Report to the Governor and the Joint Standing Committees on Environment and Commerce on the

Comprehensive Evaluation of the Connecticut Cleanup Program and Proposal for Transformation

December 21, 2011

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Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

December 21, 2011

Dear Governor Malloy and Members of the General Assembly:

In compliance with the requirements of Public Act 11-141, *An Act Concerning Brownfield Remediation and Development as an Economic Driver*, the Department of Energy and Environmental Protection (DEEP) submits our *Comprehensive Evaluation of the Connecticut Cleanup Program and Proposal for Transformation*.

In accordance with Section 6 of the Public Act, DEEP conducted an evaluation of laws that affect contamination cleanup. This report both summarizes the evaluation process and makes recommendations for a transformed cleanup program.

The enactment of Public Act 11-141, and the evaluation of cleanup programs that it triggered, represents a watershed moment for our state. Given our industrial legacy and the fact that current day activities can lead to uncontrolled releases and discharges of pollutants, there are literally thousands of sites in need of cleanup across Connecticut.

The shortcomings of existing programs, however, result in missed opportunities for cleanup. Lingering contaminated sites pose ongoing risks to public health and natural resources, and cause roadblocks to economic development and job creation. In addition, impediments to cleanup have a profound impact on land use in our state, as contaminated sites in more developed areas lay fallow – pushing development into more rural settings.

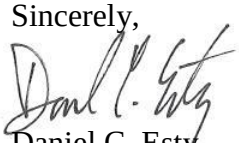
DEEP led a robust stakeholder process that focused on being inclusive, transparent, timely, and thorough. One strong point of consensus that emerged was that the status quo is neither fully protective of public health and the environment, nor is it doing enough to build the economy. DEEP worked with stakeholders to identify and carefully evaluate key issues. This process led

to the report we present today – which proposes a single cleanup program aligned with the economic, environmental, and public health realities of modern-day Connecticut.

With this report as a guide, we look forward to further discussions with all stakeholders. These discussions will allow us to fine-tune our approach and translate the concepts proposed here into a detailed action plan and specific legislation for the 2012 legislative session.

We look forward to working with you on the critical issue of transforming our cleanup programs in order to build a prosperous, sustainable future for Connecticut.

Sincerely,



Daniel C. Esty
Commissioner

Executive Summary

In accordance with Section 6 of Public Act 11-141, the Department of Energy and Environmental Protection ("DEEP") conducted a comprehensive evaluation of laws that affect contamination cleanup which included a robust stakeholder process. As a result of that process, DEEP is proposing a streamlined and transformed cleanup program that aligns with the economic, environmental and public health realities of modern-day Connecticut.

At the core of the transformation, is encouraging the productive re-use of developed sites, such that there will be sufficient land available upon which the Connecticut economy can continue to grow and prosper. With a robust, clear and efficient cleanup system, land will be available for its highest and best use, and the current and future citizens of Connecticut will not be burdened with risks to their health, a degraded environment, and a weakened economy.

In order to accomplish these goals, we need to work together to develop a simplified and unified cleanup program that addresses the highest risks posed from releases of pollution in a consistent manner. Similar to approaches used in neighboring states, the program will be primarily focused on cleaning up releases of hazardous substances with a clearer obligation to report releases and address contamination. The number of potential exits will be expanded, and timeframes for eliminating potential exposures caused by releases will be commensurate with risk and level of effort. In addition, robust milestones will better balance the goals of providing for increased certainty and predictability while still ensuring adequate oversight for the protection of public health and the environment.

The DEEP looks forward to working with stakeholders to further refine the concepts put forth above and to develop a legislative and regulatory package that will transform the way that pollution releases get cleaned up in Connecticut.

Introduction

Comprehensive Evaluation Background

The Department of Energy and Environmental Protection (DEEP) is committed to ensuring that Connecticut achieves efficient and effective cleanup of contamination caused by pollution releases. Contamination poses a risk not only to public health and the environment but also to economic development in Connecticut. Contamination is not solely an urban problem – contamination can be found in any of our towns, village centers, and rural areas.

Since the late 1960s, Connecticut has worked to formulate legislative programs and authorities that address releases of pollutants and the cleanup of such resultant contamination. In 1985, the Legislature established the Property Transfer Act, a program designed to require allocation of responsibility for remediation of high risk sites at the time of a real estate transfer. In certain cases, this program has been effective in reducing risk to public health and the environment. In many other cases, however, the fact that cleanup is linked to the transfer of property has hindered the movement and improvement of these contaminated sites.

Since the late 1990s, there has been a growing concern regarding the mounting number of underutilized or unused properties impacted by pollution releases. These properties – commonly referred to as Brownfields – can be excellent development opportunities. While the primary benefits of redeveloping Brownfields are decreasing risk to the current and future citizens of Connecticut, protecting our environment, and increasing economic development, redevelopment of these sites provide additional opportunities. Such opportunities include promoting smart growth, growing jobs in Connecticut, encouraging transit oriented development, and capitalizing on existing state and municipal infrastructure. There has also been an increasing awareness that in order for Connecticut to be competitive economically while preserving the unique character of Connecticut's vibrant cities and village centers and healthy rural lands, Brownfields must be redeveloped.

