

**Development of Connecticut’s Release-Based Cleanup Program
Pursuant to Public Act 20-9**

Subcommittee 2 -- Reporting Newly-Discovered Historical Releases

Concept Paper

June 11, 2021 - FINAL

1) Introduction and Executive Summary

The following “Concept Paper” is presented to the working group established pursuant to § 19 of Public Act (PA) 20-9 (the “Working Group”) by the members of “Subcommittee 2.” Subcommittee 2 was tasked by the Connecticut Department of Energy & Environmental Protection (DEEP) and Department of Economic and Community Development (DECD) with evaluating and providing to the Working Group recommendations regarding the reporting of newly discovered historical releases (NDHRs) under a to-be-created release-based cleanup program pursuant to PA 20-9.

The members of Subcommittee 2 are listed on Attachment A. The specific questions and issues that DEEP suggested Subcommittee 2 consider in connection with the development of this Concept Paper are discussed further below and are included in the “Subcommittee Guidance” document attached at Attachment B. A list of abbreviations, acronyms and certain terms of art used in this Concept Paper is attached at Attachment C.

The format of this Concept Paper is as follows: Section 2 describes the scope of the work undertaken by Subcommittee 2; Section 3 addresses the underlying assumptions developed by Subcommittee 2 in connection with developing this Concept Paper; Section 4 outlines the meeting procedures and guest speakers who helped frame the conversations within the subcommittee; and Section 5 discusses Subcommittee 2’s recommendations regarding reporting of NDHRs.

As discussed in more detail below, consensus was reached by the members of Subcommittee 2 on the following overarching issues and recommendations:

1. The Massachusetts Contingency Plan (MCP) provides a useful framework for reporting NDHRs and should be relied upon as a framework for developing the release-based reporting program to be created pursuant to PA 20-9, in part because there are benefits to developing a system similar to that of a neighboring state in order to provide for regional consistency and competitive balance with respect to economic development. In addition, the MCP contains elements that are consistent with Connecticut’s current approach to identifying and addressing environmental risks.
2. There should be both quantitative and qualitative reporting criteria.
 - a. Quantitative reporting criteria should be developed using appropriate risk assessment and risk management processes that are consistent with the U.S. EPA approaches to human and ecological risk assessment. These criteria may not necessarily be the

same as the default numeric criteria in the Connecticut Remediation Standard Regulations, RCSA §§ 22a-133k-1 *et seq.*, (the “RSRs”) or any future remedial endpoint/criteria to be established as part of the RSRs or otherwise. For example, the default Connecticut clean-up criteria for polynuclear aromatic hydrocarbons is very low and would likely result in over-reporting of NDHRs if used as the quantitative reporting criteria.

- i. The quantitative reporting criteria in the MCP are divided into two categories: soil and groundwater, and within those categories, two levels of risk – Reportable Concentration (RC) 1 and RC2. RC1 standards apply when sensitive uses are at risk, such as occupied dwellings or drinking water sources. RC2 standards apply in all other instances. Subcommittee 2 concluded that establishing comparable categories for reporting NDHRs would be consistent with Connecticut’s remediation requirements, protective of public health and the environment and practical.
 - b. Qualitative reporting criteria should be based on the sensitivity of the humans and the natural resources at risk from the NDHR. For example, any NDHR that poses an imminent hazard to public safety should be reported, without regard to a specific reportable concentration.
3. There should be different reporting deadlines based on the level of risk posed by the NDHR. The MCP model of 2-hour, 72 hour and 120-day reporting deadlines based on both quantitative and qualitative criteria appears protective of public health and the environment and is practical to implement. It also incorporates a number of concepts already present in Connecticut’s Significant Environmental Hazard (SEH) law, CGS § 22a-6u.
4. Not all NDHRs need to be reported and exemptions should be created for specific situations, e.g., releases reported under another program or cleaned up before the reporting deadline.
5. Responsible parties who are not required to report a NDHR pursuant to PA 20-9 should still be able to file a report if they own the property upon which the release exists. The intent would be to allow those parties to avail themselves of the formal closure mechanisms for the NDHR and to document that closure is complete (even though closure mechanisms likely will exist that do not necessarily require filing a report).
6. Where limited or incomplete data is available, the to-be established program should favor reporting and provide simple, self-implementing mechanisms to amend or withdraw a report as additional and/or more reliable information becomes available.
7. The regulations should provide some direction or mechanism for addressing situations in which it is not clear when the release occurred. That is, while there is a general consensus among Subcommittee 2 that NDHRs that occurred before or after a certain date may fall under different reporting requirements, in many situations, it will be difficult if not impossible to determine the precise date a historical release occurred. For example, the regulations should provide some flexibility and be geared toward allowing the release to be addressed pursuant to the release-based program as opposed to the Connecticut Transfer Act, CGS §§ 22a-134, *et seq.* (the “Transfer Act”).

8. Information reported to DEEP should be readily available to the public through a free, easily accessible, and searchable web portal.
9. Subcommittee 2 recommends that a single case/release tracking number be assigned to each reported NDHR, similar to the Massachusetts Release Tracking Number (RTN) system. Subcommittee 2 believes that the single case/spill number should apply regardless of whether the release is a contemporaneous release reported under CGS § 22a-450, a NDHR reported under the program to be created pursuant to PA 20-09, or another program, such as the Transfer Act. The regulations should establish a mechanism by which case/spill numbers can be merged and/or linked as facts warrant.
10. Subcommittee 2 recommends that any database to be created include the ability to search by Global Positioning System (GPS) coordinates in addition to the more common search fields (address, site name, etc.). Subcommittee 2 understands the difficulty in cataloging past NDHRs with GPS coordinates given the lack of available data. That said, inclusion of GPS coordinates to NDHRs moving forward will be invaluable to environmental professionals, state and local agencies and to the public.
11. To simplify reporting for the regulated community, DEEP should use one streamlined form for all releases - current and historical releases and releases from underground storage tanks (USTs). In addition, online reporting of releases (e.g., completing a release reporting form that can be completed directly through DEEP's website) should be available.
12. The new release-based reporting program should eventually replace certain current regulatory and statutory requirements (and the proposed spill regulations being developed pursuant to CGS § 22a-450), including but not limited to, the SEH program.
13. If the new program replaces the SEH program, then in addition to requiring that the "creator" or "maintainer" report a NDHR, certain NDHRs should be reported to DEEP regardless of who discovers them (e.g., any person discovering an imminent hazard to human health or the environment should have an obligation to report).
14. Reporting of per- and polyfluoroalkyl substances (PFAS) should be evaluated, along with other emerging, widespread contaminants as the understanding and science evolves.

In connection with the development of this Concept Paper and the above recommendations, Subcommittee 2 also developed a conceptual flow chart to illustrate the recommended reporting requirements and exemptions to reporting discussed herein (the "Flow Chart"). The Flow Chart is attached hereto at Attachment D. While the Flow Chart incorporates concepts that Subcommittee 2 reached a consensus on (e.g., not all releases should be reported), it also contains specifics with respect to potential reporting criteria and exemptions. The specific details were largely drawn from Connecticut's current standards, such as those set forth in the SEH law, and/or from the MCP. However, because the details of the reporting criteria were both beyond the scope of work of

Subcommittee 2 and were not discussed in detail, they are included in the Flow Chart for illustrative purposes only. Accordingly, the Flow Chart is presented as a recommended process (including exemptions from the reporting requirement) with the understanding that the various thresholds and specific reporting criteria would be developed at a later date.

2) Scope of Work

Subcommittee 2 examined various issues regarding NDHRs, including the following: when a historical release must be reported; what information must be reported; and how such reported information should be made accessible to the public. Specifically, Subcommittee 2 focused its discussions, evaluation, research, and recommendations on the following questions:

1. What is/are the threshold(s) requiring reporting of a historical release? Is such a threshold quantitative, qualitative, or both?
2. Within what time frame after discovery should a report be required?
3. Should reporting exceptions for certain historical releases be created if timely remediation occurs? If so, what situations qualify and what constitutes timely remediation?
4. Is it necessary to address, beyond the detail provided in the statute, releases on Transfer Act or brownfield sites?
5. Where reporting is required, what information must be reported?
6. How will reports be made accessible to the public?
7. Where releases do not require reporting, will there be a mechanism for the public or others to become aware that a release occurred? If so, what will the mechanism(s) be?

During the course of Subcommittee 2's discussions and evaluation of the above issues and questions, various other topics were addressed and discussed. For example, Subcommittee 2 also considered issues related to: (1) who, in addition to the person that "created" or "maintained" the release, may have an obligation to report a newly discovered historical release; and (2) how the evolving understanding and regulation of PFAS and other emerging contaminants should be handled in connection with a new release-based cleanup program, and in particular, any associated reporting requirements thereunder.

