



CENTER FOR PUBLIC ENVIRONMENTAL OVERSIGHT

A project of the Pacific Studies Center

278-A Hope Street, Mountain View, CA 94041

Voice: 650-961-8918 or 650-969-1545 Fax: 650-961-8918 <lsiegel@cpeo.org>

<http://www.cpeo.org>

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Office of Solid Waste and Emergency Response
U.S. Environmental Protection Agency

Dear Sirs/Mmes:

I am pleased to have the opportunity to submit comments on the April 11, 2013 External Review Draft of the “OSWER Final Guidance for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Sources to Indoor Air.” I am hopeful that the request for public comments is an indicator that the long process of developing this guidance is nearing completion.

Overall, the External Review Draft does a good job of incorporating the new scientific understanding of vapor intrusion that has emerged over the past decade, and it addresses most of the policy questions that have arisen over the same period. Issuance of the Final Guidance should not only clarify EPA’s oversight and conduct of vapor intrusion response, but it will make it easier for states without their own detailed guidance to move forward with more, and more robust vapor intrusion investigations.

The draft guidance repeatedly acknowledges the temporal variability of vapor intrusion, and the recommended time-integrated sampling is a reasonable approach. However, in many circumstances time-integrated sampling is not a practical way to reliably rule out exceedances of exposure standards over the course of an entire year. This is a particular problem for TCE (trichloroethylene), because of the potential for short-term exposures to increase significantly the risk of cardiac birth defects. I suggest that the guidance indicate a preference for continuous sampling methods, as they become available, practical, and cost-effective. Without such a preference, technology developers are unlikely to bring such devices to market.

On both page 2 and page 139 of the draft, EPA makes it clear that it has the authority to require that the owners of rental property provide access. This has been a problem in my

community, and I believe that making that authority clear to landlords will reduce the need to take legal action.

On page 54, EPA writes: “Sample locations should generally be of sufficient density to adequately account for spatial variability and heterogeneity in subsurface conditions.” I agree. At many sites, groundwater sampling locations—sufficiently dense to ensure the protection of public drinking water supply wells—have proven inadequate for delineating plumes for the purpose of targeting a vapor intrusion investigation.

On page 57, EPA describes the sampling of non-residential buildings with the HVAC system off. In my experiences, this is an effective way to tease out the potential for vapor intrusion.

On page 59 EPA recommends using site-specific ambient air sampling as opposed to generic, historic values. I agree. Our experience with such samples shows they are much more accurate than generic references.

On page 93, EPA asserts, “EPA recommends that building mitigation for vapor intrusion be regarded as an interim action that can provide effective human health protection. Vapor intrusion mitigation of buildings should not be viewed as a substitute for remediation of subsurface vapor sources. EPA recommends that building mitigation generally be conducted in conjunction with vapor source remediation where at all possible.” This is an extremely important concept. It should be made clear that it applies not only to enforcement programs such as CERCLA and RCRA Corrective Action, but to Brownfields and other voluntary cleanup programs where practitioners are likely to refer to the guidance.

On page 94 EPA discusses the use of indoor air filtration devices. Is there any positive experience with these? At the only location where I have reviewed their effectiveness, the Navy Yard Mill Site in Dracut, Massachusetts, they appear to have been ineffective and perhaps even counter-productive.

I am pleased that EPA, on page 99, recognizes the significance of owner or occupant preferences in designing mitigation systems. Perhaps language could be added explaining that people are less likely to remove, alter, or unplug systems that they have helped design.

On page 102 EPA recommends *annual* indoor air sampling as a starting point for the monitoring of mitigation systems. Until continuous sensor networks—measuring indoor air concentrations of the contaminants of concern—become practical, this is reasonable. Monitoring frequency should not be reduced over time unless it is demonstrated conclusively that the source is significantly reduced or contained. The potential for new pathways to open from the subsurface into buildings increases over time.

I welcome the addition of Section 9, beginning page 119, on Pre-Emptive Mitigation/Early Action. It’s essential that responsibility for monitoring, operation, and maintenance be clearly delineated from the start, particularly where developers incorporate mitigation into new construction. It is common for property owners to be responsible for

ensuring the integrity of passive mitigation systems, but if the remedy is passive with an option to go active, then sampling and activation should generally be the responsibility of responsible parties.

