



MICHIGAN DEPARTMENT OF ENVIRONMENT,  
GREAT LAKES, AND ENERGY

Remediation and Redevelopment Division

**PRECLUDING FACTORS ASSESSMENT FOR  
PETROLEUM VAPOR INTRUSION (PVI) LATERAL INCLUSION ZONE**

The following checklist will assist in compiling the necessary information for submittal and EGLE's subsequent review and will identify if there are conditions that will not allow the use of the Interstate Technology and Regulatory Council (ITRC) PVI lateral inclusion zone. The evaluation is to be based on the information provided in the submittal.

Site Name: \_\_\_\_\_

Submittal Type: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Completed by (Name and Title): \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email Address: \_\_\_\_\_

Date: \_\_\_\_\_

**PRECLUDING FACTOR:**

**CATEGORY A**

1. There are natural preferential pathways that intercept both the source and building foundation [Sec. 3.1.4; Fig 3-2] including:
  - Karst geology between the source and building foundation.
  - Fractured bedrock between the source and building foundation.
  - Other fractured geology between the source and building foundation.

Present  Absent  Page Number: \_\_\_\_\_

2. There are artificial preferential pathways (e.g., sanitary sewers, piping corridors) that intercept both the source and building foundation [Sec. 3.1.4; Fig 3-2].

Present  Absent  Page Number: \_\_\_\_\_

3. There is an ongoing release of petroleum products [Sec. 3.1.4].

Present  Absent  Page Number: \_\_\_\_\_

4. There is an expanding or advancing dissolved plume [Sec. 3.1.4; Fig. 3-2].  
Present  Absent  Page Number: \_\_\_\_\_
  
5. There is migrating nonaqueous phase liquid (NAPL) [Sec. 3.1.4; Fig. 3-2]  
Present  Absent  Page Number: \_\_\_\_\_
  
6. The release is leaded gasoline with lead scavengers [e.g., Ethylene dibromide (EDB), Ethylene dichloride (EDC), 1,2-dichloroethane (1,2-DCA)] above an unrestricted Site-Specific Target Level (SSTL) or Site-Specific Volatilization to Indoor Air Criteria (SSVIAC) in soil or groundwater [Sec. 3.1.4; Fig. 3-2].  
Present  Absent  Page Number: \_\_\_\_\_
  
7. The release is from a used motor oil or a waste oil tank and contains chlorinated organic compounds above an unrestricted SSTL or SSVIAC in soil or groundwater [Sec. 1.1; 4.2.1].  
NOTE: if the release contains chlorinated organic compounds, the submittal must use a 100-foot lateral inclusion zone.  
Present  Absent  Page Number: \_\_\_\_\_

***If any precluding factor in Category A is present, the ITRC PVI lateral inclusion zone cannot be applied, and a 100-foot lateral inclusion zone or site-specific lateral inclusion zone must be determined. If there are no precluding factors in Category A present and the site information supports the analysis, proceed to evaluate the precluding factors in Category B prior to utilizing the ITRC PVI lateral inclusion zone.***

**PRECLUDING FACTOR:**

**CATEGORY B**

1. The gasoline release contains greater than 10% ethanol by concentration (vol/vol) [Sec. 3.1.4; Fig. 3-2].  
Present  Absent  Page Number: \_\_\_\_\_
  
2. There are soils onsite with a naturally high content >4% weight by weight (w/w) of organic matter between the source and building foundation [Sec. 3.1.4; Fig 3-2].  
Present  Absent  Page Number: \_\_\_\_\_
  
3. Chlorinated organic compounds are present or likely present above an unrestricted SSTL or SSVIAC [Sec. 1.1; 4.2.1].  
NOTE: For this factor, the presence of chlorinated compounds is not associated with the release.  
Present  Absent  Page Number: \_\_\_\_\_

**If no precluding factors from Category A and Category B are present, and is supported with site information, an ITRC PVI lateral inclusion zone of 30-foot (uncertainties) or 5-foot or 15-foot (well characterized and stable) may be applied.**

**If any of the precluding factors in Category B is present, in the area or areas that are identified with the precluding factor present, an alternate demonstration that includes a site-specific evaluation of oxygen in soil gas can be conducted. If the oxygen in the soil gas is greater than 2%, then there is sufficient oxygen to support rapid aerobic degradation at the site and the site can use the 30-foot (uncertainties) or 5-foot or 15-foot (well characterized and stable) lateral inclusion zone for the petroleum release.**

**Soils with naturally high content of organic matter >4% w/w (i.e., swamps, marshes, floodplains, hydric soils, organic soils, and any other waterlogged or flooded soils) that are associated with anaerobic conditions require three consecutive quarters of soil gas readings for oxygen. A single sampling event for oxygen is sufficient for any other soil type.**

**If one or more of the precluding factors in Category B is present and there is no alternate demonstration made, a 100-foot or site-specific lateral inclusion zone must be applied.**

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To be completed based on the information provided in the submittal under review:

- All Category A precluding factors are absent and is supported with documentation or site knowledge: True  False
- All Category B precluding factors are absent and is supported with documentation or site knowledge: True  False
- One or more Category B precluding factors are present and an alternate demonstration was made to show sufficient oxygen (>2%) is present to support aerobic degradation:  
True  False

RRD Field/Unit Manager Signature: \_\_\_\_\_ Date: \_\_\_\_\_

If you need this information in an alternate format, contact [EGLE-Accessibility@Michigan.gov](mailto:EGLE-Accessibility@Michigan.gov) or call 800-662-9278.

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