3) Assumptions

In order to help focus our efforts and discussions on the issues and questions presented above, Subcommittee 2 developed the following assumptions upon which the concepts, recommendations, and further considerations discussed herein are based:

1. Subcommittee 2's recommendations/concepts apply to NDHRs rather than to new (contemporaneous) releases or spills.
 - Note, however, that some of the recommendations and concepts included in this Concept Paper and discussed further below could apply to both contemporaneous releases and NDHRs.
2. A "release" as defined in PA 20-9 has been identified.

3. The person (as defined in PA 20-9, e.g., creator or maintainer) who *may* have an obligation to report has been identified and has notice of the NDHR.
4. Such notice includes some minimum of quantitative and/or qualitative information, including but not limited to, an analytical result and proximity to sensitive receptors. The person who may be responsible for reporting the NDHR has at least the essential facts needed to file an initial report.
5. There will be an opportunity to address certain NDHRs, including but not limited to, performing an immediate removal action, prior to a reporting deadline.
6. Pursuant to § 17(e) of PA 20-9, the information reported will be publicly available. In particular, there will be a mechanism, such as web-based portal, that allows the public to review and search reports online.
7. Subcommittee 2 is not addressing additional reporting or investigation/remediation, etc., that may be required after the initial report of the NDHR.
8. Other than considering initial risk-based classifications of NDHRs for purposes of reporting and reporting deadlines, Subcommittee 2 is not evaluating whether or how NDHRs may be classified, for example, in tiers, for purposes of further investigation or remediation, if required.

4) Meetings/Proceedings

1. Schedule

- a. Entire Subcommittee - generally weekly, Tuesdays at 10 a.m.
- b. Small group meetings – Fridays and/or Mondays
- c. Representatives of the Subcommittee attended the larger monthly Working Group meetings

2. Procedures and Process

- a. Subcommittee 2 began with a brief overview of Connecticut's current release reporting requirements, observing that the state has, to date, implemented a two-tiered system for reporting: current releases and SEHs. Connecticut's statutory programs, including the Transfer Act, the Voluntary Cleanup Program and its federally-regulated UST program, together with the federal Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) programs, require investigation and remediation of NDHRs. However, many releases covered by these programs do not definitively require reporting to DEEP.
- b. Subcommittee 2 then reviewed select other states' release reporting requirements and discussed/evaluated their relative effectiveness, specifically whether the reporting requirements are clear, straightforward and comprehensive without being duplicative, whether accurate and complete information regarding reported NDHRs is available to the public, and whether the release reports are an integral part of the overall remedial program. Even though Subcommittee 2 is not making recommendations regarding what actions are required after a release is reported, Subcommittee 2 considered whether a state's reporting requirements segued to characterization and remedial requirements. It also should be noted that only New Jersey and Massachusetts have a program equivalent to Connecticut's Licensed

Environmental Professional (LEP) program. The other states appear to rely more on agency oversight on a case-by-case basis, which creates a different process for documenting that a release has been characterized and remediated. The state programs and Subcommittee 2's consensus findings are outlined below:

- i. Massachusetts - Presentation to the entire subcommittee by Rick Standish of Freeman Companies LLC.
 1. The Subcommittee's consensus was that the Massachusetts regulations provided the best model for Connecticut's program (at least with respect to reporting NDHRs) because the Massachusetts regulations are relatively clear with respect to who must report a release, when a release must be reported and how it must be reported. The Massachusetts regulations are also part of an overall, unified remedial program, which further provides clarity and consistency for the regulated community and the public at large.
- ii. New Jersey – Presentation to the entire subcommittee by John Oberer of GZA GeoEnvironmental.
 1. The New Jersey release reporting program was notable for the lack of clarity that exists with respect to who must report, with the result that a single release is often reported by more than one person. Duplicate reports create a recordkeeping and file management challenge for the agency, a burden for the regulated community and confusion for members of the public seeking access to information regarding a site or a release. In addition, we discussed that LSRPs may be required to report certain issues that non-LSRPs would not be required to report, which has resulted in persons perfuming investigations intentionally engaging non-LSRPs.
- iii. Pennsylvania - Presentation to the entire subcommittee by John Oberer of GZA GeoEnvironmental.
 1. The Pennsylvania program appears not to clearly address all historical releases and the disconnect between the reporting requirements for releases from USTs and all other releases creates potential confusion and/or inconsistencies in reporting.
- iv. Other Northeastern States – Rhode Island, Maine, New Hampshire and Vermont. Review of these states was performed by a small sub-group.
 1. The release reporting requirements in Rhode Island, Maine, New Hampshire, Vermont, and New York were similarly found to be less clear regarding what releases must be reported, when and by whom, whether because the state has adopted different regulatory requirements for different sources of pollution or its regulations have gaps in coverage, especially for historical releases.
 2. Rhode Island's requirements (§ 250-RICR-140-30-1.6 - Notification) are similar in general structure to Massachusetts' but are much simpler. Although simplicity is a desirable quality in and of itself, by creating only two classes of releases – those that must be reported within 15 days and those that do not have to be reported - the Rhode Island regulations fail to incorporate one of the longstanding features of Connecticut law including some releases

that are deemed to be Significant Environmental Hazards that should be reported and, if necessary, mitigated quickly.

3. Vermont's statutory program is similar to Connecticut's CGS § 22a-450 in that it requires immediate reporting of all releases by any person liable for the release, without clearly addressing the discovery of historical releases. Vermont has separate rules for releases from USTs, releases of hazardous waste and CERCLA hazardous substances, all of which relate to current releases without clearly providing guidance for the discovery of historical releases.
 4. It was observed that New York's release reporting and remediation program is, in practice, generally administered by regions and varies from region to region. In consequence, it did not appear to be a highly useful source of guidance for our purposes.
- c. Subcommittee 2 then developed an initial list of assumptions and continued to update and revise the assumptions as the discussions progressed.
 - d. Finally, Subcommittee 2 considered the questions posed by DEEP in the Subcommittee Guidance Document in the general order presented.

5) Consensus Findings and Concepts/Recommendations

The following section addresses Subcommittee 2's consensus findings and conceptual recommendations in response to the questions posed by DEEP in the Subcommittee Guidance Document.

1. Within what time frame after discovery should a report be required?

- a. The time frame for reporting may vary and should be based on the magnitude of the risk posed by the condition, including, for example:
 - i. Concentration of the contaminant
 - ii. Type of contaminant
 - iii. Media impacted
 - iv. Proximity to sensitive receptors/uses
- b. The MCP model of 2-hour, 72-hour and 120-day reporting deadlines appears protective of public health and the environment, and practical to implement. It also incorporates a number of concepts already present in Connecticut's SEH program, including:
 - i. Immediate hazards. Some NDHRs constitute potentially imminent hazards which would pose a significant risk of harm to human health, safety, public welfare, or the environment if they were present for even a short period of time and should be reported promptly. (2-hour reports)
 1. For example, impacts to a water supply or an explosion hazard would constitute immediate hazards that should be reported as soon as possible and within 2 hours of discovery.
 2. Note: A 2-hour deadline to report is intended to give the person discovering the NDHR sufficient time in which to

take initial/immediate mitigation and safety precautions before reporting the release.

- ii. Acute exposure condition. Some NDHRs that do not represent an immediate hazard would still constitute hazards that pose a significant risk of harm to human health, safety, public welfare, or the environment if left unaddressed. Accordingly, these NDHRs should be reported reasonably quickly, allowing at least a brief period of time in which to confirm that the data is accurate and representative. (72-hour reports)
- iii. Chronic exposure condition. Some NDHRs warrant reporting but present lower/low risk conditions that may be fully remediated in twelve months or less. (120-day reports)

2. What is the threshold for requiring reporting of a historical release? Is this threshold quantitative, qualitative, or both?

- a. The thresholds for requiring the reporting of a NDHRs should include both quantitative and qualitative criteria.
- b. In deciding whether or not a NDHR needs to be reported, the potential risk associated with the release needs to be a primary factor. The potential risk is a function of the potential harm that could be caused by the contaminant (i.e. its toxicity), the nature and extent of exposure to the contaminant, and the relative sensitivity of individuals (e.g., adults versus children) that may be exposed or the relative sensitivity of the resource (e.g., public drinking water source, surface water) that may be affected.
- c. In terms of the quantitative criteria, the subcommittee looked to both the MCP and the RSRs for the guidance. The MCP reporting criteria could be adopted as the Reportable Concentrations (RCs) substantially as is and/or the RSR criteria could potentially be used either as the RCs or as the basis for developing RCs. The development of specific RCs, however, was beyond the scope and resources of this Subcommittee.
- d. The MCP divides quantitative standards into two categories, a more stringent criteria for sensitive areas/uses and another less stringent standard for all others. This approach has proven to be both protective and practical, in addition to being conceptually consistent with the RSRs.
- e. The MCP adopts two quantitative criteria for soil:
 - i. Reportable Concentrations Soil (RCS) RCS-1: Concentrations based on sensitive uses of the property and accessible soil, either currently or in the foreseeable future. RCS-1 could be comparable to the Residential Direct Exposure Criteria in the RSRs. Additional criteria are established for the protection of groundwater, based on the leaching potential of the contaminated soil.
 - ii. Reportable Concentration Soil RCS-2: Concentrations based on property uses associated with moderate exposure and accessible soil, either currently or in the foreseeable future. RCS-2 could be comparable

to the Industrial/Commercial Direct Exposure Criteria in the RSRs. Additional criteria are established for the protection of groundwater, based on the leaching potential of the contaminated soil.

