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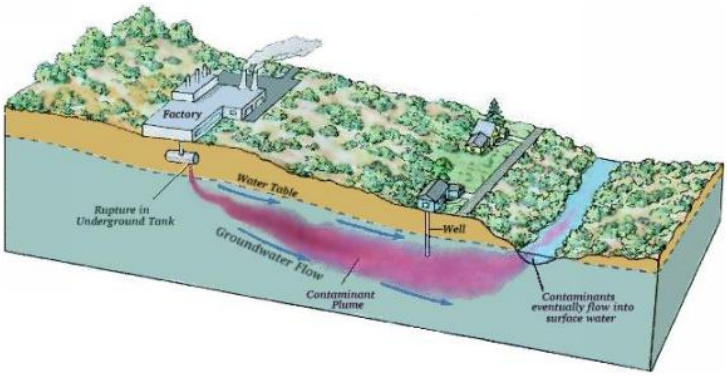
CASE HISTORY

Risk Assessment - Vapor Intrusion from an off-Site Industrial Chlorinated Solvent Plume

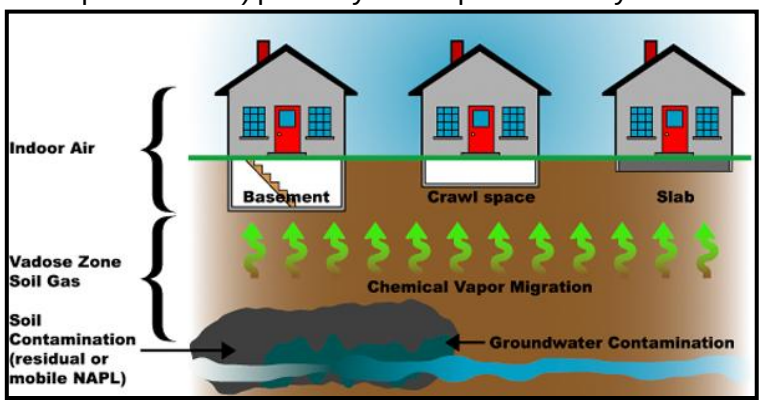
Challenge:

MUNDELL & ASSOCIATES, INC. (MUNDELL) was hired by a client to review reports documenting impacted residential drinking water wells and indoor air quality tests related to a known chlorinated solvent plume migrating from an industrial facility near Connersville, Indiana. Of particular interest was whether the plume had likely caused unacceptable potential human-health risks from detectable impacts to groundwater, soil, soil gas and indoor air at nearby residential dwellings. Interest in estimating the magnitude of impacts and the length of time since the arrival of the groundwater plume was assessed.



Action:

Risk calculations based on ingestion (groundwater from the wells), dermal (showering exposure), and inhalation (impacted indoor air due to vapor intrusion) pathways were performed by MUNDELL. Based on the data collected and accepted U.S. EPA risk calculation methodology, MUNDELL performed cancer and non-cancer risk evaluations for the residents with site-specific exposure assumptions. Extensive research was performed to obtain accurate exposure duration data for each of the residents and selected neighbors for incorporating in the risk evaluations. Risk evaluations were also performed for occasional visitors to the residents. Groundwater Screening Levels corresponding to Target Indoor Air Concentrations from draft U.S. EPA guidance documents were assessed for relevancy to the site-specific conditions. An evaluation of the likelihood of specific soil gas to indoor air attenuation factors was considered in evaluating potential impacts on vapor intrusion.



Results:

The completed evaluation performed pointed toward the potential for indoor air VOC concerns associated with the groundwater plume, requiring ongoing study and plume monitoring. This evaluation was utilized by the plaintiffs in the proceedings for a legal settlement of the case.