

Question: Is it appropriate to use Statewide health standard vapor intrusion screening values directly in the risk assessments under the site-specific standard? If not, how do you evaluate the vapor intrusion risks in the site-specific risk assessments?

Answer: No, not directly. In the site-specific risk assessments, it is not appropriate to use Statewide health standard vapor intrusion screening values directly in the risk assessments, without any adjustment.

Under the site-specific standard, vapor intrusion pathways should be considered as a part of site conceptual model development. The site conceptual model should identify all current and potential future complete exposure pathways, including the receptors at the site, based on a qualitative fate and transport analysis. If vapor intrusion pathways and other exposure pathways, such as ingestion of contaminated soil or dermal contact with contaminated groundwater, etc., may affect the same receptor at the site, the risk associated with the vapor intrusion pathways should be combined with the risks associated with the other exposure pathways to evaluate the total risk to the receptor.

In a site-specific risk assessment, the selection of contaminants of concern for soil and groundwater needs to follow the procedures described in the Technical Guidance Manual (TGM) Section IV.G.2.a.i, (page IV-114) to determine if a chemical in soil or groundwater should be retained in the risk assessment. The screening procedure is only for the potential reduction of the number of chemicals carried through the risk assessment. Those chemicals on the site whose maximum concentration exceeds the EPA Regional Screening Levels (RSLs) for carcinogenic effects (corresponding to 10^{-6} cancer risk) or $1/10^{\text{th}}$ of RSLs (corresponding to a Hazard Quotient of 0.1) for noncarcinogenic effects should be retained in the risk assessment. Chemicals that are not retained in the risk assessment may be considered to have minimal influence on total risk.

Currently, RSLs for resident air and industrial air are available for the screening of indoor air data and soil gas data in the vapor intrusion evaluations. Indoor air data can be screened by following the TGM procedures described above. For soil gas data, a remediator may apply the default subsurface-to-indoor air attenuation factor by dividing the indoor air screening values by 0.01.