- f. Similarly, the MCP has established quantitative criteria for groundwater, essentially as follows:
 - i. Reportable Concentration Groundwater (RCGW) RCGW-1: Concentrations based on the use of groundwater as drinking water, either currently or in the foreseeable future. RCGW-1 could be comparable to the Connecticut Groundwater Protection Criteria in the RSRs.
 - ii. Reportable Concentration Groundwater RCGW-2: Concentrations based on the potential for volatile material to migrate into indoor air. RCGW-2 could be comparable to the applicable Residential Groundwater Volatilization Criteria or Industrial/Commercial Groundwater Volatilization Criteria in the RSRs.
- g. The quantitative reporting criteria may not necessarily be the same as the clean-up criteria in the RSRs or any future remedial endpoint/criteria to be established, although there may be instances in which an RC is the same as the remedial standard.
- h. For the qualitative criteria, the subcommittee generally looked to the MCP and the current SEH program for various qualitative criteria and then made a determination of the potential magnitude of the risk for each situation and the identification of the hazard condition and the associated reporting timeframe.
- i. The qualitative criteria consist of situations where observations or indications of obvious releases are identified through the presence of contaminants (e.g., polluted vapors or nonaqueous phase liquid [NAPL]) that are known to pose a risk but are not concentration-based in the environment.

3. Should reporting exceptions for certain historical releases be created if timely remediation occurs? If so, what situations would qualify and what would constitute timely remediation?

The general consensus within Subcommittee 2 is that NDHRs that do not pose an imminent threat to public safety, human health, or the environment and that can be remediated in a reasonable time frame should not need to be reported. In order to evaluate other specific exemptions that may be appropriate, Subcommittee 2 reviewed the exemptions in the MCP and took a poll to identify those exemptions that the subcommittee believed should: (1) be included in a new Connecticut program; (2) be included with modifications; or (3) not be included. The list below identifies NDHRs that Subcommittee 2 believes should be considered exempt from the requirement to report in the new Connecticut program. Note that the reporting exemptions below (with some further detail) also are included on the Flow Chart.

- a. NDHRs required to be reported by regulations adopted pursuant to CGS § 22a-450.
- b. NDHRs of oil and/or hazardous material that are discharged or emitted from an

- outfall, stack or other point source, or as fugitive emissions, any of which are regulated under and have received a valid permit, license, or approval, or which are operating under a valid registration, order or guideline issued under a federal or state statute or regulation, unless the release:
- i. exceeds the amount allowed by the permit, license, approval, registration, order or guideline; and
 - ii. represents an imminent hazard to health, safety, public welfare or the environment.
- c. NDHRs of radionuclides regulated by U.S. EPA under 42 USC § 9602, 33 USC §§ 1321 and 1361, and 40 Code of Federal Regulations (CFR) Part 302 *et seq.*
 - d. Sheens
 - i. resulting from emissions or discharges from outboard motors in recreational use; or
 - ii. associated with normal surface water runoff from roadways, driveways, and parking lots.
 - e. NDHRs of hazardous material indicated by residues in the environment:
 - i. emanating from a point of original application of lead-based paint;
 - ii. resulting from emissions from the exhaust of an engine; or
 - iii. resulting from the application of pesticides in a manner consistent with their labelling.
 - f. NDHRs of oil and/or hazardous material 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.
 - g. NDHRs of oil and/or hazardous material resulting from the land application, reuse, or disposal of wastewater residuals and/or dredged spoils conducted in accordance with an approval, permit, certification, or beneficial use determination issued by the DEEP.
 - h. NDHRs of oil and/or hazardous material in groundwater detected by sampling conducted by Public Water Supply owners or operators in accordance with Department of Public Health requirements and guidance.
 - i. NDHRs of oil and/or hazardous material resulting or emanating from:
 - i. the asphalt binder in bituminous pavement;
 - ii. piers, pilings and building foundation structures;
 - iii. landscaping timbers in use;
 - iv. utility poles in use; or
 - v. building materials that are in good repair and still serving their original intended use.
 - j. NDHRs indicated solely by the presence of oil and/or hazardous material in soils that are treated, recycled, reused or disposed of at a facility licensed, permitted or approved by the DEEP, provided that:
 - i. the soil has been excavated and transported from a release area in compliance with DEEP regulations; and
 - ii. the facility is operated in a manner consistent with the terms and conditions of its license, permit or approval.
 - k. NDHRs of oil and/or hazardous material that require notification solely because a person responsible for reporting obtains knowledge of media concentrations and/or conditions that meet one or more of the RCs, when such media

- concentration value(s) and/or knowledge of conditions resulted from a sampling, analytical or observational error, as established by a preponderance of the evidence and/or as verified by additional sampling, analyses, and/or observation, within the applicable time period for notification.
- l. NDHRs that would otherwise require reporting because a person who created or maintained a release to the land and waters of the state obtains knowledge of soil concentrations equal to or greater than one or more applicable RC, where an “Immediate Removal Action” conducted has reduced concentrations of oil and/or hazardous material to an amount less than the RC, within the allowable time period for reporting.
 - m. NDHRs indicated by the presence of oil and/or hazardous material in concentrations or quantities that would otherwise meet one or more of the sets of RCs where:
 - i. a response action is being undertaken to address such release;
 - ii. a release report was previously provided for the location where the NDHR has been observed or documented; and
 - iii. such presence of oil and/or hazardous material is consistent with the types, nature, exposure potential and quantities of oil and/or hazardous material for which a report was previously provided.
 - n. NDHRs for which a documented completion of remediation has been issued, with detected concentrations that would otherwise meet one or more of the RCs, unless the presence of such release would negate or change such determinations or statements were that presence of such concentrations taken into account in the preparation thereof, or if changes in activities, uses, and/or exposures require reporting. In this context, documented completion of remediation may include but may not limited to:
 - i. a site where a Verification has been submitted in compliance with the provisions of CGS §§ 22a-134a, 22a-133x, 22a-133y, 22a-449(c)-105, 32-769, or any other law, regulation, order, permit, license or approval, provided the Commissioner has delegated such authority to a LEP; or
 - ii. a site where the DEEP has made a written determination that no further actions are required.
 - o. NDHRs of oil and/or hazardous material to:
 - i. an underground utility vault if such releases are completely contained within the vault; or
 - ii. the interior of a building, provided such releases are completely contained within the building.
 - p. NDHRs that result in a sheen on a surface water, provided that:
 - i. federal officials receive notice of such release pursuant to a reporting requirement under federal law;
 - ii. a response occurs as directed by those federal officials and according to other federal, state or local requirements applicable to such a release and response;
 - iii. the sheen does not persist for more than 24 consecutive hours; and
 - iv. the sheen does not recur at the same location within any 30-day period.
 - q. Concentrations of metals in an area documented by the United States Geological Survey or in other scientific literature as an area of elevated

- concentrations for such metal(s) measured in soil or groundwater that:
- i. is consistently present in the environment at and in the vicinity of the sampling location;
 - ii. is solely attributable to natural geologic or ecologic conditions; and
 - iii. has not been mobilized or transferred to another environmental medium or increased in concentration in an environmental medium as a result of anthropogenic activities.
- r. NDHRs of trihalomethanes in groundwater attributable to naturally-occurring ecological processes and/or leakage or discharges from a public water supply system.

4. Is it necessary to address, beyond the detail provided in the statute, releases on Transfer Act or brownfield sites?

Sections 17(c) and (d) of PA 20-9 address the discovery and reporting of NDHRs on parcels subject to the Transfer Act and brownfields programs, respectively. The general consensus of Subcommittee 2 is that it is not necessary to address beyond the detail provided in the statute NDHRs on Transfer Act or brownfield sites. That said, Subcommittee 2 understands that the *ad hoc* Transition Advisory Group is evaluating the overall transition to a release-based program and potential implications on other state and federal environmental programs and plans to provide recommendations regarding the interplay between a new release-based regulatory program and the Transfer Act and brownfields programs. Subcommittee 2 encourages DEEP to consider and incorporate, as appropriate, the recommendations provided by the Transition Advisory Group.

In addition, it will be appropriate for NDHRs that occurred prior to the filing of a Transfer Act Form I, II, III or IV but were not discovered until (1) after the date of the commissioner's approval of the remediation, (2) the date on which the verification applies in connection with a Form III or IV verification, or (3) the date on which the Form I or II was filed, to be subject to the requirements of the release-based reporting requirements. That said, the regulations to be developed should provide some clarity and/or liability protection, (e.g., against enforcement from DEEP) for the certifying party, property owner and LEPs of record for the Transfer Act site, with respect to how the report may impact the prior Transfer Act filings. The rationale for this recommendation is that there may be a concern that reporting a NDHR on a site that has been verified pursuant to the Transfer Act or for which a Form I or II was previously filed could result in an audit (or complete "reopening") of a verification or rejection of the Form I or Form II by DEEP.

