

REMEDIATION ROUNDTABLE

September 8, 2015



Connecticut Department of Energy and Environmental Protection

www.ct.gov/deep/remediationroundtable

Thank You

Thank you to those who participated in the June Roundtable's large group discussion and the extra session on Tuesday June 23rd

- 5 written responses
- 17 members of the public
- 19 DEEP staff



Connecticut Department of Energy and Environmental Protection

CAMILLE FONTANELLA

Agenda



- UST Compliance, Closure, Release Response and Corrective Action
- Transformation Components: Wave 2 RSR and Planning & Standards Updates
- Updates/Announcements
- SAFER Child Care Centers
- Guidance for SEH Self-Implementation
- Surveys for EURs
- Electronic Submittals for the Remediation Division



Underground Storage Tank Facilities

Operational Compliance, Tank Closure,
Release Response and Corrective Action

Peter Zack
Assistant Director
Emergency Response & Spill Prevention Division



Connecticut Department of Energy and Environmental Protection

UST Facilities Covered by this Presentation

➤ Includes

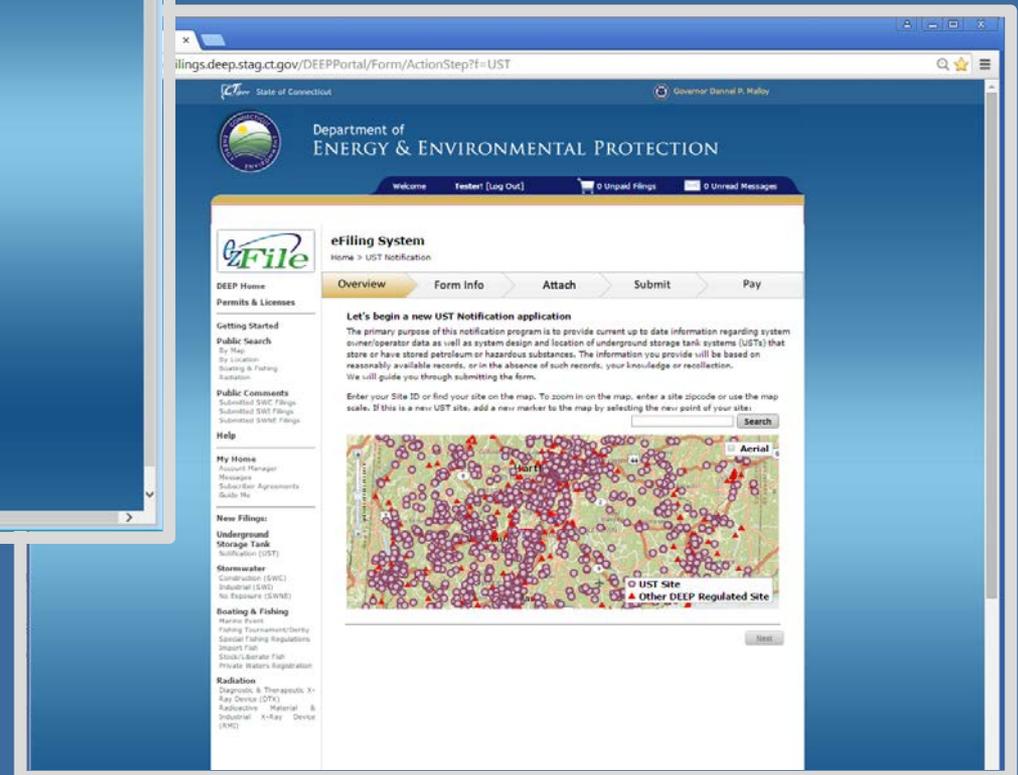
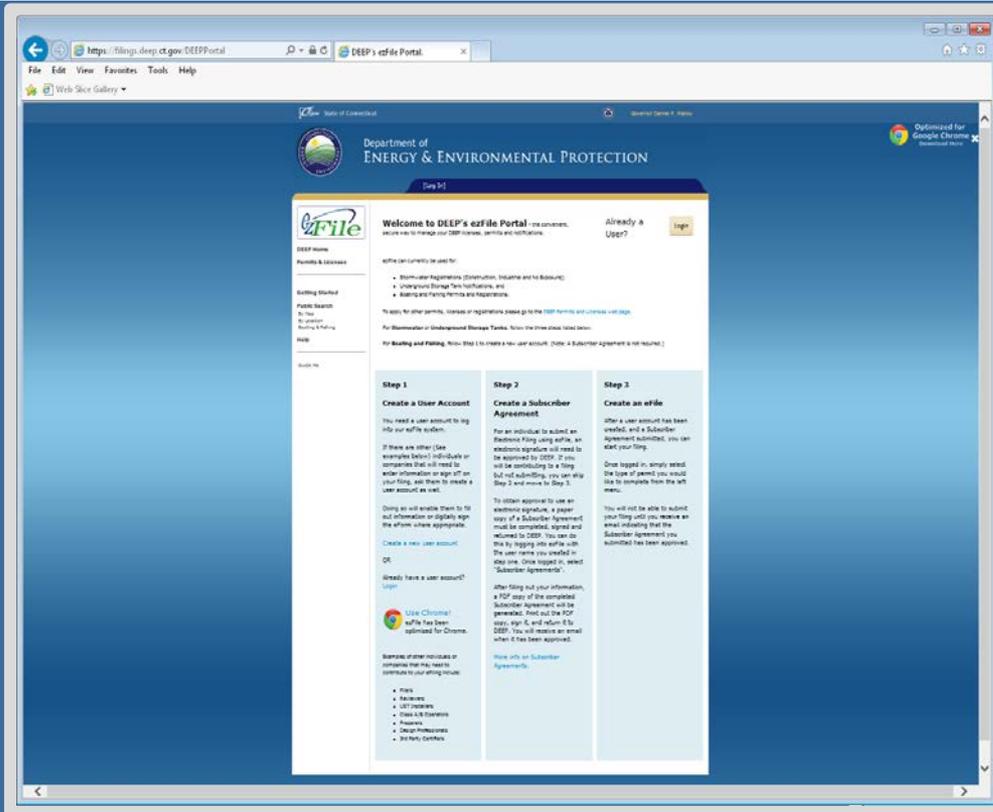
- USTs storing motor fuel including gasoline, diesel, aviation fuel and heating fuel for resale
- USTs found at gas stations, marinas, private and public fleet operations, backup power generators and heating fuel distributors

➤ Excludes

- Residential USTs and commercial USTs storing heating fuel for onsite heating



UST Notification – Annual and Modifications



Connecticut Department of Energy and Environmental Protection

Peter Zack



Goal: 100 %

**Electronic Filing
Required As of
August 1, 2015**

**Deadline for Annual Notification
and Payment October 10, 2015**

<https://filings.deep.ct.gov/DEEPPortal/>



UST Operation and Maintenance



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Preparing for a UST Inspection

- Inspections are **unannounced**
- EPA requires DEEP to inspect each facility at least once every **3** years
- All documentation is required to be available and presented to the Inspector
- Electronic records must be accessible on site for the Inspector



Top 10 UST Violations

1. Annual Line Leak Detector Testing Not Conducted
2. Annual Cathodic Protection Test Not Conducted
3. Annual Tightness Test for Pressurized Piping Not Conducted



Top 10 UST Violations

4. Spill Bucket is Not Free of Liquid or is Damaged

5. Piping Sump is Not Free of Liquid

6. Monthly Visual Inspections Not Performed

* fillable Word and pdf form available on DEEP website

http://www.ct.gov/deep/cwp/view.asp?a=2692&q=322598&deepNav_GID=1652



Top 10 UST Violations

7. Release Detection Documentation Not Available
 - 0.2 gal/hour Test
 - Interstitial Monitoring
 - Inventory Control and Reconciliation
8. Temporarily Closed UST Not Empty of Product
9. Operator Training Not Completed
10. Release Detection Not Performed



Class A, B, and C Operator Training

- Connecticut NO LONGER offers reciprocity for other New England State Operator Training Programs
- Operators must be certified through a Connecticut approved UST Operator Training Program

http://www.ct.gov/deep/cwp/view.asp?a=2692&q=505750&depNav_GIS=1652



Class A, B, and C Operator Training

Non-compliance resulting in a Notice of Violation (NOV) or formal enforcement action requires Operator Retraining for certain types of violations including

- Release Detection not performed
- Financial Responsibility not in place
- Monthly Visual Inspections not completed

These violations are also “red tagable”

http://www.ct.gov/deep/cwp/view.asp?a=2692&q=505750&depNav_GIS=1652



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Monthly Visual Inspections


Connecticut Department of Energy & Environmental Protection
 Bureau of Hazardous Materials Management & Compliance Assurance
 Emergency Response & Spill Prevention Division

UST Monthly Visual Inspection Report - Month/Year

RCRA Section 224.449(d)-109(c)(2) requires monthly visual inspections by or under the direction of the Class A or B Operator at each Underground Storage Tank (UST) facility. These inspections must be documented including all findings and repairs made and the inspection reports maintained onsite for no less than 3 years.

