

Good afternoon,

As promised, please find attached DEEP's feedback on Subcommittee 9 and 10 concept papers. Also, attached are the two public comments received on these concept papers.

We look forward to engaging in a discussion on these concepts papers. DEEP will make Ray Frigon, Lori Saliby, Brendan Schain, and me available for a question and answer session. This session will be followed by similar question and answer sessions with Subcommittees 9 and 10.

Best and be well,
Graham

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FEEDBACK ON SUBCOMMITTEE 9 AND 10 CONCEPT PAPERS APRIL 6, 2023

The following is the Department of Energy and Environmental Protection's ("Department" or "DEEP") feedback on concept papers concerning the development and implementation of a release-based clean-up program pursuant Chapter 445b of the Connecticut General Statutes ("Chapter 445b").

Concept papers were prepared by two "third phase" topical subcommittees of the larger working group, convened pursuant to General Statutes § 22a-134tt. A "charge," setting out the scope of each subcommittee may be found on DEEP's release-based remediation [web page](#). The third phase subcommittee process comprised subcommittees that considered:

- Cumulative Risk and Risk-Based Alternative Approaches ("subcommittee 9"); and
- Role and Qualifications of Non-LEP Environmental Professionals ("subcommittee 10").

The following feedback is provided to assist the working group as it reviews the concepts presented. The feedback is intended to focus on those topics that have a significant impact on the development of regulations to implement Chapter 445b and is not intended to cover every detail provided in the concept papers.

The Department believes that the work of these subcommittees, in addition to the work done by the first- and second-phase subcommittees, ad hoc teams, and drafting teams, has created a solid foundation upon which the release-based cleanup program will be constructed.

FEEDBACK ON SUBCOMMITTEE 9

Providing an LEP the flexibility to design a cleanup that is efficient and cost-effective while still protecting human health and the environment is a major theme of the subcommittee's concept paper. The Department recognizes the subcommittee's strongly held belief that certain cumulative risk tools – particularly the use "short forms" similar to those used in Massachusetts – are essential to achieving the desired flexibility. The Department is committed to providing flexibility to the extent it can be provided while still protecting human health and the environment. As discussed below, the Department agrees with the subcommittee that, in certain specified circumstances, a short form approach to cumulative risk analysis is appropriate.

The Department also believes that it can improve on the suggested concepts by also using a short form approach to make certain existing tools more usable by adding those tools to short forms and by adding new ideas to the short form approach.

➤ **Use of Short Form Approach to Direct Exposure**

While cleanups must consider, and the cleanup standards will contain, criteria and approaches applicable to direct exposure and pollutant mobility regarding soil impacted by a release and volatilization, surface water protection and protection of groundwater impacted by a release, the subcommittee suggests that the short form approach to cumulative risk be limited only to evaluating the risks posed by direct exposure to soil impacted by a release. The Department appreciates and agrees with the subcommittee's recommendation. The assessment of risk from the mobilization of pollutants into groundwater, or from those pollutants already in groundwater, requires additional considerations – including consistency with the state's Water Quality Standards – that cannot be accommodated in a short form approach. The Department believes that a short form approach to cumulative risk analysis limited to direct exposure to polluted soil can be implemented as part of a release-based cleanup standard.

➤ **Site-Wide Cleanup**

The Department agrees with the subcommittee's recommendations for establishing cleanup standards for soil impacted by a release that are derived from cumulative risk, the Department believes that the use of such risk based cleanup standards requires an investigation and cleanup of all releases on a parcel (and not just the area impacted by a discrete release). To truly consider the cumulative risk of direct exposure to impacted soil, such an analysis must consider all impacted soil likely to be encountered by the occupant or user of a parcel of land. Otherwise, such an analysis is not truly cumulative, leaves open the question of the total exposure risk to occupants and users of a parcel, and is not protective of human health. In its proposed regulations, the Department will specify a process and standards for the site-wide investigation and cleanup necessary to implement the short form approach to cumulative risk analysis.

