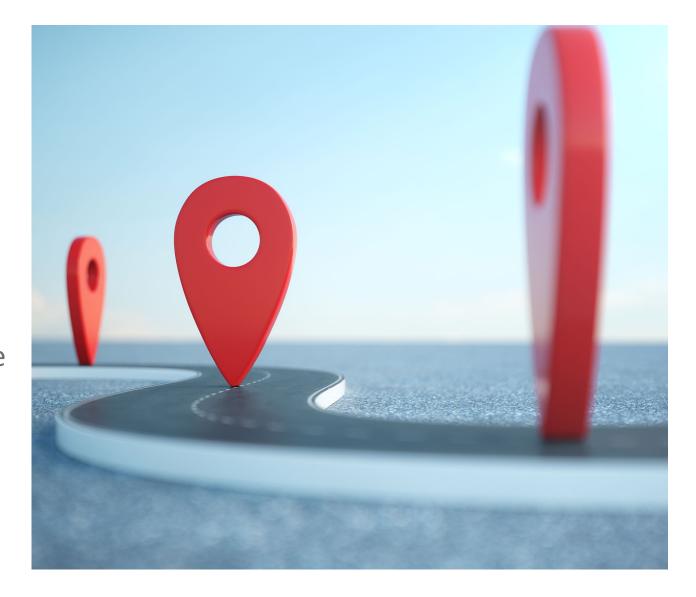


ROADMAP

- Current State
- Benefits of the new program
- Overview of the Release Based Cleanup Program
- *How does this new program compare to other states?
- Overview of the sections of the Release-Based Cleanup Regulations
- Next Steps





Slow Framework Deters Investment Interest



Proven, Release-Based Model is More Efficient

Overuses DEEP Resources



You Find It, You Spill It, You Clean It

Exempts Certain
Properties From Oversight



Tiered Approach Tailors to Risk Level of Release

Stagnant Properties

Do Not Help Environment



Increases Economic and Environmental Value

CURRENT STATE: TRIGGERED UPON TRANSFER

- ❖ Connecticut adopted the Property Transfer Act in 1985 and has amended it over 20 times since then
- Applies only to:
 - dry cleaners
 - auto body shops
 - furniture strippers
 - ❖ Generators of more than 100 kg of hazardous waste in a month
- Requires site-wide investigation of all areas that <u>might</u> have had releases ("proving the negative")
- *Applies to sales of real property *and* business operations
- Due to the numerous amendments, there are different requirements for sites based on the time of the transfer



PROPERTY TRANSFER ACT

- Does **not** require remediation of historical releases upon discovery, allowing pollution to spread
- *Does **not** apply to historical releases on property not used for dry cleaners, furniture stripping, auto body repair, or from where hazardous waste was generated
- ❖ Does **not** apply to releases at parcels or businesses that do not transfer
- Usually requires environmental and legal research to determine if the Property Transfer Act applies
- ❖ Is a factor in sites being abandoned and becoming brownfields
- Complicates property transfers
- Time-consuming for Department staff to administer, with focus on administrative functions
- Confusing to out of state business owners and financial institutions