Part I: Facility Name, ID, and Address
 UST Facility ID: _____
 UST Facility Name: _____
 UST Facility Address: _____

Part II: Inspection Items

Items listed in 224.449(d)-109(c)(2)(C)	no defect	defect	Tank ID					
Vent Risers: each riser shows no visible damage.	<input type="checkbox"/>	<input type="checkbox"/>						
Pressure/vacuum vent caps: each pressure/vacuum vent cap and/or rain cap shows no visible damage.	<input type="checkbox"/>	<input type="checkbox"/>						
Spill buckets: each spill bucket shows no presence of oil, water, or debris.	<input type="checkbox"/>	<input type="checkbox"/>						
New piping containment sumps: each sump shows no presence of oil, water, or debris. Sensors properly placed.	<input type="checkbox"/>	<input type="checkbox"/>						
Dry break poppet valves: each valve forms a continuous seal, depresses evenly across the valve seat, & reseals properly.	<input type="checkbox"/>	<input type="checkbox"/>						
Overfill devices: Inspected within the last year. "ANNUAL INSPECTION"	DATE							
			Dispenser #					
			<input type="checkbox"/>					
New under-dispenser containment sumps: each sump shows no presence of oil, water, debris. Sensors properly placed.	<input type="checkbox"/>	<input type="checkbox"/>						
Motor fuel dispenser hoses: there are no leaks, leaks, holes, kinks, crimps, or defects of any kind.	<input type="checkbox"/>	<input type="checkbox"/>						
Motor fuel dispenser cabinet interiors: shows no evidence of leaking components and shows no oil, water, or debris present.	<input type="checkbox"/>	<input type="checkbox"/>						
Transfer and dispensing areas: any release has been reported and cleaned in accordance with all applicable federal, state, and local requirements.	<input type="checkbox"/>	<input type="checkbox"/>						
Leak and product monitoring device alarm annunciation panels: there is proper operation of leak and product monitoring and detection systems.	<input type="checkbox"/>	<input type="checkbox"/>						

See Page 2
For Additional Requirements

Rev. 10/23/14

Page 1 of 2

Part II: Inspection Items - Continued
Leak and product monitoring device alarm annunciation panels: there is proper operation of leak and product monitoring and detection systems. ***See Page 2***

System Type	Check for	Findings/Comments
1. Automatic Tank Gauge (ATG) with Inventory Reconciliation	Pressing test reports - print & filed - alarm histories, sensor status reports	
2. Continuous Interstitial Monitoring	Inventory reconciled weekly, within acceptable tolerance, & filed	
3. Other - type	Sensor status report - print & filed - alarm history	

III: Repair and Maintenance Notes
 Repair and Maintenance Notes: _____

Name and Signature of Person Conducting Inspection, and Names of Class A and for Class B or Monthly Inspection

 Name of Person Conducting Inspection Signature of Person Conducting Inspection Name of Class A or B Operator under inspection

Rev. 10/23/2014

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http://www.ct.gov/deep/cwp/view.asp?a=2692&q=322598&deepNav_GID=1652



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Financial Responsibility (FR)

Insurance is the most common mechanism

Owners/operators are required to notify DEEP
of any changes to FR coverage



Release Reporting, Investigation and Confirmation

Section 22a-449(d)-105

(a) Reporting of suspected releases

- **Must** report following conditions
 - discovery of released regulated substance at the site or surrounding area – includes, discovery's by the owners, operators or others
 - unusual operating conditions observed
 - monitoring results from a leak detection system

**Report by calling DEEP UST Enforcement
860-424-3374**



Release Reporting, Investigation, and Confirmation

Section 22a-449(d)-105 (cont'd)

(b) Investigation due to off-site impacts

- DEEP can require UST owner/operator to perform release investigation

(c) Release investigation and confirmation steps

- Test and repair UST System
- Perform "site check" if system is tight

(d) Reporting and cleanup of spills and overfills

For Confirmed Releases Call DEEP Spill Reporting

860-424-3338



Release Response and Corrective Action

Sec. 22a-449(d)-106

- Discharges Prohibited

No owner or operator shall discharge any water, substance or material from a UST system without a permit (22a-430)

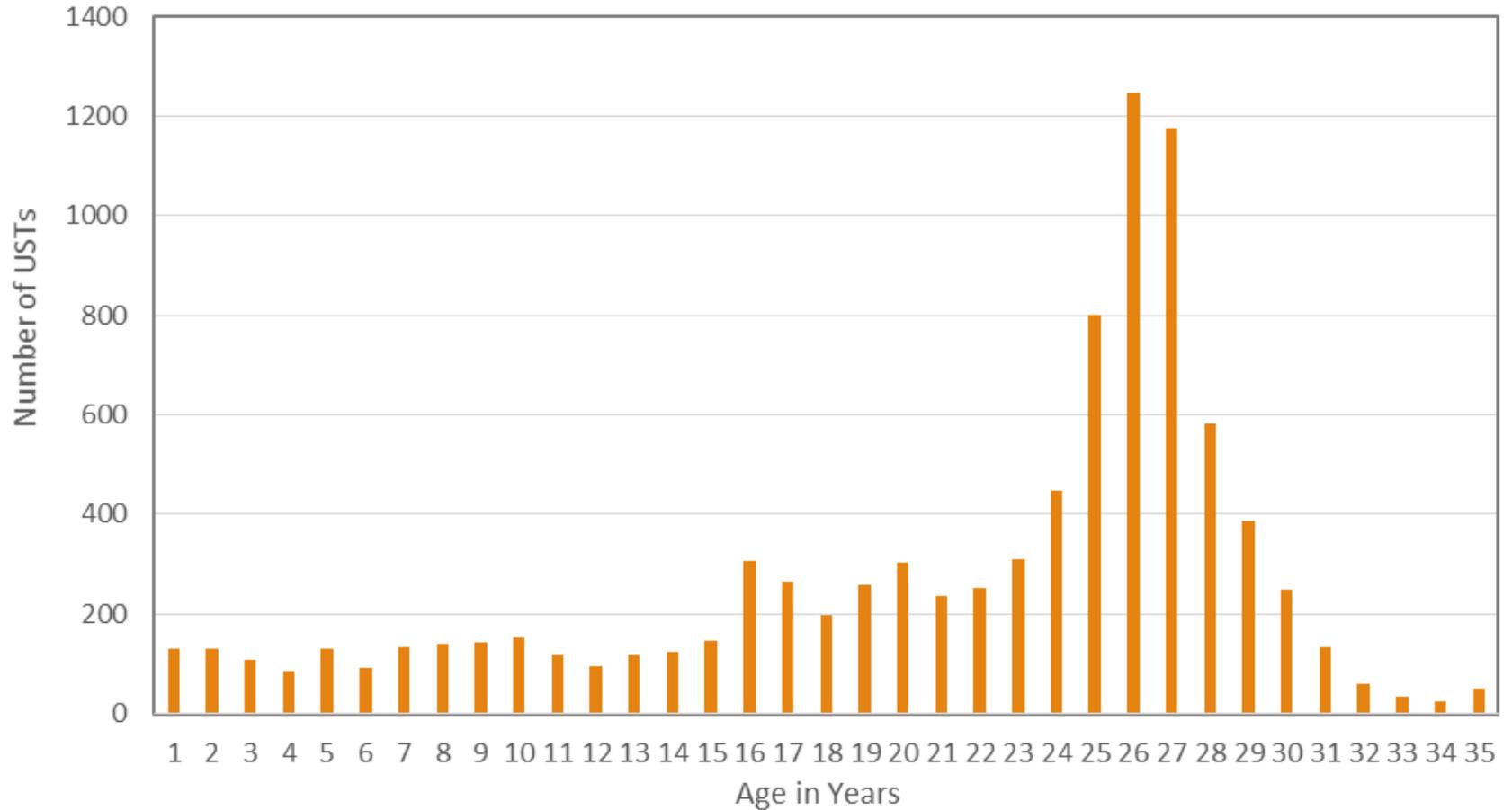
- Corrective Action

Owners and operators that discharge without a permit must restore the environment to a condition and quality acceptable to the commissioner (RSRs)



Tank Closure (removal or in-place)

Aging Tank Population



Pre-Notification of Tank Closure

- Notification to DEEP is required at least 30 days before beginning permanent closure of an UST
- Notification can be a phone call, letter, fax, or email DEEP.USTEnforcement@ct.gov
- Notification can be made by the owner, operator, or contractor
- Closure can be abandonment in place, but is not recommended



Sampling and Analytical Methods for Tank Closure

Individual soil samples should be obtained from

- Underlying soil at each end of the UST and at the level of the tank bottom from each sidewall
- If groundwater is present, at the level of the water from each sidewall and the groundwater
- Beneath dispensers and product lines in the vicinity of fittings and at no more than 20 foot intervals

http://www.ct.gov/deep/cwp/view.asp?a=2692&q=322592&deepNav_GID=1652



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Sampling and Analytical Methods for Tank Closure