On page 139, the draft guidance states: “For owners of homes or buildings who did not provide access for assessment sampling or installation of a mitigation system, EPA recommends that the site planning team make reasonable attempts to track ownership changes...” This is important. I recently talked to a homeowner who had recently moved into an existing home in the MEW Superfund Study Area vapor intrusion study area who had no idea whether her home had been sampled. In fact, she moved in unaware that it was part of the study area. I suggest that this paragraph be strengthened by suggesting to project teams that they provide annual notice to residential occupants of un-sampled homes that sampling is available. This would give both new residents and those who initially did not cooperate the opportunity to have their homes tested.

I find Section 10.7 on page 143 inadequate. Property owners’ concerns over property values are a major reason why many do not cooperate with investigations. I do not believe “property value issues are [entirely] outside the scope of Agency authority,” because agency action or inaction may have a direct impact on property values or the ability of property owners to sell. In general, completed investigations and/or mitigation help restore property values when they are impacted by reports of subsurface pollution, and EPA should be prepared to explain that. Furthermore, the pre-emptive installation of mitigation systems throughout a neighborhood should help remove the stigma. Finally, it should be a standard practice for EPA to sample and report promptly indoor air results at homes (within or on the edge of vapor intrusion study areas) where property owners request sampling because they hope to sell their residences.

Notification

In general, Section 10 (beginning on page 131) is useful, but it could be strengthened to incorporate recent lessons about notification from across the country. The following section expands upon a presentation I made in San Diego at EPA’s March 18, 2013 Stakeholders’ Vapor Intrusion Forum.

To be sure, Community Involvement is an integral part of the cleanup decision-making process, but people whose homes, schools, workplaces, and recreational facilities are potentially or actually impacted by vapor intrusion also have an intrinsic right to know about the quality of the air that they breathe. Furthermore, many people choose to make precautionary decisions based upon exposure levels that regulatory agencies may find acceptable at this time. This is particularly true of pregnant women, the parents of young children, and people with existing health problems. Remember, exposure levels are variable and experts continue to debate the quantitative risk from exposure to vapor intrusion chemicals of concern. Moreover, mitigation often is slow, and remediation takes forever. People often need to make decisions before regulators do. Finally, sampling, the operation and maintenance of mitigation systems, and long-term monitoring may all require the cooperation of building occupants.

Here are some key principles that I believe should be included in the guidance. They are based upon a number of sites where potentially impacted people have been unaware of

investigations or responses taking place in their areas or even the buildings where they worked or visited.

For residential structures:

1. Owners and other occupants should be notified personally of any planned investigation, preferably before the wider public and press are notified. This is already in the external review draft.
2. Because many owners and occupants may still not be aware of what is going on, those conducting the investigation should follow up with broader publicity. In my community of Mountain View, many residents of the affected area were not aware of EPA's diligent efforts to notify them until the local weekly newspaper featured the investigation.
3. Sampling results should be reported as soon as possible to building occupants. The 30-days-after-receiving standard in the draft guidance is not good enough. Imagine learning that your home might be poisoned by cancer-causing substances and then being told that you can't see the results for weeks. For couples contemplating pregnancy, uncertainty about TCE exposure can be particularly unnerving. EPA can reduce reporting delays by preparing materials, or optional versions thereof, while waiting for laboratory results.
4. Property owners should be required to provide the same information to prospective tenants as they or regulators provide to occupants. This would give prospective tenants the option of avoiding real or potential risks.
5. The affected public should be offered access to independent experts to help them understand that data. Even when EPA personnel are competent and concerned, they don't always understand what is on the minds of the potentially exposed public, and often members of the public don't believe EPA simply because it's the government. EPA teams should take advantage of existing technical assistance programs to help people understand the nature and extent of their risk, particularly because they may make personal decisions based upon that information.
6. I understand EPA's respect for residents' privacy, but in some situations—for example, in Ithaca, New York—the affected public wants to share their sampling results. EPA should offer an “opt in” system allowing residents to authorize the inclusion of their addresses in publicly available sampling results.

For non-residential structures:

7. Easily visible signs at entryways should notify occupants and visitors that an investigation or mitigation is planned or underway.
8. Regular occupants (students or their parents, employees, inmates, etc.) should receive notices in languages that they understand.
9. Entrance notices, signs, or placards should reflect the official level of concern and provide references or links to more detailed information, as well as to independent experts.
10. Non-residential sampling results should be summarized on signs and in notices, with full access to sampling data on site or via the Web as well as advice from independent experts.

I am impressed by EPA's willingness to hear from people whose health and property is potentially impacted by vapor intrusion, and I look forward to a Final Guidance that addresses their concerns.

Sincerely,

A handwritten signature in black ink that reads "Lenny Siegel". The signature is written in a cursive, flowing style.

Lenny Siegel
Executive Director