

**Documentation Subcommittee
Release-Based Cleanup Program
Topical Subcommittee 8. Clean-up Completion Documentation,
Verifications, and Audit Frequency and Timeframes
Concept Paper March 25, 2022**

Introduction and Background

The following Concept Paper is presented to the Working Group established pursuant to §19 of Public Act 20-9 by the members of “Subcommittee 8.” This subcommittee has been tasked by the Connecticut Department of Energy & Environmental Protection (DEEP) and Department of Economic and Community Development (DECD) with evaluating and providing recommendations regarding clean-up completion documentation, audit frequency and timeframes pursuant to PA 20-9.

Due to the breadth of Subcommittee 8’s topic, the Subcommittee formed three smaller groups within the Subcommittee to explore the three delegated issues: (1) assessing the appropriate clean-up documentation, (2) determining who should issue the “Verifications” (Closure) documentation and the appropriate Qualifications for such person and (3) evaluating the audit frequency and timeframes. In addition to the Subcommittee’s regular weekly meeting, based on the guidance provided by DEEP, each subgroup met separately to review the designated topic and document its recommendations for incorporation into this concept paper.

To that end, Subcommittee 8 has evaluated the types of documents and records that must be used and maintained to demonstrate compliance with Public Act 20-9, including the Commissioner’s review and audit of such documents and records. In developing these recommendations, we specifically recognized that DEEP’s finite resources need to be allocated in a way that most cost-effectively advances the goals of Public Act 20-9. Specifically, we avoided proposing the creation of a new class of DEEP-licensed professionals authorized to approve or document a release response activity. Also, we sought to focus DEEP oversight of response actions and audits thereof to the most serious release categories.

Throughout the process, the Subcommittee highlighted a desire from future users (bank, insurance companies, LEPs, owners, etc.) to clearly understand when a release is considered “closed.” The statute uses the term Verification when referring to closures and in defining audit frequency. Public Act 20-9 defines “Verification”, as the rendering of a written opinion by a licensed environmental professional on

a form prescribed by the commissioner 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. The subcommittee assumed that there may be instances, including those less complex releases, where an LEP or a Verification may not be needed to document or confirm closure of a release and questioned whether a different term (“closure” or verification [as opposed to Verification]) might be more appropriate.

Subgroup 1: Clean-up Completion Documentation:

Subgroup Charge and Goal: What is needed to demonstrate that the obligations under Public Act 20-9 have been discharged: What document(s) is necessary to demonstrate regulatory closure (or Verification) of site/release?

Assuming that ultimately releases or sites in Connecticut will be “documented” on-line (i.e., DEEP website) it was recognized that a DEEP electronic (integrated online) transmittal form (ETF) would be highly recommended and beneficial to (1) serve as the Closure mechanism for simple/certain types of releases (e.g., Class A-C discussed below), and otherwise (2) be the uniform “cover” form to accompany a Closure report where required (e.g., Class D+).

The ETF document generally outlines what pertinent information would be desired in a transmittal form, so that information about the release or site is easily summarized and so that a person can glean information about a release or site. The content of a transmittal form is proposed below. The group also discussed how in cases of less-complex releases, the ETF and appropriate attachments, such as photographs and a site sketch, might be all that is required to document compliance with Public Act 20-9.

The group concurred that an on-line, fillable transmittal form, which could retract to eliminate non-applicable sections (depending on certain boxes being checked) or conversely expand to accommodate additional information, as warranted, would be desirable. Such a form would be less overwhelming in cases where it might be appropriate for an owner or non-LEP to document closure.