- All samples should be analyzed for substances stored in the tank- Appropriate analytical methods can be found on the DEEP website

http://www.ct.gov/deep/cwp/view.asp?a=2692&q=322592&deepNav_GID=1652

- Analyses must be performed by a laboratory certified by the Connecticut Department of Public Health
- If contaminated soil, contaminated groundwater, or free product as a liquid or vapor is observed on site or detected by sample analysis, the CT DEEP Emergency Response Unit must be immediately notified at **(860) 424-3338** and corrective action started (Sec. 22a-449(d)-105)



Notification Tank was Closed

- Notify within 30 days through 
- Include required information on closure sampling results
- Must indicate if contaminants were detected or not
- Must submit Closure Report if contaminants are detected above the RSRs (attach as a pdf. file)



New EPA Rules

Changes not already covered by Connecticut

- Spill prevention equipment must be tested annually or include a double-walled bucket with interstitial monitoring
- Overfill and Secondary Containment must be tested every 3 years
- Release detection will be required for emergency power generator USTs



More EPA Changes

- Interstitial monitoring alarms added as an example of unusual operating condition under release reports
- Interstitial integrity testing for secondarily contained tanks added under release investigation and confirmation

EPA will not enforce new requirements in Connecticut right away



U.S. EPA Revised UST Regs

For details on EPA's revisions to the UST Regulations, see the EPA website at:

<http://www.epa.gov/oust/fedlaws/revregs.html>



Questions/Comments

Storage Tank & PCB Enforcement Unit

www.ct.gov/deep/ust

(860) 424-3374



Connecticut Department of Energy and Environmental Protection

Peter Zack

Transformation Component: RSR Wave 2 Amendments

Robert Bell
Remediation Division
Assistant Director



Connecticut Department of Energy and Environmental Protection



Draft Wave 2 Proposed RSRs Revisions

22a-133k-1

(a) Definitions (New or Modified)

Anthropogenic influence

Background concentration

Engineered control

Environmentally isolated soil

EPH/VPH/APH

Historically impacted materials

Inaccessible soil

Intermittent watercourse

Naturally occurring concentration

Prudent

Residential activity

TI Zone



22a-133k-1 (continued)

(b) Applicability

(c) Time frames for Issuance of Approvals by the Commissioner

(d) Public Participation

(e) Periodic review

(f) Use of Form Prescribed by the Commissioner

(g) Remediation of Soils Polluted with Lead



22a-133k-2 SOIL

(a) General

(b) **Direct Exposure Criteria**

(1) General

(2) Industrial/Commercial Areas

(3) Exceptions

(4) Incidental Sources

(5) Additional Polluting Substances



(c) Pollutant Mobility Criteria

(1) General

(2) Specific Circumstances

(A) Soils Polluted in a GA Area.

(B) Soils Polluted With Volatile Organic Substances in a GA area

(C) Polluted Soils Inorganic, semi-volatile, PCB or pesticide contamination in a GA area

(D) Polluted Soil in a GB Area

(E) Site specific dilution in a GB Area

(3) Determining the Presence of NAPLs in Soil

(4) Exceptions

(A) Environmentally Isolated Soils

(B) Polluted Fill

(C) **PMC does not apply (other than VOCs)**

(5) Incidental Sources

(6) Additional Polluting Substances



(d) Alternative Soil Criteria

(e) Applying the DEC and PMC

(1) 95% UCL or applicable DEC

(2) 95% UCL or applicable PMC

(3) Matrix Interference

(f) Variances

(1) Widespread Polluted Fill

(2) Engineered Control of Polluted Soils

(g) Removal of Non-aqueous Phase Liquids

(h) Use of Polluted Soil

(i) Additional remediation of soil



22a-133k-3 Groundwater

(a) General

(b) Surface-water protection criteria

(1) General Requirements

(2) Specific Circumstances

(3) Alternative surface-water protection criteria

(A) Self-implementing Alternative SWPC

(B) Commissioner approval Alternative SWPC

(New) self-implementing dilution Alternative SWPC

(New) Commissioner Approval dilution Alternative SWPC

(NEW) Additional Polluting Substances

(C) Aquatic Life Water Quality Value

(D) Human Health Water Quality Value

(E) SWPC Calculations For Additional Polluting Substances



22a-133k-3 Groundwater (continued)

(c) Volatilization criteria

- (1) Residential Volatilization Criteria For Groundwater
- (2) Industrial/Commercial Volatilization Criteria For Groundwater
- (3) Volatilization Criteria For Soil Vapor
- (4) Site-specific and alternative volatilization criteria
 - (A) Site specific residential Vol Criteria
 - (B) Commissioner Approval Alternative Vol Criteria

(NEW) Additional Polluting Substances

- (5) Exemption from volatilization criteria.
 - (A) No Building Impacted
 - (B) Indoor Air Monitoring
 - (C) Measures To Prevent Migration

(d) Applicability of Ground-water Protection Criteria

- (1) General Requirements**
- (2) Specific Requirements
- (3) Groundwater in GB area (existing use)

(New) Alternative GWPC

- (A) Self-implementing Alternative GWPC**
- (B) Commissioner Approval Alternative GWPC**

22a-133k-3 Groundwater (continued)

(e) Technical Impracticability of Groundwater Remediation

(1) Exemption from Background Due to Technical Impracticability

(2) Variance Due to Technical Impracticability of Ground-water Remediation

(f) Incidental Sources

(g) Applying the Criteria for Ground Water

(1) Ground-water Monitoring

(2) Compliance with Criteria for Ground Water

(New) Monitoring Natural Attenuation

(New) Upgradient groundwater sources

(3) Matrix Interference

(h) Additional Polluting Substances

(i) Additional Remediation of Ground Water



Main Focus of Revisions

Some of the main focuses of these proposed revisions are to make the RSRs more effective by:

- Providing additional options for exemptions and variances
- Correcting inefficiencies that have been identified in the original language
- Increasing the availability of self-implementing options
- Consolidating the presentation of topics
- Clarifying language
- Streamlining processes
- Keeping up with advances in science and technology



Not Amended

The proposed Wave 2 changes are not expected to include:

- Changes to numerical criteria (deferred to pending implementation of a science advisory board)
- Specific language regarding ecological and human exposure risk assessments
- Specific language regarding sediment



Schedule Going Forward

- “90%” Roll out of Wave 2 language Dec/Jan period
 - Including descriptive text of intent of amendments
 - Feedback on content
- Informational sessions
 - Multiple informal outreach sessions will be scheduled - anticipated in January
 - Q&A sessions for full package and targeted topics/sections – possible
- Formal Public Hearing Draft and Comment Period
 - Anticipated March 2016



Questions / Comments

Please speak loudly.



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Planning & Standards Updates

- APS
- Science Advisory Panel
- Groundwater Reclassification

Robert Hust
Planning & Standards Division
Assistant Director



Questions / Comments

Please speak loudly.



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Website Updates

Posted:

- Revised
 - RSR Approval/Notice Request form
 - Completion of Investigation Transmittal form
 - Federal Brownfield and State Brownfield pages
- New
 - Discussion Document on Surveys for EURs
 - SEH Fact Sheet
 - SEH FAQs
 - SEH Quick Summary



Website Updates

Coming soon...

- CT Brownfield Inventory
- Interim Verification Form for BRRP
- FTP website for Electronic Submittal



Announcements

- Completion of Investigation overdue letters



Connecticut Department of Energy and Environmental Protection

CAMILLE FONTANELLA

Coming soon.... to December ROUNDTABLE

Verification Form “Oopsies”

Since 1/1/15 (as of 8/14/15): 74 verifications received
35 NOI's issued
➤ 47% Incomplete Verifications

- Common mistakes completing a verification form
- Examples of correct entries
- Clarification of expectations for verification forms (why certain information is requested on verification form)



Questions / Comments

Please speak loudly.



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Connecticut Department of Energy and Environmental Protection

THE DAYCARE IS WHERE? KEEPING CHILD CARE CENTERS SAFER



September 8, 2015

Presented by

Sharee M. Rusnak

Connecticut Dept. of Public Health

Environmental & Occupational Health Assessment Program

PURPOSE OF TODAY'S PRESENTATION

- Introduce you to the Daycare SAFER program
- Discuss how Licensed Environmental Professionals (LEPs) can help the SAFER program
- Discuss results
- Positive health impacts

WHAT IS SAFER?

- Screening Assessment for Environmental Risk
- Initiative to address licensed daycares where residual chemicals from past or current operations could pose an exposure concern



WHAT PROMPTED US TO BE CONCERNED:

2006 Kiddie Kollege Daycare Closure (New Jersey)



COULD IT HAPPEN IN CONNECTICUT?

- Reuse of manu/ind/agr sites for daycare
- No requirement for past land use evaluation
- Lack of awareness at local level
- Until SAFER, not much coordination between DPH sites unit and daycare unit

WHY ARE CHILDREN MOST VULNERABLE TO ENVIRONMENTAL HAZARDS?