FORMER NORTON PAPER MILL COLCHESTER







Burned in July 2012 Still not remediated





FORMER FLEISHER FINISHING MILL STREET WATERBURY







Burned in April 2012



City remediated & redeveloped in 2023 with state and federal funds

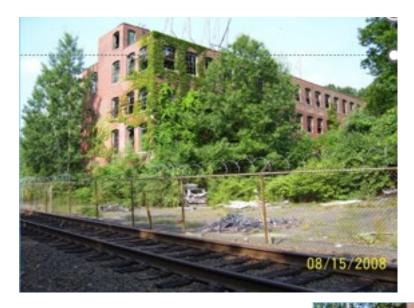


FORMER COOPER INDUSTRIES BROOKLYN

Still not investigated or remediated

Entered Cleanup Program 1986





FORMER BRISTOL BABCOCK COMPANY WATERBURY



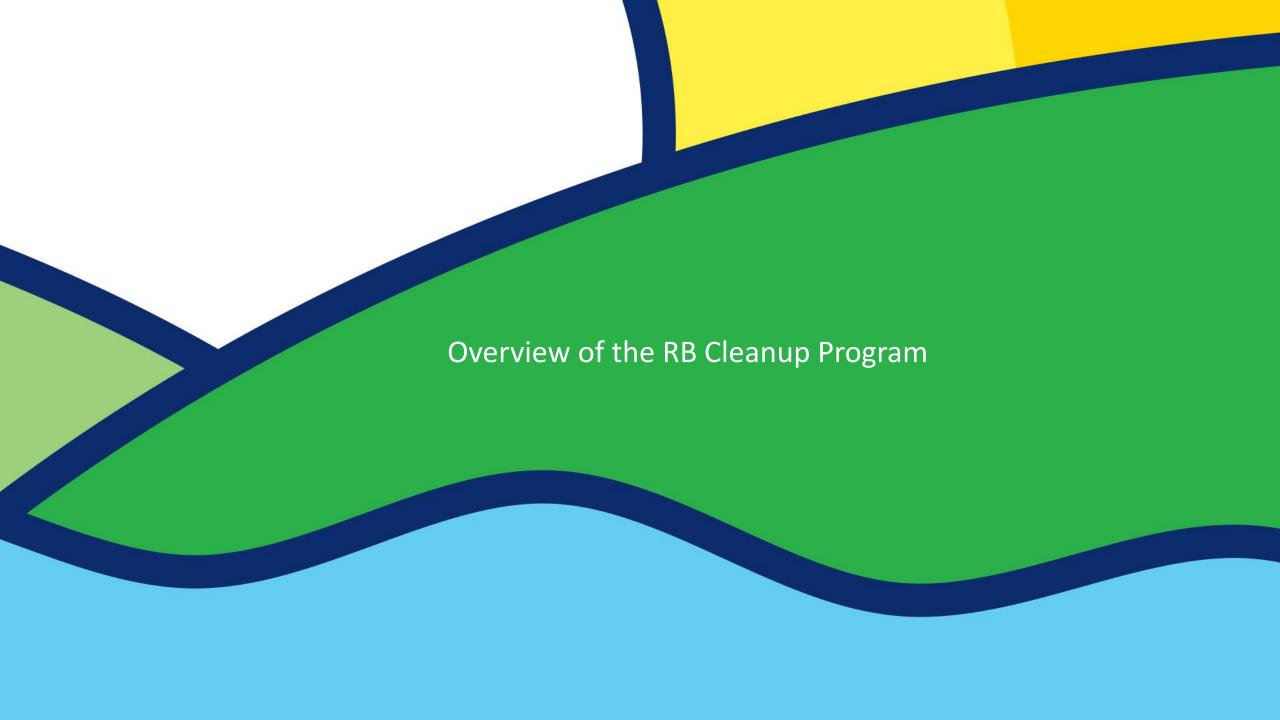
Entered Cleanup Program 1987



Burned in 2015 Still not remediated

CURRENT STATE: OTHER PROGRAMS

- •Significant Environmental Hazards while requiring exposure to certain levels of pollution to be prevented, contamination may be mitigated and remain in place; administratively burdensome for staff and the public
- ■RCRA Corrective Action federally-funded; applies only to certain hazardous waste generators
- ■Voluntary Remediation Programs (22a-133x & 22a-133y) burdensome to administer
- ■Underground Storage Tank Program federally-funded; applies only to regulated underground tanks
- PCB Program federally-funded; inspection and enforcement program
- Release Reporting new releases only, does not require remediation to RSR standards
- ■Brownfields Programs ease remediation at sites that had not been addressed under other existing programs and are underused or abandoned



PROGRAMMATIC CHANGES WITH TRANSITION TO RELEASE-BASED PROGRAM

Existing Transfer Act obligations remain, new obligations will not be created

Brownfield programs will still require site-wide investigation and cleanup

Voluntary parcel-wide investigation and cleanup option planned

Significant
Environmental Hazard
program will be sunset
and incorporated into
new regulations

Enforcement programs
will remain – DEEP still
can issue orders for
investigation and
cleanup

RELEASE-BASED CLEANUP PROGRAM FRAMEWORK

Report

Report new release or newly-discovered historic release

Perform

 Perform Immediate Action when required to contain and/or remove the release and prevent human exposure

Tier

• If not completely cleaned up within one year of discovery, complete Tier Checklist to determine the level of oversight for remaining remediation

Perform

Continue cleanup actions until completed and verified

THE RELEASE-BASED CLEANUP PROGRAM WILL:

- * Address all releases, regardless of how the release was discovered
- Ensure releases achieve unified cleanup standards
- Create new, more flexible options for completing remediation
- Create consistent documentation of remediation for all releases, including small ones
- Relieve small business owners and from "proving the negative" or paying to determine applicability of Property Transfer Act

PROGRAM BENEFITS - EFFICIENCY

These programmatic tools will help reach an endpoint in a timely manner:

