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MAP STANDARDS

Please adhere to the “Guidance for Preparing Land Use Covenant Maps” when preparing LUC maps. The guidance is available in Appendix A of the LUC Instructions, which are found on the OER Technical Guidance and Templates webpage. A correctly prepared LUC map facilitates a faster review of the draft LUC by OER and helps to ensure that future property owners more fully understand the activity and use limitations mandated by the LUC.



Historical Data Quality Requirements

High quality data is important when remediation decisions are based on risk assessment. Therefore, the VRP requires that a minimum of 10% of the data used in risk assessment is validated in accordance with specific USEPA protocol. However, the process of assessing the nature and extent of contamination at a VRP site is frequently an iterative process, and often historical sources of data from multiple investigations are utilized in a VRP project. Historical data is often useful and efficient in identifying COPCs and delineating environmental impacts, but unless this data can be validated in accordance with the appropriate protocol, it cannot be used in risk assessment. In cases where the quality of data is unknown or suspect,

the LRS must be cautious in its use, even for COPC identification and delineation. It is the duty of the LRS to protect the safety, health, and welfare of the public in the performance of their professional duties (60CSR3, Section 5.1.b). Therefore, OER expects the LRS to evaluate all data with respect to the project Data Quality Objectives and to be prepared to justify and defend the use of any historical data that is used in a VRP project. Data needs to be collected and analyzed using procedures and methods that ensure data quality, and field procedures and laboratory methods are subject to review and approval by OER. You are strongly encouraged to discuss data quality with OER staff prior to basing critical decisions on historical data.

EFFECTS OF TEMPERATURE ON THE RECOVERY OF COMPOUNDS IN SOIL VAPOR



Two PAH compounds, benzo(a)anthracene and naphthalene, are sufficiently volatile to be evaluated in the vapor intrusion pathway. These PAH compounds are common COPCs at sites where heavier petroleum compounds such as diesel fuel, mineral spirits, or kerosene have been released. Research conducted by Hayes and others (2005) showed that naphthalene vapor sample recoveries were reduced by up to 47% when the vapor sample train was at 50° F, rather than ambient temperature (73° F). By contrast, the cooler temperature had no effect on the recovery of benzene and trichloroethene in vapor samples. However, research has also shown that temperature differences in the upper soil profile can lead to variations in total soil vapor concentrations by a factor up to two (Luo et al. 2009, USEPA 2010, Hers et al. 2014, Johnson and Deeb 2014). Because of these issues, WVDEP strongly recommends that all soil vapor sampling be conducted when ambient temperature is at least 70° F. In cases where COPC concentrations in soil vapor collected during periods of relatively low soil temperature are within one-half magnitude of acceptable concentrations, WVDEP will require that additional samples are collected when the ambient temperature is at least 70° F to verify the previously-collected data.

EXPOSURE FACTORS FOR THE RECREATIONAL RECEPTOR

The VRP Rule defines Residential Land Use to include recreational areas. Because of this, the most protective standards are applied by default to recreational land use unless a site-specific exposure assessment is conducted. The USEPA has developed Regional Screening Level equations to assess recreator exposures and has provided an on-line calculator to simplify the analysis. However, the calculator does not provide default values for Exposure Frequency and Exposure Time. Thus, there is a growing need for WVDEP and other states to develop default factors for recreator scenarios that can be used to calculate site-specific risks and health effects. To address this issue, the updated VRP Guidance Manual will include exposure factors for both high-contact (i.e., sports fields, playgrounds) and low-contact recreational activities such as ATV use. In the meantime, please contact WVDEP Toxicologist Ross Brittain to discuss exposure factors that would be most appropriate for your site.

Save The Date!!

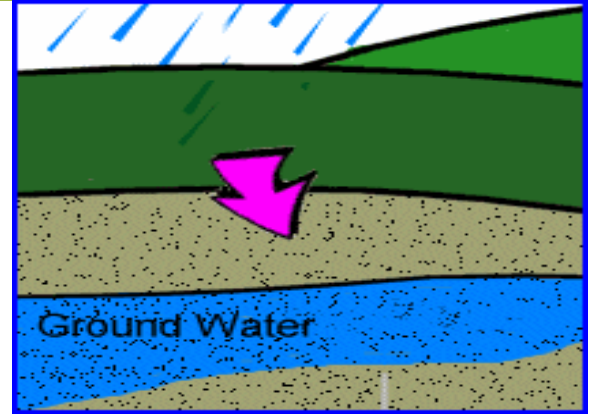
The West Virginia Brownfields Conference will be held at the Marriott Waterfront Place Hotel in Morgantown, WV, from September 10 through 12, 2019. LRS Training will take place from 8:00 AM through 3:00 PM on Tuesday, September 10, 2019.

