REMEDIATION ROUNDTABLE

August 26, 2014

Connecticut Department of Energy and Environmental Protection

www.ct.gov/deep/remediationroundtable

Agenda

- Updates and Announcements
- Transformation and Wave 2 RSR Amendments Roadmap
- Public Comments on Wave 2 RSR Transformation Discussion Documents
- Groundwater Technical Impracticability Overview
- Critical Aspects of Laboratory Testing
- Brownfield Presentation

Website Updates

- General Permit for Insitu Remediation- Chemical Oxidation with the Public Notice
- Revitalizing Contaminated Lands: Addressing Liability Concerns (via the Guidance webpage) - the 2014 edition of EPA's Revitalization Handbook
- Guidance for Calculating the 95% Upper Confidence Level for Demonstrating Compliance with the Remediation Standards Regulations

Urban Soils Workgroup Update

- Project initiated through the Remediation Roundtable
  - Goal: provide guidance for how to address widespread low-level impacts to soils in our cities under the current RSR framework
  - May 2012 Roundtable presentation
- Achievements:
  - Defined an approach to when material could meet the definition of Urban Soils
  - Proposed a streamlined method for the design and approval of engineered controls to render the material inaccessible
  - Determined Urban soils would be covered by the coal ash exemption of the RSRs

So where are they now?

- Concepts developed are being used in the development of Reporting Requirements and in the Background Workgroup
- Incorporated into the Wave 2 Discussion Document on self-implementing Engineered Controls
- Future Plans include an additional discussion document on the definition and chemical composition of typical Urban Soils

To those of you who volunteered your time and energy to that effort it continues to grow larger and has not been disregarded

Announcement: TCE Developmental Risk

Carl Gruszczak
Environmental Analyst 2
Remediation Division

TCE – Developmental Risk

- Purpose of this Announcement
  - Make sure the Environmental Community is aware of this emerging issue
  - Issue will affect any situation where women of child-bearing age (not just pregnant women) are potentially present
  - Still early in the process, so don't have all the nuances worked out (Policy on how to handle situations is still in development)

TCE – Developmental Risk

- Recent studies have shown TCE to be a Developmental Toxicant:
  - Causes cardiac defects and immune system changes from in utero exposure
  - Much shorter exposure timeframe compared to cancer-based risk
    - Likely less than full gestation period
    - May be as short as a few weeks

  - EPA has derived an inhalation reference concentration (RfC) of 2 µg/m^3 to protect against these effects (for comparison, the RSRs are based on 5 µg/m^3)

TCE – Developmental Risk

- What does this mean?
  - In the occupational setting, the target indoor air concentration (TAC) was determined by DPH to be 8 µg/m^3 based on a time weight-averaged basis (8 hrs/day, 5 days/week exposure)

    - Recommend decreasing indoor air concentrations to below 8 µg/m^3 as quickly as possible
    - If I/C RSR criteria is exceeded by 60% (1.6x) in either groundwater or sub-slab soil vapor, there may be an exceedance of the 8 µg/m^3 in indoor air
    - Mitigation is fastest (and probably easiest) solution

TCE – Developmental Risk

- What does this mean?
  - In the residential setting, the TAC determined by DPH is the 2 µg/m^3 RfC derived by EPA (24 hrs/day, 7 days/week exposure)
    - This TAC is lower than the RSR TAC of 5 µg/m^3 which was used to derive the Residential Volatilization Criteria (although it is higher than the 1 µg/m^3 TAC used in the 2003/2008 Proposed RSR Revisions)
    - Still working on how to handle this situation
      - Currently, no RSR obligation to meet this criteria (Recommendation)
      - Mitigation would be easiest solution (remove any exposure)

Questions / Comments

Please state your name and speak loudly.

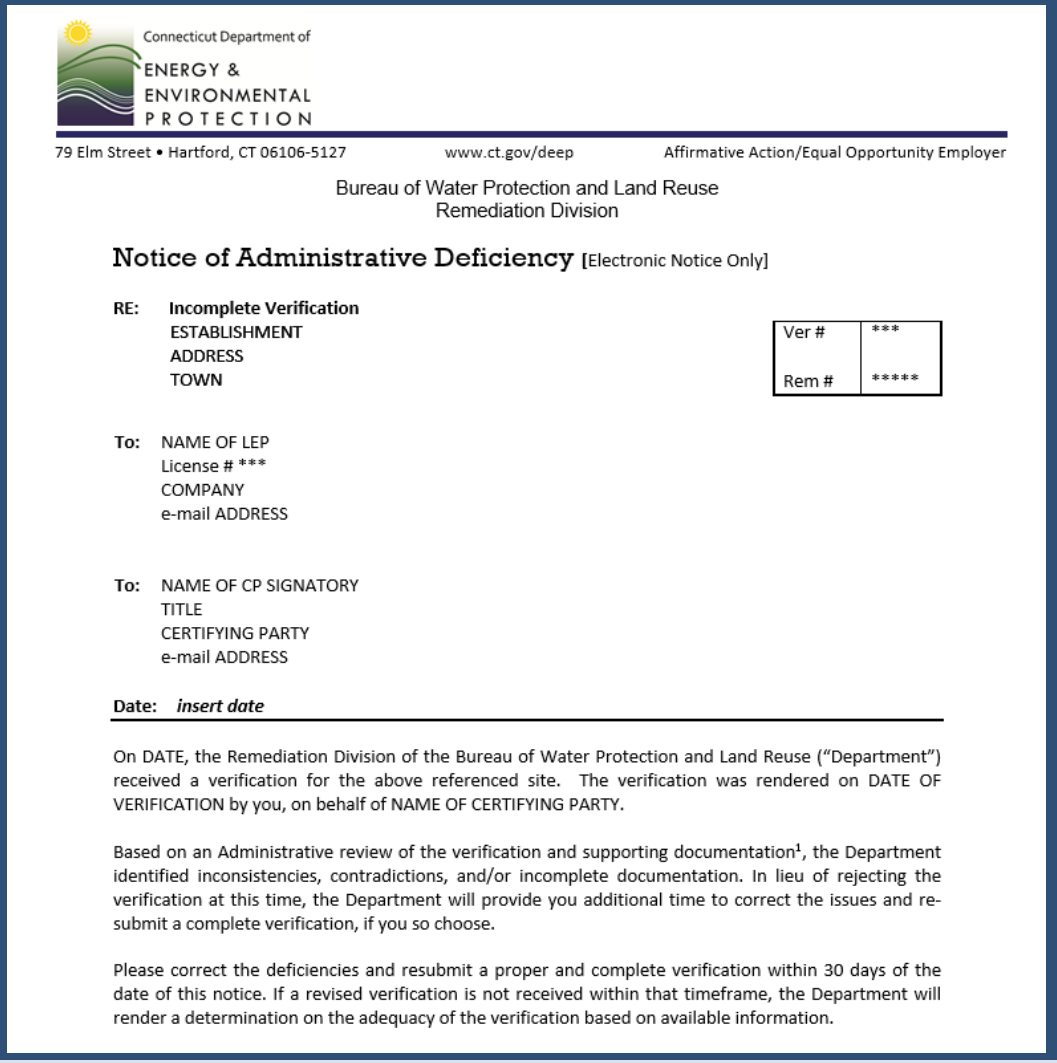
Submit comments to DEEP.remediationroundtable@ct.gov