➤ **Cumulative Risk Derived Cleanup Standard**

On page 4 of its concept paper, the subcommittee recommends “a cumulative [excess lifetime cancer risk] of 1×10^{-5} for exposure to multiple carcinogens, an [excess lifetime cancer risk] of 1×10^{-6} for exposure to an individual carcinogen, and a cumulative [Hazard Index] of 1 (allowing for summation of non-cancer risk by target organ) within the RSRs to support a cumulative risk approach.” The Department agrees that, when considering the cumulative risk from direct exposure to soil impacted by a release that contains multiple carcinogens, a cleanup standard ensuring that cumulative excess lifetime cancer risk does not exceed 1×10^{-5} is appropriate, provided that no individual carcinogen exceeds an excess lifetime cancer risk of 1×10^{-6} . Such an analysis must necessarily include an evaluation of *all* exposure risk pathways.

➤ **Other Existing Tools**

As noted above, the Department believes a short form approach can also be used to increase the availability and usability of certain existing tools found in the Remediation Standards Regulations. The Department will, therefore, propose that a short form approach to the implementation of those tools also be made available to those choosing to perform site-wide cleanups. While final decisions on which tools will use this approach have not been made, such tools will likely include but not be limited to:

- Creation of a spreadsheet, available on DEEP's webpage, that can be used to calculate Additional Polluting Substance criteria,
- Creation of a spreadsheet, available on DEEP's webpage, that can be used to generate Alternative Volatilization Criteria (certain parameters open within set ranges and based on LEP knowledge of the site), and
- Other form derived outputs that can guide cleanup approaches.

➤ **Additional Exposure Scenarios**

The subcommittee suggests, and the Department agrees, that the creation of exposure scenarios in addition to "residential" and "industrial/commercial" would create additional flexibility. The subcommittee suggests several additional exposure scenarios for consideration. The Department believes that the following exposure scenarios merit further consideration for inclusion in the cleanup standards under development:

- Property Managed Residential Use (access to soil is highly controlled) [see concept paper p. 2]
- Passive Recreation [see concept paper pp. 2,6]
- Trespasser Scenario [concept paper p. 6]

➤ **Environmental Use Restrictions**

The subcommittee makes several suggestions regarding environmental use restrictions ("EURs"). The Department notes that its authority to make changes in this area is limited by both statute and common law concerning real property.

The subcommittee does suggest that, for certain exposure scenarios, a conservation easement be permitted to take the place of an EUR. The Department appreciates the subcommittee's creative thinking and supports this idea in principle. However, there are certain issues that must be overcome. The restrictions used in conservation easements are not universal, and such easements are held by a variety of entities – including municipalities and their boards and commissions, private land trusts, and the State. Further, conservation easements are not enforceable by the Department.

The Department believes, however, that for sites with an already recorded conservation easement, the recording of an environmental use restriction enforceable by the Commissioner can be expedited and simplified. For example, significantly less title work may be needed before a restriction is recorded, and subordination agreements may be unnecessary. The Department looks forward to continuing discussion on this idea with the working group.

FEEDBACK ON SUBCOMMITTEE 10

Subcommittee 10 identified several first principles that must form the basis of regulations authorizing non-LEP environmental professionals to certify the completion of a cleanup. The Department agrees that there must be a level playing field between LEPs and non-LEPs engaged in the work; there must be certainty that leads to market acceptance of cleanups overseen by non-LEPs; and, some minimum training and continuing education requirements are necessary.

The Department believes that certain enforcement authority relative to those undertaking cleanups already exists, and can be further defined to ensure a level playing field. The Department further believes that its existing statutory authority to permit those professionals undertaking the cleanup of releases can be adjusted and expanded to accomplish many of the goals identified by subcommittee 10.