- Their bodies are still growing and developing
- They play more intensely on the ground
- They have more hand to mouth contact, especially if <2 years old



DAYCARE SAFER PROTOCOL OVERVIEW

4 Ways to identify daycares with potential environmental concerns:

1. Electronic database comparison
2. Manual cross check of new daycares
3. Inspector referral form
4. Property history questionnaire for daycare
licensing applicants



Referral to EOHA for follow-up

EOHA ROLE DURING FOLLOWUP

- File reviews
- Site visits
- Ensure data gaps are filled
- Recommendations to reduce exposure
- Coordination
- Risk Communication
- Documentation

WE WORK JOINTLY WITH OTHER DPH PROGRAMS FOR SOME ISSUES:

- Lead paint or asbestos in buildings
- Well contamination

WHAT THE DAYCARE PROTOCOL DOES NOT COVER:

- Family daycare homes

WHAT WE HAVE EXPERIENCED SO FAR SINCE 2007 ROLLOUT

Manual Cross Check of New Daycares

- 5 w/ leaking USTs
- 1 former industrial site (East Hampton)

Daycare Licensing Inspector Referral Form

- 2 former funeral homes
- 7 on/adjacent to former industrial sites
- 1 auto paint store
- 3 nail salons
- 3 millplexes

WHAT WE HAVE EXPERIENCED SO FAR (Cont)

Property History Questionnaire

- 12 with Environmental Site Assessments
- 1 nail salon/1 hair salon
- 1 former machine shop
- 1 former dairy farm
- 1 former dry cleaner
- 1 former printing company

Case Studies

DAYCARE CENTER EAST HAMPTON, CT



FORMER HERBICIDE/INSECTICIDE FACTORY



FORMER HERBICIDE/INSECTICIDE FACTORY, STRATFORD

- New daycare for mentally handicapped children
- Soil has moderate to high levels of arsenic
- With assistance of EOHA and LHD, site was remediated

ADJACENT BUSINESSES

- Can be a concern if co-located within the same building
- Not a concern if located several or more doors away in the same strip mall
- Businesses of potential concern:
 - Dry cleaners
 - Nail salon/hair salon
 - Auto repair/auto painting shop
 - Copy/print shop

DAYCARE ADJACENT TO NAIL SALON



HOW LEPS CAN HELP THE DAYCARE SAFER PROGRAM

Inform DEEP and DPH SAFER Program when:

- Doing a Phase I ESA for a client who wants to open up a daycare on a property and the past use of the property is agr/manu/ind
- Performing remedial investigations/work near or on a daycare property
- The future use of a property might be a daycare

HOW LEPS CAN HELP THE DAYCARE SAFER PROGRAM (Cont)

Please inform DPH SAFER program and DEEP if Daycare is located on a property that was ever used as a:

- Dry cleaner
- Gas station
- Auto shop
- Factory/Man/Ind
- Metal Plating
- Shooting range
- Metal Plating
- Farming/Agriculture
- Hair/Nail salon
- Funeral home

POSITIVE HEALTH IMPACTS

- Awareness about SAFER program has increased
- Referral process is working
- Issues are successfully addressed
- SAFER has been a vehicle for improved environmental health practices in daycares
- Model for other state and federal programs

QUESTIONS/FEEDBACK



Significant Environmental Hazards Self-Implementation

Camille Fontanella
Remediation Division
Environmental Analyst III



Connecticut Department of Energy and Environmental Protection

Public Act 13-308



Mitigation

- **NEW** Definition and Concept of Mitigation

Mitigated = Controlled

- Interim measures that control/prevent exposure
- Some level of care needed until permanent abatement or until remediation is complete
 - Continued inspection, maintenance, or monitoring for re-validation of controlled status



Self-Implemented Response

- Amended law provides for:
 - **Automatic implementation** of initial response actions
 - standard directives formerly requested in acknowledgement letter
 - **Report of activity with proposal for further work** with notification in most cases



DEEP Response

Acknowledgment

- 10 days
- DEEP may provide additional info
- May include Approval, Disapproval, or Certification

Approval / Disapproval

- Must disapprove if not acceptable
- Shall approve acceptable report or plan
- May provide conditional approval

Additional Directives

- If disapproval DEEP shall prescribe actions
- If Ackn or conditional approval DEEP will provide directives, as necessary

Certification

- Shall certify acceptable permanent abatement
- When conditions that caused notification no longer exist



DEEP Response

- Forms include required and optional data
 - the more info provided, the more flexibility in response
- DEEP **WANTS** to approve acceptable plan or report
 - Key elements:
 - Full characterization of SEH exposure risk
 - Adequate continued care



Self-Implementation Overview

- Polluted Water Supply Well > GWPC [22a-6u(b)]
- Polluted Water Supply Well < GWPC [22a-6u(c)]
- Threatened Water Supply Wells [22a-6u(g)]
- Surface Soil Direct Exposure Risk [22a-6u(d)]
- Volatilization Pathway [22a-6u(e)]
- Surface Water Pathway [22a-6u(f)]



NEW SEH Self-Implementation

Polluted Water Supply Well > GWPC / NAPL [22a-6u(b)]

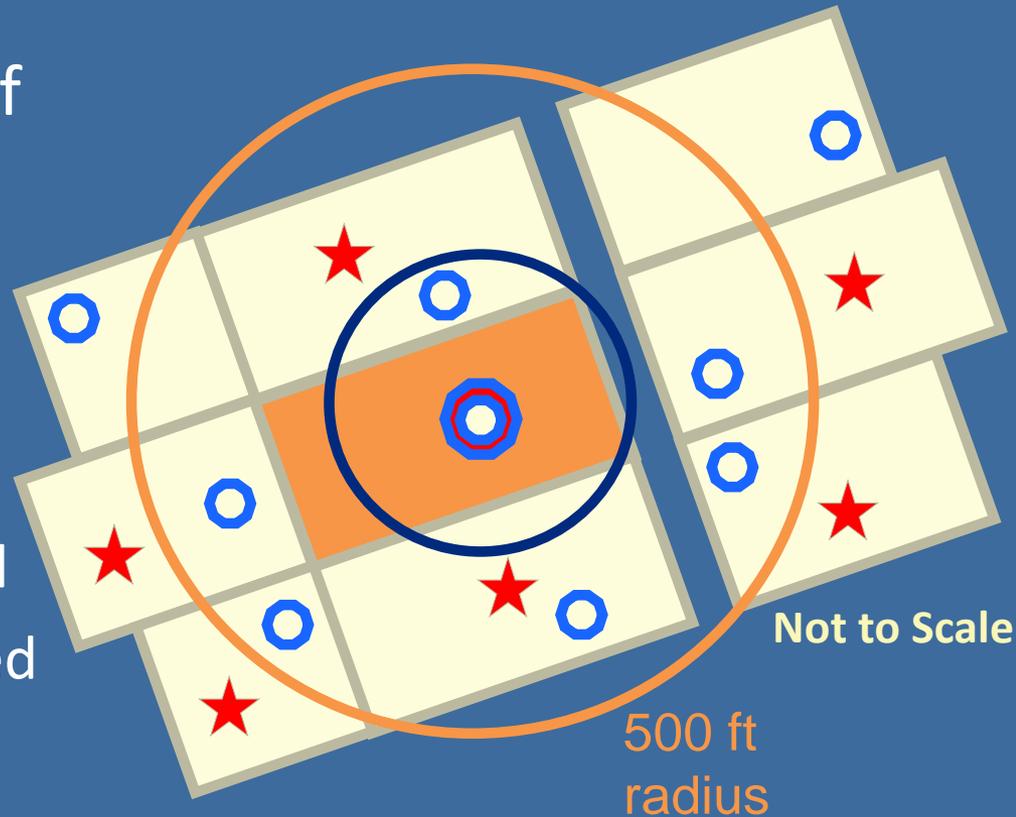
1. Verbal notification in 1 day
2. Written notification in 5 days
3. Conduct well survey for 500 foot radius
4. Seek access and test wells on **adjacent** parcels
5. Complete actions and report in 30 days
 - Due 3 weeks after written (5-day) notification
 - Actions completed above
 - **Future action proposals**



Water Supply Wells > GWPC

TECHNICAL CONSIDERATIONS

- Recommended retest of supply well to confirm
- Adjacent parcel testing
 - Only if well itself within 500 feet of polluted well
 - Include parcels separated by roads



★ = test adjacent well



NEW SEH Self-Implementation

Polluted Water Supply Well < GWPC [22a-6u(c)]

1. Retest supply well to **confirm result**
2. If retest is > GWPC, follow 22a-6u(b) requirements
 - Well survey within 500 feet
 - Seek access and test adjacent wells
3. Notify, complete actions, and submit report in 30 days
 - Actions completed above
 - **Future action proposals**



NEW SEH Self-Implementation

Threatened Water Supply Wells within
500 ft downgradient and 200 ft radius [22a-6u(g)]

