracusa Sand and Gravel completed investigations to identify a source for the contaminants, define the limits of the contamination, and assess possible exposure routes to the contamination;
- Based on the investigations, groundwater contamination extends over one mile from an area south of Dryer Road to the Modock Road Springs (see map on 1st page). The southern extent and source of the contamination is currently unknown, but will be addressed as part of the RI/FS described above;
- Based on results of the investigations the Modock Road Springs site was listed as a Class 2 site in the New York State Registry for Inactive hazardous Waste Disposal Sites in August of 2006. A Class 2 site means the site poses a threat to the public health or environment and cleanup action is required; and
- As described above, the NYSDEC will be completing an RI/FS with field activities starting in January 2007.

Document Repository

Public understanding and involvement are important to the success of New York's hazardous waste remedial program. To keep you informed, NYSDEC distributes fact sheets, similar to this one, and we place site documents for your review in a local repository. Also available in the repository is the Citizen Participation Plan which

describes activities to keep you informed and involved during the investigation and cleanup of the site. You are encouraged to give your comments and suggestions. Your understanding and involvement can help ensure a cleanup program that effectively protects public health and the environment. The NYSDEC has established Document Repositories for the Modock Road Springs - DLS Sand & Gravel, Inc. site at the following locations:

Victor Free Library 91 Maple Avenue Victor, NY 14565-1390 (585) 924-2637 Hours: M-Th 10-9 F10-6, Sat 10-4, Sun 2-4 (Contact Patricia Evans for an appointment)	By appointment at: NYSDEC Central Office 625 Broadway Albany, N.Y. 12233-7013 (518) 402-9818 -or- (888) 459-8667	By appointment at: NYSDEC Region 8 Office 6274 E Avon-Lima Road Avon, N.Y. 14414 (585) 226-5326 (Contact Lisa LoMaestro Silvestri for an appointment)

NYSDEC Mailer

Please feel free to use this mailer for any of the following purposes:

____ 1. You would like to be placed on the NYSDEC's Modock Road Springs project mailing list.
____ 2. You would like to include the name and address of someone you know who may be interested in receiving future fact sheets.
____ 3. You would like to be taken off the NYSDEC's Modock Road Springs project mailing list.
____ 4. You would like to provide us with a change of name or address. If you move, fact sheets are NOT automatically forwarded to your new address.
____ 5. You would like to provide us with a comment or question (please specify below).

----------**FOLD INWARD**----------

Please complete the form as indicated below, fold and mail directly to the NYSDEC.

Add the following name(s):

_____ _____
_____ _____
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Delete the following name(s):

_____ _____
_____ _____
_____ _____

Make the following changes:

(Old)_____ (New) _____
_____ _____
_____ _____

----------**FOLD INWARD**----------

Comments or Questions:

Place
Stamp
Here

Lisa Silvestri
New York State Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, NY 14414 -9519

NEW YORK STATE
DEPARTMENT OF HEALTH

Trichloroethene (TCE) in Indoor and Outdoor Air

FACT SHEET
February 2005

What is trichloroethene?

Trichloroethene is a manufactured, volatile organic chemical. It has been used as a solvent to remove grease from metal. Trichloroethene has also been used as a paint stripper, adhesive solvent, as an ingredient in paints and varnishes, and in the manufacture of other organic chemicals. Other names for trichloroethene include TCE and trichloroethylene. TCE is a common name for trichloroethene and will be used for the rest of this fact sheet.

TCE is a clear, colorless liquid, and has a somewhat sweet odor. It is non-flammable at room temperature and will evaporate into the air.

How can I be exposed to TCE?

People can be exposed to TCE in air, water and food. Exposure can also occur when TCE, or material containing TCE, gets on the skin.

TCE gets into the air by evaporation when it is used. TCE can also enter air and groundwater if it is improperly disposed or leaks into the ground. People can be exposed to TCE if they drink groundwater contaminated with TCE, and if the TCE evaporates from the contaminated drinking water into indoor air during cooking and washing. They may also be exposed if TCE evaporates from the groundwater, enters soil vapor (air spaces between soil particles), and migrates through building foundations into the building's indoor air. This process is called "soil vapor intrusion."

