

# TCP Listening Session

July 23, 2018

NW Regional Office

Bellevue, WA

# Agenda

1. Welcome and Introductions
2. Implementation Memo No. 21 – Frequently Asked Questions (FAQ's) Regarding VI and Ecology's 2009 Draft Guidance
  - ▶ Background – VI Guidance Development
  - ▶ Overview of several FAQ's
  - ▶ Schedule
  - ▶ Discussion and Feedback
3. Upcoming Petroleum VI Training
4. Open Discussion
5. Meeting Summary/Adjourn

# What VI Guidance is Available?

## ▶ Petroleum VI Guidance:

1. ***Implementation Memo 14 (March 2016)*** – Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion.
2. ***Implementation Memo 18 (January 2018)*** – Petroleum Vapor Intrusion (PVI): Updated Screening Levels, Cleanup Levels, and Assessing PVI Threats to future buildings.

## ▶ Other VI Guidance:

1. ***Ecology's draft VI guidance (October 2009)***.
2. ***Implementation Memo 21 (Draft)*** – Frequently Asked Questions (FAQ's) Regarding Vapor Intrusion (VI) and Ecology's 2009 Draft VI Guidance.
3. ***Implementation Memo 22 (Draft)*** – Vapor Intrusion (VI) Investigations and Short-term TCE Toxicity.

# Draft Implementation Memo No. 21

4

- ▶ Numerous portions of the 2009 guidance need updating.
- ▶ Implementation Memo No. 21 provides answers on whether certain portions of the guidance are still applicable and also addresses several topics that were not originally included.
- ▶ A draft version of the memo was released for public review and comment on July 5th.
- ▶ Comments due by August 10<sup>th</sup>.



**Draft: Frequently Asked Questions (FAQs)  
Regarding Vapor Intrusion (VI) and Ecology's  
2009 Draft VI Guidance**

**Implementation Memorandum No. 21**

*Date:* June 22, 2018  
*To:* Interested Persons  
*From:* Jeff Johnston, Section Manager  
Information & Policy Section  
Toxics Cleanup Program  
*Contact:* Policy & Technical Support Unit, Headquarters  
*Attachments:* A – Continuous TCE Sampling Results

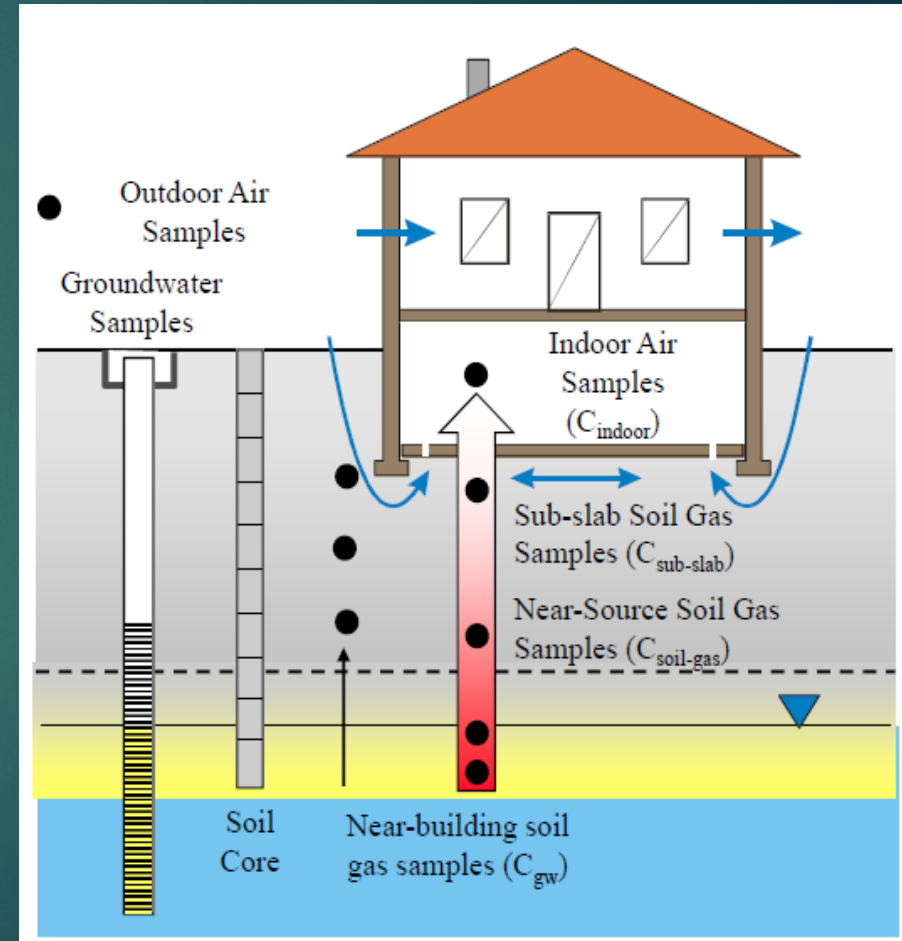
**Accommodation Requests:** To request ADA accommodation including materials in a format for the visually impaired, call Ecology's Toxics Cleanup Program at 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