1. Conduct well survey for 500 foot radius
2. Seek access and test wells on **adjacent** parcels
 - Recommended testing of any on-site well too!
3. Notify, complete actions, and submit report in 30 days
 - Actions completed above
 - **Future action proposals**



Threatened Water Supply Wells

TECHNICAL CONSIDERATIONS

- Well survey even where water service and GB areas
 - What is downgradient?
 - Without GW flow, cannot know downgradient
 - Without 3-D hydrogeologic data in bedrock, any direction could potentially be downgradient
- ➔ Recommend notification for plume within 500 ft if occupiable structures present, unless receptor survey has already determined no supply wells

Well Receptor Guidance



All Water Supply Well Hazards

30-Day Report: Future Action Proposals

- Testing of additional supply wells
 - identify and eliminate exposure within 500 feet
 - Are wells further away at risk due to hydrogeologic conditions?
- Determining source of pollution and extent of plume
- Installation of treatment systems or other mitigation
- On-going monitoring program for supply wells, monitoring wells, and/or treatment system
 - sampling locations, parameters, frequency, and **REPORTING SCHEDULE**



NEW SEH Self-Implementation

Surface Soil Direct Exposure Risk [22a-6u(d)]

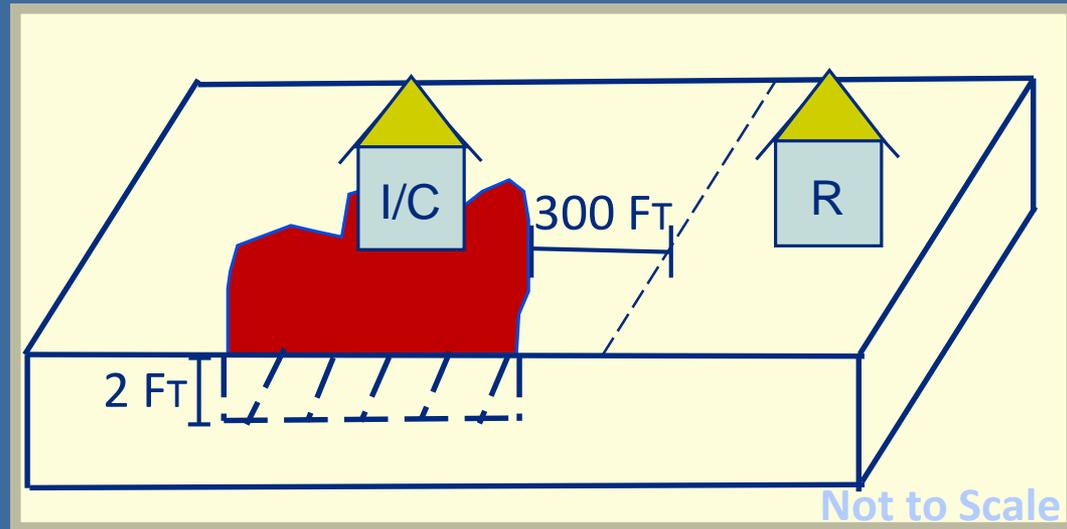
1. Evaluate extent of hazard
2. Prevent exposure via interim control
3. Notify, complete actions, and submit report in 90 days
 - Actions completed above
 - **Future action proposals**
 - (Added voluntary report of removal/inaccessible)



SURFACE SOIL

TECHNICAL CONSIDERATIONS

- 15x I/C within 300 feet of Residential Activity = distance from area exceeding hazard to residential parcel boundary



- Characterization of extent evaluates laterally and top 2 feet
- Interim Controls prevent exposure by limiting access
 - fencing, signage, pavement, other cover



SURFACE SOIL

90-Day Report: Future Action Proposals

- Additional delineation of extent exceeding SEH threshold and preventing exposure
- Plan for maintenance and monitoring of interim controls
- Annual M&M status report submittal schedule until Certification of abatement

Optional:

- Plan to remove soil above the criteria
- Construction of a more durable interim barrier to render inaccessible per RSRs
- Remediation of the site



SURFACE SOIL

Voluntary Report

- Delineation of extent exceeding SEH threshold
- Description of area removed or description of how area rendered inaccessible per RSRs
- Date abatement completed



NEW SEH Self-Implementation

Volatilization Pathway [22a-6u(e)]

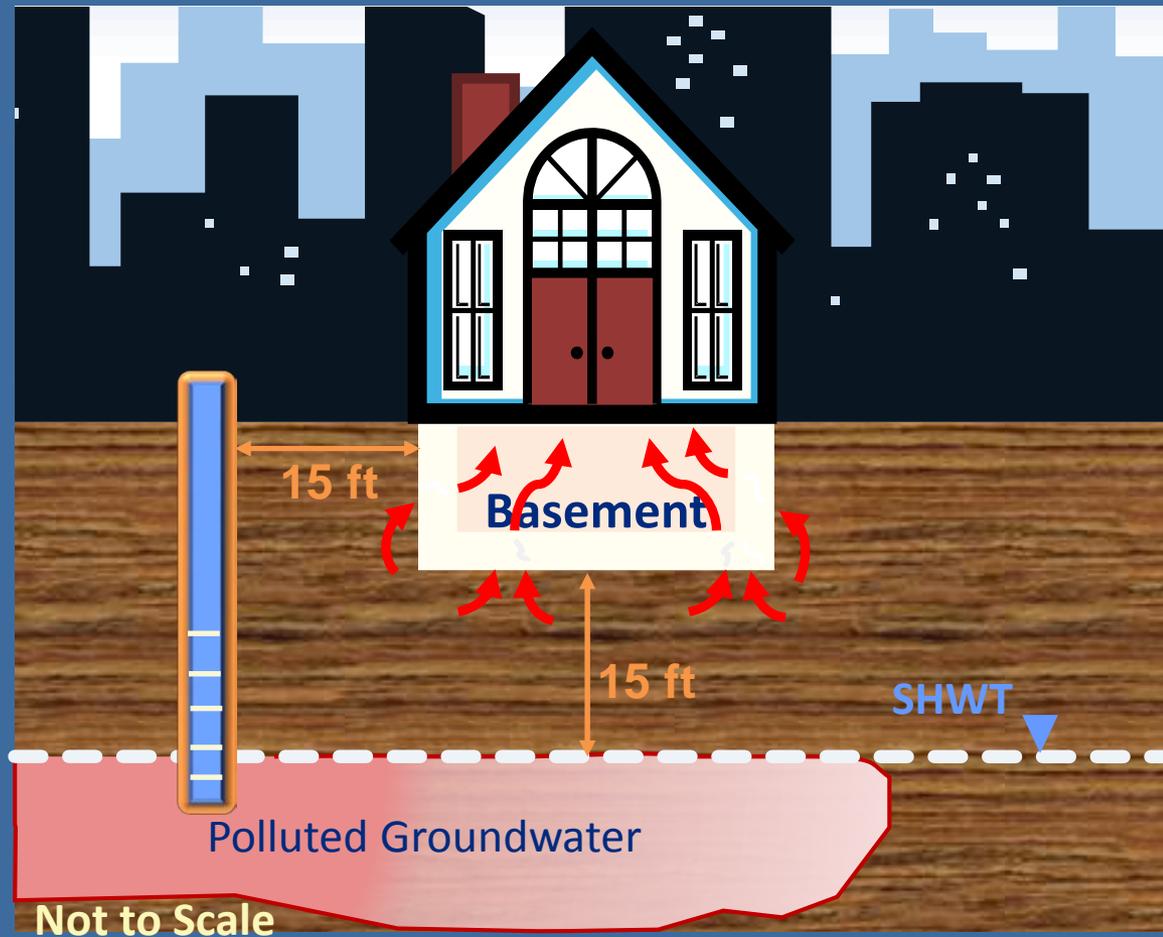
1. Notify and submit plan in 30 days
 - Plan for mitigating exposure or abating condition



VOLATILIZATION

TECHNICAL CONSIDERATIONS

- “within 15 feet” of a building
 - should use the lowest building level and
 - seasonal high groundwater elevation, if known



VOLATILIZATION

30-Day Plan to Mitigate or Abate

- Delineating area of contamination
- Evaluating soil gas or indoor air quality, if needed
- Implementing control measures, if needed
 - occupancy management, air handling, vapor controls
 - **IMPLEMENTATION SCHEDULE**
- Implementing monitoring program for soil gas or indoor air, or treatment/control system operation
 - sampling locations, analytes, frequency (seasonality!), and **REPORTING SCHEDULE**



NEW SEH Self-Implementation

Surface Water Pathway [22a-6u(f)]

1. Verbal notification in 1 day if product entering surface water (exempt if otherwise reported to Spills)
2. Written notification and plan in 30 days
 - Plan for monitoring, mitigating or abating condition



SURFACE WATER

TECHNICAL CONSIDERATIONS

- DEEP recommends low-flow sampling techniques that minimize turbidity to limit false positives
- Given broad definition of surface waters in WQS, DEEP considers most GW pollution to be potentially contributing to downgradient surface water
 - GW that contains NAPL and is near to and discharging to surface water is defined as SEH condition, even if NAPL itself is not currently entering surface water