Ultimately, the reporting of a NDHR on a site that was previously verified or for which a Form I or II was previously filed should not, by itself, subject the site to a new site-wide investigation pursuant to the Transfer Act triggered by an audit of the verification or rejection of the Form I or II, particularly if the NDHR will be addressed pursuant to the requirements of the new release-based program.

Furthermore, with respect to PA 20-9 §17(c)(2), which provides that any release that occurs after the filing of a Transfer Act Form I-IV shall be subject to the requirements of the release-based reporting program, except for any releases that are identified prior to the completion of a Phase II

investigation following the filing of a Form III or IV, the general consensus of Subcommittee 2 is that the certifying party on any such Form III or IV should have the option, but not the obligation, to address such release in connection with its requirements pursuant to the Transfer Act. That is, should the NDHR have occurred and be discovered subsequent to the completion of a Phase II (on a site subject to a Form III or IV), the person with the obligation to report the release should be required to do so; however, the certifying party on the Form III or IV should be permitted to address any further investigation or remediation that may be required pursuant to its existing Transfer Act requirements or, alternatively, any such release should be permitted to be further investigated/remediated, to the extent required, pursuant to the requirements of the to-be-established release-based program.

Lastly, the regulations should provide some direction or mechanism for addressing situations in which it is not clear when the release occurred. While there is a general consensus among Subcommittee 2 that releases that occurred before or after a certain date may fall under different reporting requirements, in many and if not most situations, it will be difficult if not impossible to determine the precise date a NDHR occurred in order to confirm whether or not the NDHR occurred before or after, for example, the date of a Transfer Act Form I or II filing, a Form III or IV verification, or a Phase II investigation. To that end, the regulations should allow some flexibility and be geared toward permitting the release to be addressed pursuant to the release-based program.

5. If reporting is required, what information should be reported?

In order to assess the potential human health and environmental risks posed by a NDHR, DEEP should receive sufficient information on: (1) the nature of the NDHR; (2) the location of the NDHR; (3) the setting in which the NDHR exists; and (4) the party potentially responsible for the NDHR. A standard form should be developed that will provide sufficient information to DEEP, but not be so detailed or cumbersome as to delay the required reporting. Currently, DEEP has many regulatory programs that require submission of information by a responsible party to address an environmental violation or condition. Existing forms for other DEEP programs should be reviewed for consistency with the forms developed to report the NDHRs.

Subcommittee 2 reviewed release reporting forms from Massachusetts, New Hampshire, and Rhode Island, as well as DEEP forms for SEH reporting, and found that the Massachusetts forms included essential information DEEP likely would require for an initial evaluation of a NDHR. The Rhode Island and New Hampshire reporting forms were relatively simple but appeared to be inadequate for the Connecticut program. The existing DEEP forms for reporting SEH conditions appeared to be overly complicated, considering some NDHRs that are reported will be quickly closed through interim actions and those NDHRs that are tier classified will be submitting additional detailed information as part of the characterization and remediation process. Based on our review, Subcommittee 2 is recommending the new DEEP release-based regulation reporting forms follow the Massachusetts model rather than forms used by other northeastern states.

For NDHRs that pose an immediate threat to human health or the environment or an acute hazard, and which require reporting within 2 or 72 hours, basic information should be reported by telephone to DEEP. The information should be recorded in a data file with a specific release

number.

Below is a list of information that Subcommittee 2 believes should be included in an initial notification under a 2 or 72-hour reporting requirement, if known. Much of this information may be unknown at the time of the initial notification but can be provided to DEEP in a follow up written release report or subsequent submittal.

1. The date and time the release was discovered.
2. GPS coordinates (which can be obtained using a smart phone or computer) of the location where the NDHR was initially found.
3. The suspected extent of the NDHR (if able to be estimated).
4. The street address (including town and zip code) for the NDHR, and any information that could narrow the area where the NDHR occurred (e.g., nearest utility pole number, other landmarks on the site).
5. The category of the NDHR (i.e., 2-hour notification, 72-hour notification).
6. The general type of hazard (e.g., risk of explosion, water supply contaminated, water supply threatened, significant surface soil contamination, volatile organic compounds near a building, or surface water threatened).
7. The name and contact information for the property owner (if they are different from the creator and/or maintainer).
8. The name and contact information for the person reporting the NDHR, and their relationship to the creator and/or maintainer.
9. Current use of the property on which the NDHR was found.
10. Known substances and/or chemical compounds that are present in the NDHR.
11. The reporting condition that was exceeded (e.g., analytical results that exceed reporting criteria, suspected UST release, release to groundwater, separate phase NAPL in a well, release to storm drain).
12. The media (e.g., soil, groundwater, surface water, wetland) that has been impacted by the NDHR.
13. Known or suspected sensitive receptors within 500 feet of the NDHR (e.g., observed residential water supply wells, public water supply wells or reservoir, day-care facility, occupied buildings, etc.).
14. The name and contact information (company, address, telephone number, email address) for the person representing the creator and/or maintainer of the NDHR.
15. The name and contact information for any technical environmental professional (LEP, engineer, or other consultant) that assisted in the discovery of the release.

Subsequent to the initial reporting, the responsible party should report the information listed above in writing on a standard form prescribed by DEEP within a designated time frame (e.g., 60 days). It is recommended that the follow-up form for reporting 2 and 72-hr reporting requirements also be used for 120-day reporting. The Subcommittee recommends that one form be used for reporting active releases, as well as NDHR, and/or suspected releases (e.g., in the case of a failed UST leak test).

6. Who else may/should have a reporting obligation (other than the creator or maintainer)?

If the to-be-established regulations pursuant to PA 20-9 replace the SEH program, then in addition to requiring that the “creator” or “maintainer” report a NDHR, certain NDHRs should be reported to DEEP regardless of who discovers them. For example, any person discovering an imminent threat to human health, or the environment should have an obligation to report. This population of possible individuals to report could include, but not be limited to:

1. LEPs
2. Technical Environmental Professionals (TEPs)
3. Federal, state municipal, or private employees
4. Construction Workers
5. Utility Workers
6. Due diligence representatives (financial institutions, developers, attorneys, etc.)

A subgroup within Subcommittee 2 agreed that there should only be limited environmental conditions (imminent hazard or immediate risk environmental hazards) where reporting to DEEP by persons other than the “creator/maintainer” may be required. With the exception of the immediate notifications where human health is potentially endangered, the subgroup is of the opinion that individuals, such as those noted above, should not be responsible for reporting to DEEP.

The reporting approach would most likely mirror the MCP reporting approach rather than other nearby states or the New Jersey approach where the Licensed Site Remediation Professional (LSRP) has an obligation to report all discoveries to New Jersey Department of Environmental Protection (NJ DEP). The New Jersey reporting approach has had the unintended consequence of precluding LSRPs from conducting much due diligence work.

As discussed above, Subcommittee 2 considered three reporting timing categories:

1. Immediate Risk (2-hour reporting)
2. Acute Risk (72-hour reporting)
3. Chronic Risk (120 days)

The subgroup recognized that the SEH program is generally perceived as successful in identifying short term notification situations where significant environmental hazards are present and reporting must be done on an expedited basis. Accordingly, the recommendations set forth herein and referenced in the Flow Chart, incorporate the concepts of the SEH program with minor modifications, including shortening the time period for reporting certain conditions. Shortening the deadlines for reporting, however, creates timing and procedural challenges if persons other than the creator or maintainer are required to report. The Subcommittee considered this issue and made the recommendations below.

For purposes of the discussion presented below, “individual” refers to a person who could potentially be required to report as listed above, excluding the creator/maintainer. Subcommittee 2 proposes the following reporting timeframes and individuals/entities responsible for reporting be considered if the SEH program no longer exists:

2-hour Reporting Conditions (Immediate Risk)

1. Individual is required to notify the Client.
2. Client is required to notify the Creator/Maintainer (Owner), if different than the client
3. Individual is required to notify Creator/Maintainer (Owner) if Client does not notify Creator/Maintainer.
4. Individual is required to notify DEEP if Creator/Maintainer (Owner) does not notify DEEP.

The timeframe for reporting a Release to DEEP under this immediate risk condition is 2 hours from the time a creator/maintainer obtains knowledge of a Release. If someone other than the creator/maintainer is required to report to DEEP, the response time should be prompt but within 2 hours of determining the creator/maintainer is not notifying DEEP.

72-Hour Reporting Conditions (Acute Risk)

1. Individual is required to notify Client.
2. Client is required to notify Creator/ Maintainer (Owner) if different than the client.
3. Creator/ Maintainer (Owner) is required to notify DEEP.

The timeframe for reporting a Release to DEEP under this acute risk condition should be a maximum of 72 hours from obtaining knowledge of a NDHR.

