

Good evening members of the Working Group,

The two Ad Hoc teams (anthropogenic background and historical fill and releases on residential properties) and the Drafting Team charged with providing this groups advice and feedback to the DEEP have nearly finished their work. Attached, please find draft reports from the Ad Hoc teams and a flowchart and outline generated by the Drafting Team.

To ensure that this working group has another opportunity to review and consider the work of these teams, and to ensure that members of the Working Group have an additional opportunity to weigh in on this initial advice and feedback to be provided, DEEP suggests the following process for preparing the Working Group's advice and feedback:

- Please provide questions or comments on the teams' reports in writing by e-mail to the appropriate contact listed below, **on or before Friday, October 22, 2021 at 10 AM**. Please also copy DEEP.Cleanup.Transform@ct.gov on the e-mail transmitting your questions or comments.
 - Ad Hoc Team Contact – Anthropogenic Background and Historical Fill: Amy Velasquez (avelasquez@rwater.com)
 - Ad Hoc Team Contact – Release on Residential Properties: Emilee Scott (EScott@rc.com)
 - Drafting Team Contact: Adam Fox (Adam.Fox@ct.gov)
- The teams will review questions or comments in advance of the October 26, 2021 Working Group meeting, and may make necessary clarifications or modifications based on comments.
- At that October 26, 2021 Working Group meeting, the teams will summarize and respond to the question and comments received, indicating if – and how – those questions and comments are addressed in their reports.

DEEP anticipates that the Drafting Team will incorporate the reports from the Ad Hoc teams and the Subcommittee concept papers in its final report, which will constitute *initial* advice and feedback to DEEP, so DEEP can begin to consider drafting of the release-based regulations.

I want to thank all members of the Working Group – and particularly those on the Ad Hoc and Drafting Teams – for their hard work as we close out this phase of the working group process.

Best,
Graham

**CTDEEP RELEASE-BASED CLEANUP REGULATIONS WORKGROUP
Ad Hoc Committee for Historical Fill**

**Draft Summary of Issues Raised by Five Subcommittees
Discussed at the Workgroup Meeting - September 14, 2021
Revised and Submitted to DEEP – October 7, 2021**

As currently defined by Public Act 20-9, the Ad Hoc Committee is concerned that the presence of historical fill containing contaminants (which by its very nature as “fill” was placed there by someone at some time) would fall within the definition of a “release” under the statute and the Release-Based Cleanup Program. This raised many concerns in the various committees, which all agree that historical fill should be treated differently from discrete historical releases of contaminants. The Ad Hoc Committee concluded, after reviewing all the subcommittee reports, that the most effective way to do this would be to redefine “release” in the statutes and/or regulations such that the presence of historical fill is not a historical release. The presence of historical could also be explicitly excluded from the proposed Release-Based Cleanup Regulations’ reporting and cleanup obligations for historical releases. As noted above, regardless of how this is done, whether through statute or regulation or a combination of both, historical fill should be viewed differently from discrete historical releases, which we understand to have been the intent of PA 20-9.

Set forth below is a summary of how each subcommittee addressed or discussed “historical fill.”

From Subcommittee 1 – Discovery of Historical Release

- “Historical release” means the presence of oil or petroleum or chemical liquids or solids, liquid or gaseous products, or hazardous waste (as defined in section 22a-448 of the Connecticut General Statutes) in, on or under the land and waters of the state as a result of a release, as defined in Public Act 20-09. “Release” as defined by Subcommittee 1 does not include the presence of naturally occurring substances, the application of fertilizer or pesticides consistent with their labeling, or the presence of substances found at concentrations consistent with anthropogenic background. This definition of “Release” may require legislative changes to codify the additional exemptions.
- “Naturally occurring substance” means an element, compound or material which is already present in the environment (soil, water, air) and in forms or concentrations that have not been directly altered by human activity.
- “Anthropogenic background” means those levels of oil or petroleum or chemical liquids or solids, liquid or gaseous products that are not attributable to a specific release and which are:
 - a. attributable to atmospheric deposition of industrial process or engine emissions and are ubiquitous and consistently present in the environment,

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- b. releases to groundwater from a public water supply system,
- c. petroleum residues that are incidental to the normal operation of motor vehicles,
- d. Constituents of concrete and breakdown of concrete, or
- e. Natural breakdown of bituminous concrete in the state of its intended purpose in the absence of mechanical removal, landfilling, etc.