SURFACE WATER

30-Day Plan to Monitor, Mitigate or Abate

- Define/monitor plume or NAPL extent to show does not/will not migrate into SW under varying conditions
 - Contemporaneous, field filtered sampling as per
 - [Use of Filters for Groundwater Sampling Guidance](#)
 - Demonstrate GW < SEH thresholds before discharge to SW
 - Calculate site-specific dilution in accordance with RSRs
 - [Method of Estimating the 7Q10](#)
- On-going monitoring program for periodic evaluation of GW/SW quality
 - Sampling locations, analytes, frequency, and **IMPLEMENTATION AND REPORTING SCHEDULE**
- Proposals to mitigate any surface water toxicity



DEEP Website

DEEP's updated Significant Environmental Hazards webpage

- **NEW** Quick Summary Table (July 23)
- **NEW** FAQs (July 23)
- **NEW** Fact Sheet (July 23)
- **NEW** Form (July 1)
- **NEW** Guidance and Instructions (July 1)
- **NEW** List (May 31)
- Other info and guidance



Significant Environmental Hazard Quick Summary*

Exposure Pathway	Sample Location	Threshold Values for Notification (see Tables A, B, and C)	Exceptions to Notification	Notification Timing/Method	Initial Response Requirements
Drinking Water	Water from supply well	< GWPC	Detected pollution is not associated with site investigated	30 day written	<ul style="list-style-type: none"> Retest well 30 day report with recommendations
		> GWPC or NAPL present	none	1 day verbal 5 day written	<ul style="list-style-type: none"> Well survey to 500 feet Test abutters 30 day report with recommendations
	Groundwater near the well	> GWPC within 200 foot radius or 500 feet upgradient	none	30 day written	<ul style="list-style-type: none"> 30 day report with recommendations
Surface soil (top 2 feet)	Residential property	> 15 X Res. DEC	<ul style="list-style-type: none"> Prior to 90 days Hazard abated by: <ul style="list-style-type: none"> removal > threshold inaccessible per RSRs remediated to RSRs Site in LHD lead paint abatement program TPH 	90 day written	<ul style="list-style-type: none"> Determine extent Prevent exposure 90 day report with recommendations
	Industrial/ Commercial property (I/C)	> 30x I/C DEC	<ul style="list-style-type: none"> As above for 90 day abatement TPH Specified organic chemicals list 	90 day written	
	I/C property within 300 feet of a residence, school, playground, park or daycare facility	Organic Chemicals > 30 X I/C DEC	As above	90 day written	
		PCBs and metals > 15 X I/C DEC	<ul style="list-style-type: none"> As above < 30x I/C DEC and already has well-maintained fencing/pavement 	90 day written	

Exposure Pathway	Sample Location	Threshold Values for Notification (see Tables A, B, and C)	Exceptions to Notification	Notification Timing/Method	Initial Response Requirements
Volatilization to indoor air	Groundwater within 15 feet of a structure	> 10 x Groundwater Volatilization criteria	<ul style="list-style-type: none"> • Soil vapor not > 10 X VCSV under building • < 10 X DEEP-approved site-specific value • Specified organics • Indoor air monitoring implemented • Structure vacant • Chemical in industrial use 	30 day written	<ul style="list-style-type: none"> • 30 day plan to mitigate or abate exposure
	Explosive vapors entering a structure	Explosivity meter shows any detection	If not confirmed with second reading	<ul style="list-style-type: none"> • Immediate verbal to OCSR • 7 day written 	<ul style="list-style-type: none"> • Immediate response as directed by OCSR • Contact local fire department
Surface Water	Entering surface water	NAPL	No verbal notice If OCSR notified	<ul style="list-style-type: none"> • 1 day verbal to OCSR • 30 day written 	<ul style="list-style-type: none"> • Immediate response as directed by OCSR • 30 day plan to monitor, mitigate or abate
	Groundwater near and likely entering surface water	NAPL > 10 X Acute Toxicity WQS	None None	30 day written	<ul style="list-style-type: none"> • 30 day plan to monitor, mitigate or abate

*This table is for informational "at-a-glance" purposes. Consult the statute [CGS 22a-6u] for specific wording and requirements of the law. □

SEH Quick Summary Table



Connecticut Department of Energy and Environmental Protection

CAMILLE FONTANELLA

Questions

SEH Questions contact:

Kenneth Feathers, Supervising Sanitary Engineer

860.424.3770 / kenneth.feathers@ct.gov

Camille Fontanella, Environmental Analyst III

860.424.3074 / Camille.Fontanella@ct.gov

www.ct.gov/deep/remediation

[Significant Environmental Hazards webpage](#)



Public Discussion Draft

Proposed Regulations - Surveys for Environmental Use Restrictions

Peter Hill
Supervising Environmental Analyst
Remediation Division



Connecticut Department of Energy and Environmental Protection

EUR Survey Workgroup

- Michelle Bedson – Engineer, DEEP, Remediation Division
- Bob Baron – Surveyor, DOT
- Bob Dahn – Surveyor, Meehan & Goodin
- Peter Hill – Supervising Environmental Analyst, DEEP, Remediation Division
- Steve Holtman – LEP, Woodard & Curran
- Jack Looney - Attorney, Office of the Attorney General
- Doug Pelham – Attorney, Cohn, Birnbaum & Shea
- Reese Roberts – Surveyor, Reese G Roberts Land Surveyors



EUR Survey Workgroup

- Meetings held monthly for 17 months
- **Goal Achieved** - Draft regulations “LEAN” and streamline EUR surveys
 - ✓ Discussion draft posted July 8, 2015 - Comment period closes October 30, 2015
 - ✓ EUR survey regulations will be part of the “Wave 2” RSR amendments



Purposes of EUR Survey

Short-term purpose is to depict location of subject area(s):

- To ensure subject area(s) are located appropriately to address release area; and
- To evaluate potential conflicts with the EUR.

Long-term purpose is to document conditions at the property:

- To ensure long-term protection of human health and the environment; and
- To ensure enforceability of the EUR



Existing ELUR Survey Regulations

- ELURs require a “Class A-2 Survey”
- The term “Class A-2 Survey” is defined in RCSA 22a-133q-1(a):
 - The term “Class A-2 Survey” is ambiguous
 - References superseded *“Recommended Standards for Surveys and Maps in the State of Connecticut”*;
 - References outdated *American Land Title Association and American Congress (ALTA) survey standards*; and
 - Requires a survey of the entire property to Class A-2 Standards of Accuracy – even if the ELUR applies only to a portion of the property



Proposed EUR Survey Regulations

The proposed EUR survey regulations now:

- ✓ Specify EUR survey standards and requirements;
- ✓ Are consistent with current regulations, standards, and guidelines for surveys in the State of Connecticut;
- ✓ Remove references to *Recommended Standards for Surveys and Maps in the State of Connecticut* and *ALTA*; and
- ✓ Provide flexibility when the EUR applies to only a portion of the property – potentially saving significant time and money