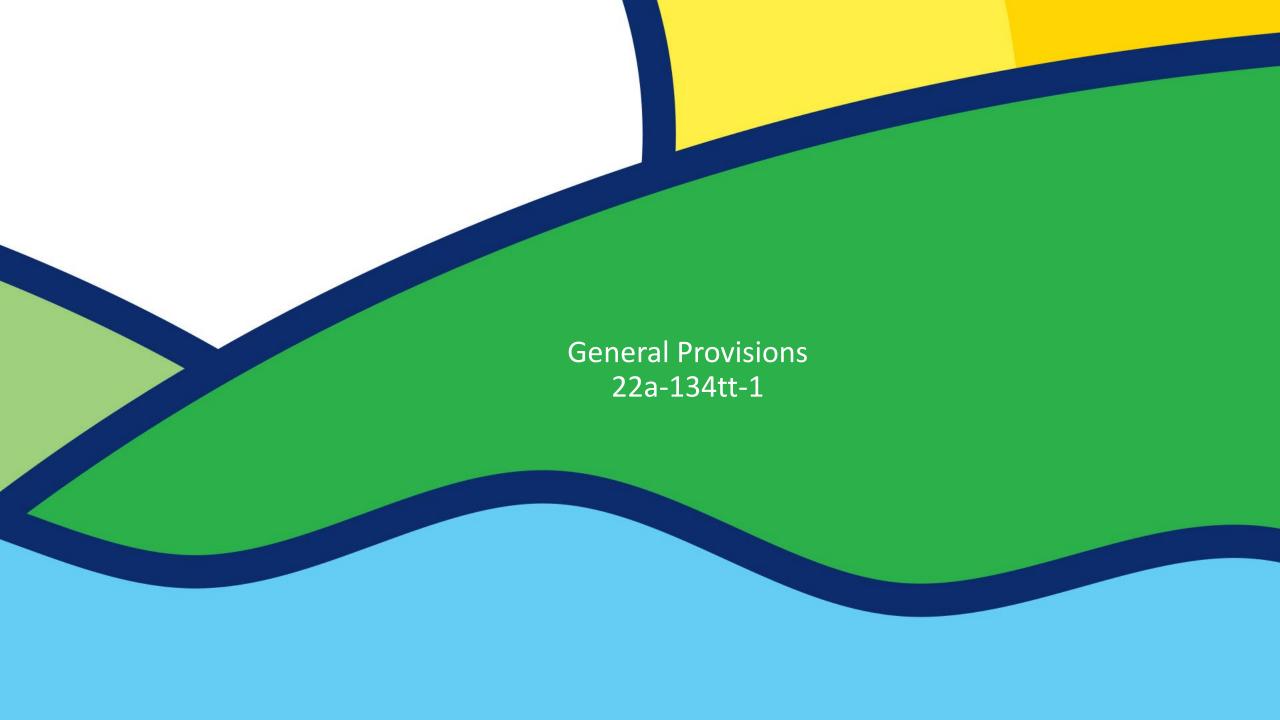
- "Walk-away" background baselines for naturally-occurring metals
- PEP provisions
- Permit by rule for managing Historically Impacted Material
- Permit by rule for managing soil under roads, parking lots, and buildings
- LEP implemented, risk-based DEC criteria ("short forms")
- ❖ 120 days to cleanup historical releases before reporting (if below 2x RSR criteria, 1 year)

BENCHMARKING AGAINST MASSACHUSETTS

	Release-Based Cleanup Program	Other States
Type of Program	CT is moving from a patchwork of cleanup regulations to a release-based system	CT is joining 48 other states that currently have release-based cleanup regulations
Fees	Less than MA; simpler in application and fewer actions that require fees	MA has annual fee based on tier; many one-time fees
Tiers	Tier assignments if a release is not cleaned up within one year of discovery. Tiers based on level of risk (Tier 1A, 1B, 2, 3)	MA tiers after one year of discovery based on complexity, number of sources, and how serious the threat potential contamination poses (Tier I or Tier II)
Level of oversight	Program puts the responsibility on the creator or maintainer to hire a LEP or PEP in most circumstances, though some releases will have DEEP involvement	MA relies on licensed spill contractors and licensed site professionals to oversee most cleanups, with DEP oversight as conditions warrant
Audits	Comprehensive audit process in regulations; audits performed on a percentage of release records that are certified by PEPs and verified by LEPs	MA has an audit program that evaluates documents throughout cleanup

Connecticut Department of Energy & Environmental Protection





GENERAL PROVISIONS

Definitions- Over 150 definitions, many from the RSRs

- "Areal extent of a groundwater plume" means the surface area beneath which groundwater is polluted by a release and in which one or more substances from such release or mobilized by such release is present at a concentration above the laboratory reporting limits.
- "Certification" means the rendering of a written opinion by a PEP 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.
- "Emergent Reportable Release" means a release to the land and waters of the state discovered by an observed change in conditions that is required to be reported by regulations adopted pursuant to section 22a-450 of the Connecticut General Statutes.
- "Existing release" means a release discovered through laboratory analysis of samples taken from the land and waters of the state.
- "Permitted Environmental Professional" or "PEP" means a person authorized by a permit issued pursuant to section 22a-454 of the Connecticut General Statues to certify release records.
- "Significant Existing Release" means a release to the land and waters of the state discovered . . . that is present in the location identified, or creating one or more impacts to public health or the environment identified in section 22a-134tt-5(f).