Announcement: Verification Processing Update

Claire Foster
Environmental Analyst 3
Remediation Division

Verification Processing Update

- Notice of Administrative Deficiency (NOAD)
- Identifies issues that need to be corrected
- Sent electronically
- Response requested within 30 days



Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Bureau of Water Protection and Land Reuse
Remediation Division

Notice of Administrative Deficiency [Electronic Notice Only]

RE: **Incomplete Verification**
ESTABLISHMENT
ADDRESS
TOWN

Ver #	***
Rem #	*****

To: NAME OF LEP
License # ***
COMPANY
e-mail ADDRESS

To: NAME OF CP SIGNATORY
TITLE
CERTIFYING PARTY
e-mail ADDRESS

Date: ***insert date***

On DATE, the Remediation Division of the Bureau of Water Protection and Land Reuse ("Department") received a verification for the above referenced site. The verification was rendered on DATE OF VERIFICATION by you, on behalf of NAME OF CERTIFYING PARTY.

Based on an Administrative review of the verification and supporting documentation[1], the Department identified inconsistencies, contradictions, and/or incomplete documentation. In lieu of rejecting the verification at this time, the Department will provide you additional time to correct the issues and re-submit a complete verification, if you so choose.

Please correct the deficiencies and resubmit a proper and complete verification within 30 days of the date of this notice. If a revised verification is not received within that timeframe, the Department will render a determination on the adequacy of the verification based on available information.

Questions / Comments

Please state your name and speak loudly

Submit comments to DEEP.remediationroundtable@ct.gov

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Transformation and Wave 2 RSR Amendments Roadmap

Robert Bell
Assistant Director
Remediation Division

DEEP's 2013 Proposal

- RSR Amendments
  - More risk-based endpoints = faster and less costly cleanup
- New Releases
  - Adopt reporting regulations
  - Cleanup to numeric criteria in the RSRs
- Historical Releases
  - 2xRSRs for known releases
  - Sunset Transfer Act
- Time critical conditions – make safe
  - Amend Significant Environmental Hazard law

DEEP's 2013 Proposal cont.

- Brownfields
  - Keep site-wide approach as a voluntary program
  - Expand municipal incentives/protections
- Unified system/procedures
  - Promote lean
  - Cleanup to common outcomes/RSRs
  - Unify procedures, documents, public info where feasible
  - Likely combination of legislation and regulation amendments
- Checks and Balances
  - LEP Board resources/staffing
  - Audit and enforcement tools
  - Web-based information

Cleanup Transformation Roadmap

Completed in 2013

- Municipal Liability Relief (effective July 2013)
- Cleanup Standards Wave 1 (effective 6/27/13)
- Expanded Authority for Institutional Controls (implementation subject to RSR Wave 2 regs)

→

Increased Rate of Verifications

-75/yr. average in 2 years prior to amendments
-98/yr. in 12 months after Wave 1 amendments
-Data based on “parcels” which avg 5-8 “release areas” per

Cleanup Transformation Roadmap

2014

- DEEP Recommendations – Risk Assessment Evaluation
- Regulation Reform:
  - Wave 2 Cleanup Standards (includes Institutional Controls)
  - Spill Reporting
  - Soil Reuse

2015

- Statewide Groundwater Reclassification process
- RSR Wave 2, Spill Reporting, and Soil Reuse regulation adoption process

2015 cont.

- Legislation
- Significant Hazard Phase-in (of 2013 amendments)
- Information management system and website upgrade

Release Reporting/Cleanup

- Release reporting regulations – public hearing draft goal March 2015
  - Releases subject to reporting
  - Exemptions to reporting
  - Reporting and contents of report
- Early exit cleanup and closure certification
  - Immediate and effective mitigation minimizes spread of contamination, less environmental impact, lower cleanup costs and faster closure
- Wave 2 RSR amendments – public hearing draft goal March 2015

Current Schedule highlights

- Risk Evaluation Report – due end of August
- Recommendations on risk report and legislation – October 2014
- Soil Reuse regulations discussion draft, and Deed Notice regs discussion draft: Oct/Nov ‘14
- Legislation – January 2015
- RSR amendments (Wave 2) and Release Reporting Regulations – public hearing draft goal March 2015

Questions / Comments

Please state your name and speak loudly

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Risk Evaluation Report Update

Cheryl Chase

Director

Inland Water Resources Division

Risk Evaluation

- Final Report due from CDM Smith August 27th will be posted on website when received
- Public Meeting to review recommendations in report September 10th
- Public Comments on recommendations due by September 30th
- DEEP recommendations to legislature to consider both report and comments

Questions / Comments

Please state your name and speak loudly

Submit comments to DEEP.remediationroundtable@ct.gov

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Public Comments on Wave 2 Discussion Documents

KEVIN NEARY
ENVIRONMENTAL ANALYST 3
REMEDIATION DIVISION

Discussion Document Comments

- 7 Discussion Documents released from August 8, 2013 to April 30, 2014
- Open comment period ended on May 30, 2014
- May Roundtable breakout workgroups on three discussion documents
- Received comments from 5 stakeholders
- 54 individual comments or suggestions

Discussion Document Comments

Breakdown of Comments

	# of comments
➢ Sediment	17
➢ Alternative GWPC	14
➢ Engineered Controls	13
➢ MNA	7
➢ Recreational DEC	2
➢ Alternative PMC	1
➢ Institutional Controls	0

Sediment Comments

"How will background pertain to sediment?"

- Background study needed to determine background levels for constituents of concern that may have been released to sediment and are related to the release that is being investigated
- Currently, evaluating background levels for sediment is proposed to be by Commissioner approval until more background evaluations have been conducted
- Background Guidance Workgroup - determination of background in sediment would follow principles set forth in this general guidance (yet to be determined)

Sediment Comments

"There are not enough self-implementing options; everything will still end up with DEEP approval."

- Listed self-implementing options are meant to be a first step- We will evaluate whether more may be added in the future
- Less complex sites can fulfill sediment requirement through the established self-implementing options
- More complex sites requiring sediment remediation will require DEEP approval

Alternative GWPC

"The Alternative GWPC area seems small, why can't the extent of Alternative GWPC area be larger?"