For Example

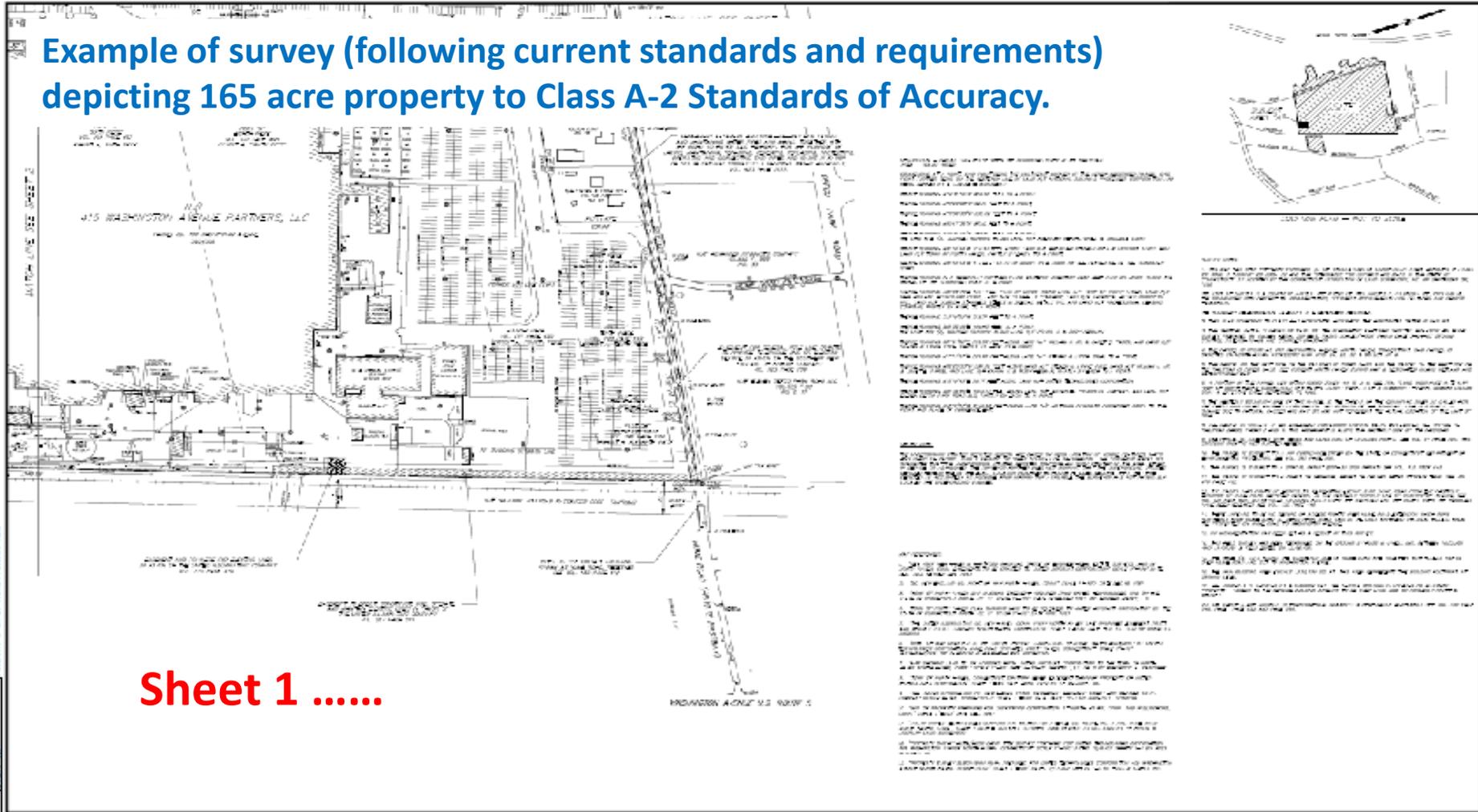


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Existing ELUR Survey Regulations

Example of survey (following current standards and requirements) depicting 165 acre property to Class A-2 Standards of Accuracy.



Sheet 1

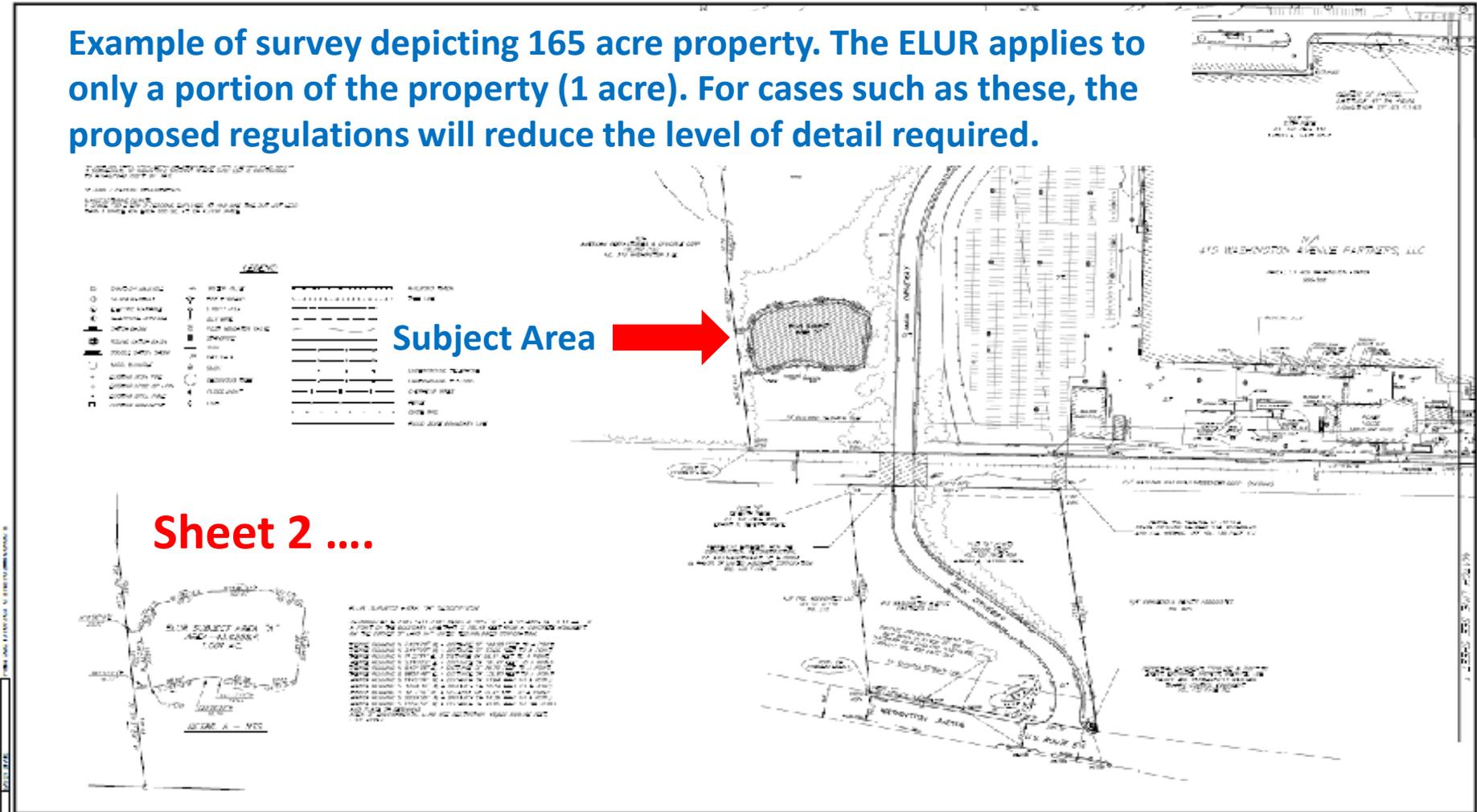


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Peter Hill

Existing ELUR Survey Regulations

Example of survey depicting 165 acre property. The ELUR applies to only a portion of the property (1 acre). For cases such as these, the proposed regulations will reduce the level of detail required.



Proposed EUR Survey Regulations

To provide this flexibility, the work group agreed to define two categories of surveys based on the size of the subject area(s) in relation to the entire property:

- A. Subject area(s) is 50% to 100% of the property; and
- B. Subject area(s) <50% of the property

The regulations define the requirements for each category of survey



Proposed EUR Survey Regulations

Subject area(s) is 50% to 100% of the property:

- With Class A-2 Horizontal Accuracy, conduct a *Property Survey* type of survey; and
- Indicate and depict the items specified in the regulations for the entire property



Proposed EUR Survey Regulations

Subject area(s) <50% of the property:

- Conduct a *Limited Property/Boundary Survey* type of survey;
- Indicate and depict, with Class A-2 Horizontal Accuracy, the items specified in the regulations in and within 100 feet of the subject area(s) or the property boundary whichever is less; and
- Complete the survey for the rest of the property based on deed and other available information

OR, alternatively

- Conduct a *Property Survey* type of survey for the entire property



Proposed EUR Survey Regulations

The “items specified” include:

- General map requirements for all surveys

Vicinity map, latitude and longitude of a point on the property, subject area labelling, map notes, title block, requirement for spot elevations at subject area(s) with certain restrictions, and when EUR is final, requirement to submit property owner affidavit affirming that there have been no changes since the survey was conducted

- Map requirements specific to category of survey

Property boundaries, subject area boundaries, property description, conflicts with record deed descriptions and maps, encroachments, apparent improvements and features, location of plottable easements, and utilities



Proposed EUR Survey Regulations

REMEMBER: The discussion draft comment period ends
October 30, 2015

Please send comments to:

DEEP.cleanup.transform@ct.gov



Connecticut Department of Energy and Environmental Protection

Peter Hill

Questions / Comments

Please speak loudly.



www.ct.gov/deep/remediationroundtable



Connecticut Department of Energy and Environmental Protection

Remediation Division Entering the World of Electronic Submittals

Kevin Neary
Remediation Division
Environmental Analyst III



Connecticut Department of Energy and Environmental Protection

Electronic Submittal

- Electronic submittal of certain documents will soon be here (Before 2016)
- Uploading will be done through an FTP site (similar to the current ELUR upload process)
- Select Remediation Documents and LUST Documents can now be submitted
 - Remediation can ONLY accept Monitoring Reports right now



Prior to Uploading (Step 1)

- Go to Remediation upload webpage and download Electronic Submittal Form
- Fill out Electronic Submittal Form
- Imbed Electronic Submittal Form as first page of electronic document
- Save document as **PDF_A**
 - Instructions will be available on DEEP webpage



Electronic Submittal Form



Connecticut Department of
Energy & Environmental Protection

Electronic Submittal Form for DEEP Remediation and LUST FTP Portal

This Electronic Submittal Form is to be used when submitting a document to the DEEP FTP Portal. This form must be completed and included as page one of your electronic document.