GENERAL PROVISIONS

Requirements for Analytical Data

All analytical data used to comply with the regulations shall be scientifically valid and defensible, with a level of precision, accuracy, and sensitivity commensurate with its intended use. All submissions shall include an analytical data quality assessment and data usability evaluation prepared by individuals qualified to make such assessment or evaluation.

Significant Existing Releases (SER)

Subsection lists 5 scenarios of existing releases that are considered significant

- Releases impacting drinking water wells
- Release of a substance within 500 feet of a private well at a concentration equal to or greater than the groundwater protection criteria
- Release in soil within 2 feet of surface with a substance at concentrations equal to or greater than 15x the direct exposure criteria
- Release of volatile organic substance or volatile petroleum substance to groundwater that is causing certain impacts
- Release of a substance equal to or greater than 10x the surface water protection criteria or of NAPL to groundwater within 500 ft of surface water

Licensing of Permitted Environmental Professionals (PEP)

Discussed further in the PEP section of the presentation



DISCOVERY OF EXISTING RELEASES

Discovery of a Release by RP (MOST RELEASES)

Discovery of a release occurs when a person who created or is maintaining (RP; responsible party) a release has actual knowledge or constructive knowledge of such release.

- Actual knowledge of a release shall include lab analysis or observation of NAPL.
- Constructive knowledge is based on the reasonable person standard or multiple lines of evidence.

Special Circumstances:

Discovery of Significant Existing Release (SER) - discovered when any person, taking into account any specialized knowledge or training, authorized or otherwise permitted by the RP to access a specific area for any purpose, obtains actual knowledge or constructive knowledge of a release requiring immediate action.

Discovery by DEEP or others- Person who discovers required to notify RP

• If DEEP determines a release exists and notifies the RP, then the RP is deemed to have actual knowledge.

DISCOVERY CONTINUED

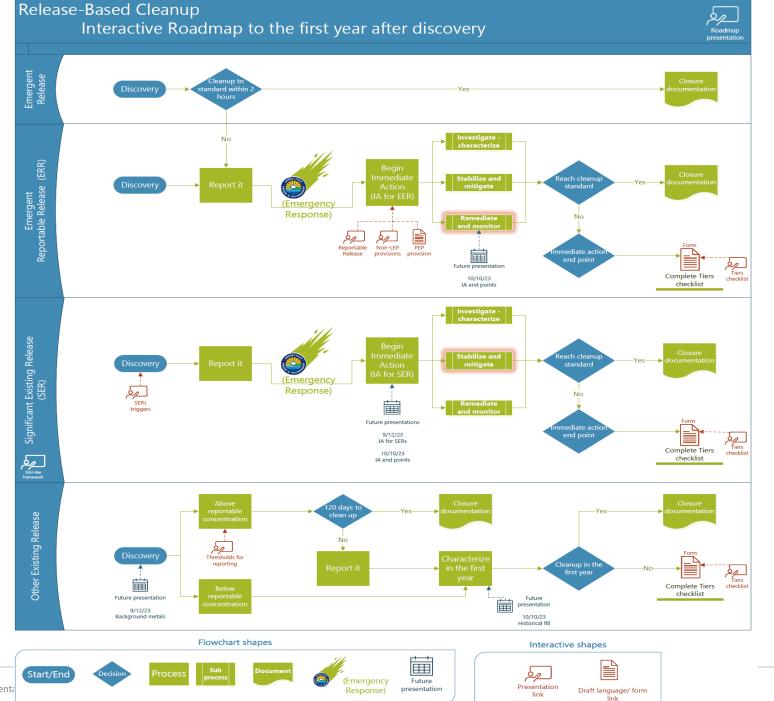
Discovery of Emergent Reportable Releases (ERR) – any release required to be reported pursuant to the Release Reporting Regulations (RCSA §§ 22a-450-1 et seq) is considered discovered and subject to the RBCRs

Exceptions:

Releases from Regulated Underground Storage Tank Systems- the release shall not be considered to have been discovered for the purposes of this section.