The following assumptions apply:

1. Each release or site will have a release/site specific number assigned at the time of reporting;

2. An ETF or ETF and attached Closure report will tie into the release/site specific number on-line; the form should be interactive and dynamic to accommodate different circumstances and should include the identification of the proper credentials that are needed for Closure/Verification based on the information submitted;
3. Terminology to be used on transmittal form to be determined based upon other subcommittee recommendations, and would not necessarily be what is noted below;
 - a) With the hope of using a single form to accommodate multiple types of releases of varying volume and complexity, it is expected that there will be portions of the form that can be by-passed (marked not applicable) when requested information is not relevant to release/site so that form can be “rightsized” to release/site.
 - b) For instance, where a release was limited to a spill on pavement, an abbreviated form could be realized by marking certain boxes such as those associated with groundwater or surface water impacts or the presence of sensitive receptors as “not-applicable.” And, for less serious releases that may not require a Closure report or be subject to a response or Verification by an LEP, the form should be short and simple and, where possible, comprise the final documentation of closure/compliance.
 - c) The ETF alone might be the appropriate documentation for localize, or low risk releases (e.g., Class A, B or C releases, as discussed in the following section). In these low-risk cases (for instance a spill to pavement that was immediately cleaned), an owner or facilities manager might be able to complete the required information in an on-line format and as warranted, attach photographs, receipts, or manifests.
 - d) Whereas, in cases of a release to the ground surface, or where a sensitive receptor was identified, selecting a “yes” response could expand the form to allow additional information.

1. Recommended Content of a Release/Site Closure Transmittal Form (ETF)

It is anticipated that all transmittals will include basic release information (Parts I and II) and one or more attachments (photographs, sketch map). For simple releases (e.g., spill on pavement or in a

containment structure) those items and Part VII (certification/sign-off) may be all that is required to document closure of the release. For those cases, the ETF could serve as the only release documentation.

Part I: General Information: Release/Site Number and Location Information

1. Site owner / operator / tenant / responsible party information / LEP or qualified individual information.
2. City, Street Address and Property or Tenant contact information; other information such as Assessor (map/block/lot, and deed) information, etc. could be required for more serious and/or complex releases. The group concurred that GPS Coordinates (latitude/longitude) would also be useful in locating releases.
3. Any additional location aid information to identify the release(s) to which the Form applies.

Part II: Description of Release: Substance Released, Volume and Release Mechanism, Immediate Actions Taken

1. Description of substance released.
2. Volume of material released (if known).
3. Mechanism of Release (e.g., broken valve on tank).
4. Immediate Remediation/Clean-up Actions Taken (if appropriate), including name of Spill Contractor.

Part III: Previous Reports or Information on Release

1. If different types of previous Release/Site Verification or Closure reports exist, identify those here (and attach as appropriate).
2. Information on “category” of release (i.e., IRA, tier/risk category, Class [per discussion below]) that would assist a reviewer (e.g., closed with EUR).

**Part IV: Setting/Receptors/Conceptual Site Model (CSM) (as applied to release area)/
Description of Release/Site**

1. Site information:

- Site/Release area usage (industrial, commercial, residential),
 - Surface water and groundwater classification,
 - Depths to water table, bedrock,
 - Location of nearest downgradient surface water body;
 - Abutting land uses and sensitive/ecological receptors, water supply wells
 - Vapor intrusion risk.
2. Nature of Spill - Spill to pavement, groundwater impacts, soil impacts, etc. Depending upon response, some subsequent sections of form would be not applicable.
 3. Nature/Type of Release/Contaminants of Concern (COCs) – Petroleum, Metals, Volatile Organic Compounds (VOCs), Polychlorinated Biphenyls (PCBs), etc.
 4. Other Pertinent Information
 - Applicable Clean-up Criterion
 - Significant Environmental Hazard identified.

Part V: Description of Investigation, Remediation Response Actions and Compliance Measures (History/Approvals and record of prior submissions)

1. Remedial measures – pavement cleanup, soil excavation, in-situ remedy, alternative criteria/Additional Polluting Substances (APS); variance approvals; EURs; use of polluted soil; technical impracticability for groundwater remediation etc.
2. Release regulatory history – submissions of reports, milestone documents, if applicable.
3. Public Notice, if applicable
4. Soil release investigation/compliance demonstration, if applicable;
5. Groundwater investigation/compliance/exemption demonstration, if applicable. Include discussion of interim closure option, if applicable, if only monitored natural attenuation (MNA)/long-term groundwater remedy remains.

