

Former Vailsburg Middle School

Newark, Essex County

February 2009

Overview

The New Jersey Department of Environmental Protection (DEP) began remedial activities on July 28, 2008 to address potential impacts to the former Vailsburg Middle School from vapor intrusion. Vapor intrusion occurs when fumes from contaminated soil or ground water seep through cracks and holes in foundations or slabs of buildings and accumulate in basements, crawl spaces or occupied areas. DEP initiated this remediation after elevated levels of benzene, tetrachloroethene (PCE) and trichloroethene (TCE) were detected in ground water, soil gas and indoor air samples collected by the Getty Service Station located across the street from the school. The Getty Service Station is not believed to be the source of the PCE and TCE in ground water.

History

In January 2008, **soil gas** and **indoor air** sampling was conducted by Getty at various locations on the school grounds including the cafeteria/kitchen and several classrooms. During the soil gas testing, samples of the air from the soil below the building foundation were collected and analyzed for volatile organic compounds (VOCs). The indoor air sampling measured levels of VOCs present in the air inside the building.

The January **soil gas** samples revealed the highest levels of PCE and TCE in the soil beneath the cafeteria. These results were 895 $\mu\text{g}/\text{m}^3$ of PCE and 1090 $\mu\text{g}/\text{m}^3$ of TCE. These results exceed the Soil Gas Screening Levels of 34 $\mu\text{g}/\text{m}^3$ and 27 $\mu\text{g}/\text{m}^3$, respectively. Please note, however, that soil gas is air *underneath* the building, and would not be the air that a person would be breathing while in the building or standing outside in the parking lot. **Indoor air** results revealed PCE and benzene at their highest levels in the cafeteria where PCE measured at 5.6 $\mu\text{g}/\text{m}^3$ and benzene at 3.2 $\mu\text{g}/\text{m}^3$, which exceeded the Indoor Air Screening levels of 3 $\mu\text{g}/\text{m}^3$ and 2 $\mu\text{g}/\text{m}^3$, respectively. TCE was not detected in the indoor air. An exceedence of air screening levels does not necessarily mean that a building is unsafe, rather an exceedence of screening levels is cause for further evaluation, and if necessary, remediation.

Current Actions

The New Jersey Department of Health and Senior Services reviewed the indoor air data and concluded that the contaminant concentrations detected in the indoor air do not present any immediate health risk. However, to prevent the contaminated air detected in the soil gas from entering the building, DEP is installing a Perimeter Soil Vapor Extraction System. The system is designed to reduce the levels of TCE, PCE and benzene in the air below the slab by continuously venting the contaminated air beneath the building to the exterior of the structure.

Key Construction Activities

* Construction activities at the site began July 28, 2008. These activities were scheduled for the summer months for the safety of the children.

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New Jersey Department of Environmental Protection
Site Remediation Program, Office of Community Relations
www.nj.gov/dep/srp/community/

Jon S. Corzine
Governor



Mark N. Mauriello
Commissioner

* Site activities at the school included excavation in the paved areas to allow for installation of the Perimeter Soil Vapor Extraction System (system).

* The system was operational on September 25, 2008. Although the Newark Public Schools chose not to renew their lease, the system remains operational as the owner of the property seeks either new tenants or a buyer.

* DEP resampled the indoor air and subslab soil gas on December 11 and 12, 2008 to ensure the system is reducing the levels and is working effectively. Results of this testing indicates that the system is working efficiently and the indoor air results reveal no exceedances of DEP's Residential Indoor Air Screening Levels for the contaminants of concern associated with the site. In addition, no background contaminants were detected in the six indoor air samples in excess of DEP's Residential Indoor Air Screening Levels.

* Most of the system is not visible because the equipment is primarily installed under the ground with the exception of a small garden shed used to house the above-ground equipment.

Off-site Investigation

In addition to remedial activities at the former Vailsburg Middle School, DEP initiated an off-site investigation in September 2008 to determine if vapor intrusion is occurring in buildings in the surrounding neighborhood. DEP sampled eight homes and results from these air samples indicate that vapor intrusion is not occurring at any of the homes tested.

For more information about the site or the remediation activities, please contact Suellen May, Community Relations Coordinator at (609) 292-5299.

Additional information can be viewed on the DEP Web site at www.nj.gov/dep/srp/community.