Naturally Occurring Background Metals at the Time of Discovery

- There are new default values for various metals found in Connecticut soils
- Metal Concentration ≤ Natural Background = No release = no reporting and no tiering





REPORTING NEWLY DISCOVERED EXISTING RELEASES

Report Required- Reporting timeframe based on level of risk

- Imminent Hazard Shall be reported within the first two hours of discovery
- SER Shall be reported within the first 72 hours of discovery
- Other releases Shall be reported within 120 days* of discovery
- Lesser releases Shall be reported within 365 days* of discovery if less than 2x applicable cleanup standard
- Reporting exemptions include releases required to be reported pursuant to the Release Reporting Regulations and incidental releases

*releases remediated to the cleanup standards and verified by an LEP prior to 120 or 365 days do not need to be reported

REPORTING NEWLY DISCOVERED **EXISTING** RELEASES

Contents of Report – described in the regulation and submitted on forms provided by the Commissioner.

Reports of SERs by non-RP - If the person who discovers a significant existing release (SER) has authorized access to the geographic area of the release, notify RP within one hour of discovery.

Reports of Existing Releases at Transfer Act site- Report the release under the RBCRs if the parcel is required to be investigated and remediated under the Transfer Act.

If already being investigated and remediated under the Transfer Act, and there is no immediate action required, report and specify whether remediation will occur pursuant to the RBCRs or the Transfer Act.



CHARACTERIZATION OF DISCOVERED RELEASES

Requirement to Characterize Nature and Extent of a Release

- Determine the nature and extent of a release upon discovery. This characterization is necessary prior to determining the appropriate remedial action for an existing release and required to demonstrate satisfaction of the RBCRs.
- Characterization of a release requires developing a conceptual site model, which may include the following: topography of release area; chemical properties of substances; history of property; lab results
- Tier characterization of a release shall be completed as soon as practicable, but no later than 1 year after discovery.

Prevailing Standards and Guidelines

- Methods or protocols posted on the Department's website shall be considered prevailing standards and guidelines.
- Methods or standards used for characterization other than those specified by the Commissioner must be submitted for review



IMMEDIATE ACTIONS

Immediate Action (IA) Required

- IAs are required:
 - For all new releases required to be reported pursuant to the Release Reporting Regulations (called Emergent Reportable Releases)
 - For all Significant Existing Releases (or "SERs," the higher risk group of releases replacing the current SEH program)
- Certain, specified actions must be taken depending on the type of release and nearby receptors to quickly mitigate the release and prevent danger to human health
- IA considered complete when cleanup standard is achieved or IA transition-point is satisfied.

IMMEDIATE ACTIONS

Emergencies and Exigent Conditions

- Codifies the Department's current emergency response practices.
- Commissioner has discretion to consider ERR or SER an emergency or exigent condition and direct the response to the release.
- The Commissioner may retain a licensed spill contractor to perform address a release and recover costs and take enforcement action, including when the creator or maintainer fails to take action.
- The Commissioner's response may end at a point prior to achieving an IA endpoint or cleanup standard at which point the creator or maintainer would be responsible to continue required IAs.





Completion of cleanup is required within 1 year of discovery or the release must be Tiered



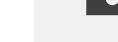
If you have submitted a Release Remediation Closure Report within 1 year of discovery that documents compliance, you would not need to Tier.



Tiering oversight increases with risk.



Tiering is objective, clear cut, Yes or No.



TIERS

TIERS CHECKLIST

Checklist is a "Form prescribed by Commissioner."

Checklist is a decision tree for evaluating work done within the first year and for subsequent tiering reevaluations.

LEPs must determine and verify the assignment to a Tier.

Appropriate, supporting documentation should accompany the checklist.

One checklist per release.

One source = one release.

Co-mingled releases: most stringent Tier would prevail.

DEEP Oversight means LEP work is overseen by DEEP, as is the case now.

TIERS CHECKLIST

Tier 1A. DEEP Oversight

Highest-risk releases.

DEEP lead.

FEWEST cases.

Unknown risks to receptors; programmatic noncompliance.

Complete closure or retier 2 years after Discovery.

Tier 1B. LEP Oversight Receptor Risk

Known risk to receptors (drinking water, vapor) must still be addressed or scoping/screening eco not completed

RAP not completed

Complete closure or retier 3 years after
Discovery

Tier 2. LEP Oversight Controlled Risk

Controlled risk, no receptor pathways

Complete closure or retier 5 years after
Discovery

Tier 3. Monitoring Oversight

Monitored Natural
Attenuation (MNA) only

Complete closure or reevaluate effectiveness of MNA 6 years after Discovery

Increased Risk

Part III: Tier Determination

wer the following questions. Any box checked in the Tier 1A Indicator column ght designates the release as Tier 1A.			
Receptors are known and documented			
A scoping level ecological risk assessment has been completed.	□ Yes □ No		
A drinking water receptor survey has been completed.	□ Yes □ No		
1c. A vapor intrusion receptor survey has been completed.	□ Yes □ No		
Does/did the release require Immediate Action under [REF TBD]	□ No (Skip to line 3) □ Yes (Proceed to 2a)		
2a. Immediate Action requirements have been met	□ Yes □ No		
3. Tier characterization is complete.	□ Yes □ No		



GENERAL CLEANUP STANDARDS PROVISIONS

This section uses existing regulatory text from the RSRs

- (a) Time-frames for issuance of approvals by the Commissioner
- (b) Environmental use restrictions
- (c) Financial assurance
- (d) Public participation (adjusted for new program)
- (e) Other requirements



KEY POINTS



•This section indicates who can attest that a cleanup has been completed.

