Assessing and Mitigating Vapor Intrusion for an Insurance Claim at a NJ Dry Cleaners Site

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Abstract

The potential for Vapor Intrusion (VI) to migrate into structures is an important environmental issue especially for retail shopping centers with historic or current dry cleaning operations. This paper will present the investigation and remediation activities to address potential VI exposure at a shopping center in Edison NJ. The site contains soil, soil gas and groundwater impacts associated with former and current dry cleaning operations in two separate site locations. The primary contaminants of concern are tetrachloroethylene (PCE) and its daughter products. Though soil gas impacts have not been fully delineated prior, based on groundwater data collected in April and July 2009, the NJDEP required VI assessment be completed. This presentation will depict the challenges of the VI investigation (several rounds of soil gas and indoor air sampling) in an active retail shopping center. The site was complicated due to the effort of communication and education with the landlords and the tenants, the needed adaptations to changing state regulations (NJDEP new requirements for soil gas sampling and public notification) and site specific challenges (especially site hydrogeology) for the design and installation of a VI mitigation system. Additionally, the presentation will discuss the constraints of working within an insurance claim context and the interface with the insurance claim analyst and internal consultant. Finally the presentation will discuss the use of an existing remediation system (CWE) as an interim engineering control for VI exposure onsite.

The purpose of the presentation is to discuss the following:

1) The basis of the NJDEP required vapor intrusion investigation
2) VI assessment using multiple lines of evidence
3) Challenges of community outreach, changes in State regulations
4) Interim engineering controls
5) VI mitigation system design and implementation

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The VI Mitigation Project was Successful Because of the Following:

- Preparation of notification letter to the impacted tenants
- Field meeting with each tenant to discuss the installation of the VI mitigation system
- Field meeting with tenants to provide training on the VI mitigation system O&M
- Submitted updated notification letter to tenants including indoor air results post mitigation

Community Outreach

- Collaboration with the NJDEP regulators
- Communication with an educated community
- Respect for tenant operation constraints
- Intensive communication with insurance claim analyst and internal consultant
- Implementation of sound VI mitigation technology