Part VI: Attachments

1. Site Plan;

2. Photo-documentation (it is expected that photographs would be included for all releases);
3. Approvals/notifications;
4. Public notice documentation;
5. Supporting data / sampling exhibits,
6. Receipts or waste manifests;
7. As appropriate, Release/Closure Report (see discussion below, and attached suggested report outline); and,
8. If necessary, EUR fact sheet and Certificate of Title, etc.

Part VII: Certification/Signoff

Owner/responsible party and LEP (if applicable) information, electronic signature with appropriate certification language.

2. Recommended Contents of Remediation Closure Report

Subgroup 2 recommends that a Verification/Closure report be required for Class D+ releases (see classification discussion in the next section). The following assumptions apply:

1. In creating a suggested outline for a closure “report”, the subgroup considered how a single outline might be used to document various types of releases.
2. While we worked to create an outline that might be appropriate to accommodate closure of multiple releases/types of releases including those more complex cases, we understood that many releases would not require all, or most of the information in the outline.
3. Because of the varied nature and size of releases, a standard organization became a challenge.
4. As discussed above, an ETF with attachments (photographs, sketch, manifests) might be the appropriate documentation for Class A, B or C releases (as discussed in the following section). For higher risk or more complex releases (Class D+), additional information, and a lengthier document would be appropriate.

A suggested outline/Table of Contents for a closure/Verification report, where required, is included as Attachment 1 to this document. Report sections included would vary based on the type of release.

Subgroup 2: Verifications/Qualifications:

Subgroup Charge and Goal: Consideration of Who is Qualified to Issue End Point Approvals

The referenced chart (Table 1 on the following page) summarizes various release scenarios and suggested entities which can sign off on an end point and issue the Closure/Verification report.

1. Credentials/Qualifications for Individuals with Sign-Off Authority

The subgroup discussed at length whether DEEP should provide certification and/or licensing of a new category of licensed professional that would be something short of a full LEP licensing.

Acknowledging DEEP's limited authority, no new certification or licensing program is recommended.

However, the subgroup found that not all releases require full LEP involvement. Therefore, a mechanism should be created, depending upon the release, that assures sufficient documentation and a certification by someone who has appropriate knowledge and/or experience. Questions discussed included: What credentials and qualifications will be required for individuals with sign-off authority?

The subgroup looked at comparable examples in: UST regulations and looked at EIT and LEP-IT in training. For certain types of releases, other individuals beyond LEPs, should be acceptable. If a LEP is to rely upon the individual later, that person's qualifications may be considered but other indicia of a response should also be acceptable (documentation, photographs, lab reports) if a Closure report or subsequent Verification is warranted.

The group also questioned if there might be different document retention requirements for different types of individuals with sign-off authority. This question will need to be addressed by DEEP.

2. Checklist of Qualifications for Signoffs:

DEEP could create a checklist outlining qualifications for Closure signoffs, including, but not limited to considerations of:

1. Certain types of experience (i.e., the project managers working under LEP);
2. Credentials – (e.g., a project manager signing a letter affirming the work is consistent with the applicable regulations);
3. Educational criteria (for example, 4 years, or possibly use LEP framework as a guide);