120-Day Reporting Conditions (Chronic Risk)

1. Individual is required to notify Client.
2. Client is required to notify the Creator/Maintainer (Owner), if different than the client.
3. Creator/Maintainer is required to notify DEEP within 120-days of obtaining knowledge of a Release unless a response action is initiated prior to the deadline (120 days from discovery) and close out documentation is maintained and available to DEEP upon request.
4. If a response action is not initiated within 120 days, Creator /Maintainer must submit written notification to DEEP.

The timeframe for reporting a NDHR to DEEP under this chronic risk condition should be a maximum of 120 days from obtaining knowledge of a NDHR. The initial communication for the 120-day reporting condition is anticipated to be a written notification.

With the exception of the short-term (2-hr) notifications where human health is potentially endangered, the subgroup is of the opinion that TEPs and LEPs should not be involved or beresponsible for reporting to DEEP.

7. How will that report be accessible to the public?

Subcommittee 2 recommends the creation, implementation, and maintenance of a publicly available database containing all reports generated because of the reported NDHRs, as well as contemporaneous releases. In this Subcommittee's opinion, the Waste Site & Reportable Releases

Data Portal overseen by the Massachusetts Executive Office of Energy & Environmental Affairs (the “Data Portal”) provides an excellent baseline for DEEP’s potential release-based database. The Data Portal provides a number of different search categories in order to find specific releases, including by Release Tracking Number (RTN), city, town, street address, and site name. It also provides useful filters to narrow the search, including a releases Compliance Status, the Licensed Site Professional of record, and provides alternate search criteria to limit one’s search to sites with an Activity and Use Limitation.

One important limitation of Massachusetts’ Data Portal is the inability to search for sites/releases by GPS coordinates. Given the long and oftentimes confusing development histories of many Connecticut towns and cities, street addresses can be limiting in that they can be either confusing or inaccurate. This becomes particularly apparent in the years and decades after a release in cases where a property has been subdivided or otherwise developed, or street addresses have changed. This Subcommittee recommends that any such database include the ability to search by GPS coordinates in addition to the more common search terms (address, site name, etc.). The Subcommittee understands the difficulty in cataloging past releases with GPS coordinates given the lack of available data. That said, inclusion of GPS coordinates to releases on a going forward basis will be invaluable to future environmental professionals and property owners.

This Subcommittee further recommends that a single case/release number be assigned to each reported release, similar to Massachusetts RTN system. The Subcommittee believes that the single case/spill number should apply regardless of whether the release is being addressed under the new program to be established pursuant to PA 20-9 or another program, such as the Transfer Act. The regulations should establish a mechanism by which case/spill numbers can be merged and/or linked, as warranted. For example, where the discovery of a contemporaneous release leads to the discovery of a reportable historical release at the same site, all the case/spill numbers can either be merged with the initial case/spill number or otherwise linked.

The case/spill number would be used to track the life of a release, including all reports related to any such release, including investigation, remediation and closure documents, as well as post-closure documents, such as post-recordation inspections associated with Environmental Use Restrictions. All documents submitted in connection with a release will be assigned the same case/spill number. In other words, records for a release will no longer be assigned, for example, a separate SITS number, SEH number, LUST number, UST number and a RemID or multiple RemIDs. Ideally, available reports would include DEEP correspondence, approvals, audits, etc. that would be helpful in giving additional detail regarding the release and its subsequent investigation and cleanup.

In addition to available reports, this Subcommittee recommends that the proposed database contain a simple dashboard for each release/site that contains high level information about the site and release in question, including case/spill number, site name, address, reporting category (e.g., 2-hr, 72-hour, 120-day), release or reporting date, location (e.g., loading dock, right of way), source, contaminants, EURs) information, site LEP of record, and status of the release. This will provide users with a simple one-page snapshot of the site/release without having to dig through available historical reports.

8. If Releases do not require reporting, will there be a mechanism for the public or

others to become aware that a Release occurred?

Subcommittee 2 is of the opinion that not all NDHRs should require DEEP notification. Without a reporting requirement there would not be a straightforward way to allow for the public at large to learn about such an NDHR. Subcommittee 2 evaluated and discussed this issue and reached a consensus that this situation is acceptable in a properly constructed program.

The real estate and business markets provide several incentives for property owners, operators, and financial institutions to retain records and make them available to prospective purchasers, investors, and lenders. For example, lender liability, innocent purchaser, and brownfield laws create liability safe harbors for prospective lenders and purchasers who perform site assessments, which results in most commercial properties undergoing an environmental assessment prior to a sale or financing (e.g., an ASTM compliant Phase I environmental site assessment at a minimum, and Phase II environmental site assessment where determined to be warranted based on the findings of a Phase I environmental site assessment). The costs of those assessment activities are generally borne by the seller, whether directly or indirectly in the form of a lower sale price. In consequence, there are market-driven incentives for owners to maintain records so that they can be available for later transactions.

Securities laws also require disclosure of conditions which can create material liability, and this incentivizes publicly traded companies and borrowers to document the risk associated with an environmental condition. Finally, occupants of commercial and industrial properties generally maintain records of environmental assessments at the commencement of their occupancy in order to document conditions for which they are not liable. These and other market-driven factors will generally provide opportunities for interested parties (e.g., potential purchasers) to obtain relevant information regarding NDHRs at a property that did not trigger a requirement to report to DEEP.

9. Other Issues for Consideration by the Work Group and DEEP

PFAS and Other Emerging Contaminants

PFAS (per- and polyfluoroalkyl substances) include more than 4,700 synthetic organic chemicals which have been manufactured and used worldwide since the 1940s. PFAS have been widely used in consumer products and have numerous industrial applications, and are the primary ingredient in aqueous film-forming foam (AFFF). Manufacturing, use, and disposal as well as general household/residential use, may release PFAS to the environment and lead to human exposure.

PFAS are persistent in the environment and have resulted in the contamination of soil, sediment, groundwater, and surface water. The main pathways for releases of PFAS to the environment are discharges to air, soil, water, and municipal wastewater treatment facilities, industrial and commercial processes, and use of AFFF for both training and incident response. Given the prevalence of PFAS in consumer products, AFFF, and industry, it is likely that NDHRs of PFAS to Connecticut's environment will continue to be identified.

It is important that PFAS releases be identified and assessed, with priority given to those nearsensitive receptors such as potable wells and ecologically important areas. However, based on current technical information, potentially substantial concentrations of PFAS may be present in soil

and groundwater and those detections may not be directly attributable to an identifiable historical source or sources.

To that end, PFAS should be evaluated, along with other emerging contaminants, as the understanding and science evolves. Subcommittee 2 recommends adoption of exceptions to reporting comparable to the exceptions proposed for other widespread, comparatively low risk conditions, including, for example:

- Widespread/local use of pesticides, when those uses are consistent with labeling where such pesticides contain PFAS either by design or as a manufacturing or packaging by-product.
- Residential septic effluent.
- Certain exemptions for the use of aqueous film-forming foam (AFFF) by local Fire Departments consistent with its intended purpose (fighting or prevention of fires) including those residential and other locations where the foam was used for emergency response activities.

Releases Identified in Certain Rights of Way or Easements

The Subcommittee discussed the issue of reporting NDHRs located in rights-of-way and easements. Work in these areas is predominantly carried out by utilities and state departments (e.g., Connecticut Department of Transportation). As such, when a release is identified there may be no clear understanding of who the “creator/maintainer” is. Therefore, our recommendation is these NDHRs be reported to DEEP rather than to the “creator/maintainer” but Subcommittee 2 understands this issue may need further evaluation. It is also recommended that the current policy originally issued as the DEEP “Guidance for Utility Company Excavation” be continued and utilities be allowed to return contaminated soil to the excavation as long as the conditions of the Guidance are followed.

Residential Properties

During discussions, concerns about reporting of NDHRs at residential properties were raised. While it is important that such releases be reported when they pose a threat to public health, safety and the environment, consideration should be given to adopting investigation and remediation options, (“off-ramps”), tailored to the financial and technical capabilities of most residential property owners.

Contaminants With No Reporting Criteria

There should be a relatively simple mechanism for establishing reportable criteria for contaminants for which there is no published numeric concentration.

THE END.