- •The following bolded terms are further defined within the regulations:
 - LEPs can verify the clean-up of all releases
 - •PEPs can **certify** the clean-up of certain releases

PEPs CAN CERTIFY A SUBSET OF EMERGENT REPORTABLE RELEASES UNDER THESE CONDITIONS:

- (A) The approximate location and volume of such release was known at the time remediation commenced;
- (B) The substance or substances are known;
- (C) The release:
- (i) did not occur in or directly to a surface water body and has not migrated to surface water body; or
- (ii) occurred in or migrated to a surface water body, and each substance released is soluble or has a specific gravity of less than 1
- (D) The release:
- (i) consists of a substance or substances other than oil or petroleum and has not contacted groundwater; or
- (ii) consists only of oil or petroleum, is not within 500 feet of drinking water well, and has not caused a persistent impact to groundwater
- (E) Remediation is commenced within the specified time, and all immediate actions required are completed in the specified time
- (F) Soil impacted by the release is removed and properly disposed; and
- (G) A PEP who responded to and directed the cleanup of such release certifies that each of the requirements has been satisfied.

WAS THE RELEASE TO A SECONDARY CONTAINMENT SYSTEM?

DID THE RELEASE REACH SURFACE WATER?

A PEP can certify if the following conditions are met:

- The volume of the release is less than the volume the system was designed to contain; -and-
- The secondary containment system is not damaged



A PEP can certify if the following conditions are met:

- It floats and you can scoop it up; -or-
- It's soluble



HAS A RELEASE CONTACTED GROUNDWATER?

A release shall be determined to have contacted groundwater if:

- Groundwater is encountered during excavating;
- The substance is detected in a groundwater well immediately downgradient of the approximate location of the release and not more than 5 feet from the edge of the excavation; -or-
- A substance(s) released is determined to be present in the groundwater using a method specified by the Commissioner

If the above are true and the release is anything other than oil or petroleum, a PEP **cannot** certify.



HAS A RELEASE OF OIL OR PETROLEUM CAUSED PERSISTENT IMPACT TO GROUNDWATER?

A release shall be determined to have caused a persistent impact to groundwater if:

- A visible sheen remains on groundwater after three attempts within 24 hours at removing the sheen;
- One or more of the substances released is detected in a monitoring well immediately downgradient of the release and not more than 5 feet from the edge of the area of excavation 24 or more hours after completion of excavation of impacted soil; -or-
- A substance(s) released is determined to be present in the groundwater using a method specified by the Commissioner

If the above are true, groundwater has been persistently impacted by oil or petroleum and a PEP **cannot** certify.





CREDENTIALS

To determine if a license pursuant to 22a-454 can be issued, the commissioner shall consider:

- Training
- Experience
- Education
- Any additional credential or licenses



SPECIAL PATH

- Applies to tanks that heat four or fewer residential units
- The responsible party is the homeowner
- Impacts are limited to inside the house and on-site soils
- Soil removal to the maximum extent prudent
 - Can leave impacted soils if residential footing would be threatened by removal
- Closure report identifies pollution that remains
- Groundwater must be sampled if encountered
- Groundwater impact doesn't last more than 24 hours

WHY RESIDENTIAL HEATING OIL?



Not all homeowner insurance policies cover heating fuel tank releases



Currently, residential home heating fuel tanks are exempt from DEEP's UST Regulations.



DEEP is seeing an increase in releases from residential tanks as the tanks age



Residential home heating tanks do not have the same leak detection equipment as regulated tanks; therefore, releases are often discovered when homeowners have more frequent deliveries.



Heating oil contamination is well understood and biodegrades



There were over 477 residential oil tank releases reported to DEEP in 2023.