Table 1: Chart of Release Classes, Tiers and Certifications

Sign Off Class	Class A	Class B	Class C	Class D	Class E	Class F	Class G	Class H	Class I	
	Below	Below reportable concentration for an historic release	Contained in Impervious Structure	Release to Soil	Release to Soil	Release to Soil within “x” feet of a sensitive receptor (e.g., drinking water)	Release to Surface Water or Conveyance to Surface Water	Release to sediment	Significant Environmental Hazard	
	RQ for a spill/sudden release			GB	GA					
Report?	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	
Release Tier ¹	Not tiered	Not tiered	Not tiered	Tier 2	Tier 2 (unless DEEP initiates process to move to Tier 1)	Tier 2 or Tier 1 depending on impacts to groundwater ²	Tier 1 or Tier 2 ³	Tier 1 or Tier 2 ³	Tier 1	
Who Certifies?	Property representative.	Property representative.	Property Representative	LEP	LEP	DEEP, subject to DEEP ceding certification to LEP	DEEP, subject to DEEP ceding certification to LEP	DEEP, subject to DEEP ceding certification to LEP	LEP	
	emergency responder, or technical environmental professional (as defined in CGS 22a-6u(a)(10))	emergency responder, or technical environmental professional (as defined in CGS 22a-6u(a)(10))	or emergency responder		Subject to DEEP assuming responsibility [1]					
Nature of Certification	Based on available information and appropriate inquiry	Based on available information and site testing performed in accordance with appropriate regulations	Based on available information and appropriate inquiry	investigation based on prevailing standards	investigation based on prevailing standards	investigation based on prevailing standards	investigation based on prevailing standards	investigation based on prevailing standards	investigation based on prevailing standards	
				remediation completed in accordance with remediation standards	remediation completed in accordance with remediation standards	remediation completed in accordance with remediation standards	remediation completed in accordance with remediation standards	remediation completed in accordance with remediation standards	remediation completed in accordance with remediation standards	hazard abated
									remediation completed in accordance with remediation standards	

¹ Release Tier - The concept of “Release Tiers” was explored by an earlier subcommittee, and we have avoided trying to duplicate its work. However, we believe that the classification of releases based on relative impacts to health and the environment should drive decisions on the nature of and the professionals responsible for documenting the completion of the response action. We included potential Tier assignments in this chart based on feedback from Subcommittee 6. We also understand that a release could be remediated prior to a Tier assignment making the Release Tier inapplicable.

² Subcommittee 5 suggested that release with polluted groundwater 500 ft upgradient, or 200 ft in any direction of a drinking water well with impacts above Groundwater Protection Criteria should be assigned to Tier 1.

³ Tier assignment would depend on magnitude of release.

4. Work experience (identify number of years, like LEP framework);
5. Qualifications may vary based upon the Class of Releases referenced in table above. For lower Class signoffs (e.g., Class A – C), qualifications for technical environmental professionals (TEP) or other non-LEPs who respond to such releases, could include education, work experience (i.e., years of experience), work history, continuing coursework. A self-certification program could be developed, with the potential for confirming qualifications upon audit.
6. The group also discussed whether certain types of first responders (Fire Chief, e.g.) or clean-up contractors might be eligible to sign off on release Closure.

Note: DEEP may be resistant to review applications for new private sector sign off designation; but the property or business owner should maintain a record/paperwork of the person's qualifications and training. That information could be produced upon an audit or if otherwise requested by DEEP.

3. Miscellaneous Considerations

1. Create a public list of approved entities (applications uploaded to the STP);
2. Confirm insurer's position (E&O) insurance (add a rider for "LEP in training")?
3. Enforcement - abuses could be discovered through the audit process;
4. Releases to surface water – further discussion to develop shoreline items more fully;
5. Weaving in CT Site Characterization Guidance Document considerations for full responses to releases where the entire property is at issue; if an isolated release exists a "Release Characterization Guidance Document" should be developed.
6. Except for properties that are excluded under the Public Act (i.e., Transfer Act sites, Brownfield sites), all historic releases discovered will be subject to today's approach.
7. A special exclusion may be needed for historic fill. Also, a presumption is that releases on residential properties (i.e., from working on a car to a release from an oil tank will be excluded and managed differently).
8. Responses to new sudden releases will be vary depending on the Class of the release.