From Subcommittee 2 – Reporting of Historical Release

- Fill containing regulated compounds related to coal, coal ash, or wood ash, excluding wood ash resulting from the combustion of lumber or wood products that have been treated with chemical preservatives should be exempt from reporting.

From Subcommittee 3 – Characterization of Historical Release

- Acknowledging the presence of background conditions is an important aspect of any characterization effort, since it is not appropriate to expect a responsible party for a particular release to cleanup conditions that existed before that particular release occurred (anthropogenic background) or to attempt to characterize the extent of conditions that are actually representative of naturally occurring concentrations (naturally occurring background).
- DEEP should identify and publish ranges for naturally occurring concentrations of metals in soil (and possibly groundwater), so that environmental professionals can quickly determine if the concentration of a metal detected in a soil sample is within the range that can be considered to be naturally occurring for the particular metal and conclude that the concentration is not indicative of a release.
- Metals, SVOCs, petroleum hydrocarbons and PFAS are contaminants that are present in fill material or as a result of atmospheric or widespread deposition, and DEEP should consider developing guidelines for typical ranges of anthropogenic background conditions that could be used to at least minimize characterization efforts needed to distinguish between the background conditions and a discovered historical release.

From Subcommittee 4 – Immediate Removal Actions

- A possible pathway for historical releases of polluted fill with impacts to soil would not involve emergency spill response, would have a low probability of an SEH, and a high probability of an expediated remedial action, with an intermediate action as an option, likely fall outside the tier classification, with likely involvement of CTDEEP Remediation Group and/or an LEP.
- A release associated with historical polluted fill that impacts water could require an Emergency Response, but cleanup/characterization would likely be overseen by an LEP with some CTDEEP Remediation Group involvement.

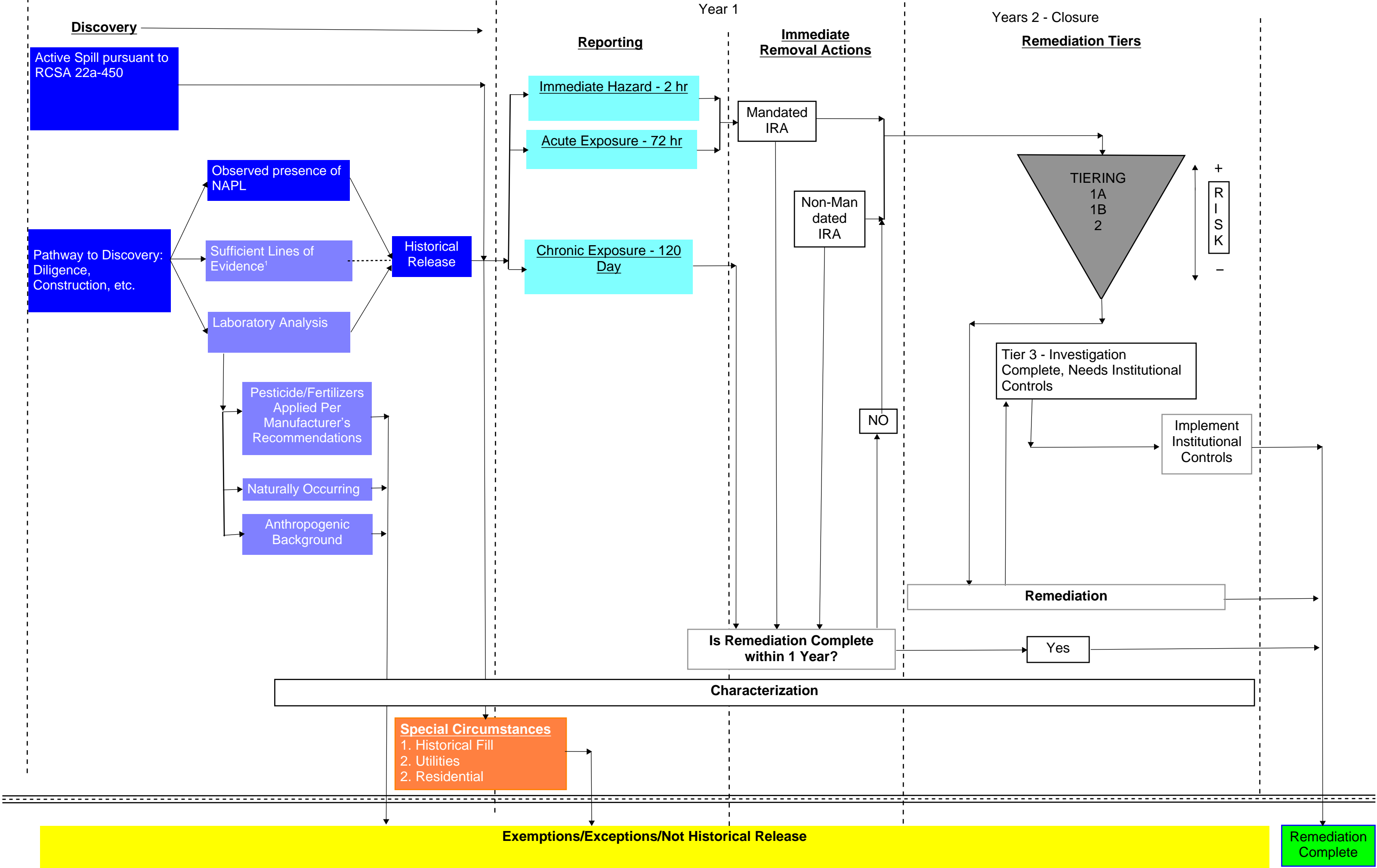
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From Subcommittee 5 - Tiering