- Alt. GWPC covers 8% of the State, but contains 14% of Property Transfer Program sites
- Area could be larger with an updated Public Supply Map
- Changing layers used to generate area would negatively impact future water supplies

Engineered Control Comments

"Consider modifying the suggested markers and layers required to implement the Engineered Control."

- Urban Soils Workgroup suggestions of Engineered Control design are being considered
- Engineered Control design may be expanded based on public comments

Monitored Natural Attenuation

"The MNA concept seems conservative in the duration and requirements."

- 20 year requirement is consistent with ITRC guidance and directives
- Reasonable timeframe – one that ensures that the environmental burden will not be shifted to future generations
- Longer timeframes available for Technical Impracticability Variance
- Considering Commissioner approval option for sites that meet some but not all requirements

Recreational DEC

"What will be the criteria for determining if an ELUR or a Deed notice can be used?"

- Will be more defined with further development of deed notice process
- May depend on proposed land use and/or degree of access

Comment Response Document

- A document is being generated that summarizes each comment and describes DEEP's response
- Sediment, Alternative GWPC and MNA will have a Comment Response Document to be posted on DEEP Remediation webpage
- Due to limited comments received for the other Discussion Documents a Comment Response Document is not warranted

Discussion Documents

All public comments and Roundtable breakout group discussions will be considered as the Wave 2 RSR changes are drafted…

Your comments will be valuable on the Draft Regulations!

Questions / Comments

Please state your name and speak loudly

Submit comments to DEEP.remediationroundtable@ct.gov

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Groundwater Technical Impracticability Overview

Maurice Hamel
Environmental Analyst 3
Remediation Division

TECHNICAL IMPRACTICABILITY VARIANCE

Section 22a-133k-3(e)(2)

* Variance to groundwater criteria where it is not technically feasible to remediate to applicable criteria
* Not a waiver of source investigation or remediation
* Not a site-wide sign-off
* One component of a RAP to allow use of alternative groundwater criteria

TECHNICAL IMPRACTICABILITY VARIANCE

- Defines the long-term obligations for a site
- May be suitable to support Final Verification and/or Form II filing if appropriate
- Enables transfer of property and reassignment of post-remedial obligations

What is available online:

- ✓Draft Guidance Document

Link to web page

Link to Guidance Document

- ✓Fact sheet
  - Flow Chart
  - Initial Check List

Link to Fact Sheet

TI VARIANCE OVERVIEW

TI SCENARIOS

Residual Source

- DNAPL
- Some LNAPLs
- Solid
- Sorbed

Persistent Plume

- Steady state or slowly diminishing plume
- Will not dissipate within a reasonable time frame

Both scenarios may be applicable at some sites

LONG-TERM RESPONSIBILITIES

- Land Use Controls
- Active containment systems
- Monitoring program to gauge effectiveness
- Financial assurance for continued operation of the systems
- 5 Year Status Review Reporting
- Triggers for performing maintenance or re-evaluating
- A program for assessing and implementing contingency
- Respond to changes that may threaten receptors

WAVE 2 CONSIDERATIONS

Long-Term Obligation Permits

- A way to administratively enforce long-term obligations
  - After sign-off under
    - Form III filing
    - Consent Order
- Along the lines of a Stewardship Permit

Approved Sites

6 TI Variances approved to date

- 4 suitable to support Final Verification
  - Fully addressed downgradient receptors
- All have been for solvents
- 4 for bedrock plumes
- 2 have overburden containment systems
- Summary sheets for approved sites - pending

TI REQUEST FORMAT

- TI Fact Sheet outlines basic requirements for initial meeting
- Appendix B of Guidance Document provides a detailed description of formal request

Appropriate Conditions

Persistent Plumes

- Moving slowly in poorly fractured bedrock
- From fully remediated sources

Petroleum in bedrock

- Quench oil
- Limited success with product recovery
- Limited, localized groundwater exceedances

Appropriate Conditions

Chronic Solvent Plume

- Remediate residual solvents to the MEP
  - Dual phase extraction
  - ISCO
  - Thermal
- Residuals continue to impact groundwater
- Attempted / assessed plume remediation
- Ongoing long-term measures

Appropriate Conditions

Chronic Metals Plumes

- Plating or electrochemical etching solutions
  - Residuals extend below watertable
- Source remediation unsuccessful
  - Excavation
  - Chemical reduction
  - Pump and Treat
- Steady state plume dissipates prior to receptors

UNACCEPTABLE CONDITIONS

- Additional AOCs to be investigated
- Source not remediated
- Continuing impacts to sediment
- Plume not delineated / projected off-site
- Receptors not identified
- Downgradient development potential
  - Within plume
  - Close enough to divert plume
- Surface water impacts not addressed

TI Variance Summary

- Variance to groundwater criteria

  -Plume cannot be fully remediated but the source has been addressed

- It is not a short-cut to save on remedial costs

- Allows a final verification

  With long-term obligations

Questions / Comments

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Submit comments to DEEP.remediationroundtable@ct.gov

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Critical Aspects of Laboratory Testing

Dermot Jones – Laboratory Consultant/ Certification Officer
Dept. of Public Health

Certified Analysis

CT DPH certifies labs to test regulated Analytes and Analyte Groups that may contaminate; Non-potable Water/Wastewater, Solid Waste/Soils, & Drinking Water

Certification is based on Labs generating acceptable QC data, successfully analyzing PTs and passing inspection requirements

MISSION STATEMENT

The Environmental Laboratory Certification Program mission is to promote the benchmark by which accurate, precise, and legally defensible analytical data is reported by the environmental laboratory industry for use in compliance and in accordance with federal and state law. This is accomplished by ensuring that environmental laboratories located in or doing business in CT meet all applicable EPA and CT standards.

Test Results

Labs report results compared to a practical detection or reporting limit

A “none detected” (ND) result means that any instrument response for specific contaminant does not exceed the detection or reporting limit