➤ **Jurisdiction for Non-LEP Environmental Professionals**

Similar to the opinions expressed by subcommittee 10, DEEP believes there should be a role for non-LEP environmental professionals to certify that a cleanup has satisfied applicable cleanup standards, including provisions created to address more directly new releases. The question that requires more discussion is what types of releases can non-LEP environmental professionals certify or what scenarios should they be prohibited from certifying.

DEEP believes that releases that can be cleaned up to a standard expeditiously, and that don't result in a sustained groundwater impact should be permitted to be certified by non-LEP environmental professionals. Generally, any impact to groundwater would trigger the need for a LEP, unless such impact is directly attributable to the cleanup action and the release mechanism and pollutants are known (e.g., temporary sheen on ground during excavation of petroleum-impacted soil).

Certification of these types of releases may be completed on a form prescribed by the commissioner with documentation of the remediation attached. That documentation could include a written description of the remediation, analytic results, maps showing the locations samples were collected, photographs, etc.

➤ **Oversight versus Certification**

It is important to distinguish between the work of cleaning up a release and the act of certifying that a release has satisfied the required cleanup standard. The Department recognizes that the work of cleaning up new releases is largely not performed by LEPs today. Instead, the task of mobilizing equipment and manpower to remove pollution from the environment falls mostly to emergency responders and permitted spill contractors who respond to, and address, those releases.

The question before subcommittee 10, and now before the working group and the Department, is in what circumstances can certain non-LEP environmental professionals certify that a cleanup has satisfied applicable cleanup standards (keeping in mind that cleanup approaches applicable to new releases may need to be developed). This represents a shift from the old paradigm, where “closure” of a response to a new release was not necessarily intended to serve as a certification that cleanup standards had been satisfied.

When considering the concept paper and this written response, it is important to remain aware of this distinction.

➤ **Accountability and Enforcement**

Those professionals tasked with certifying the completion of cleanups – whether they are LEPs or not – must be accountable for compliance with applicable statutes and regulations. As both the subcommittee and other members of the working group have pointed out, LEPs are already held to a high standard of professionalism by the LEP regulations. The Department acknowledges that to level the playing field, it must have the necessary tools to hold non-LEP environmental professionals to account for issues of compliance with statutory and regulatory standards.

The enforcement provisions of chapter 445b – found specifically at Conn. Gen. Stat. § 22a-134ss – apply to “violations of the provisions of sections 22a-134qq to 22a-134tt, inclusive.” See, e.g., 22a-134ss(f) (allowing the Commissioner to adopt a schedule for administrative civil penalties). To the extent regulations adopted pursuant to Conn. Gen. Stat. § 22a-134tt contain specific provisions regarding those persons authorized to certify cleanup has reached completion, compliance with those regulatory requirements is likely subject to certain enforcement provisions found in § 22a-134ss. The Department intends to provide further structure to this enforcement authority, and further clarity on how it might be used, in regulation, and looks forward to continuing this discussion with the working group.

➤ **Conn. Gen. Stat. § 22a-454 Permits**

Under current law, “[n]o person shall engage in the business of collecting, storing or treating waste oil or petroleum or chemical liquids or hazardous wastes or of acting as a contractor to

contain or remove or otherwise mitigate the effects of discharge, spillage, uncontrolled loss, seepage or filtration of such substance or material or waste . . . without a permit from the commissioner.” Conn. Gen. Stat. § 22a-454. With some adjustment, the Department believes that permits issued pursuant to this section can be used to achieve many of the subcommittee’s goals.

For example, the subcommittee suggested the Department maintain a list of those non-LEP environmental professionals authorized to certify that a cleanup has satisfied applicable cleanup standards. While the creation of a standalone list presents resource and due process questions, maintaining a list of valid permits issued pursuant to § 22a-454 will accomplish the same goal and resolve any due process issues (because of the procedural protections already in place for permits).