CLEANUP STANDARDS FOR SOIL

- This section uses existing regulatory text from the RSRs
- Including soil criteria, DEC, PMC, variances and the other provisions previously in 22a-133k-2 (Relevant appendices are also being carried over from the RSRs)
- With the addition of new provisions:
 - historically impacted material permit-by-rule
 - managing inaccessible soil under parking lots, roadways and buildings
 - two new exposure scenarios managed multi-family residential and passive recreation
 - •LEP implemented, risk-based alternative direct exposure criteria

Connecticut Department of Energy & Environmental Protection

ADDITIONS TO THE SOIL CLEANUP STANDARDS

DIRECT EXPOSURE CRITERIA

Managed Multifamily Residential DEC

A release may qualify if the parcel has more than 4 residential units and the parcel and residential units are managed by an association or professional property management company

Will require an EUR prohibiting the disturbance of soil by residents and active recreation without impervious cover

Passive Recreation Residential DEC

Can be cleaned up to the passive recreation DEC if it is:

- (1) subjected to an EUR or
- (2) has a passive recreation conservation easement

Examples of passive recreation include: hiking trails, bike paths, horse trails

USE OF PERMITS BY RULE

HISTORICALLY IMPACTED MATERIAL

Applicability

- Industrial/commercial sites only with confirmed presence of historically impacted material

Notification

- A form prescribed by the Commissioner to notify the Department an owner is seeking cover under the permit by rule

Requirements

- Maintain Industrial/Commercial use
- Cannot relocate historically impacted material parcel except as allowed by cleanup standards
- Notify any new owner or interest holder of the permit by rule
- Record an affidavit of facts on the land records
- Submit a closure report
- Conduct inspections every 5 years to demonstrate compliance

MANAGING SOIL BENEATH PARKING LOTS, ROADS AND BUILDINGS

Inaccessible soil at a release area is not required to be remediated to the direct exposure criteria if the soil is located beneath concrete or bituminous concrete used for parking or vehicle travel or below a building foundation.

Similar administrative requirements as the historically impacted material permit by rule

- submit document to Commissioner that verifies compliance,
- record an affidavit of facts on the land records,
- inspect every 5 years and report to the Commissioner on condition of concrete

Connecticut Department of Energy & Environmental Protection

CLEANUP STANDARDS FOR GROUNDWATER



This section uses existing regulatory text from the RSRs

- (a) Groundwater criteria
- (b) Alternative surface water protection criteria
- (c) Volatilization criteria
- (d) Groundwater protection criteria
- (e) Technical impracticability variance
- (f) Conditional exemption for incidental sources
- (g) Conditional exemption for groundwater polluted with pesticides
- (h) Applying the groundwater criteria
- (i) Additional polluting substances
- (j) Additional remediation of groundwater