Attachment A

Subcommittee 2 Members

Name	Company	Representing
Aaron D. Levy	Shipman & Goodwin LLP	Environmental transaction attorneys
Alicea Charamut	Rivers Alliance of Connecticut	Representatives of environmental advocacy groups
Amy Velasquez	Regional Water Authority	Municipal representatives
Anne Peters	Carmody Torrance Sandak & Hennessey LLP	Environmental transaction attorneys
Ashley Zane	Connecticut Business & Industry Association	Any other interested member of the public
Deborah Motycka Downie	Haley & Aldrich and Selectwoman Town of Stonington	Licensed Environmental Professionals/Environmental Consultants Municipal representatives
Derek Ezovski	ORMS, LLC	Licensed Environmental Professionals/Environmental Consultants
Gary O'Connor	Pullman & Comley, LLC	Representatives from the Brownfields Working Group
James Hutton	University of Connecticut	Licensed Environmental Professionals/Environmental Consultants
James Robison	Aquarion Water Company	Licensed Environmental Professionals/Environmental Consultants
Kyle R. Johnson	Brown Rudnick LLP	Environmental transaction attorneys
Richard Kochan	HRP Associates, Inc.	Licensed Environmental Professionals/Environmental Consultants
Rick Standish	Freeman Companies, LLC	Licensed Environmental Professionals/Environmental Consultants
Taylor Amato	Day Pitney LLP	Environmental transaction attorneys
Tom Salimeno	Loureiro Engineering Associates, Inc.	Licensed Environmental Professionals/Environmental Consultants
Pat DeRosa	DEEP	DEEP Resource - Lead
Jing Chen	DEEP	DEEP Resource
Tony Allevo	DEEP	DEEP Resource

Attachment B

DEEP GUIDANCE FOR SUBCOMMITTEE 2

Subcommittee Guidance

Subcommittee 2 Reporting Newly-Discovered Releases

Scope: This subcommittee should evaluate the following:

What is the threshold for requiring reporting of a historical release after such a release has been discovered? Is this threshold quantitative, qualitative, or both?

Within what time frame after discovery should a report be required?

Should reporting exceptions for certain historical releases be created if timely remediation occurs? If so, what situations would qualify and what would constitute timely remediation?

Is it necessary to address, beyond the detail provided in the statute, reporting of releases on Transfer Act or brownfield sites?

If reporting is required, what information should be reported?

How will that report be accessible to the public?

If releases do not require reporting, will there be a mechanism for the public or others to become aware that a release occurred?

Discuss the conceptual framework for when a historical release must be reported, what information should be reported, and how that information will be accessible to the public.

Deliverable: A concept paper, or concept papers if consensus is not reached, that present concepts responsive to the questions identified above to advise the Department when drafting regulations concerning reporting newly-discovered releases.

First Meeting Tasks:

- DEEP will introduce staff assigned to assist subcommittee and explain their role.
- Subcommittee members select two (2) subcommittee leads.
- Verify accuracy of contact information for all subcommittee members.
- Discuss the scope provided, and identify any questions regarding the scope.
- Identify a process for presenting and discussing concepts to be included in concept paper(s).
- Set a schedule for future subcommittee meetings (subcommittee must meet at least monthly).
- Identify topics for discussion at the next subcommittee meeting.

Subcommittee Ground Rules

1. Subcommittee time belongs to the subcommittee.
2. Every member participates.
3. All ideas deserve discussion.
4. Listen and ask questions.
5. Be respectful and courteous.
6. Stay on topic.
7. Work to understand every team member's perspective in order to better comprehend the motivation behind each concept put forth.
8. Meet deadlines and commitments.
9. Let people finish – no interruptions.
10. Ensure that all ideas requiring further evaluation are tracked for future discussion.

Attachment C

Abbreviations, Definitions and Descriptions

Note: the following descriptions are for general information purposes, only. Relevant statutory and regulatory definitions can be found in the documents listed in the Source column.

Term	Description	Source
95% UCL	Ninety-five percent upper confidence level of the arithmetic mean. This is a statistical method for determining how well individual sample results, which vary from sample to sample, accurately represent overall conditions.	RCSA §22a-133k-1(a)(52)
ASTM	American Society of Testing Materials	
Brownfields Program	"Brownfields program" means one or more of the brownfields programs established by Connecticut statutes. They include: The brownfields liability relief program established pursuant to CGS § 32-764; The Abandoned Brownfield Cleanup (ABC) program authorized by CGS§ 32-768; The Brownfield Remediation and Revitalization Program (BRRP) authorized by CGS § 32-769; and The Municipal Brownfield Liability Relief (MBLR) program authorized by CGS § 22a-133ii.	PA 20-09, §15(2)
CAS Number	Unique number assigned by the Chemical Abstracts Service to every substance described in the open scientific literature	
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended. Also known as "Superfund", this statute includes provisions establishing liability for the cost of investigating and remediating certain historical pollution.	42 U.S.C. §§ 9601 <i>et seq.</i>
Creator	Defined as a person who creates a NDHR to the land and/or waters of the state on or after the date on which regulations are first adopted pursuant to §19 of PA 20-06 in violation of §§ 17 through 21, inclusive, of PA 20-09. That is, in plain language, the person who caused a NDHR.	PA 20-09
DEEP	Connecticut Department of Energy & Environmental Protection	
EUR	Environmental Use Restriction. An EUR is used to minimize the risk of human exposure to pollutants and	CGS § 22a-133o

Term	Description	Source
	hazards to the environment by preventing specific uses or activities at a property or a portion of a property.	
GPS	Global Positioning System	
LEP	Connecticut Licensed Environmental Professional	CGS § 22a-133v
LSP	Licensed Site Professional, pursuant to the Massachusetts Contingency Plan	310 CMR § 40.0000
LSRP	Licensed Site Remedial Professional, pursuant to the New Jersey Site Remediation Reform Act and the corresponding regulations known as the Administrative Requirements for the Remediation of Contaminated Sites.	N.J.S.A. 58:10C N.J.A.C. 7:26C
LUST Number	Leaking Underground Storage Tank site number assigned by DEEP staff	
Maintainer	Defined as a person who maintains a NDHR to the land and/or waters of the state on or after the date on which regulations are first adopted pursuant to § 19 of PA 20-06 in violation of §§ 17 through 21, inclusive, of PA 20-09. That is, the owner of land on which an un-remediated NDHR has occurred.	PA 20-09
MCP	The Massachusetts Contingency Plan. The MCP is the set of regulations under Chapter 21E of the Massachusetts statutes, known as the Oil and Hazardous Material Release Prevention Act. The MCP creates the program for required assessment, risk assessment and remediation of oil and hazardous materials contamination.	310 CMR § 40.4000 <i>et seq.</i> See: Subpart C, Notification of Releases and Threats of Release of Oil and Hazardous Materials, 310 CMR §§ 40.0300 <i>et seq.</i>
NAPL	Nonaqueous phase liquid, for example, a layer of oil floating on the water table	RCSA § 22a-133k-1(a)(54)
NDHR	An historical release discovered after the effective date of regulations adopted pursuant to PA 20-09, also referred to as a newly discovered historical release	PA 20-09
NJDEP	New Jersey Department of Environmental Protection	
PCB	Polychlorinated biphenyl	
PFAS	per- and polyfluoroalkyl substances	
Phase I site assessment	Phase I Environmental Site Assessment performed in conformance with ASTM Standard E1527-13, Standard Practice for Environmental Site Assessments and, in Connecticut, DEEP's Site Characterization Guidance Document (rev. 2010)	
Phase II site assessment	Phase II Environmental Site Assessment (including soil and/or groundwater sampling) performed in conformance with ASTM Standard E1903-11, Standard Practice for Environmental Site Assessments	

Term	Description	Source
	and, in Connecticut, DEEP's Site Characterization Guidance Document (rev. 2010)	
RC	Reportable Concentration and RC each means the concentration of oil or hazardous material in soil or groundwater which requires notification	See 310 CMR § 40.0006
RCGW-1	Reportable Concentration Groundwater 1. RCGW-1: Concentrations are based on the use of groundwater as drinking water, either currently or in the foreseeable future. RCGW-1 could be comparable to the Connecticut Groundwater Protection Criteria in the RSRs.	See 310 CMR § 40.0362 and RCSA §22a-133k-1(a)(33)
RCGW-2	Reportable Concentration Groundwater 2. RCGW-2: Concentrations are based on the potential for volatile material to migrate into indoor air. RCGW-2 could be comparable to the applicable Residential Groundwater Volatilization Criteria or Industrial/Commercial Groundwater Volatilization Criteria in the RSRs.	See 310 CMR § 40.0362 and RCSA §22a-133k-1(a)(95)
RCGW-3	Reportable Concentration Groundwater RCGW-3: Concentrations would be based on the potential environmental effects resulting from contaminated groundwater discharging to surface water. RCGW-3 could be comparable to the applicable Surface Water Protection Criteria in the RSRs.	See 310 CMR § 40.0362 and RCSA §22a-133k-1(a)(89)
RCRA	Resource Conservation and Recovery Act. RCRA is the federal cradle to grave statutory program addressing the management of hazardous waste and includes requirements for investigating and remediating certain releases.	42 U.S.C. § 6901 <i>et seq.</i>
RCS-1	Reportable Concentration Soil 1. RCS-1 would apply if there are or are likely to be sensitive uses of the property and accessible soil, either currently or in the foreseeable future. RCS-1 could be comparable to the Residential Direct Exposure Criteria in the RSRs.	See 310 CMR §40.0361 and RCSA §22a-133k-1(a)(15)
RCS-2	Reportable Concentration Soil 2. RCS-2 concentrations could be based on property uses associated with moderate exposure and accessible soil, either currently or in the foreseeable future. RCS-2 could be comparable to the Industrial/Commercial Direct Exposure Criteria in the RSRs.	See 310 CMR § 40.0361 and RCSA §22a-133k-1(a)(41)
RemID	Remediation Identification Number assigned by DEEP	
RSR	Connecticut Remediation Standards Regulations,	RCSA § 22a-133k-1 <i>et seq.</i>
SEH	Significant Environmental Hazard. The Connecticut	CGS § 22a- 6u