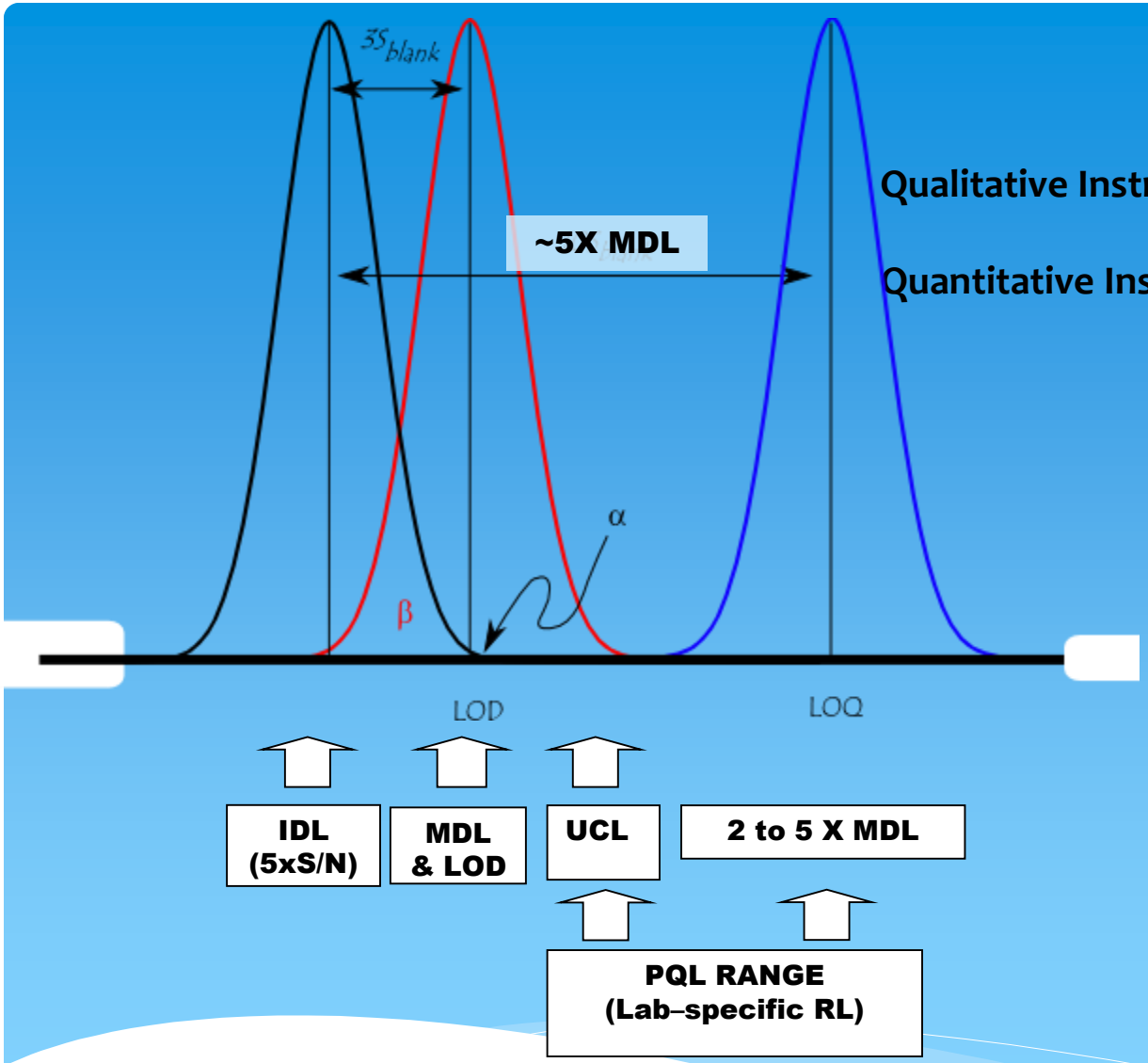
Or ND = levels of contaminants detected below a set criteria at which reliability of quantitation is uncertain

Reliability tied to Best Available Technology

In general, detection/reporting limits are regulated

Reporting Criteria

- **MDLs – are statistically calculated {Std. Dev. X Student T value} analyzing 7 replicates of prepared standard at minimum concentration for which a compound can be detected**
- **MDL/LOD is minimum concentration that can be measured and reported with 99% confidence that the concentration is greater than zero, but exact concentration is not reliable**
- **MCL – are EPA limits set to determine water quality; generally @ 10X MDL**
- **PQLs/LOQ – are reliable limits of detection generally @ 5X MDL**
- **Reporting Limit - is the minimum conc. of an analyte that can be reliably quantified; Lab determined for a given method**

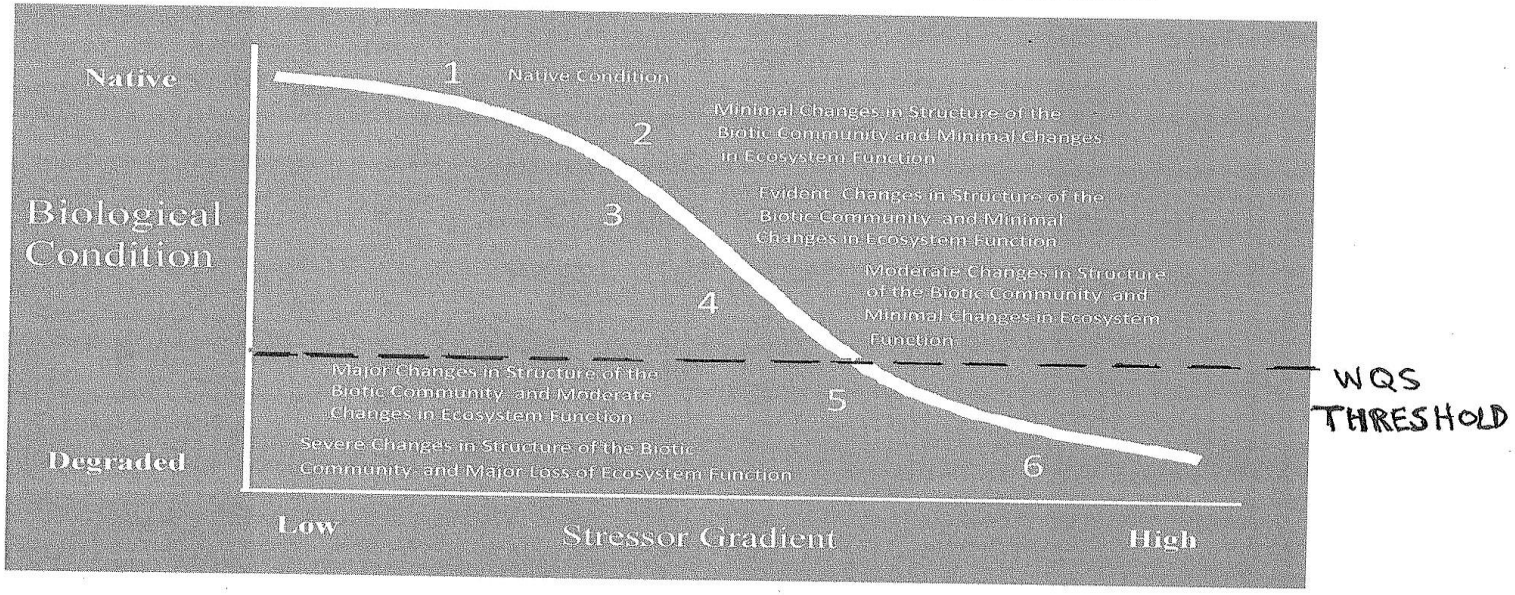


Qualitative Instrument Response – IDL, & MDL

Quantitative Instrument Response – PQL & LOQ

2011 Connecticut Water Quality Standards

APPENDIX F: CONNECTICUT BIOLOGICAL CONDITION GRADIENT MODEL



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Clean Water Act – Water Quality Standards

Required by Section 303(c) of the federal Clean Water Act

WHAT IS SW-846?