- Newly discovered historical releases (primary release) on parcels or in areas of parcels that contain polluted historical fill/anthropogenic background should not be subject to additional or more onerous requirements to reach closure based on the presence of these materials. The tiering and response to the primary release should be limited to the risk posed by the primary release and the presence of polluted historical fill/anthropogenic background should not create additional obstacles or delays to the reuse of properties by requiring the owner to address the historical fill on the full parcel or larger portions of the parcel beyond the primary release area for the newly discovered historic release, unless the fill poses an imminent threat to human health or sensitive receptors.
- Some Subgroup members do not agree that anthropogenic background/historical fill containing substances above applicable remedial criteria should be treated differently from other releases.

Summary of Key Points Discussed by the Ad Hoc Group

- Historical fill that meets the definition of "Clean Fill" means (1) natural soil (2) rock, brick, ceramics, concrete, and asphalt paving fragments which are virtually inert and pose neither a pollution threat to ground or surface waters nor a fire hazard and is not a release or an historical release.
- Historical fill needs to be treated differently from a historical release regulated under the proposed Release-Based Cleanup Regulations. The owner of property who is addressing a new or historical distinct release unrelated to the presence of historical fill should not be required to address the historical fill, including on the full parcel or larger portions of the parcel beyond the primary release area for the newly discovered release or historical release.
- Where material that is part of the historical fill creates a Significant Environmental Hazard, which needs to be redefined and/or clarified under the proposed Release-Based Cleanup Program, characterization and remediation to mitigate the hazard should be evaluated and possibly required.



Discovery

Active Spill pursuant to RCSA 22a-450

Pathway to Discovery: Diligence, Construction, etc.

Observed presence of NAPL

Sufficient Lines of Evidence¹

Laboratory Analysis

Historical Release

Pesticide/Fertilizers Applied Per Manufacturer's Recommendations

Naturally Occurring

Anthropogenic Background

Special Circumstances
 1. Historical Fill
 2. Utilities
 2. Residential

Reporting

Immediate Hazard - 2 hr

Acute Exposure - 72 hr

Chronic Exposure - 120 Day

Year 1

Immediate Removal Actions

Mandated IRA

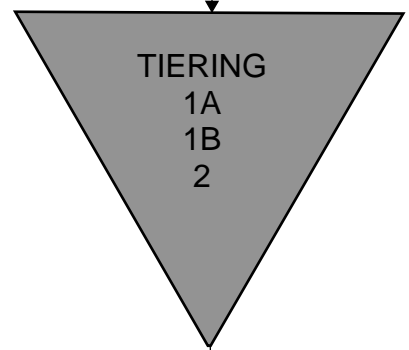
Non-Mandated IRA

NO

Is Remediation Complete within 1 Year?

Years 2 - Closure

Remediation Tiers



Tier 3 - Investigation Complete, Needs Institutional Controls

Implement Institutional Controls

Remediation

Yes

Exemptions/Exceptions/Not Historical Release

Remediation Complete

Recommendations of Ad Hoc Group Releases on Residential Properties

Submitted to the Release-Based Remediation Workgroup and the Department of Energy and Environmental Protection (DEEP) on 10/19/21

DEEP's charge to the group: *"The Ad Hoc Team should evaluate the concepts proposed by the first phase Subcommittees and propose conceptual approaches or additional tools to aid homeowners in addressing releases on their property. The approaches or tools proposed may include special pathways to achieving cleanups or interim measures that both protect human health and the environment but are also efficient and cost effective for homeowners to implement."*

The Group assumed:

- Under the release-based program there will be many releases that do not require closure by an LEP, and that the majority of residential releases will fall into that category.
- The overwhelming majority of releases occurring at residences will be fuel oil.
- These recommendations would not apply when a release occurs at a business operated from a home.
- Some releases that are discovered and reported would not trigger an obligation to remediate on the part of the party making the discovery and report (consistent with the assumptions of the Discovery Subcommittee as stated in the Discovery Concept Paper). For example, when a residential drinking water well is discovered to be contaminated because of an upgradient source of pollutants, we assume that the upgradient source would be responsible for remediation.

