Q&A

- Immediate Actions for Significant Existing Releases
- Naturally Occurring Metals in Soils

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Immediate Actions for Significant Existing Releases

(IAs for SERs)

Questions on IAs for SERs

General

- How were the timelines developed?
- SER and SEH integration: How will the two programs interact and will property owners with existing SEHs have to act with the new SER requirements?
- Would the IAs for SERs requirements apply to homeowners? Funding is a concern.

Questions on IAs for SERs

Drinking Water Wells – Release Determination

- Will all wells with detectable contaminants be considered SERs?
- How will it be determined whether the constituents detected in a well are from a "release" or background?

Questions on IAs for SERs

Drinking Water Wells – Timelines

- Is it possible to:
  - Make the release vs background determination in 2 days?
  - Conduct sampling in 2 days?*
  - Install a drinking water treatment system in 15 days?*
  - Connect to public water in 30 days?*

*when a legal access agreement is required

Questions on IAs for SERs

Drinking Water Wells – IA Process

- Will there be a provision for bottled water if the requirements of the IA are not fulfilled within the specified timeframes?
- Will DEEP be prepared to assist private parties to access properties to test wells, install systems, etc.?

Questions on IAs for SERs

Drinking Water Wells – IA Process

"Drinking water wells on adjacent parcels must be identified and sampled within 2 days and then drinking water wells within 200 feet of the impacted well and within 500 feet downgradient must be identified and sampled."

- Isn't the latter requirement duplicative? Is there a scenario in which the sampling required within 2 days wouldn't include wells that would be included within the sampling required within 15 days?

Questions on IAs for SERs

Soils

"Within 90 days:

- *Remediate all impacted soil to the applicable DEC*
- *Remove or mitigate soils to prevent exposure and submit immediate action plan*
- *Render soils inaccessible (as defined in RSRs)*
- *Remediate soil impacted by PCBs as required by 40 CFR 761"*

- As presented during the September Working Group meeting, are these all required Immediate Actions to address a SER for soil?

Questions on IAs for SERs

Soils

- Why does soil have to be fully remediated in 90 days? Why not continue with the SEH concept of "making safe" in the short term and require a plan to be implemented in the longer term. The remedy could be built into the redevelopment.
- What sorts of mitigation strategies does DEEP envision, and how would they differ from current SEH mitigation strategies (e.g., fence)?

Questions on IAs for SERs

Soils

"Within 90 days the impacted soil would need to be remediated to the applicable DEC."

- How is the applicable DEC determined?
  - Will it be based on actual use like CGS 22a-6u(d)(1)?
  - Or would there need to be an EUR in place that restricts residential use to rely on the I/C DEC?
- Why is 15X DEC proposed as the multiplier instead of 30X for some substances, as it is today?

Questions on IAs for SERs

Soils

"Within 90 days the impacted soil would need to be remediated to the applicable DEC."

- Shouldn't the required level of cleanup be <15X DEC (the SER trigger concentration) rather than the more stringent DEC value?

  - Requiring cleanup within 90 days to the DEC seems contrary to DEEP's proposed Tiering system, which would allow up to one year to meet RSR standards before a site is tiered.

Questions on IAs for SERs

Soils

"One of the listed options is "render soils inaccessible" (as defined by the RSRs).

- Does DEEP envision any changes from the present definition?
- What sorts of documentation would be expected within 90 days and the longer term?

Questions on IAs for SERs

VOS & VPS

- Are there timeframes for this SER response?
- How was the 10x GWVC threshold selected?
- If the building is vacant and awaiting sale and a new user, can the remedy for volatiles be deferred?

Questions on IAs for SERs

Surface Water

- Why is DEEP proposing to consider any detection within 500 feet of surface water an SER when the present SEH trigger is for "groundwater which is discharging to surface water" under Conn. Gen. Stat. § 22a-6u(f)(1)?

- Are there timeframes for this SER response?

