



Toxics Cleanup Program

Listening Session Summary

Session Topic: Vapor Intrusion, et al.

Session Date: Thursday, July 23, 2018

Session Location: Northwest Regional Office (NWRO)

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Introduction

The purpose of this listening session was to give participants an opportunity to ask questions and provide feedback on Draft Implementation Memo No. 21: *Frequently Asked Questions (FAQs) Regarding Vapor Intrusion (VI) and Ecology's 2009 Draft VI Guidance*, which was released for public comment on July 5, 2018, (Ecology Publication No. 18-09-046, <https://fortress.wa.gov/ecy/publications/SummaryPages/1809046.html>). There was also an open discussion portion of the meeting where participants could ask about any issues that were of interest or concern to them.

Summary of the Major Discussion Points

The meeting began with Ecology providing some background information related to on-going work related to VI, as well as an overview of several questions and proposed answers contained in Implementation Memo No. 21. Access the PowerPoint slides from our VI webpage at <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Vapor-intrusion-overview> The rest of this document summarizes the key discussion points but does not represent a complete record of the meeting.

Questions and comments on Implementation Memo No. 21

1. **If a predictive model is used as one line of evidence, is the expectation that other lines of evidence will consist of indoor air or soil gas sampling?**

Ecology indicated there could be situations where that type of information would not be necessary. For example, sites with petroleum impacts could potentially rely on soil and/or groundwater data as the other lines of evidence.

2. **When contamination cannot be completely removed because of a sidewalk or roadway but the building has a parking structure below the occupied space, could the vehicle exhaust system also be used as the mechanism to address any VI concerns?**

Ecology indicated that these types of scenarios could be protective of the VI pathway and that an FAQ will be added to provide direction on how these situations should be addressed.

3. **Are changes being considered that would result in the OSHA-permissible exposure limits being reduced to be consistent with EPA's short-term TCE (trichloroethylene) actions levels?**

Ecology is not aware of any pending changes, but if the current levels are reduced, the Occupational Safety and Health Administration (OSHA) would still be responsible for ensuring compliance.

4. **If off-gassing of PCE (perchloroethylene) from the floors or walls of a former dry-cleaner is the cause of indoor air exceedances (and not VI) who would have responsibility for addressing the impacts?**

Ecology indicated that we would look for assistance from the Department of Health.

5. **Naphthalene has a very low indoor air cleanup level that often can't be achieved with current lab instruments. How should that situation be dealt with?**

Ecology acknowledged that it was often not possible to achieve the $0.074 \mu\text{g}/\text{m}^3$ standard. In these cases, work with the laboratory to determine the lowest quantitation level possible. In most cases, the resulting value will become the applicable cleanup level.

6. Can a VI evaluation proceed directly to indoor air sampling?

Ecology stated that this approach is an available option but if used, sub-slab and ambient air samples should be collected concurrently in order to help with data evaluation.

7. Is it possible to establish a site specific attenuation factor?

The draft Implementation Memo allows for the development of a site specific attenuation factor. The Memo does not establish constraints on the process, but does require that the necessary technical justification for the selected value be provided.

8. If a commercial land use scenario is used to address the VI pathway and then subsequent cleanup is done to achieve the Method A cleanup levels, would additional VI sampling be necessary?

In most cases, VI should not be an issue if the Method A cleanup levels are met. However, if previous air or soil gas monitoring revealed exceedances then follow-up sampling should be performed. In addition, confirmation sampling to document that the Method A levels have been met would also be necessary.

9. Can the VI pathway be addressed by simply installing a vapor barrier?

Ecology indicated that sampling data to document the barrier is effective in preventing VI from occurring would generally be needed.

10. Does Ecology allow the use of passive samplers for evaluating the VI pathway?

The draft Implementation Memo does not specify the type of sampling device that must be used, but technical justification of why the approach was selected is necessary. Several participants indicated there may be situations where passive samplers would be preferred. One person indicated they use them in conjunction with other devices like Summa Canisters.

11. When evaluating preferential pathways, is it possible to sample utilities (e.g. a sewer line) rather than indoor air?

Ecology stated that if contaminant migration through preferential pathways is suspected, it would be preferable to sample the sewer gas to obtain direct evidence on whether contaminant migration is occurring.

12. Does the Uniform Environmental Covenants Act (UECA) specifically address the issue of commercial vs. residential land use scenarios?

Ecology didn't think that this issue was addressed by UECA but would do some follow-up checking.

Note: Following the meeting, Ecology reviewed RCW 64.70 which contains the Uniform Environmental Covenants Act (UECA) as adopted by the Washington Legislature. The statutory language does not address different land use scenarios.

13. Is there an internal process to train Ecology Site Managers on the content of the various Implementation Memos or other guidance documents to help ensure consistent application?

Ecology indicated that there are internal webinars, in-person training sessions, and external conferences that are used to help make sure documents are consistently interpreted. In addition, Ecology has an internal VI workgroup with representative from each region, as well as regional VI experts that provide assistance to Site Managers.

14. How is Ecology's VI guidance different than EPA's?

Ecology noted that in general the documents are similar, but did provide several examples of where differences exist. The first was that EPA does not have a specific horizontal petroleum VI screening distance so Ecology adopted ITRC's 30-foot screening distance. A second example are the screening and cleanup levels in Ecology's CLARC database, which contains fewer compounds than the Environmental Protection Agency's list and in some cases, different levels.

15. How much does it cost to do a VI evaluation using multiple lines of evidence?

Several consultants indicated that for a relatively straightforward site, the cost would be in the \$10,000 to \$20,000 range. For a complex site, the cost could approach \$100,000.

Questions during the open discussion portion of the meeting

1. Can Ecology provide suggestions on to deal with municipalities (typically when a covenant is necessary in the right-of-way) in order for the site to achieve an NFA determination?

There was a significant amount of discussion, but no one was aware of a workable solution given the current regulatory requirements.