The Department agrees with the subcommittee that training and continuing education should be required, although there may be some differences of opinion regarding the type and frequency of training. A permit application provides an enforceable mechanism to require self-certification of the completion of training and continuing education in a submission to the Department.

The requirement to obtain a permit will also assist with market acceptance of cleanups as the credential itself becomes standard in the marketplace.

Many of the adjustments to the current permitting framework necessary to accomplish the goals of the subcommittee will not require extensive statutory or regulatory modifications, but rather modifications of application forms (to collect the appropriate information) and the Department’s public facing website (to provide necessary information).

The Department looks forward to further discussions with the working group on this topic, including the scope of its existing enforcement tools, the type and frequency of training required, and the use of Conn. Gen. Stat. § 22a-454 permits for this purpose.



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March 31, 2023

To: CT DEEP – Release-Based Cleanup Program Working Group

Sent via Email to: DEEP.Cleanup.Transform@ct.gov

The Environmental Professionals Organization of CT (EPOC) is pleased to submit these comments on the third phase of Topical Subcommittee Concept papers released for public comment on March 15, 2023. This document provides our overall comments to the two concept papers as follows (links provided to posted papers):

- Topical Subcommittee 9: [Cumulative Risk and Risk-Based Alternative Approaches](#)
- Topical Subcommittee 10: [Role and Qualifications of Non-LEP Environmental Professionals](#)

General Comments:

We recognize and applaud the efforts of the subcommittee members who worked on these papers over the past several months. We acknowledge the difficult task each workgroup undertook in a brief period to address the multitude of complex issues that must be evaluated as we embark on a transition to a new release-based cleanup program in CT.

Comments on Papers:

Topical Subcommittee 9: Cumulative Risk and Risk-Based Alternative Approaches

EPOC agrees that a cumulative risk and risk-based alternative should be included in the new regulations. Cumulative risk assessment is a well-established process for understanding the risk posed by environmental contamination to human and environmental receptors. These processes have been successfully implemented as part of the federal program and have been used in several states. EPOC specifically supports the following concepts presented in the Concept Paper:

- The cumulative risk assessment approach should be a self-implementing option for Licensed Environmental Professionals (LEPs);
- The cumulative risk approach can be used to both document that a condition of no significant risk exists at a release site post-remediation and to assess risk pre-remediation to allow subsequent remedial actions to target the risk drivers at a release site;
- The Department, in coordination with the Department of Health, should adopt the following cumulative risk standards:
 - A cumulative excess lifetime cancer risk (ELCR) of 1×10^{-6} for exposure to an individual carcinogen and an ELCR of 1×10^{-5} for multiple carcinogens.
 - A non-cancer hazard index of 1 (allowing for summation of non-cancer risk by target organ);

- The new regulations should include a provision for the use of Short Form risk calculators for assessing cumulative risk in Connecticut; and
- The incorporation into the new regulations of the other components necessary to complete an evaluation of risk posed by contamination at a release including provisions for assessing ecological risk and the incorporation of maximum allowable contaminant levels.

The experience of our members who practice in other states or under the federal program indicates that cumulative risk assessment is an effective tool for addressing complex, contaminated sites.

Topical Subcommittee 10: Role and Qualifications of Non-LEP Environmental Professionals

EPOC agrees that there can be another group of professionals that sign-off on low volume, low toxicity contemporaneous releases (having occurred in a period not longer than 24 hours) where no impact to environmental media has occurred. EPOC would also be willing to entertain sign-off of low volume, low toxicity contemporaneous releases (having occurred in a period not longer than 24 hours) by non LEPs in instances where the only environmental medium impacted is soil. The Department will need to determine the meaning of low risk and low toxicity and the standard of care to be used to demonstrate that only soil has been impacted by a release.