WEBSITE NEWS

A new screening tool is available on the OER website. A spreadsheet has been developed by OER that includes De Minimis values in numerical format (not scientific notation), as well as several other useful benchmark values such as USEPA Regional Screening Levels and VISL values, BTAG values, WV Surface Water and Groundwater Standards, and others. The spreadsheet can be downloaded from the Technical Guidance and Templates section of the OER Website.

EVALUATING MIGRATION TO GROUNDWATER

When designing a Site Assessment Workplan, the LRS should always ensure that groundwater samples are collected and analyzed for the same COPCs evaluated in soil unless you have good quality data to show that concentrations in groundwater are less than the migration to groundwater (MTG) values in Table 60-3B of the VRP Rule. OER staff recently encountered a site where the concentrations of certain soil contaminants exceeded the MTG but were not analyzed in groundwater samples. This error results in the need to resample groundwater or to implement a remedy for COCs in groundwater that may not be present, both of which should be avoided.



The default MTG values currently listed in Table 60-3B use conservative input factors, which result in highly protective values. To make MTG screening more representative and useful, OER will be proposing changes to the VRP Rule and include procedures in the VRP Guidance Manual to develop site-specific MTG values. These site-specific values will more accurately predict the probability of groundwater impacts from soil contamination and will allow the LRS to “screen out” the need for groundwater monitoring at sites where impacts are relatively minor.

Automated LRS Exams are Here!

On-Line Training and Testing is Coming in 2020!

The first computer-based LRS exam was given on March 27, 2019, at the State Government Training Center in Charleston. Karren Wood of The Thrasher Group in Bridgeport, WV successfully passed the exam and is our newest LRS. All future exams will be computer-based and given at the training center in March and September of each year. The training center is located at the State Capitol Complex, on the 2nd Floor of Building 7.

The move to a computer-based test is the first step in moving toward mandatory annual refresher training to be provided on-line by OER. The mandatory on-line training will be accessed from your personal workstation and is designed to ensure that members of the LRS community remain aware of current assessment and remediation technology and recent developments in VRP regulations, guidance, and processes. After completing the one-hour training session, you will be prompted to take a test to document your knowledge of the material. Failure to pass the exam will require you to retake sections of the training. The current plan is to make the annual training and associated exam mandatory for all LRSs and OER PMs and is anticipated to begin in 2020.



Tell Us What

You Think...

The goal of this newsletter is to keep the lines of communication open and flowing at capacity.

Please let us know if there are topics you want to know more about, or just tell us what you think about the newsletter.

The best way to reach us is by sending an email to the address below.



Office of Environmental Remediation

DEPLRSPprogram@wv.gov

News Feed

- **New COC Template!**

The new Certificate of Completion template includes a requirement to list the applicable remediation standards for each media. Download the most recent version from the OER Website.

- **New Topics in the Updated Guidance Manual**

The VRP Guidance Manual will include two new guidance topics: Guidance for assessment of rail trails and guidance for the design and use of covers to prevent direct contact and caps to prevent infiltration.

- **Always Screen Against Residential De Minimis Values!**

The list of Contaminants of Concern in soil at a VRP site are determined by comparing the concentrations of all Contaminants of Potential Concern to the Residential De Minimis Soil Standards. Comparison must always be made to the Residential De Minimis Soil Standards, whether or not the intended future land use is residential or industrial. A COC is defined as a contaminant present at a concentration which requires a remedy to achieve the desired remediation standard. Any soil contaminant that exceeds the Residential De Minimis Standard will require a remedy.

New Faces, New Places

- Project Manager **Sheena Moore** has recently accepted a position with the Landfill Closure Assistance Program, so Program Manager Erin Brittain will be managing her projects until a new project manager is hired. We wish Sheena good luck in her new role.
- **Curtis Phillips**, an Environmental Resources Specialist located in the WVDEP Fairmont Office, has recently taken over management of UECA-LUST sites, primarily in the northern part of WV. The next time you interact with Curtis, please congratulate him on his new role in project management.
- Deputy Director **Casey Korbini** has just accepted a temporary reassignment from Secretary Caperton to lead the WVDEP Public Information Office until a permanent replacement is found. In the meantime, DLR Director Rob Rice will take a more active role in OER operations until Casey returns to her position in OER.