* Test Methods For Evaluating Solid Waste, also known as SW-846, is a living document of 250+ methods, validated, approved and appropriate for preparation and analysis of complex matrices for the Resource Conservation and Recovery Act (RCRA).

* A tool that enables analyses to be made specific to analytes of concern in matrices of concern at regulatory levels of concern.

* Monitoring requirements under RCRA Subtitle C specify only that the analyst must demonstrate that one can determine the analytes of concern in the matrix of concern at the regulatory level of concern.

HISTORY OF RCRA - METHODS POLICY, GUIDANCE & FLEXIBILITY

- SW-846 was developed in the early 80s, and followed a "Performance Based" methods program approach that was required for use in support of "RCRA."

- For most RCRA analyses "any reliable method" may be used (58 FR 46040, Final Rule of Update II of SW-846, Aug. 1993). The regulations do not specify "how" the preparatory and determinative analyses will be performed.

- Authorized States can require the use of SW-846 methods for any or all applications in their RCRA Programs, however, the EPA Regions do not have the statutory authority to require the use of SW-846 methods for non-mandatory applications.

RCRA specifies "what" needs to be determined, and leaves the "how" up to the Laboratory Analyst.

Precise Testing Begins with Sample Integrity

- Collecting Representative Samples
- Adhere to Objectives of Sampling Plan
- Proper Handling and Preservation
- Proper COC and Sample Records
- Field Sampling Quality Assurance
- = Proper Analysis

Sample Collection

- Methods of sample preservation are relatively limited and are intended to control:
  1) retard biological action
  2) slow down hydrolysis of analytes and analyte groups
  3) reduce volatility of analytes and analyte groups
  4) reduce absorption effects

- Generally limited to pH control, chemical addition, refrigeration and freezing.

- Therefore it is extremely important for Laboratories to adhere to holding times.

TABLE 1

RECOMMENDATION FOR SAMPLING AND PRESERVATION OF SAMPLES ACCORDING TO MEASUREMENT[1]

Measurement	Vol. Req. (ml)	Container[2]	Preservative[3,4]	Holding Time[5]
100 Physical Properties				
Color	50	P,G	Cool, 4°C	48 Hrs.
Conductance	100	P,G	Cool, 4°C	28 Days
Hardness	100	P,G	HNO_3 to pH < 2	6 Mos.
Odor	200	G only	Cool, 4°C	24 Hrs.
pH	25	P,G	None Req.	Analyze Immediately
Residue				
Filterable	100	P,G	Cool, 4°C	7 Days
Non-Filterable	100	P,G	Cool, 4°C	7 Days
Total	100	P,G	Cool, 4°C	7 Days
Volatile	100	P,G	Cool, 4°C	7 Days
Settleable Matter	1000	P,G	Cool, 4°C	48 Hrs.
Temperature	1000	P,G	None Req.	Analyze Immediately
Turbidity	100	P,G	Cool, 4°C	48 Hrs.
200 Metals				
Dissolved	200	P,G	Filter on site HNO_3 to pH < 2	6 Mos.
Suspended	200		Filter on site	6 Mos.[8]
Total	100	P,G	HNO_3 to pH < 2	6 Mos.

TABLE 1 (CONT)

Measurement	Vol. Req. (ml)	Container[2]	Preservative[3,4]	Holding Time[5]
MBAS	250	P,G	Cool, 4°C	48 Hrs.
NTA	50	P,G	Cool, 4°C	24 Hrs.

1. More specific instructions for preservation and sampling are found with each procedure as detailed in this manual. A general discussion on sampling water and industrial wastewater may be found in ASTM, Part 31, p. 72–82 (1976) Method D-3370.

2. Plastic (P) or Glass (G). For metals, polyethylene with a polypropylene cap (no liner) is preferred.

3. Sample preservation should be performed immediately upon sample collection. For composite samples each aliquot should be preserved at the time of collection. When use of an automated sampler makes it impossible to preserve each aliquot, then samples may be preserved by maintaining at 4°C until compositing and sample splitting is completed.

4. When any sample is to be shipped by common carrier or sent through the United States Mails, it must comply with the Department of Transportation Hazardous Materials Regulations (49 CFR Part 172). The person offering such material for transportation is responsible for ensuring such compliance. For the preservation requirements of Table 1, the Office of Hazardous Materials, Materials Transportation Bureau, Department of Transportation has determined that the Hazardous Materials Regulations do not apply to the following materials: Hydrochloric acid (HCl) in water solutions at concentrations of 0.04% by weight or less (pH about 1.96 or greater); Nitric acid (HNO_3) in water solutions at concentrations of 0.15% by weight or less (pH about 1.62 or greater); Sulfuric acid (H_2SO_4) in water solutions at concentrations of 0.35% by weight or less (pH about 1.15 or greater); Sodium hydroxide (NaOH) in water solutions at concentrations of 0.080% by weight or less (pH about 12.30 or less).

5. Samples should be analyzed as soon as possible after collection. The times listed are the maximum times that samples may be held before analysis and still considered valid. Samples may be held for longer periods only if the permittee, or monitoring laboratory, has data on file to show that the specific types of sample under study are stable for the longer time, and has received a variance from the Regional Administrator. Some samples may not be stable for the maximum time period given in the table. A permittee, or monitoring laboratory, is obligated to hold the sample for a shorter time if knowledge exists to show this is necessary to maintain sample stability.

6. Should only be used in the presence of residual chlorine.

SAMPLE COLLECTION WEB LINKS

For SDWA –
http://www.epa.gov/ogwdw/methods/pdfs/manual_labcertification.pdf

For CWA –
http://www.gpo.gov/fdsys/pkg/FR-2012-05-18/pdf/2012-10210.pdf

For RCRA –
http://www.epa.gov/epawaste/hazard/testmethods/sw846/pdfs/chap3.pdf &
http://www.epa.gov/epawaste/hazard/testmethods/sw846/pdfs/chap4.pdf

CHAIN OF CUSTODY www.