9. PARCEL vs RELEASE based program –changes will need to be made, including what the “signoff” for closure is. The statute defines “V”erification, and that term is currently used for full-site closure, but “v”erification is also used in the statute for a final release response.
10. Need to clarify the words used for concluding a “release” or confusion will result.
Subcommittee 8 discussed the possibility of using the term “Closure” in place of Verification for clean-up of discrete releases under this program.

Subgroup 3: Audit Frequency and Timeframes:

Subgroup Charge and Goal: What information must be maintained to demonstrate that a release has been remediated, including any environmental use restriction? Does this requirement to maintain records extend to: 1) remediation of releases that do not have to be reported; or 2) releases for which a Closure report is required but a Verification is not? How long must records demonstrating compliance be maintained? How will such information be publicly accessible – by providing to DEEP or by being maintained in a publicly accessible database? How should the auditing of a Closure or Verification (screening versus thorough review) be calibrated to the different types of release?

1. Retention of Documents Recommendations:

1. Best practice versus regulation will be different for retention of records.
2. We suggest current site owners maintain documents until the site is sold to a new owner (or the tenant vacates the site) including but not limited to final/closure notices, agency communications, remediation actions, and lab results which may be required/necessary upon the sale of a site by risk assessors and lending institutions.
3. The retention of records will be by the site owner or certifying/responsible party (e.g., a tenant) and maintained by the consultant for as long as the regulations require. The owner will have access to a tenant’s retained records and consultant will provide records to anyone upon the permission of the site owner.
4. Retention can be electronic or hard copy- no requirement that the records be kept in a physical copy.
5. Maintain current document retention period for LEPs for reportable and non-reportable releases.

6. Should a new class of professionals ultimately be created under the regulations, the retention period of documents should be the same as LEP requirements to ensure parity among regulated community.

Note: some insurance and compliance standards may require consultants to hold onto records longer than required by the regulations or in a specified form.

Note: there may be information reported to DEEP so information can be on the public database easing retention of documents by owners/tenants/certified parties/responsible parties. This may impact audit percentages and will need to be addressed either through technology or guidance in the future.

2. Audits:

1. An audit can include a Closure report (or ETF closure documentation), full verification or fact/full screening based on PA 20-19 and interpretation by DEEP. Statute requires 20% of highest risk tiers be subject to an audit. Note: Target or Minimum?
2. Using the tiering structure laid out by the Tiers Subcommittee, audits should be based on the level of risk of the site using qualitative criteria to determine the level of audit within each tier.
3. Tier 1 from the higher risk would require audit on 20% of reports.
4. There will be a minimum of 5% audits for tiers 2 and 3. Note: Subject to availability of DEEP resources.
5. Level of audits for tiers 2 and 3 will use qualitative fields to determine the level of the audit that are currently used by DEEP.
6. The verification audit period will be 120 days with a three-year completion requirement and include existing exceptions.
7. The goal would be to shorten the verification audit period upon increased electronic/automation of forms that would allow DEEP increased capacity to review reports.
 - The Subgroup suggested that a shorter audit period timeframe be available for lower tiers/Category 1,2,3 releases that do not require LEP or DEEP oversight.
 - The Subgroup also considered that audits of the lower risk/category release closures could potentially be precluded in cases where those Closures/reports/transmittals were submitted or reviewed by an LEP.

- Exemptions: Situations where a verification is based on materially inaccurate, erroneous or misleading information, or where post-remediation monitoring has not been completed or an Environmental Use Restriction necessary to achieve compliance has not been recorded.

3. Public Facing Database:

1. DEEP should continue efforts to make the file room electronically accessible and would recommend additional bond dollars if necessary to speed up the process.
2. The database should be a searchable and recoverable using keywords including those currently used in the DEEP Document eSearch Portal.
3. Consider a GPS search option for the release versus addresses which may change.
4. Ideally there should be only one release number per release regardless of which program the release is in.
5. Recommend DEEP looking into a mobile version of spill reporting through a web app, consider texting option versus calling in spills pending DEEP capacity and available resources.