Recommendations for approaches or additional tools to aid homeowners in addressing releases on their property:

Recommendation 1. No Lessening of Health or Safety Standards

The Ad Hoc Group was not in favor of enacting any approaches or tools that would make environmental standards less stringent at residential properties in an attempt to ease the burden on homeowners suffering from a spill or its consequences. Given the exposure pathways associated with residential uses, the Ad Hoc Group was in favor of requiring the achievement of residential standards under the RSRs (or successor set of standards) for releases occurring on residential properties and/or through residential activities. There was discussion of whether there should be mandatory drinking water testing for residences served by wells, but there was not consensus on the issue. One idea to lessen financial burden would be to tie residential water well testing to the sale or transfer of a property by requiring home inspectors to screen for nearby potential contaminant sources (i.e., dry cleaners, gas stations, industrial properties) and conduct appropriate sampling. Another idea is to inform the public about areas of groundwater contamination impacting residential properties, such as pesticide / PFAS contamination, by CT DEEP publishing /mapping the potable water well results.

Recommendation 2. Prevent Releases

The Ad Hoc Group agreed that the most cost-effective way to address releases is to prevent them from happening in the first place. Because the most common release at a residence is likely to be from a spill of fuel oil, the group recommended actions to decrease the probability of loss of fuel oil from storage

tanks and their associated fittings. The Ad Hoc Group preferred incentives, not sanctions, to encourage homeowners to address the potential risk that their aging storage tanks might pose.

A. Underground Storage Tanks (USTs)

1. Educate. Provide educational materials for the homeowner to know who to contact and how to close / in most cases remove a residential UST. Provide education materials about the risks posed to the environment associated with residential USTs.
2. Identify the extent of the risk. The Ad Hoc Group recommends that DEEP undertake an analysis to determine the number of remaining residential USTs.

DEEP staff reported to the Ad Hoc Group about its Residential Amnesty program for USTs that ran from July 1999 to December 31, 2002. It was responsible for the removal of 4,000 tanks, using four million dollars in bond funding. More were likely removed because those with no contamination may not have submitted any reports to DEEP (then DEP). The number remaining is unknown and, consequently, so is the risk from UST's.

3. Incentivize removals. The Ad Hoc Group recommends an incentive program for removal of USTs that is scaled to the size of the risk and to the availability of funds. Multiple approaches were put forward for consideration including:

- a. Provide funds for remediation after removal of the UST, if removal indicates the presence of a spill from the tank. It was the opinion of the Ad Hoc Group that the money for remediation, and possibly for removal, did not have to originate from public funds. New Hampshire's Petroleum Reimbursement [Fund](#) is a financing mechanism that deserves consideration as a model to emulate in Connecticut.
- b. Incentivize removal of a known residential UST on the sale or transfer of the property.

B. Above Ground Storage Tanks

1. Incentivize prevention with regular inspections, as done in neighboring states, without creating an undue burden on the homeowner.
 - a. Massachusetts and Vermont have laws requiring inspection of oil tanks and their associated hardware. Massachusetts has taken a two-pronged approach of [mandating](#) anti-spill features on home heating systems and requiring insurance companies to offer optional [coverage](#) for residential spills.
 - b. The infrastructure for regular inspections of above ground tanks already exists within the companies that service oil burners. A requirement for a regular inspection would be of benefit. Vermont [requires](#) inspections of fuel oil storage and associated equipment (1) Immediately after tank system installation; (2) Immediately after initial delivery of fuel to the tank system; (3) Prior to the initial delivery of fuel to the tank system when the tank owner switches fuel carriers; (4) If not otherwise required under subdivisions (1), (2), or (3) of this subsection, the tank system shall be inspected once every three years.