Term	Description	Source
	SEH statute requires the reporting and mitigation (but not necessarily the complete remediation) of certain conditions.	
SITS Number	DEEP's Spills Incident Tracking System Number. This number is assigned by DEEP staff to each reported release.	
TEP	Technical Environmental Professional	CGS § 22a-6u
Transfer Act	The Connecticut property transfer law. The Transfer Act requires that certain properties and businesses, referred to as “establishments”, be investigated and remediated following a transfer of ownership.	CGS §§ 22a-134 <i>et seq.</i>
Transfer Act Form I	A written certification submitted by the transferor of an establishment when an investigation of the parcel has been conducted in accordance with prevailing standards and guidelines and no release of hazardous waste or a hazardous substance has occurred at the establishment being transferred; or when no release of a hazardous waste has occurred at the establishment and a LEP has verified that any release of a hazardous substance has been remediated in accordance with the RSRs.	CGS § 22a-134(10)
Transfer Act Form II	A written certification submitted by the transferor of an establishment when an investigation of the parcel has been conducted in accordance with prevailing standards and guidelines and a release of hazardous waste or a hazardous substance has occurred at the establishment, but the Commissioner has approved in writing or a LEP has verified pursuant to CGS Sections 22a-133x, 22a-133y, or 22a-134a that any pollution from the establishment has been remediated in accordance with the RSRs.	CGS § 22a-134(11)
Transfer Act Form III	A written certification signed and submitted by a certifying party when the environmental conditions at the establishment are unknown, or a release of hazardous waste or a hazardous substance has occurred at the establishment and any pollution from the establishment has not been remediated in accordance with the RSRs. The party signing the Form III certification agrees to investigate the parcel and remediate pollution caused by any release of a hazardous waste or a hazardous substance from the establishment in accordance with the RSRs. The statute does not require completion of remediation before the establishment is transferred.	CGS § 22a-134(12)
Transfer Act Form IV	A written certification signed and submitted by one or more certifying parties when an investigation of the	CGS § 22a-134(13)

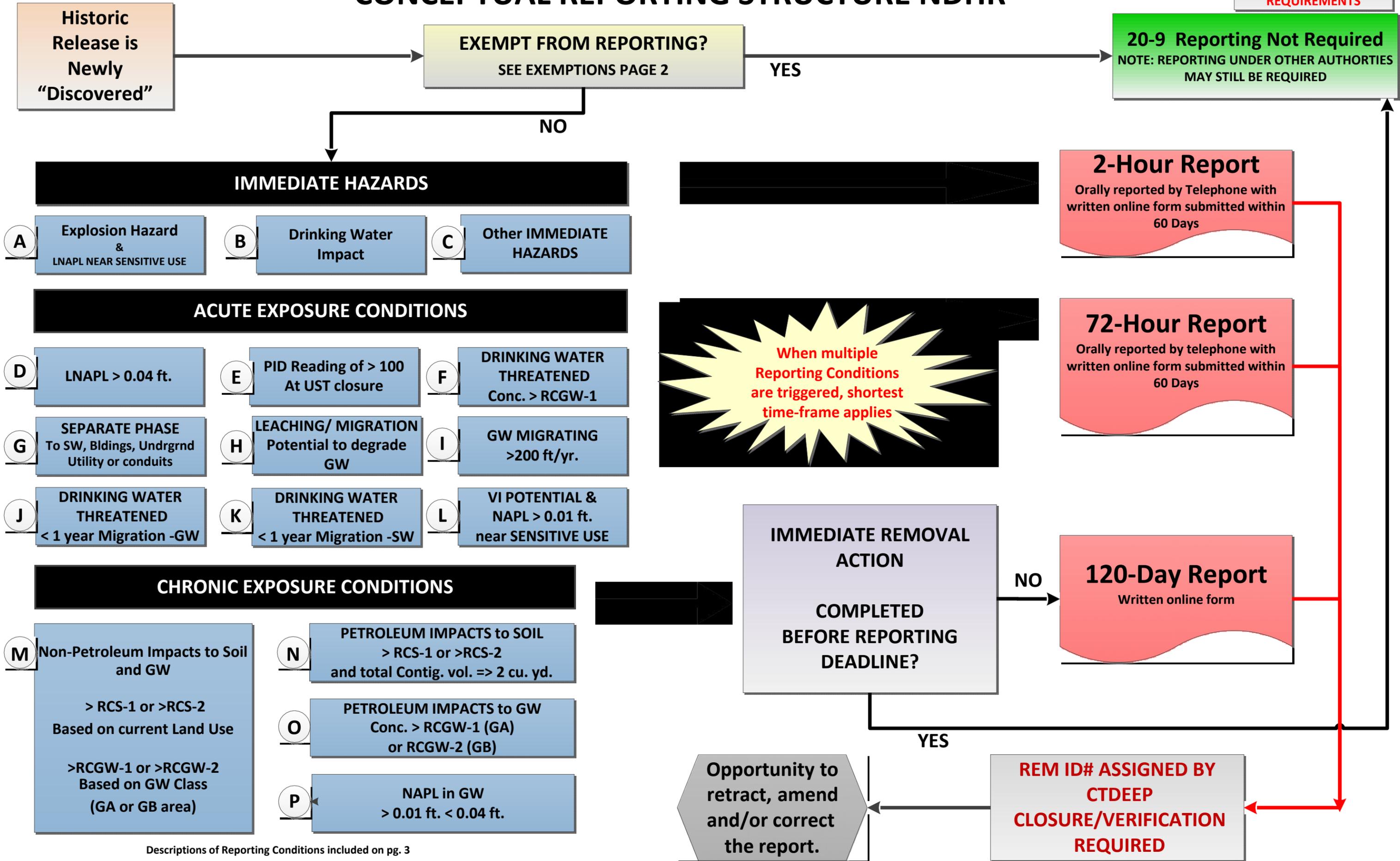
Term	Description	Source
	establishment has been completed in accordance with prevailing standards and guidelines, there has been a release of hazardous waste or a hazardous substance at the establishment, and a LEP has verified that all actions to remediate any pollution from the establishment have been taken in accordance with the RSRs except groundwater monitoring, or the recording of an Environmental Use Restriction. The party signing the Form IV certification agrees to conduct groundwater monitoring in accordance with the RSRs.	
UST Program	The Connecticut Underground Storage Tank Program administered by DEEP.	CGS § 22a-449(d) RCSA § 449(d)-1 RCSA § 449(d)-101 <i>et seq.</i>
Verification	“Verification” is a written opinion by a licensed environmental professional that an investigation of the parcel has been performed in accordance with prevailing standards and guidelines and that the establishment has been remediated in accordance with the remediation standards	CGS § 22a-134(19)
Voluntary Clean-up Program	One of two voluntary remediation program administered by DEEP	CGS §§22a-133x and 133y