SHADED AREAS FOR LAB USE ONLY

Lab WO# _____

Project Manager _____

COPY OF REPORT TO

CUSTOMER: _____

ADDRESS: _____

ATTENTION: _____

E-MAIL: _____

PHONE: _____ FAX: _____

BILLING INFORMATION

BILL TO: _____

ADDRESS: _____

ATTENTION: _____

TELEPHONE: _____

PURCHASE ORDER#: _____

PROJECT INFORMATION

PROJECT: _____

PROJECT LOCATION: _____ STATE: _____

PROJECT MANAGER: _____

IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:

E-MAIL: _____

TELEPHONE: _____

FAX: _____

8260C

ETPH

ANALYSIS

SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	PRESERVATIVES: H_2SO_4	HCL	HNO_3	NAOH	NON-PRES	MeOH
Sample 1 – well #35												
Sample 2 – bore # 9 (hot)												

CUSTODY TRANSFER	DATE	TIME
SAMPLER:		
RECEIVED:		
RELINQUISHED:		
RECEIVED:		
RELINQUISHED:		
RECEIVED:		

TURNAROUND (INDICATE IN CALENDAR DAYS): _____ FAX _____ HARD COPY _____ E-MAIL

EXPEDITED SERVICE MAY BE SUBJECT TO SURCHARGE

COMMENTS _____

CONDITION UPON RECEIPT: (Check One)

❒ Cooled ❒ Ambient _____ °C Upon Receipt at Lab

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

U2 Pocket Colorimeter II - Chlorine - Chlorine
Response Chart
Data Values (ppm)
0.33
0.32
0.31
0.30
0.29
0.28
0.27
0.26
0.25
0.24
0.23
0.22
0.21
0.20
0.19
0.18
0.17
0.16
0.15
0.14
0.13
0.32
0.23
0.14
MUCL
MLCL
02/04/2012 11:01:12 AM
02/05/2012 8:35:02 PM
02/07/2012 6:08:53 AM
02/08/2012 3:42:43 PM
02/10/2012 1:16:34 AM
02/11/2012 10:50:25 AM
02/12/2012 8:24:15 PM
02/14/2012 5:58:06 AM
02/15/2012 3:31:57 PM
02/17/2012 1:05:47 AM
02/18/2012 10:39:38 AM
02/19/2012 8:13:29 PM
02/21/2012 5:47:19 AM
02/22/2012 3:21:10 PM
02/24/2012 12:55:01 AM
02/25/2012 10:28:51 AM
02/26/2012 8:02:42 PM
02/28/2012 5:36:33 AM
02/29/2012 3:10:23 PM
03/02/2012 12:44:14 AM
03/03/2012 10:18:05 AM
03/04/2012 7:51:55 PM
03/06/2012 5:25:46 AM
03/07/2012 2:59:37 PM
03/09/2012 12:33:27 AM
03/10/2012 10:07:18 AM
03/11/2012 7:41:09 PM
03/13/2012 5:14:59 AM
03/14/2012 2:48:50 PM
03/16/2012 12:22:41 AM
03/17/2012 9:56:32 AM

Takeaway Message

- Analytical testing is complicated – multiple methods, varied criteria, & regulated vs. unregulated contaminants
- SOPS implemented for collecting all types of samples – chemical, microbiological
- Sample collection records retention - clear and precise records
- Proper sampling is key in accurate data reporting

Drinking Water

Wastewater/Non-Potable Water & Solid Waste/Soils

Tested by a Certified Lab

DERMOT JONES

Questions / Comments

Please state your name and speak loudly.

Submit comments to DEEP.remediationroundtable@ct.gov

DEEP's Role in Brownfields Redevelopment - How Can We Help You?

Mark Lewis, Brownfields Coordinator
DEEP- Office of Constituent Affairs & Land Management

Former US Baird Machine Co., Stratford

Two Roads Brewing Company

What is a brownfield?

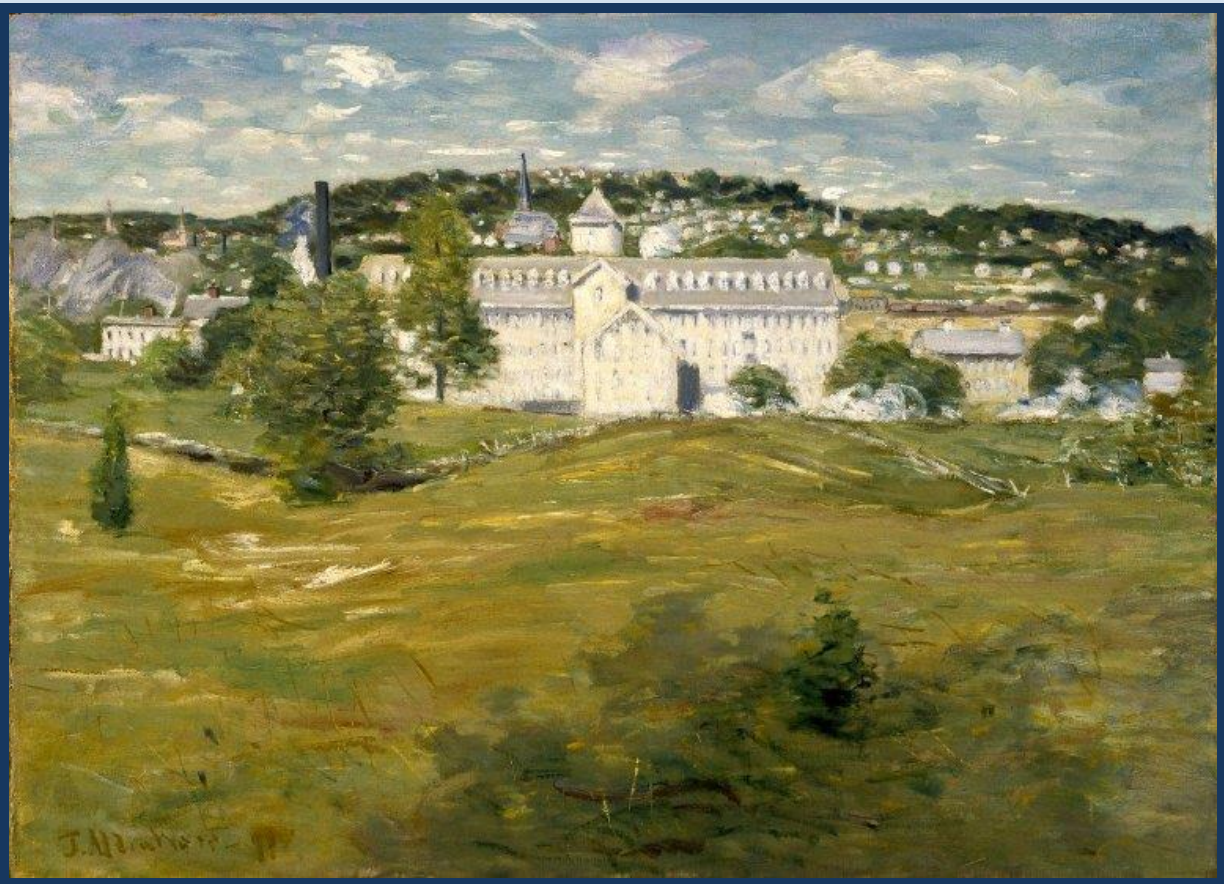
This is what everyone thinks of as a brownfield

