

Volatilization to Indoor Air Pathway (VIAP): Site Screening & Evaluation

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Objectives

- Share current DEQ understanding of VIAP
- Share current understanding of the science
- Share current Evaluation and Screening process for assuring protection of public health, safety and welfare
- Discuss results of process so far
- Answer questions

Interim Action Screening Levels

Acceptable Air Concentration (AAC)

- The lowest calculated value for a hazardous substance becomes the Health Based Value evaluated for criteria determination

Media-Specific Volatilization to Indoor Air Interim Action Screening Levels

- Key Terms
 - RIASL: Recommended Interim Action Screening Levels
 - TS RIASL: Time-Sensitive Recommended Interim Action Screening Levels
 - RIASL12: Nonresidential Recommended Interim Action Screening Levels appropriate for exposures less than 12 hours
 - TS RIASL12: Time-Sensitive Recommended Interim Action Screening Levels appropriate for exposures less than 12 hours

Screening Level Development

Foundations in the Midwest – New Construction

Residential RIASL and TS RIASL

- Residential RIASL
 - Occupied basement
- Residential TS RIASL
 - Occupied basement
 - Adjusted Acceptable Air Values (AAVs)

Nonresidential RIASL

- Nonresidential RIASL
 - Former residential now nonresidential use
 - Unoccupied basement
- Nonresidential RIASL12
 - Adjusted for 12-hour workday exposure

Nonresidential TS RIASL

- Nonresidential TS RIASL12
 - < 50,000 ft²
 - Slab-on-grade
 - Adjusted Acceptable Air Values (AAVs)
 - Adjusted for 12-hour workday exposure

TS RIASL12 Footnote

- TS RIASL12 :
 - Time-Sensitive Recommended Interim Action Screening Levels appropriate for exposures less than 12 hours for structures that were not formerly residential houses. It may be appropriate to take expedited response actions at former residential structures when concentrations are less than those identified.

Development of Site-Specific Criteria**Do GVIIC & SVIIC Apply?**

- If a site meets the assumptions that SVIIC and GVIIC are based upon, and they are below those criteria, then the site is currently in compliance for the VIAP
- When the generic assumptions are not met, further evaluation is necessary
 - Interim action screening levels
 - Site-specific evaluations

When Generic Criteria Do Not Apply

- Groundwater (Rule 14(2)):
 - Structure present (or planned) which does not have a concrete block or poured floor and walls
 - Groundwater is within 3 meters of the ground surface
 - A sump present
- Soil (Rule 24(2)):
 - Structure present (or planned) which does not have a concrete block or poured floor and walls
 - A sump present

Purpose of Screening Levels and(Site-Specific) Criteria**Screening Values and Criteria**

- VIAP Site Screening Values
- Response Action Levels
- Interim Action Screening Levels
- Media Specific Screening Values
- Site-Specific Criteria

Interim Action Screening Levels

- Collaboratively developed by DHHS and DEQ
- Used by DEQ, DHHS, and local health departments
- Media Specific:
 - Indoor Air
 - Soil
 - Groundwater
 - Vapor

MDEQ and MDHHS - Working Together, Working Cooperatively**Interim Action Screening Levels**

- Identifies indoor air concentrations for 29 hazardous substances
- Intended to assist with risk evaluation by:
 - Determining if potentially unsafe levels of contaminants are present in the indoor air;
 - Determining whether interim action to reduce potential exposure is needed; and
 - If interim action is needed, assist in determining how quickly those actions should be completed.

- More information checkout the Listserv note dated August 07, 2017
 - Release of Michigan Department of Environmental Quality (DEQ) Volatilization to Indoor Air Interim Action Screening Levels

Process

- 3 parts:
 - Evaluation Process
 - Screening Process
 - Evacuation and Mitigation Documentation (Coming Soon!)

Purpose of the “Evaluation Process”

- Identify sites for VIAP potential within RRD
- Prioritize VIAP sites for DHHS based on the potential for public health exposures
- Document resource needs
 - Funding and staffing
- Document that evaluations are being conducted
- Document that the evaluations are conducted in a consistent manner

What Gets Evaluated - July 1, 2017 forward

- Baseline Environmental Assessments
- Notices of Migration
- Triage Reports with NAPL within 30' of a structure
- Submittals for sites/facilities with known chlorinated solvent contamination
 - Potential for significant public health risks
 - Previously identified sites of concern
- Superfund 5 Year Reviews and Brownfield Assessments
- Actions relying on compliance with GVIC or SVIC

Purpose of “Screening Process”

- Mechanism to share data and information with DHHS
- Ensures collaboration with DHHS for the protection of public health
- Provides an orderly way to focus the limited resources of DEQ and DHHS
- Gateway to Local Public Health partners for VIAP

Number of Sites thru the Process

- > 840 Evaluations since 7/1/2017
 - 260 evaluations remainder of FY 2017
- > 580 so far in FY 2018
 - 97 sites brought to the review team
- 46 formal “notifications” to DHHS from RRD to DHHS

Questions...?