Requirements for submittals through the FTP Portal:

- Only document types identified in [Part III](#) below may be submitted through the FTP Portal.
- Documents submitted through the FTP Portal must include all applicable figures, tables and laboratory data.
- Files must be formatted as PDF/A and use the appropriate naming convention:
 - For Remediation Filings: **REM_RemID_DocumentType** NOTE: You must replace "RemID" with the Remediation ID (Rem ID) for your project and "DocumentType" with the appropriate Document Type identified in Part III below.
 - For LUST Filings: **LUST_SiteAddress_Town_AbbreviationForDocumentType_DateOfReport** NOTE: Replace "SiteAddress" with the Site street address, "Town" with Site town, "AbbreviationForDocumentType" with the appropriate abbreviation (see page 2 of this form) and "DateOfReport" with the Report date.

Part I: Filing Type (Select either Remediation or LUST as your Filing Type)

<input type="checkbox"/> Remediation Primary Program: Select a Program *Rem ID: (required)	<input type="checkbox"/> LUST UST Facility ID: (if applicable) Spill Case Number: (if known)
---	---

Part II: Site Information

Site Name: Site Address: City/Town:	State: CT Zip Code:
Secondary Programs (complete as many as applicable for this document):	
Program: Select a Program	Project ID:
Program: Select a Program	Project ID:
Program: Select a Program	Project ID:
Program: Select a Program	Project ID:
Provide Project ID for each secondary program if it is known. Each program has a unique ID (i.e. Rem ID, Spill Case #, UST Facility ID, PCB File #, etc.)	

Part III: Document Information

Select a Document Type: <input type="text" value="Select a Document Type"/>	Date of Document: MM/DD/YYYY
---	------------------------------

Part IV: Submitter Information

Name:	**E-mail:
**By providing this e-mail address you are agreeing to receive official correspondence from the department, at this electronic address, concerning the subject document. Please remember to check your security settings to be sure you can receive e-mails from ".ct.gov" addresses. Also, please notify the department if your e-mail address changes.	
Name of company/business this document is being submitted on behalf of:	

* Contact Information:

Remediation Filings: Please contact the Remediation Division at 860-424-3705 if you do not know your project's Remediation ID (Rem ID) or if you have any questions.

LUST Filings: Please contact the LUST Coordination Program at 860-424-3376 if you have any questions.



Electronic Submittal Form

➤ Specific items

- Project ID (Required)
 - Remediation Projects: Rem ID
 - LUST Projects: UST Facility ID or Spill Case #
- Site Information
- Secondary Programs involved
- Document Name (Drop down list)
- Submitter Information (Your name and email)
- Company information is being submitted for



Uploading Document (Step 2)

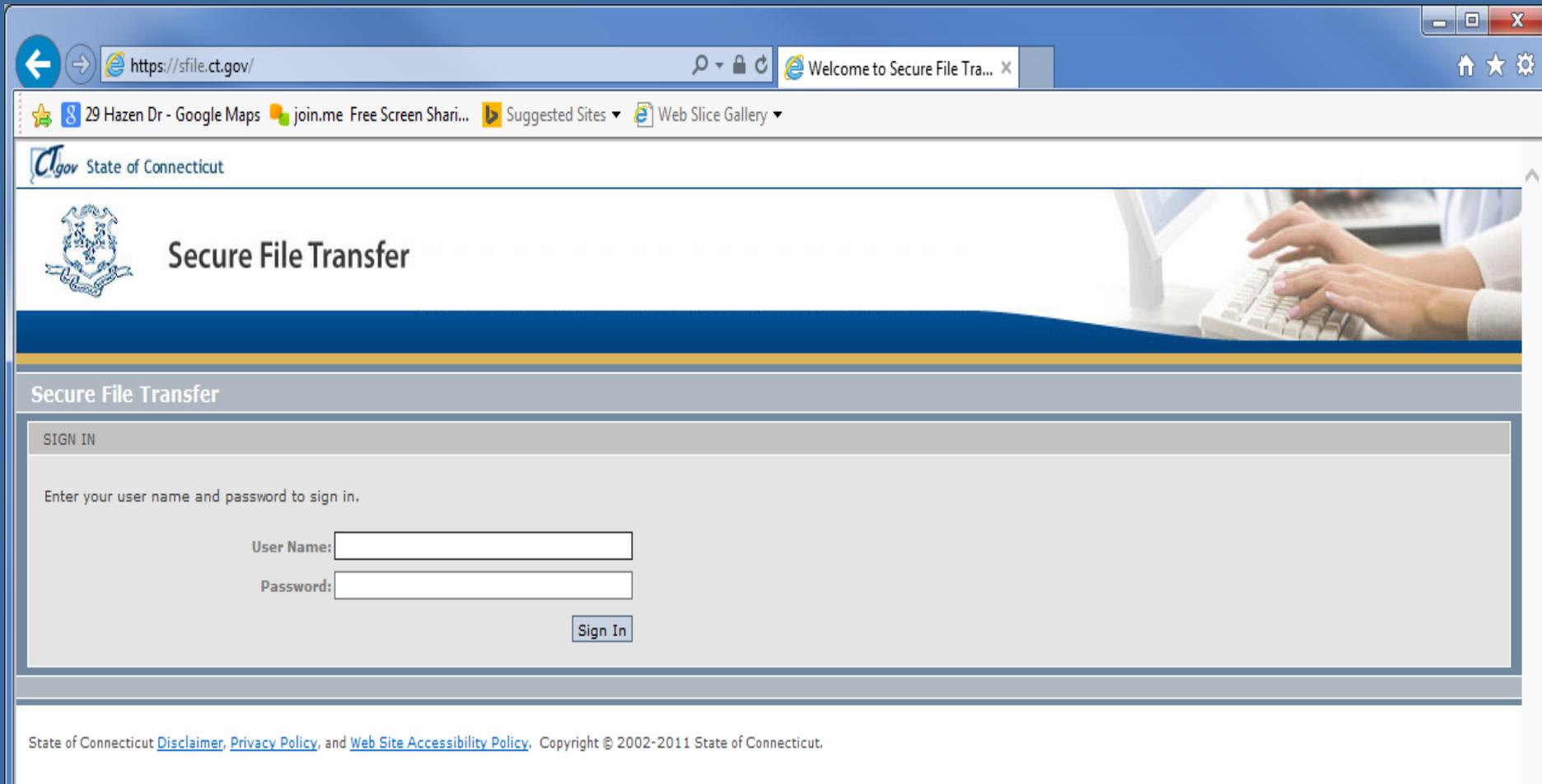
- Get password for FTP site by:
emailing DEEP.cleanup.upload@ct.gov

- Go to FTP site and enter

username: deepcleanupdocuments
password: from email



Uploading Document (Step 2)



The screenshot shows a web browser window with the URL <https://sfile.ct.gov/>. The browser's address bar shows the URL and a search icon. The page header includes the Connecticut state logo and the text "State of Connecticut". Below the header, the main content area features the "Secure File Transfer" logo and a banner image of hands typing on a keyboard. The main content area is titled "Secure File Transfer" and contains a "SIGN IN" section. The sign-in section includes the instruction "Enter your user name and password to sign in." and two input fields: "User Name:" and "Password:". A "Sign In" button is located below the password field. At the bottom of the page, there is a footer with the text: "State of Connecticut [Disclaimer](#), [Privacy Policy](#), and [Web Site Accessibility Policy](#). Copyright © 2002-2011 State of Connecticut."



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Uploading Document (Step 2)

- Browse for document and upload

Secure File Transfer

Secure File Transfer SIGN OUT

MY FOLDERS FOLDER / Transfer mode: binary

ACCOUNT INFO NAME SIZE DATE

Change Password Delete Download View (HTML) View (Text) Browse... Upload File

State of Connecticut [Disclaimer](#), [Privacy Policy](#), and [Web Site Accessibility Policy](#). Copyright © 2008-2011 State of Connecticut.



Connecticut Department of Energy and Environmental Protection

Kevin Neary

Key Points

- Every document needs the electronic submittal form
- Follow directions on submittal form
 - File name is specific and important ("REM_...")
 - Dropdown list for documents acceptable at this time
- Go to Remediation Electronic submittal webpage for:
 - Additional detail, Electronic Submittal and Links



Key Points

- There will be an FAQ webpage for common issues
- Computers will be available in the file room to access electronic documents
- E-alert will be sent out once FTP site is live
- PLEASE do not submit hard copy once electronic file is submitted



Questions / Comments

Please speak loudly.



www.ct.gov/deep/remediationroundtable



Connecticut Department of Energy and Environmental Protection

Remediation Roundtable



E-mail: DEEP.remediationroundtable@ct.gov

Web: www.ct.gov/deep/remediationroundtable



Connecticut Department of Energy and Environmental Protection

REMEDIATION ROUNDTABLE

Next meeting: December 8, 2015



Connecticut Department of Energy and Environmental Protection

www.ct.gov/deep/remediationroundtable