



United States
Environmental Protection Agency
1 Congress Street, Suite 1100
Boston, MA 02203

Raymark Bulletin #41 May, 2003

Raymark Advisory Committee

The Raymark Advisory Committee (RAC) is the local advisory group organized by the Town of Stratford to work with the U.S. Environmental Protection Agency and the Connecticut Department of Environmental Protection on the investigation and cleanup of contamination associated with the Raymark Superfund Site.

The Stratford Town Council sought to establish a broad based membership when it established the committee in June, 2000. The RAC members are charged with ensuring that the Superfund cleanup process addresses the many individual concerns within the Town, reconciling the collective interests of all Stratford residents in their advice to the environmental regulatory agencies.

The RAC meets monthly on the second Tuesday from 6:30 to 9:30 p.m. The meetings are held at the Stratford Army Engine Plant located at 550 Main Street in Stratford. The public is invited!

There are two scheduled meetings in May. The next three dates are:

Tuesday, May 13, 2003
Tuesday, May 27, 2003
Tuesday, June 10, 2003

EPA Continues Evaluation of Soil Gas, Indoor Air and Groundwater

This fact sheet provides information on a phase of soil gas, indoor air and GW investigation that EPA will conduct in the Stratford Housatonic River/Ferry Creek area. The fieldwork will be conducted in two steps. The first step occurred during the last week of March 2003. The second step, Step Two, will occur during the first week of May 2003 and is described in this bulletin.

Introduction

EPA has conducted soil gas and indoor air sampling in Stratford over the past three years. Soil gas is a term describing gas that fills the tiny voids between soil particles. When groundwater is contaminated with volatile organic compounds (VOCs ; chemical compounds that evaporate readily to the atmosphere), the chemicals can change into a gas and move upward through the soil and into homes and buildings. Previous sampling confirmed that this is occurring in some areas and EPA and the Connecticut Department of Environmental Protection (CT DEP) have installed ventilation systems in nine buildings where contaminant levels were high enough to cause concerns for human health. The VOCs that were detected in indoor air samples were 1,1-dichloroethylene (1,1-DCE), trichloroethylene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and toluene.

EPA has been investigating the groundwater in Stratford for a number of years. The focus of the investigation work described below has only recently narrowed to the area of contamination between the former Raymark facility and the Housatonic River/Ferry Creek area.

Soil Gas, Indoor Air and Groundwater Investigation

Why?

This work is being done because the continuing rounds of sampling have indicated that VOCs in groundwater are moving into the indoor air in some homes.

When?

The work is planned to be conducted in two steps. The first step occurred during the last week of March 2003. The second step is planned to occur during the first week of May 2003.

**EPA New England website for past Raymark Bulletins:
www.epa.gov/region01/superfund/sites/raymark/bulletin**

Where and how will this be done?

Step One. The first step entailed detailed and comprehensive indoor air and soil gas testing at homes in or near areas where groundwater information suggests indoor air impacts could be occurring. EPA contacted a number of homeowners to request access to their homes for sampling. EPA received access to eleven (11) homes and conducted testing in those homes during the last week of March. The details for Step One are provided in Bulletin #40 which is available on the internet at the web address provided at the bottom of page 1.

Step Two. The second step will entail discrete and focused soil gas and groundwater testing outside near select groundwater monitoring wells. The purpose of the testing will be to better understand the relationship between groundwater VOC concentrations and soil vapor concentrations. ***This step will not require access to homes.***

Specific Details for Step Two: Groundwater and Soil Gas Testing

The problem of the migration of VOCs from groundwater to indoor air (collectively termed, the "vapor intrusion pathway") is complex. Although the source of the VOCs is the groundwater emanating from the Raymark site, for a number of reasons, it is often difficult to detect VOCs that may migrate from the groundwater through the soil and into homes. Some of the reasons why it is difficult to detect the VOCs emanating from groundwater include, among others: (a) the unique variations in soil and groundwater in residential areas; (b) the presence of subsurface utilities, such as sewer, gas and water lines; and (c) weather-related factors that influence soil gas such as wind, rain, temperature and/or barometric pressure.

The purpose of this work, therefore, is to conduct detailed and comprehensive groundwater and soil gas testing near and around certain groundwater wells that have been installed in the Stratford Housatonic River/Ferry Creek area. Because these wells are located in the street areas, the tests will not involve access to homes. If, based on the results that EPA obtains during the conduct of the work, EPA desires to sample close to a given home, EPA will contact the homeowner and request access.

This work will be coordinated and conducted by EPA's Office of Research and Development (ORD) Ada, Oklahoma laboratory with support from EPA's Regional mobile laboratory and contractors / technicians with specialized knowledge of soil gas that EPA ORD has retained for this purpose.

The tests will utilize a small drill rig mounted inside a small van. The van will be stationed near a groundwater well of interest. The purpose of the drill rig will be to discretely advance and sample the soil gas near the groundwater well. In addition, the groundwater well itself will be discretely sampled. EPA ORD hopes to test at least three groundwater well locations and may perhaps test additional locations based on the preliminary data collected.

Who should you contact for more information?

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Who is EPA's Office of Research and Development (ORD) and why is ORD involved?

EPA has a number of laboratories across the United States. These laboratories are staffed by experts in environmental science. EPA's ORD routinely provides technical support to EPA projects such as the Raymark Stratford, CT site. The migration of VOCs from groundwater to indoor air is complex. EPA believes that ORD technical support would be helpful in understanding the potential impacts of VOCs on homes and buildings in the Housatonic River/Ferry Creek area. Two EPA laboratories will be involved with this work: (1) EPA's National Risk Management Research Lab, Subsurface Protection and Remediation Division, located in Ada, Oklahoma and (2) EPA's National Risk Management Research Lab, Indoor Environment Management Branch located at the Research Triangle Park, North Carolina. The Ada, Oklahoma lab specializes in the sciences of the subsurface (soils and groundwater) and the Research Triangle Park lab specializes in radon and indoor air science.