4. Subgroup's Questions for Release-Based Working Group:

1. Is the Certifying Party/Responsible party solely responsible for retention of documents?
2. Should others (e.g., non-LEP professionals [TEPs], first responders) be responsible for document retention, and if so, for how long?
3. It was agreed that a GPS location requirement could provide more accurate information on the location of the spill since addresses are constantly changed. However, we questioned if the inclusion of a GPS location should be required or optional (e.g., cases of trade secrets, or companies like EB or Pratt not wanting to disclose specific location of releases on their campuses.)
4. Should the term "Closure" be incorporated into the statute (in the definition) as opposed to Verification in cases where someone other than an LEP is documenting the clean-up.

Closing Comments

Subcommittee 8 wishes to thank all members of the CT DEEP Remediation Division for their continuous, and open commitment in assuring Connecticut residences and businesses that protection of

Subcommittee 8:

Clean-up Completion Documentation, Verification/Closure, and Audit Frequency and Timeframes
§19 of Public Act (PA) 20-9; Release-Based Cleanup Program Concept Paper

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our environment and human health is held paramount.

Also, thank you for the opportunity to assist DEEP towards that goal. Please feel free to contact the undersigned committee chairs as follows with any questions or clarifications:

Subcommittee 8 Co-chairs:

Alfred E. Smith, Esq; Deborah Motycka Downie, LEP; and Michael R. Granata, LEP

Subgroup 1- Chair: Douglas S. Pelham, Esq.

Subgroup 2- Chair: Kevin King, LEP

Subgroup 3- Chair: Ashley Zane, CBIA, Eric Boswell, LEP

ATTACHMENT 1

SUGGESTED OUTLINE FOR CLOSURE/VERIFICATION REPORT

SUGGESTED OUTLINE FOR CLOSURE/VERIFICATION REPORT

TABLE OF CONTENTS

1. Executive Summary
2. Introduction/Background
 - a. Release Discovery
 - b. Reporting and Tiering
3. Background
 - a. Site and Regulatory History (public notice?)
 - b. Release History and Discovery
 - c. Previous Reports/submissions and Summary of Completed Assessment and/or Remediation
 - d. Previous Approvals (and if relied on)
 - e. Environmental Setting
 - f. Receptor Assessment
 - i. Supply Wells
 - ii. Land Uses
 - iii. Ecological
 - g. Applicable RSRs
4. Conceptual Site (of release(s)) Model (Characterization)
 - a. Release Area 1
 - Tiering
 - Impacted media,
 - Degree and Extent of impact
 - Applicable RSR Endpoints
 - b. Release Area 2
 - c. Etc.
5. Supporting Information
 - a. Summary of investigations with supporting field notes
 - b. Remedial approach
 - Site remediation/excavation
 - In-situ remediation
 - Institutional Controls
 - Etc.
 - c. Description of Final Remedial Measures (if any) with supporting field notes
 - d. Description of sampling (assessment and/or post-remediation) with supporting tables and laboratory reports
 - e. Public Notice
 - f. Figures
 - g. Calculations
 - h. Long-Term (post-closure report) obligations (e.g., monitoring, financial assurance) if applicable
6. Data Gap Analysis and Laboratory Data Quality/Data Usability Evaluation
7. Conclusions and Recommendation
 - a. Release Area 1 RSR compliance
 - b. Release Area 2 RSR compliance

SUGGESTED OUTLINE FOR CLOSURE/VERIFICATION REPORT

FIGURES

- Site Location
- Sampling locations
- Excavations & test pits
- Groundwater Flow
- Cross Sections: Soil, Bedrock, groundwater
- Isopleths

APPENDICES

- Investigation/monitoring reports
- Laboratory Reports
- Photographs
- Boring Logs
- Waste Documentation
- As-built
- O&M Plans
- Statistical analysis
- Modeling information