324.20120f Vapor intrusion; evaluation and management methods.

Sec. 20120f. (1) To satisfy the requirements of this part, a person may evaluate, address, and manage the vapor intrusion to the indoor air inhalation exposure pathway for a hazardous substance using any of the following methods:

(a) Meeting all of the conditions in section 20120a(18).

(b) For purposes of evaluating and addressing the vapor intrusion to the indoor air inhalation pathway in connection with any release of petroleum as described as a regulated substance defined in section 21303(h)(ii), the process outlined in the Interstate Technology Regulatory Council petroleum vapor intrusion guidance document (PVI-1, Oct-14).

(c) An approach, using multiple lines of evidence, demonstrating that the vapor intrusion to the indoor air inhalation exposure pathway does not pose an unacceptable risk to the public health, safety, or welfare, or the environment consistent with all or a combination of 1 or more of the following:

(i) The United States Environmental Protection Agency "OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air" (OSWER Publication 9200.2-154, June 2015).


(iii) The United States Environmental Protection Agency's "Documentation for EPA's Implementation of the Johnson and Ettinger Model to Evaluate Site Specific Vapor Intrusion into Buildings Version 6.0" (USEPA, September 2017).

(d) Indoor air sampling that accounts for actual site conditions and demonstrates acceptable indoor air concentrations resulting from vapor intrusion compared to any of the following:

(i) When criteria in subparagraph (ii) are not available, regional screening levels published by the United States Environmental Protection Agency that are applicable to residential or nonresidential land use, as appropriate, at cancer and noncancer risk levels specified in section 20120a(4).

(ii) Applicable indoor air inhalation generic cleanup criteria promulgated by the department.

(iii) Site-specific criteria approved by the department.

(e) An alternative method or model for assessing vapor intrusion risk that utilizes only site-specific variables or a combination of site-specific or building-specific variables if the method or model is scientifically sound and supported by adequate site information. An alternative method or model under this subdivision to address contamination that has migrated beyond the boundaries of the property that is the source of the release must be approved by the department.

(f) A method or model allowed in a promulgated rule.

(2) The indoor air inhalation pathway is not a reasonable and relevant pathway for purposes of response activities undertaken under this part if there is no occupied building or planned occupied building that is within the following distances from subsurface volatile hazardous substance contamination:

(a) For petroleum contamination, within both a 30-foot lateral separation distance and the permissible vertical separation distance under the Interstate Technology Regulatory Council petroleum vapor intrusion guidance document (PVI-1, Oct-14).

(b) For any volatile hazardous substance contamination other than petroleum, within both a 100-foot lateral separation distance and a 100-foot vertical separation distance.

(3) If there is an occupied building or planned occupied building within the distances from subsurface volatile hazardous substance contamination in subsection (2), the indoor air inhalation pathway is not necessarily a reasonable and relevant pathway; rather, further evaluation is needed to determine whether the indoor air inhalation pathway is reasonable and relevant considering site-specific factors such as site-specific geology or hydrogeology, measured contaminant concentrations, the existence of institutional controls, including land use or resource use restrictions, or the existence of exposure controls, exposure barriers, or other mitigating factors, including building ventilation or use.


Popular name: Act 451

Popular name: Environmental Remediation

Popular name: Environmental Response Act

Popular name: NREPA