Relevant appendices are also being carried over from the RSRs



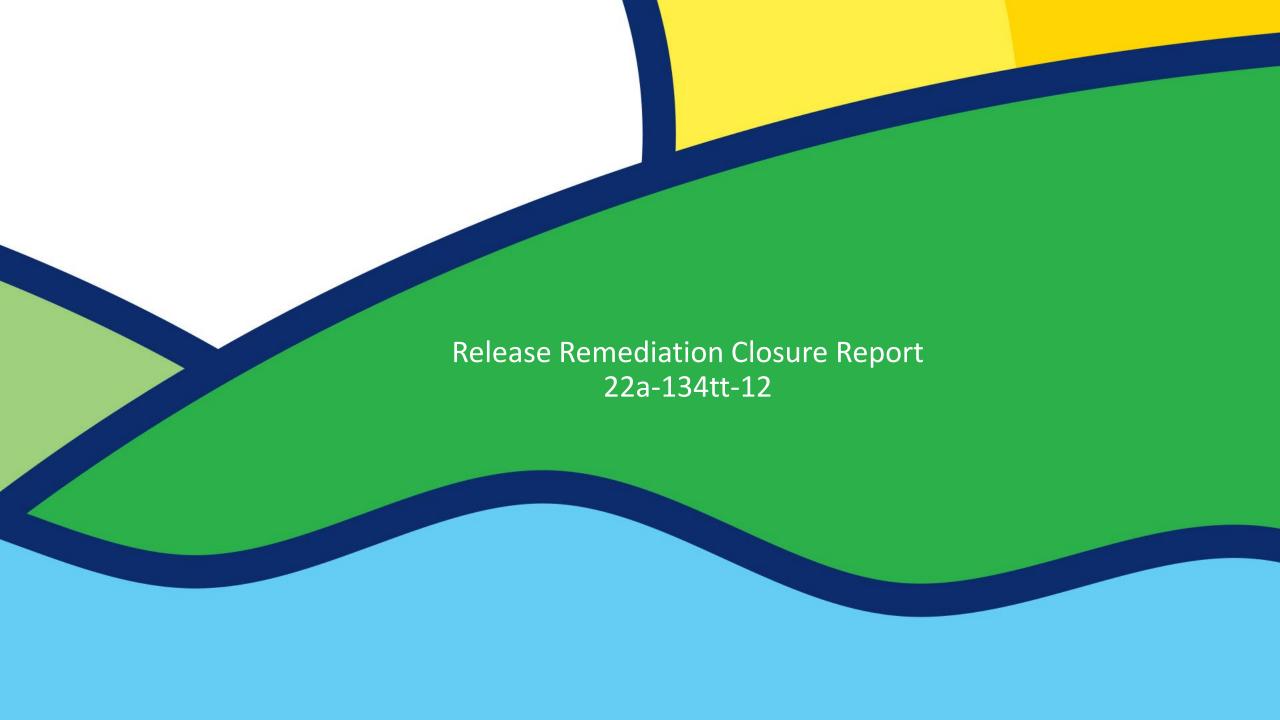
VERIFICATION AND CERTIFICATION

LEPs can **verify**

- Immediate Action reports
- Tier assignment
- Changes in tier assignment
- Release remediation closure reports, except for the limited universe where certification is specified

PEP can certify or LEP can verify

- Immediate Action reports generated as a result of an immediate action where certification is specified (RCSA § 22a-134tt-5(g))
- Release remediation closure report where certification is specified (RCSA § 22a-134tt-8)



RELEASE REMEDIATION CLOSURE REPORT

Upon achieving applicable cleanup standards for a release, a release remediation closure report must be prepared and, in some circumstances, submitted to the Commissioner.

Contents of the Report:

- •Prepared on a form prescribed by the Commissioner
- •Name, phone number, and email address of the creator/maintainer
- •Location of release, including property address and GIS coordinates
- Date of discovery
- Date of reporting (if reporting was required)
- Date of first tier assignment (if tier assignment was required)
- Release records
- Remediation records
- •LEP's verification or, for a small subset of releases, PEP's certification

Note: some reports will be retained and not submitted to DEEP



WHAT TO DO WITH A RELEASE REMEDIATION CLOSURE REPORT

- Submit it to the commissioner, if:
 - The report is for an ERR;
 - The release was an existing release required to be reported;
 - For reports that were not required to be submitted to DEEP, within 30 days if the commissioner requests the report
- Creator/maintainer must retain the report for 10 years







WHAT CAN BE AUDITED?

Any release record can be audited

LEP Verified Records

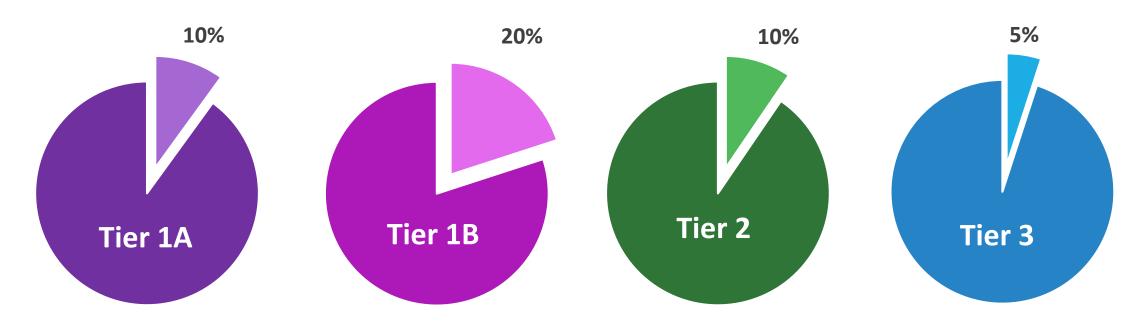
- IA reports
- Tier assignments (including tier changes)
- Release remediation closure reports

PEP Certified Records

- IA reports
- Release remediation closure reports

FREQUENCY OF AUDITS

Goal is to conduct audits on a percentage of releases from each tier based on the initial tier assignment:



Types of Audits and Process

Туре	What	Notice of Audit	Possible Outcomes	Timeline
Screening	Review of 1 release record	0	Accept (no written notice) Reject	
			> Focused audit	Complete: 180 days
			ズ Full audit*	
Focused	Review of 1 release record or issue identified during screening audit	☑	Accept Reject	Initiate: 180 days Complete: 18 mo.
			> <i>><i audit*<="" full="" ti=""></i></i>	
Full	Review of any or all release records AFTER submission of a closure report		Accept Reject	Initiate: 180 days** Complete: 2 yrs.

^{*}A full audit may be initiated only after closure documentation has been received

^{**}Unless continued from a focused audit



NEXT STEPS

Accept written comments until **February 6, 2024**;

Discuss these comments at two monthly working group meetings held on **February 13** and **March 12**, **2024**; and

Post a notice of intent to adopt the RBCRs <u>no earlier than</u> **April 1, 2024**.