How can TCE enter and leave my body?

If people breathe air containing TCE, some of the TCE is exhaled unchanged from the lungs and back into the air. Much of the TCE gets taken into the body through the lungs and is passed into the blood, which carries it to other parts of the body. The liver changes most of the TCE taken into the blood into other compounds, called breakdown products, which are excreted in the urine in a day or so. However, some of the TCE and its breakdown products can be stored in the fat or the liver, and it may take a few weeks for them to leave the body after exposure stops.

What kinds of health effects are caused by exposure to TCE in air?

In humans, long term exposure to workplace air containing high levels of TCE (generally greater than about 40,000 micrograms of TCE per cubic meter of air (mcg TCE/m^3)) is linked to effects on the central nervous system (reduced scores on tests evaluating motor coordination, nausea, headaches, dizziness) and irritation of the mucous membranes. Exposure to higher levels (generally greater than 300,000 mcg TCE/m^3) for short periods of time can irritate the eyes and respiratory tract, and can cause effects on the central nervous system, including dizziness, headache, sleepiness, nausea, confusion, blurred vision and fatigue. In laboratory animals, exposure to high levels of TCE has damaged the central

nervous system, liver and kidneys, and adversely affected reproduction and development of offspring. Lifetime exposure to high levels of TCE has caused cancer in laboratory animals.

Some studies of people exposed for long periods of time to high levels of TCE in workplace air, or elevated levels of TCE in drinking water, show an association between exposure to TCE and increased risks for certain types of cancer, including cancers of the kidney, liver and esophagus, and non-Hodgkin's lymphoma. One study showed an association between elevated levels of TCE in drinking water and effects on fetal development. Other studies suggest an association between workplace TCE exposure and reproductive effects (alterations in sperm counts) in men. We do not know if the effects observed in these studies are due to TCE or some other possible factor (for example, exposure to other chemicals, smoking, alcohol consumption, socioeconomic status, lifestyle choices). Because all of these studies have limitations, they only suggest, but do not prove, that exposure to TCE can cause cancer in humans and can cause developmental and reproductive effects as well.

What are background levels of TCE for indoor and outdoor air?

The exact meaning of background depends on how a study selected sampling locations and conditions. Generally, sampling locations are selected to be not near known sources of volatile chemicals (for example, a home not near a chemical spill, a hazardous waste site, a dry cleaner, or a factory). In some studies, the criteria for sampling indoor air may require checking containers of volatile chemicals to make sure they are tightly closed or removing those products before samples are taken. The New York State Department of Health (NYSDOH) has used several sources of information on background levels of TCE in indoor and outdoor air. One NYSDOH study of residences heated by fuel oil found that background concentrations of TCE in indoor and outdoor air are less than 1 mcg/m^3 in most cases. In this study, most homes did not have obvious sources of volatile organic compounds (VOCs). In those homes with VOC sources, samples were taken and the data are included in the study.

What are sources of TCE in air in homes?

TCE is found in some household products, such as glues, adhesives, paint removers, spot removers, rug cleaning fluids, paints, metal cleaners and typewriter correction fluid. These and other products could be potential sources for TCE in indoor air.

Another source of TCE in indoor air is contaminated groundwater that is used for household purposes. Common use of water, such as washing dishes or clothing, showering, or bathing, can introduce TCE into indoor air through volatilization from the water.

TCE may also enter homes through vapor intrusion as described on page 1 in the question "How can I be exposed to TCE?".

What is the level of TCE that people can smell in the air?

The reported odor threshold (the air concentration at which a chemical can be smelled) for TCE in air is about 540,000 mcg TCE/m^3. At this level, most people would likely be able to start smelling TCE in air. However, odor thresholds vary from person to person. Some people may be able to detect TCE at levels lower than the reported odor threshold and some people may only detect it at concentrations higher than the reported odor threshold.