Former Gilbert & Bennett wire factory, Redding

Brownfield Definition

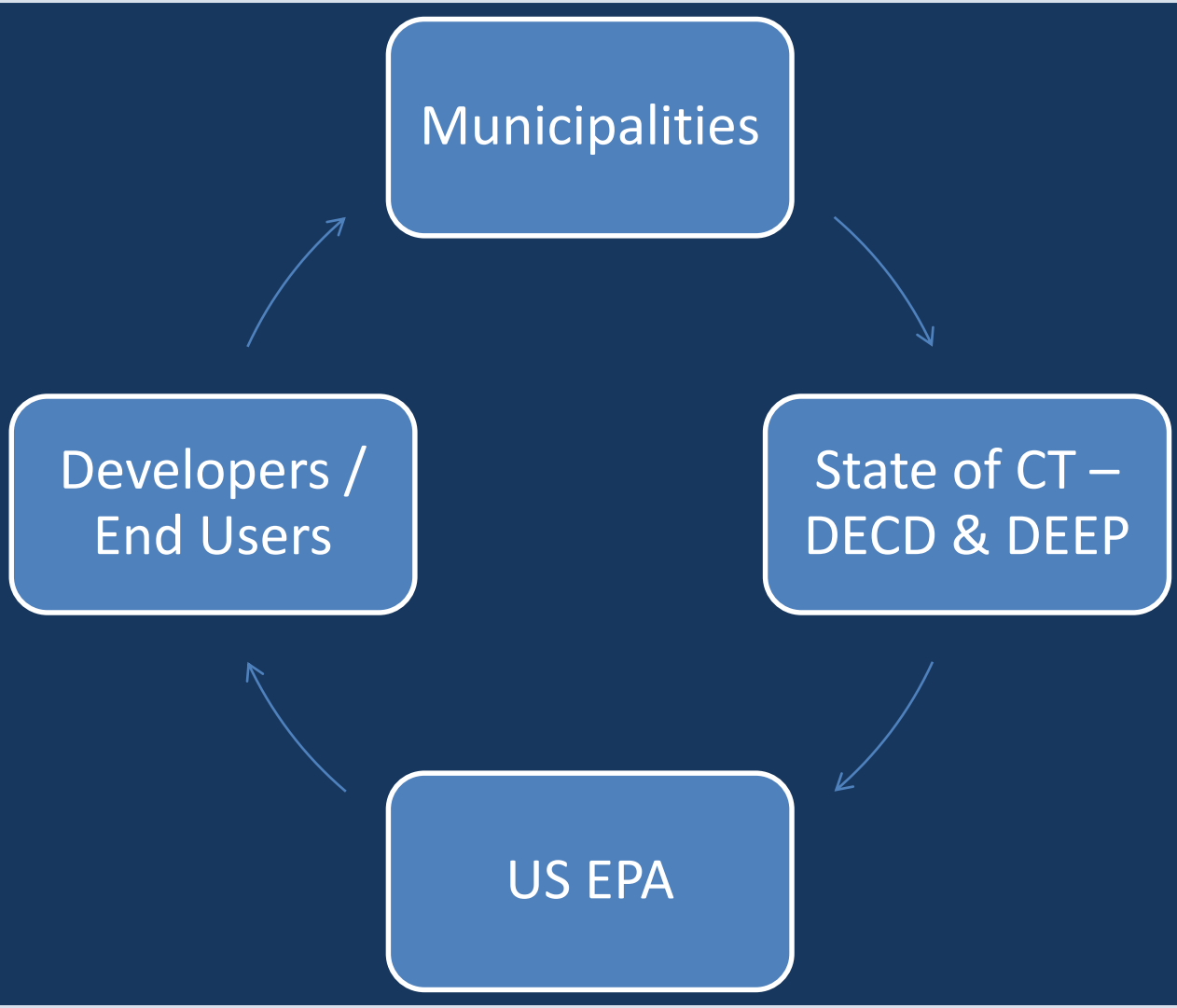
Any abandoned or underutilized site where redevelopment, reuse or expansion has not occurred due to the presence or potential presence of pollution in the buildings, soil or groundwater that requires investigation or remediation before or in conjunction with the redevelopment, reuse or expansion of the property (CGS § 32-760)

Willimantic Thread Factory- J. Alden Weir- 1893



Our mills inspired 19th century landscape painters. They remain a resource and a source of inspiration today.

Brownfields Coordination



Success – Past and Future

- State and Federal Agencies have been working with municipalities on Brownfields since 1992
- Partnerships have yielded great success
- Connecticut is interested in more success with municipal projects

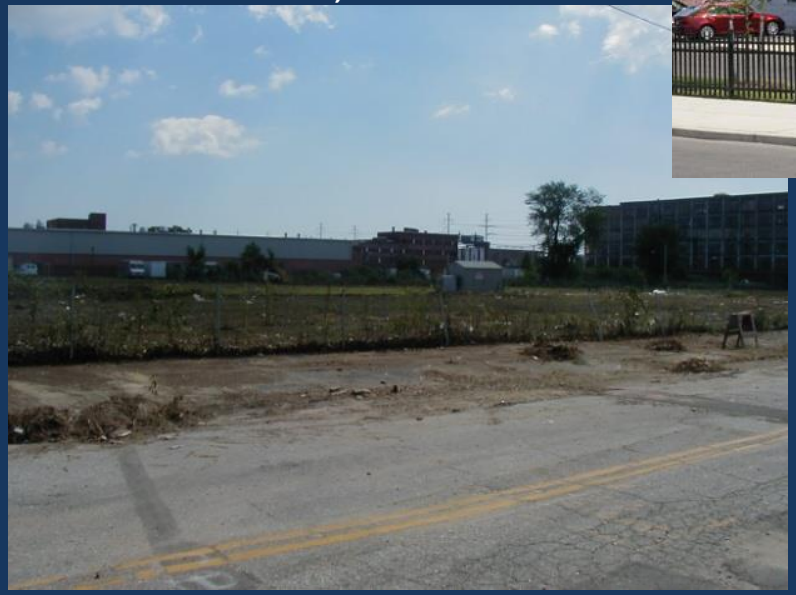
Remington Rand- Middletown

10 businesses now leasing space

Bryant Electric / Industrial Redevelopment- Bridgeport

New Businesses

- Akdo Intertrade Inc.
- Chaves Bakery II Inc.
- Carr's Ice Cream LLC
- Modern Plastics, Inc.