# Specific Issues Being Clarified

- ▶ The draft memo covers 28 specific issues. Four examples are listed below:
  1. Use of models,
  2. Situations where the same chemicals are present in the workplace from sources in addition to VI,
  3. Whether groundwater data alone can be used to screen-out the VI pathway, and
  4. Can a VI evaluation proceed directly to indoor air sampling.

# Can the Johnson Ettinger Model be the Sole Method to “Screen out” the VI Pathway?

- ▶ The 2009 draft guidance identifies several situations where predictive models can be used as the sole line of evidence to support a “screen out” decision.
- ▶ Ecology now recommends that multiple lines of evidence be used to make that decision. Modeling could be used in conjunction with other site data.
- ▶ This is consistent with EPA’s 2015 VI guidance along with numerous other states.



# Can Models that Account for Aerobic Biodegradation be Used?

- ▶ Models such as BioVapor or PVI Screen can be used when assessing the potential for petroleum VI.
- ▶ BioVapor was developed by API and PVI Screen (which was released in March by EPA) is an updated version of BioVapor.
- ▶ As with the J&E model, Ecology recommends using multiple lines of evidence to make a screen out decision. Modeling could represent one line of evidence.

# How is VI Evaluated When Other Sources Contribute the Same Chemicals?

- ▶ If the chemical(s) present in the workplace are regulated by OSHA, then MTCAs do not control the allowable levels in indoor air.
- ▶ There may also be situations where ambient air is impacting indoor air quality (for example, a convenience store located in close proximity to fueling operations).
- ▶ In situations where an unrestricted cleanup isn't possible and the VI pathway cannot be fully assessed due to high IA concentrations, a covenant will be necessary to ensure land use doesn't change without first evaluating the potential for VI.



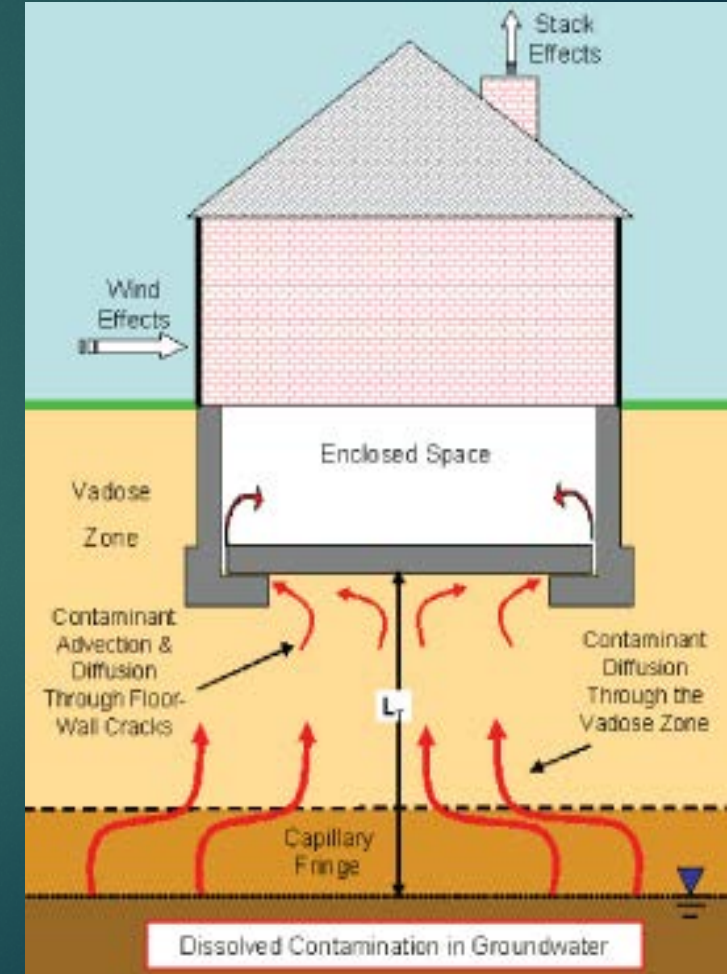
# Are There Situations Where the Previous Examples Would Warrant a VI Evaluation?