If I can't smell TCE in the air, am I being exposed?

Just because you can't smell TCE doesn't mean there is no exposure. Sampling and testing is the best way to know if TCE is present.

What is the NYSDOH's guideline for TCE in air?

After a review of the toxicological literature on TCE, the NYSDOH set a guideline of 5 mcg/m^3 for TCE in air. This level is lower than the levels that have caused health effects in animals and humans. In setting this level, the NYSDOH also considered the possibility that certain members of the population (infants, children, the elderly, and those with pre-existing health conditions) may be especially sensitive to the effects of TCE.

The guideline is not a bright line between air levels that cause health effects and those that do not. The purpose of the guideline is to help guide decisions about the nature of the efforts to reduce TCE exposure. Reasonable and practical actions should be taken to reduce TCE exposure when indoor air levels are above background, even when they are below the guideline of 5 mcg/m^3. The urgency to take actions increases as indoor air levels increase, especially when air levels are above the guideline. In all cases, the specific corrective actions to be taken depend on a case-by-case evaluation of the situation. The goal of the recommended actions is to reduce TCE levels in indoor air to as close to background as practical.

Should I be concerned about health effects if I am exposed to air levels slightly above the guideline? Below the guideline?

The possibility of health effects occurring is low even at air levels slightly above the guideline. In addition, the guideline is based on the assumption that people are continuously exposed to TCE in air all day, every day for as long as a lifetime. This is rarely true for most people who are likely to be exposed for only part of the day and part of their lifetime.

How can I limit my exposure to TCE?

TCE can get into indoor air through household sources (for example, commercial products that contain TCE), from contaminated drinking water, or by vapor intrusion. As with any indoor air contaminant, removing household sources of TCE will help reduce indoor air levels of the chemical. Maintaining adequate ventilation will also help reduce the indoor air levels of TCE. If TCE is in the indoor air as a result of vapor intrusion, a sub-slab depressurization system, much like a radon mitigation system, will reduce exposures by minimizing the movement of vapors that are beneath a slab into a building. If TCE is in the water supply of a house, a carbon filter on the water supply to remove the TCE will minimize ingestion and inhalation exposures.

Is there a medical test that can tell me whether I have been exposed to TCE?

TCE can be measured in people's breath soon after they are exposed. TCE and some of its breakdown products can be measured in the urine and blood. These tests are not routinely available at a doctor's office. Urine and blood tests can indicate that you may have recently (within the last few days) been exposed to a large amount of the chemical. However, they cannot tell you the source of the exposure. Some of the breakdown products of TCE can also be formed from other chemicals.

When should my children or I see a physician?

If you believe you or your children have symptoms that you think are caused by TCE exposure, you or your children should see a physician. You should tell the physician about the symptoms and about when, how and for how long you think you and/or your children were exposed to TCE.

What is the NYSDOH doing to educate physicians about TCE?

The NYSDOH maintains an Infoline (1-800-458-1158) that physicians or the public can call when they have questions related to various types of chemical exposures. A certified occupational and environmental health nurse is available to triage physicians' questions and to direct their inquiries to the appropriate staff member.

The NYSDOH also works closely with the federal Agency for Toxic Substances and Disease Registry (ATSDR), making their educational materials available to physicians upon request. One of these items is an environmental medicine case study entitled "Trichloroethylene (TCE) Toxicity," which provides the opportunity for physicians to earn continuing medical education credits from the Centers for Disease Control and Prevention. Physicians who would like to complete this training are encouraged to contact the NYSDOH for more information. A printed copy can be mailed to the physician or it can be accessed on-line at the following web site http://www.atsdr.cdc.gov/HEC/CSEM/tce/index.html.

Where can I get more information?