Attachment D

Flow Chart - Reporting Newly Discovered Historical Releases

CONCEPTUAL REPORTING STRUCTURE NDHR

DOCUMENT RETENTION REQUIREMENTS



EXEMPTIONS

1. No release required to be reported by regulations adopted pursuant to section 22a-450 of the general statutes shall also be required to be reported by regulations adopted pursuant to regulations adopted pursuant to 20-9.
2. Releases that are discharged or emitted from an outfall, stack or other point source, or as fugitive emissions, any of which are regulated under and have received a valid permit, license, or approval, or which are operating under a valid registration, order or guideline issued under a federal or state statute or regulation, unless the release:
 - (a) exceeds the amount allowed by the permit, license, approval, registration, order or guideline; and
 - (b) represents an Imminent Hazard to health, safety, public welfare or the environment. This provision shall not relieve any person from any other duty to notify which may exist under any other statute or regulation, nor shall it in any way limit the authority of any other agency, political subdivision or authority of the federal or state government or of the Department to enforce or otherwise carry out the duties assigned to it by law;
3. (4) releases of radionuclides regulated by EPA under 42 USC § 9602, 33 USC §§ 1321 and 1361, and 40 CFR Part 302 *et seq.*;
4. Sheens:
 - (a) resulting from emissions or discharges from outboard motors in recreational use; or
 - (b) associated with normal surface water runoff from roadways, driveways, and parking lots;
5. Releases indicated by residues in the environment:
 - (a) emanating from a point of original application of lead-based paint;
 - (b) resulting from emissions from the exhaust of an engine; or
 - (c) resulting from the application of pesticides in a manner consistent with their labelling;
6. Releases 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;
7. Releases resulting from the land application, reuse, or disposal of wastewater residuals and/or dredged spoils conducted in accordance with an approval, permit, certification, or beneficial use determination issued by the Department.
8. Releases in groundwater detected by sampling conducted by Public Water Supply owners or operators in accordance with Department of Public Health requirements and guidance.
9. Releases resulting or emanating from:
 - (a) the asphalt binder in bituminous pavement;
 - (b) piers, pilings and building foundation structures;
 - (c) landscaping timbers in use;
 - (d) utility poles in use; or
 - (e) building materials that are in good repair and still serving their original intended use;
10. Releases indicated solely by the presence of oil or petroleum or chemical liquids or solids, liquid or gaseous products or hazardous wastes in soils at a facility licensed, permitted or approved by the Department to treat, recycle, reuse or dispose of such soil, provided that:
 - (a) the soil has been excavated and transported from a release area in compliance with Department regulations; and
 - (b) the facility is operated in a manner consistent with the terms and conditions of its license, permit or approval;
11. Releases that require reporting solely because a Person Responsible for Reporting obtains knowledge of media concentrations and/or site conditions that meet one or more of the reporting criteria, when such media concentration value(s) and/or knowledge of site conditions resulted from a sampling, analytical or observational error, as established by a preponderance of the evidence and/or is(are) refuted by additional sampling, analyses, and/or observation, within the applicable time period for reporting;
12. Releases that would otherwise require reporting because a person who created or maintained a release to the land and waters of the state obtains knowledge of soil concentrations equal to or greater than one or more applicable Reportable Concentrations, where a Immediate Removal Action conducted in accordance with these regulations has reduced concentrations of oil and/or hazardous material at the site to an amount less than the Reportable Concentration(s), within the allowable time period for reporting;
13. Releases in concentrations or quantities which would otherwise meet one or more of the sets of Reportable Concentrations at a site where:
 - (a) a response action is being undertaken in compliance with the provisions of these regulations to address such release;
 - (b) a release report was previously provided to the Department for the site on which the release has been observed or documented; and
 - (c) such presence of oil and/or hazardous material is consistent with the types, nature, exposure potential and quantities of oil and/or hazardous material for which a report was previously provided to the Department;
14. Releases for which a documented completion of remediation has been issued, in concentrations that would otherwise meet one or more of the sets of Reportable Concentrations, unless the presence of such release would negate or change such determinations or statements were that presence of such concentrations taken into account in the preparation thereof, or if changes in activities, uses, and/or exposures at the site require reporting to the Department. In this context, documented completion of remediation includes:
 - (a) a site where a Verification has been submitted to the Department in compliance with the provisions of 22a-134a; 22a-133x; 22a-133y; 22a-449(c)-105; CGS Section 32-769, or any other law, regulation, order, permit, license or approval, provided the Commissioner has delegated such authority to a LEP
 - (b) a site where the Department has made a written determination that no further actions are required;
15. Historic releases of oil and/or hazardous material to:
 - (a) an underground utility vault provided such releases are completely contained within the vault and reporting under other regulations/provisions is not required.
 - (b) the interior of a building, provided such releases are completely contained within the building and reporting under other regulations/provisions is not required.
16. Historic releases that result in a sheen on a surface water, provided that:
 - (a) federal officials receive notice of such release pursuant to the Federal Water Pollution Control Act as amended;
 - (b) a response occurs as directed by those federal officials and according to other federal, state or local requirements applicable to such a release and response;
 - (c) the sheen does not persist for more than 24 consecutive hours; and
 - (d) the sheen does not recur at the same location within any 30 day period
17. Concentrations of metals in an area documented by the U.S. Geological Survey or in other scientific literature as an area of elevated concentrations for such metal(s) measured in soil or groundwater that
 - (a) is consistently present in the environment at and in the vicinity of the sampling location;
 - (b) is solely attributable to natural geologic or ecologic conditions; and
 - (c) has not been mobilized or transferred to another environmental medium or increased in concentration in an environmental medium as a result of anthropogenic activities.
18. Releases of Trihalomethanes in groundwater attributable to naturally-occurring ecological processes and/or leakage or discharges from a public water supply system;

REPORTING THRESHOLDS

Newly Discovered Historic Releases Which Require Reporting Within Two Hours

Except as provided in (Exemptions), persons required to notify under 20-9 shall notify the Department as soon as possible but not more than two hours after obtaining knowledge that a release meets one or more of the following sets of criteria:

- A. a historic release where pollution is on or emanating from a parcel, that such pollution is causing or has caused polluted vapors emanating from polluted soil, groundwater or nonaqueous phase liquid (NAPL) which vapors are migrating into structures or utility conduits and which vapors pose an explosion hazard.
- B. a historic release where pollution is on or emanating from a parcel, that such pollution is causing or has caused contamination of a public or private drinking water well with:
 - i. a substance for which the Commissioner of Energy and Environmental Protection has established a reportable concentration, or.
 - ii. the presence of nonaqueous phase liquid.
- C. a historic release to the environment indicated by the measurement of concentrations of pollution, equal to or greater than 15 times the RCS-1 reporting concentrations at the ground surface or within a depth of twelve inches below the ground surface, at any location within 500 feet of a residential dwelling, school, playground, recreation area or park, unless access by children is controlled or prevented by means of bituminous pavement, concrete, fence, or other physical barrier.

Newly Discovered Historic Releases Which Require Reporting Within 72 Hours

Except as provided in (Exemptions), persons required to notify under 20-9 shall notify the Department not more than 72 hours after obtaining knowledge that a release of oil and/or hazardous material(s) meets one or more of the following sets of criteria:

- D. a historic release to the environment indicated by the presence of NAPL in a groundwater monitoring well, excavation, or subsurface structure in which NAPL has come to be located at a measured thickness equal to or greater than ½ inch (0.04 feet) at a location greater than 30 feet from School, Daycare or Child Care Center or occupied Residential Dwelling;
- E. a historic release to the environment indicated by the presence of volatile organic compounds within ten feet of the exterior wall of an underground storage tank, as established by measurement of equal to or greater than 100 parts-per-million (ppm) by volume of total organic vapors "as benzene" in the headspace of a soil or groundwater sample using a headspace screening method, and where such sample was obtained:
 - 1. greater than two feet below the ground surface; and
 - 2. as part of a closure assessment required pursuant to 22a-449(d)-107.
- F. A historic release to the environment indicated by the measurement of oil and/or hazardous material in the groundwater at concentrations equal to or greater than a Category RCGW-1 Reportable Concentration, within:
 - 1. an Aquifer Protection Area
 - 2. 500 feet of a private water supply well
- G. a historic release that has resulted in the discharge of separate-phase oil and/or separate-phase hazardous material to surface waters, buildings, or underground utilities or conduits;
- H. a historic release to the ground surface or to the vadose zone that, if not promptly removed or contained, is likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;
- I. releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year;

- J. releases to the groundwater that have been or are within one year likely to be detected in a public or private water supply well;
- K. releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir; or
- L. releases to the groundwater or to the vadose zone that have resulted or have the potential to result in the discharge of vapors into a School, Daycare or Child Care Center or occupied Residential Dwelling. Conditions that indicate a potential discharge of vapors into a School, Daycare or Child Care Center or occupied Residential Dwelling include, but are not limited to:
 - 1. soil or soil gas impacted with one or more volatile organic compounds within six feet, measured horizontally from the wall of the structure, and within ten feet measured vertically from the basement floor or foundation at concentrations that are likely to discharge vapors into the structure;
 - 2. one or more volatile organic compound in the groundwater exceed the applicable Volatilization Criteria within 30 feet of the structure, and the average annual depth to groundwater in that area is 15 feet or less;
 - 3. volatile light non-aqueous phase liquid (LNAPL) is present in a groundwater monitoring well, excavation, or subsurface depression within 30 feet of the structure at a measured thickness equal to or greater than inch (0.01 feet); or
 - 4. evidence of vapor migration along preferential pathways at a location that is likely to result in the discharge of vapors into the structure.

Newly Discovered Historic Releases Which Require Reporting Within 120 Days

Except as provided in (Exemptions), persons required to notify under 20-9 shall notify the Department not more than 120 days after obtaining knowledge that a release meets one or more of the following sets of criteria:

- M. a release to the environment indicated by the measurement of one or more hazardous materials in soil or groundwater in an amount equal to or greater than the applicable Reportable Concentration;
- N. a release to the environment indicated by the measurement of oil and/or waste oil in soil in an amount equal to or greater than the applicable Reportable Concentration, where the total contiguous volume of the oil and/or waste oil contaminated soil is equal to or greater than two cubic yards;
- O. a release to the environment indicated by the measurement of oil in groundwater in an amount equal to or greater than the applicable Reportable Concentration; or
- P. a release to the environment indicated by the presence of a subsurface NAPL in a groundwater monitoring well, excavation, or other subsurface structure in which NAPL has come to be located at a measured thickness equal to or greater than 1/8- inch (0.01 feet) and less than ½ inch (0.04 ft.).