Recommendation 3. Lessen the Burden to Homeowners Who Experience a Spill

1. Provide educational materials for the homeowner to know who to contact and how to respond to a spill. The information could be available from fuel oil dealers, a placard required to be installed on the tank, DEEP or at the “311” information number.
2. Make financial assistance available to incentivize reporting and clean-ups. Provide homeowners with access to a fund to assist with the characterization and remediation of a fuel oil spill which meets the legal threshold of a “reportable” spill. The Group recommended that a dedicated non-lapsing account be established for this purpose. A small surcharge on home heating fuel would be one potential funding mechanism.
3. Lessen the administrative burden of reporting and closing spills at residences.
 - a. Consider increasing the minimum reportable quantity of fuel oil for residences in cases where there is no imminent risk to people or to the environment.
 - b. Where a release is sufficient to be reportable, provide a simplified reporting form or highlight the standard form so that the reporter can easily identify the portions required to be completed for a spill at a residence and disregard the rest.

Recommendation 4. – Handling Releases Other Than Fuel Oil

1. Lessening of reportable quantities for releases that are not fuel oil is not warranted. Because of the wide variability of the potential adverse effects of the multiple substances other than fuel oil, the Ad Hoc Group did not recommend a higher reporting threshold than appears in DEEP’s Spill Reporting Regulations. (The [Draft](#) Release Reporting Regulations require reporting of a release of either ten (10) pounds or more or one and a half (1.5) gallons or more, of a reportable material other than oil or petroleum, if released within any period of twenty four (24) hours. The Draft Release Reporting Regulations also require reporting of a release of either less than ten (10) pounds or one and a half (1.5) gallons of a reportable material other than oil or petroleum unless, within two (2) hours of discovery, properly trained.)
2. Lessening the administrative burden for homeowners is warranted. Provide a simplified reporting form or highlight the standard form so that the reporter can easily identify the portions required to be completed for a spill at a residence and disregard the rest.

Recommendation 5. – Innocent Landowner/Downgradient Owner Protections

Assuming that there are opportunities for downgradient owners to demonstrate that they did not cause the contamination and should not be responsible for remediating it, such opportunities should be crafted to be easy for homeowners to use. Additional study might be required on the issue of what it means for a resident to “maintain” a release and whether more robust carve-outs for downgradient property owners are necessary.

Chronology of the Ad Hoc Group's meetings and deliberations.

September 10, 2021: First meeting of group – Broad discussion of the nature and extent of residential spills and the charge by DEEP to address the burden to homeowners.

September 13, 2021: Written report drafted for oral report on 9/14

September 14, 2021: Oral report from Ad Hoc Group to the larger Working Group on the Ad Hoc Group's process and deliberations

September 22, 2021: Second meeting of group. Heard from representatives of the Department of Insurance, The Department of Housing (Crumbling Foundations Fund) and a representative of the real estate sector.

September 28, 2021: Third meeting of group – Heard from a representative of the C-Pace program concerning its suitability as a model to finance a large remediation expense.

October 4, 2021: Fourth meeting of group summarized discussions and framed recommendations

October 8, 2021: Fifth meeting to approve draft recommendations.

October 12, 2021: Summation and recommendations of Ad Hoc Group to Working Group.

October 15, 2021: follow-up meeting to discuss input received in October 12 Working Group meeting.

October 26, 2021: Working Group's consideration of ad hoc team recommendations.

Participants

1. Eric Boswell, LEP, Stantec
2. George Gurney, LEP Weston Solutions
3. Emilee Mooney Scott, Attorney Robinson & Cole
4. Matthew Hackman, PE, LSP, LEP
5. Jim Morrison, LEP, Antea Group
6. M.J. Ryer, Ryer Associates Commercial Real Estate
7. Peter Hearn, CT Council on Environmental Quality
8. Abigail Davis, CT DEEP
9. Amber Trahan, CT DEEP

Presenters:

Michael Barbaro, Huntsman-Meade Real Estate
Mackey Dykes, Connecticut Green Bank
Kristin Fabian, Connecticut Dept. of Insurance
Lena Holleran, Connecticut Dept. of Housing

Overall, the Team's discussions will result in the development of an overarching flow chart (see attached) that combines/reconciles the five subcommittee's processes and a white paper that will consist of an executive summary of the five (5) subcommittee reports that will document the following:

1. Where there is agreement amongst the subcommittees
 - a. Consensus reached
 - b. Consensus not reached
 - c. Open items that need to be addressed by the overall Working Group
2. Overall questions that need to be answered by DEEP
3. Gaps in process between the subcommittees
4. Potential Conflicts
5. Infrastructure requirements to be implemented by DEEP
6. Recommended next steps/topics to tackle