Clean-up of spills routinely requires that professional judgement and experience be exercised. Therefore, we agree with the white paper that non-LEPs should:

- Have relevant experience and training;
- Be required to document activities so that the spill response actions and closure determinations can be easily understood in the future;
- Be subject to Department review and, when deficiencies are found, required to complete additional work or retain an LEP to close out the incident; and,
- Be subject to additional consequences if Department reviews identify deficiencies on several occasions for a single individual.

With regard to LEP closures, EPOC strongly believes that any release that has the potential to or impacts groundwater needs to be addressed and closed by an LEP. Similarly, due to the requirement to use professional judgement and the conceptual modeling process, nearly all historical releases should also be addressed and closed by an LEP, with a possible exception for low volume, low toxicity releases that just impact soil.

With regard to the Subcommittee 10 deliberations, it became clear that there are currently two standards of care in Connecticut to close releases. The conservative LEP verification process which requires proof of no impact and/or compliance, monitoring, use of administrative and

engineering controls, approval of additional polluting substances, etc. In contrast, spill and UST closures are typically not as well documented and typically do not result in RSR compliance, as these releases are often addressed only to the point that an imminent hazard does not remain but are not taken all the way through the process such as recording administrative restrictions, applying for additional polluting substance clean up criteria, or performing compliance groundwater monitoring. Public Act 20-9 requires that the new Release Based Program address all releases equally.

We also note that nearly every work group has discussed this concept and that none have been able to reach a consensus. As DEEP is the ultimate decision maker, we conclude that DEEP needs to revise the RSRs and/or the 22a-450 spill regulations to develop clean-up procedures and/or standards for lower volume, lower toxicity releases that don't reach the environment. With this information in hand, but likely not until then, a determination of the types of lower-risk releases and non LEP professionals that can close them will be appropriate and obtainable.

EPOC continues to support the Department's effort to move towards a release-based program. Ten subcommittees, two Ad hoc groups and two drafting teams have completed their work. EPOC concludes that it is now time for DEEP to begin writing and sharing portions of the regulations for Task Force advice and feedback.

We welcome the opportunity to continue to participate in the development of the Release-Based Remediation Program.

From: Burrus, Scott <Sburrus@sovcon.com>
Sent: Tuesday, March 28, 2023 7:47 PM
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Subject: Public Comment to Subcommittee 10 Concept Paper

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Good afternoon DEEP and Working Group,

I would like to provide the following brief comments in reference to the Subcommittee 10 Concept Paper: Roles and Qualification of Non-LEP Environmental Professionals:

Upon review of the Concept Paper, although it reports there were varying degrees of consensus amongst the members on specific topics, there appear to be several references to the potential for Non-LEP Environmental Professionals, referred to in the Paper as a Technical Environmental Professionals (TEP), to be able to Certify releases to soil as long as specific timeframe and volume limitations are met and that groundwater impacts have been determined not to have occurred. The Paper also provides a template "Immediate Action Field Assessment" form as an example of a possible mechanism for use to confirm actions are conducted in a manner consistent with cleanup objectives and to provide for consistency across the State for these types of submittals. The template asks, "...were samples collected" and "...was a copy of the analytical results attached...". The report additionally mentions that most of the committee members agreed that TEPs would need to be subject to some level of training, however the extent of that training was not contemplated or fully agreed upon. However, the Concept Paper does not appear to provide any details or correlations to existing regulations/guidance regarding soil sampling requirements and training requirements associated therewith. In order to ensure the reliability of the certification from the TEP, the requirements for sampling need to be clearly defined regarding the following:

- Appropriate sampling locations based on site conditions;
- Quantity of samples based on release size and soil excavation extents;
- Acceptable sample collection methods;
- Analytical methodologies; and
- TEPs ability/training to complete a valid Data Quality Assessment and Data Usability Evaluation (DQA/DUE)

I fully agree and support the creation of regulations to allow for TEPs to provide Certification of specific types of releases based on site conditions, response actions, and timeframes, however, in order to do so, well defined conditions and requirements must be put in place to ensure the consistency and reliability of the submissions.

Regards,

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