- ▶ Yes, addressing the VI pathway would be necessary if:
  1. The site investigation confirms that VI is impacting neighboring buildings or adjacent businesses, or
  2. The manufacturing process changes such that the chemicals of concern are no longer being used.

# Are groundwater data enough to screen out the VI pathway?

10

- ▶ For many sites, soil and groundwater data are often initially collected....particularly in or near the source area, before the VI pathway is assessed.
- ▶ For any site, it may be possible to use the groundwater screening levels in CLARC to screen out particular buildings.
- ▶ For petroleum releases, groundwater data may be sufficient to screen out the site if:
  1. The source area including contaminated soil is removed,
  2. Monitoring confirms the groundwater concentrations are low, and
  3. The separation distances in Implementation Memo No. 14 have been met.



# Can a VI Evaluation Proceed Directly to Indoor Air (IA) Sampling?

- ▶ Yes, especially when high levels of VOC's are found in soil or groundwater in close proximity to buildings occupied by sensitive receptors.
- ▶ Ecology generally recommends collecting ambient air and sub-slab or crawl space air samples concurrently with IA samples.
- ▶ When evaluating data, be sure to consider the potential affects from indoor and ambient air sources, in particular when the IA CUL's are low.

# Implementation Memo No. 21

## Projected Schedule

1. July 23<sup>rd</sup> – Listening Session
2. August 10<sup>th</sup> – Public comment period ends
3. August to October – Evaluate feedback and incorporate changes
4. November - Issue final document

# Agenda

13

1. Welcome and Introductions
2. Implementation Memo No. 21 – Frequently Asked Questions (FAQ's) Regarding VI and Ecology's 2009 Draft Guidance
  - ▶ Background – VI Guidance Development
  - ▶ Overview of several proposed changes
  - ▶ Schedule
  - ▶ Discussion and Feedback
3. Upcoming Petroleum VI Training
4. Open Discussion
5. Meeting Summary/Adjourn

# Upcoming Petroleum VI Training

14

- ▶ The Interstate Technology Regulatory Council (ITRC) will be providing a 2-day petroleum VI training course in Washington State.
- ▶ Logistics:
  - October 10-11, 2018
  - Four Points Sheraton
  - Des Moines, WA
- ▶ Registration information is available on the ITRC web page at: <https://www.regonline.com/builder/site/Default.aspx?EventID=2394765>.

# Agenda

15

1. Welcome and Introductions
2. Implementation Memo No. 21 – Frequently Asked Questions (FAQ's) Regarding VI and Ecology's 2009 Draft Guidance
  - ▶ Background – VI Guidance Development
  - ▶ Overview of several proposed changes
  - ▶ Schedule
  - ▶ Discussion and Feedback
3. Upcoming Petroleum VI Training
4. Open Discussion
5. Meeting Summary/Adjourn

# Agenda

16

1. Welcome and Introductions
2. Implementation Memo No. 21 – Frequently Asked Questions (FAQ's) Regarding VI and Ecology's 2009 Draft Guidance
  - ▶ Background – VI Guidance Development
  - ▶ Overview of several proposed changes
  - ▶ Schedule
  - ▶ Discussion and Feedback
3. Upcoming Petroleum VI Training
4. Open Discussion
5. Meeting Summary/Adjourn