

# CONCEPTS

## Vapor Intrusion: An Emerging Public Health Concern



### Successfully evaluating and mitigating invisible hazardous vapors requires experience.

When an industrial or commercial site closes up shop, there may be more left behind than abandoned facilities and overgrown landscaping. Through vapor intrusion (VI), dangerous pollutants located underground and out of sight can migrate into homes and work places. Heating and air conditioning use, wind, and weather changes draw subsurface vapors, such as petroleum fumes or solvents, into enclosed spaces. Even at relatively low concentrations, VI can create harmful indoor environments.

Professional VI assessment is an important step for clients looking to keep pace with rapidly evolving regulatory changes. The Department of Environmental Quality (DEQ) has proposed rule changes revising generic cleanup criteria and screening levels, especially for VI, slotted to take effect as soon as this year. These changes may impact your facility's Due Care obligations, even if your company did not cause the contamination.

The public health risk could exist anywhere, not only at sites once occupied by businesses using hazardous substances. Subsurface pollutants, and some naturally occurring gases (radon and methane), can migrate significant distances before seeping into homes or businesses through foundation or basement cracks, floor joints, foundation drains, dewatering sumps, or utility penetrations. The health risks posed by these vapors can include headaches and skin rashes, neurological and developmental problems, and, in some cases, the potential for an explosive building environment.

Developing the Conceptual Site Model (CSM) is a crucial component of the evaluation process. It summarizes the site's physical characteristics including soil types, distance from the vapor source to buildings, utility corridor location, and groundwater depth.

The CSM determines whether additional monitoring or building modifications are necessary or advisable. We have developed CSMs that provide information our clients need to make decisions concerning new building design, building modification plans, or satisfy regulators that costly modifications are not needed.

Successfully evaluating and mitigating invisible hazardous vapors requires experience. FTCH has extensive experience assisting clients with VI concerns, including coordination with federal, state, and local regulators across the US. This experience encompasses all VI aspects from the evaluation process to design and installation of vapor mitigation systems.

FTCH HAS THE EXPERIENCE, EQUIPMENT, AND EXPERTS TO:

EVALUATE YOUR SITE.

DESIGN AND CONDUCT SOIL-GAS, SUB-SLAB, AND/OR INDOOR AIR SAMPLING PROGRAMS.

ASSESS PASSIVE OR ACTIVE VAPOR MITIGATION NEEDS.

DESIGN AND INSTALL COST-EFFICIENT VAPOR MITIGATION SYSTEMS TAILORED FOR YOUR BUILDING AND SUBSURFACE SITE CHARACTERISTICS.

WORK WITH YOUR ARCHITECT OR BUILDER TO INCLUDE VAPOR MANAGEMENT SYSTEMS IN YOUR NEW BUILDING OR EXISTING BUILDING REMODEL.

VI criteria are unique. Whether using existing data or newly generated data, trust FTCH to evaluate the relevant and applicable VI criteria and help you navigate regulatory changes to keep your building safe.

FOR ADDITIONAL GUIDANCE ON HOW VI APPLIES TO YOU, CONTACT DAN GREENE, CPG.  
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