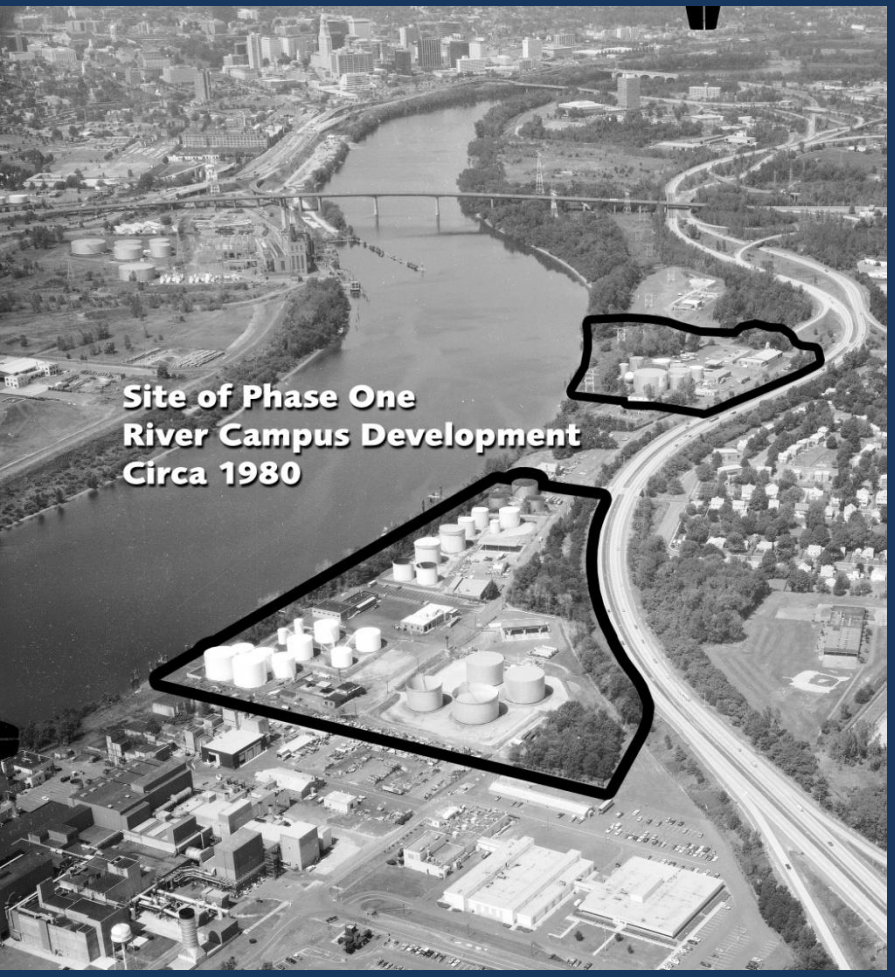
Killingly Commons- Killingly

Former 1,000,000 ft^2 glass factory

CBRA $1.5M Tax Increment Financing

Now a major regional retail center

Goodwin College, East Hartford



- CBRA $3M PILOT
- State grant $2.25M
- USEPA – 3 Cleanup Grants ($200K each)
- Leveraged over $20M in private investment
- Former petroleum tank farm

Occum Park, Norwich

Former factory destroyed in 1988 fire

- Two State grants $2.1 M
- Local funding $200,000

Redeveloped into Riverside Park

2008 Real Estate Exchange Award for Community Development

Connecticut Department of Energy and Environmental Protection

MARK LEWIS

BF Goodrich/ Sponge Rubber plant, Shelton

Then- largest arson fire in US history- 1975

Now- Riverwalk- Veteran's Memorial Park

Connecticut Department of Energy and Environmental Protection

MARK LEWIS

State Brownfield Assistance

- Funding (DECD)
- Liability Relief (DEEP and DECD)
- Technical Assistance (DEEP and DECD)

Colt Factory- Hartford

State Liability Relief

For municipalities, economic development organizations, private parties

- Covenants Not To Sue
- Third-party liability relief
- Abandoned Brownfield Cleanup Program
- Brownfield Remediation and Redevelopment Program
- Municipal Brownfields Liability Relief

Covenants Not To Sue

- When?- after submitting *Brownfield Investigation Plan and Remediation Schedule*
- CGS §22a-133aa: transferable, many protections, costs 3% of property value
  - *Free for municipalities; other parties may schedule payments over time*
- §22a-133bb: non-transferable, less protections, free

Third Party Liability Relief

- Third-party liability limited for non-responsible parties that own a contaminated property and investigate and remediate such properties

CGS §22a-133ee- *No owner shall be liable for any costs or damages to any person other than this state, any other state or the federal government, with respect to any pollution or source of pollution on or emanating from such owner's real property that occurred or existed prior to such owner taking title to such property*

Innocent Land Owners

CGS § 22a-452d & 22a-452e

- Innocent Land Owners not liable for State actions taken to contain, remove or mitigate a spill

- Innocent Land Owners not liable for any order of the Commissioner issued on or before August 1990 to abate or remediate a spill or discharge

Abandoned Brownfield Cleanup Program

- For properties unused or significantly underutilized for 5 years prior
- Redevelopment of regional or municipal benefit by non-responsible party
- No obligation to investigate/ remediate off-site
- Liability relief from state and third parties
- No fee, exempt from Property Transfer Act
- Must apply prior to property acquisition
- CGS §32-768

Brownfield Remediation and Revitalization Program

- 32 properties per year admitted by DECD
- Must be bona fide prospective purchaser, innocent property owner or contiguous landowner
- No obligation to investigate and remediate off-site
- Liability relief from state or any third party
- Fee 5% of land value, exempt from Property Transfer Act
- CGS §32-769

Municipal Brownfields Liability Relief Program

- Open to municipalities or development corps that are not responsible parties
- Simple application submitted prior to acquisition
- State and third party liability relief, exemption from Property Transfer Act
- Not required to fully investigate or cleanup Brownfield but must be good stewards of land
- CGS § 22a-133ii

Municipal Access Liability Relief CGS § 22a-133dd

- Any municipality, economic development entity, or LEP may enter a property to conduct an investigation without liability if:
  - Owner cannot be located,
  - Property encumbered by tax lien,
  - Notice of eminent domain filed,
  - Municipality finds investigation in public interest to determine if property should be redeveloped, or
  - Municipal official determines investigation necessary to assess potential risk to health or environment

What do You See?

This?

Or this?

Proposed city boat launch at former oil terminal- Norwich

For More Information

www.ctbrownfields.gov

or

Contact me:

mark.lewis@ct.gov

(860) 424-3768

Questions / Comments

Please state your name and speak loudly.

Submit comments to DEEP.remediationroundtable@ct.gov

Thank you!

Next meeting: November 18, 2014

Schedule and agenda on website
www.ct.gov/deep/remediationroundtable

Submit comments to the Roundtable Committee at
DEEP.remediationroundtable@ct.gov