Questions on IAs for SERs

Surface Water

- What definition of surface water is DEEP using?
  - Will vernal pools and stormwater detention basins count?
  - What percentage of Connecticut's surface area is within 500 feet of surface water using that definition?

Naturally Occurring Metals in Soil

Naturally Occurring Background Metals in Soil

Question

Will DEEP consider the products of combustion PAHs as naturally occurring materials?

Additional Context

- The extensive forest fires both in US and adjacent Canada (including aerial deposition) contribute PAHs to soil.

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Naturally Occurring Background Metals in Soil

Question

Why is hexavalent chromium criteria listed?

Additional Context

- The naturally occurring presence of the form of chromium is rare and any presence of it in a sample would trigger further evaluation.

Naturally Occurring Background Metals in Soil

Question

Why aren't comparisons being made to the PMC?

Question

Is an exception for certain fill materials possible?

Additional Context

- Quarried rock from several different formations may be used as fill materials, and the concentrations of metals may not meet the C horizon background levels or RSR criteria.
- The baseline does not appear to account for fill materials that may be imported from adjacent states.

Naturally Occurring Background Metals in Soil

Question

Will sites with arsenic background > than 6 mg/kg require the use of Option 3 (with additional sampling and statics)?

If Option 3 results in background > Res DEC, will DEEP approval be required?

Additional Context

- There are many sites in Connecticut that have naturally occurring arsenic above 6 or 10 mg/kg. The approvals could add additional strain on DEEP resources.

Naturally Occurring Background Metals in Soil

Question

Can the Department provide the raw data and calculations for review?

Naturally Occurring Background Metals in Soil

Question

Please confirm the statistical parameter used to calculate the statewide background ranges is the 95% Upper Confidence Level (UCL) of the Mean.

- Is the Department aware that this statical parameter measures the central tendency of the data?
- Does the Department not agree with the Interstate Technology Regulatory Council (ITRC) observation that a 95% UCL of the mean should not be used to determine background threshold values (BTVs)?

Additional Context

- From ITRC soil background guidance document: "…since the mean is a measure of the central tendency of a dataset, UCL of the mean should not, under all but select circumstances, be used as a BTV because the result would be excessive false positive results."

Naturally Occurring Background Metals in Soil

95% UCL of the Mean (continued):

- Did the Department consider the use of upper percentiles for calculation of background threshold values?
- Did the Department consider the use of upper tolerance limits using a 95% confidence level for calculation of Connecticut's background threshold values?

Additional Context

- Massachusetts used the 90 to 95 percentiles to calculate BTVs
- From ITRC:

  "Estimates of upper percentiles are reliable *if the background dataset is adequately large* and representative of a single population."

  "The UTL is the UCL of an upper percentile of the observed values…For example, the 99- 95 UTL represents the 95% upper confidence level (95% UCL) of the 99th percentile value….The 95-95 UTL has become the most common measure of BTV in practice."

Naturally Occurring Background Metals in Soil

Question

Why did the Department choose just the C horizon data for their evaluation?

Did the Department consider a background data set for 0 –2-foot below grade and a separate set for soil greater than 2 feet?

Additional Context

- The Brown & Thomas data is from undeveloped public land including parks and state forests. Sample locations avoided: 200 m of a major highway, 50 m of a rural road, 100 m of a building, and 5 km downwind of major industrial activity.
- 100 samples of surface material from <5 cm deep.
- 86 samples from A horizon - Includes organic material to which metals can bind. Some metals concentrations were higher in these samples, indicating possible contributions from anthropogenic sources.
- 79 samples from C horizon - Non-organic.

Naturally Occurring Background Metals in Soil

Question

Will DEEP be developing a map of areas where such substances are generally naturally occurring so a property owner doesn't have to prove the presences of such substances [through sampling]?

If metals are detected in soil disposal samples, will the property owner have to test for heavy metals on the site to prove that they are naturally occurring if the area is known to have high levels of such metals?

THANK YOU!