If you have any questions about the information in this fact sheet or would like to know more about TCE, please call the NYSDOH at 1-800-458-1158 or write to the following address:

New York State Department of Health
Bureau of Toxic Substance Assessment
Flanigan Square, 547 River Street
Troy, NY 12180-2216

Length of exposure:

Short-term exposure is called **acute exposure**. Long-term exposure is called **chronic exposure**. Either may cause health effects that are immediate or health effects that occur days or years later.

Acute exposure is a short contact with a chemical. It may last a few seconds or a few hours. For example, it might take a few minutes to clean windows with ammonia, use nail polish remover or spray a can of paint. The fumes someone might inhale during these activities are examples of acute exposures.

Chronic exposure is continuous or repeated contact with a toxic substance over a long period of time (months or years). If a chemical is used every day on the job, the exposure would be chronic. Over time, some chemicals, such as PCBs and lead, can build up in the body and cause long-term health effects.

Chronic exposures can also occur at home. Some chemicals in household furniture, carpeting or cleaners can be sources of chronic exposure.

Sensitivity:

All people are not equally **sensitive** to chemicals, and are not affected by them in the same way. There are many reasons for this.

- People's bodies vary in their ability to absorb and break down or eliminate certain chemicals due to **genetic differences.**

- People may become **allergic** to a chemical after being exposed. Then they may react to very low levels of the chemical and have different or more serious health effects than nonallergic people exposed to the same amount. People who are allergic to bee venom, for example, have a more serious reaction to a bee sting than people who are not.

- Factors such as **age, illness, diet, alcohol use, pregnancy and medical or nonmedical drug use** can also affect a person's sensitivity to a chemical. Young children are often more sensitive to chemicals for a number of reasons. Their bodies are still developing and they cannot get rid of some chemicals as well as adults. Also, children absorb greater amounts of some chemicals (such as lead) into their blood than adults.

For more information:

New York State Department of Health
Center for Environmental Health
Flanigan Square
547 River Street, Room 316
Troy, NY 12180-2218
1-800-458-1158 (ext. 2-7530)

March 2001

New York State Department of Health

What is Exposure?

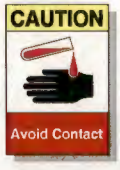
Exposure is contact. No matter how dangerous a substance or activity, without exposure, it cannot harm you.

Information Sheet

Amount of exposure:

Over 400 years ago, a scientist said "...nothing [is] without poisonous qualities. It is only the dose that makes a thing poison." The **dose** is the amount of a substance that enters or contacts a person. An important factor to consider in evaluating a dose is body weight. If a child is exposed to the same amount of chemical as an adult, the child (who weighs less) can be affected more than the adult. For example, children are given smaller amounts of aspirin than adults because an adult dose is too large for a child's body weight.

The greater the amount of a substance a person is exposed to, the more likely that health effects will occur. Large amounts of a relatively harmless substance can be toxic. For example, two aspirin tablets can help to relieve a headache, but taking an entire bottle of aspirin can cause stomach pain, nausea, vomiting, headache, convulsions or death.



Routes of exposure:

There are three major means by which a toxic substance can come into contact with or enter the body. These are called routes of exposure.

Inhalation (breathing) of gases, vapors, dusts or mists is a common route of exposure. Chemicals can enter and irritate the nose, air passages and lungs. They can become deposited in the airways or be absorbed through the lungs into the bloodstream. The blood can then carry these substances to the rest of the body.

Direct contact (touching) with the skin or eyes is also a route of exposure. Some substances are absorbed through the skin and enter the bloodstream. Broken, cut or cracked skin will allow substances to enter the body more easily.

Ingestion (swallowing) of food, drink, or other substances is another route of exposure. Chemicals that get in or on food, cigarettes, utensils or hands can be swallowed. Children are at greater risk of ingesting substances found in dust or soil because they often put their fingers or other objects in their mouths. Lead in paint chips is a good example. Substances can be absorbed into the blood and then transported to the rest of the body.
The route of exposure can determine whether or not the toxic substance has an effect. For example, breathing or swallowing lead can result in health effects, but touching lead is not usually harmful because lead is not absorbed particularly well through the skin.