Remediation and Redevelopment Program

Issues & Trends 2016

February 3, 2016
12:00 p.m.

Dial: 1-855-947-8255
Passcode: 6612 745#
Screening Closed BRRTS Sites for Vapor Risk: How RR-042 Can Help Speed Property Transactions

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Questions will be taken during the presentation. You may also submit questions to DNRRRComments@wisconsin.gov
RR-042 – Previous Webinar

June 3, 2015 Webinar:

RR-042, DNR Case Closure Continuing Obligations: Vapor Intrusion

http://dnr.wi.gov/topic/Brownfields/TrainingLibrary.html
~18,000 ERP + LUST Sites

Closed BRRTS Cases & VI

CLOSURE YEAR
1996 - 2010
2011 - Today
Re-Opener or Helpful Tool?

RR-042 is a helpful tool....
TITLE:

DNR Case Closure Continuing Obligations: VI

SITUATION xiii (pgs. 7 - 11):
Residual volatile contamination poses future risk of VI

USES:

1. Closure of sites with VI risk, but no buildings
2. Due Diligence, Phase I, Planning, etc., for property transaction/redevelopment
   *(Closed with VOC impacts but no VI Assessment)*
Considerations for Applying Vapor Intrusion Continuing Obligations  
(Numbers in this table are only recommendations. All decisions for applying continuing obligations are made on a site-by-site basis using professional judgment.)

<table>
<thead>
<tr>
<th>Continuing Obligation Options</th>
<th>Criteria for Application of VI Options</th>
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<tbody>
<tr>
<td>Case Closure-GIS Registry Form 4400-202</td>
<td>Chlorinated VOCs</td>
</tr>
<tr>
<td>(ix) O&amp;M of VMS needed to protect VI pathway</td>
<td>Sub-slub &gt; VSRL</td>
</tr>
<tr>
<td>(x) Hydrologic control for VMS to operate effectively</td>
<td>Sub-slub/sump air &gt; VRSL At highest level, water table intersects building foundation</td>
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<tr>
<td>(xi) Compounds of Concern in use</td>
<td>Sub-slub &gt; VRSL Solvent use in building at time of closure</td>
</tr>
<tr>
<td>(xii) Commercial/Industrial Exposure Assumption</td>
<td>Sub-slub &gt; Commercial/industrial VRSL Solvent NOT in use at time of closure</td>
</tr>
<tr>
<td>(xiii) Future Construction. Includes remodeling or additions on an existing building. (assumes: 1) there are no preferential pathways between the new building and residual VOC source and 2) the groundwater plume is stable or receding)</td>
<td>If any of the following exist: Soil: GW-RCL for PCE/TCE met or exceeded anywhere in vadose zone on property GW ≥ ES on property GW ≥ PAL if contaminated groundwater may contact building foundation</td>
</tr>
</tbody>
</table>
Chlorinated VOCs: If ALL exist

Assess Vapor Pathway

Vapor pathway NOT assessed before closure

CVOCs Present in soil and/or groundwater

Near occupied building (Existing or Proposed)

Present
Soil > GW RCL
GW > ES
(PCE & TCE)

Near
Building < 100 ft from contamination
Petroleum VOCs: If ANY exist

**NAPL**
- Distance: 15’ vertical; 30’ lateral
- Floating product
- Soil: Benzene >10 ppm; Naphthalene >5 ppm; PVOC >250 ppm
- Groundwater: Benzene >1 ppm; PVOC >30 ppm

**Soil**
- Distance: 5 feet or less
- Significant concentrations < NAPL

**Groundwater**
- Distance: 5 feet or less
  (if groundwater in contact with building, PAL concentrations apply)
- Benzene <1 ppm; significant concentrations < NAPL
Applying Screening Criteria

Question: Could conditions that give rise to vapor intrusion exist at this property?

- Assess available data, site conditions. *Note: Most closed sites will not have soil or groundwater data within 5-ft of buildings.*

- Determine whether VI can be ruled out.

- If not, additional assessment needed.
Screening Closed Petroleum Sites for Vapor Risk

CASE EXAMPLES
Total PVOC = 3.5 ppm  
B = 1.3 ppm  
Distance = 10 - 20 feet

Total PVOC = 30 ppm  
B = 10 ppm  
Distance = 45'  
(geoprobe grab sample)

Total PVOC = 3.2 ppm  
B = 0.9 ppm  
Distance = 20 feet

Groundwater flow direction
Contact Information

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Issues & Trends 2016

March 2 12:00 p.m.

General Liability Clarification & Off-Site Exemption

Audio and information from today’s presentation and future Issues & Trends Series events can be found on the RR Program Training Webpage at: Http://dnr.wi.gov/topic/Brownfields/Training.html

Questions/Comments/Suggestions regarding the Issues & Trends Series can be submitted to: DNRRRComments@wisconsin.gov