More can and should be done to protect public health and the environment and promote the safe and responsible redevelopment of areas impacted by pollution releases but many now realize that the Transfer Act represents a barrier to these laudable goals. The Act has been modified in large and small ways over twenty times, with fourteen modifications in the last sixteen years. These incremental changes were generally positive, but failed to address the fundamental structural constraints. In such a situation, it is important for government to take a step back and holistically evaluate the effectiveness of a program to determine what fundamental changes are needed in current laws so that the highest results can be achieved. DEEP, the regulated community, and non-profit organizations promoting environmental protection and environmental justice all share the same concern that more must be done to improve our current system. Improvements are especially important given current economic

conditions, as every release of pollution has the potential to reduce the value of impacted properties, and creates public health, financial, and environmental uncertainty.

In order to meet the charge given to DEEP and in accordance with Public Act No. 11-141, a comprehensive evaluation of laws that affect contamination cleanup has been conducted. This report summarizes the evaluation process and presents recommendations for a transformed cleanup program.

Public Act No. 11-141

In 2011, the Legislature directed DEEP through Public Act No. 11-141 – An Act Concerning Brownfield Remediation and Development as an Economic Driver – to review the system through which Brownfields are investigated, remediated, and returned to productive use. This charge, found in Section 6 of the Act, required a review of all provisions of the general statutes that affect remediation. This system, however, includes more than just Brownfields. Through the current cleanup program, DEEP addresses risk to public health and the environment at many properties that are not by definition Brownfields. All releases of pollution that impact a property will affect the value of that property and present a risk to public health and the environment until exposures to contamination are eliminated and the environment is restored.

The Public Act stated that the evaluation shall include (1) factors that influence the length of time to complete investigation and remediation under existing programs; (2) the number of properties that have entered into each property remediation program, the rate by which properties enter and the number of properties that have completed the requirements of each property remediation program; (3) the use of licensed environmental professionals in expediting property remediation; (4) audits of verifications rendered by licensed environmental professionals; (5) the programs provided for in chapters 445 and 446k of the general statutes that provide liability relief for potential and existing property owners; (6) a comparison of existing programs to states with a single remediation program; (7) the use by the Commissioner of resources when adopting regulations such as studies published by other federal and state agencies, the Connecticut Academy of Science and Engineering or other such research organization and university studies; and (8) recommendations that will address issues identified in the report or improvements that may be necessary for a more streamlined or efficient remediation process.

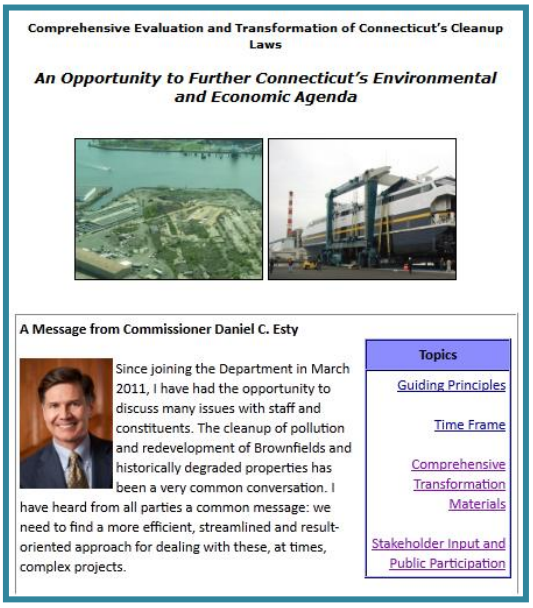
Comprehensive Evaluation of Connecticut's Site Cleanup Programs

Early in 2011, DEEP released a white paper that provided baseline information on Connecticut's site cleanup programs and the underlying laws that affect pollution remediation. The white paper, included as ***Appendix A***, offered a summary of the current cleanup construct and past evaluations and changes to the program, and started the discussion on opportunities for

improvement. It is clear from the white paper that the current system utilized in Connecticut is not sufficiently effective or efficient, and that perennial and minor modifications to the existing program authorities have not resulted in overall improvement to the system as a whole.

Components of the Comprehensive Evaluation

At the onset of this comprehensive evaluation, DEEP established guiding principles to direct the assessment. To encourage participation, DEEP launched a dedicated webpage (www.ct.gov/deep/remediation-transform) to ensure this evaluation was conducted transparently and that all stakeholders had access to needed information. DEEP also established an e-mail address for stakeholders to share their ideas, questions, and concerns.


Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws

An Opportunity to Further Connecticut's Environmental and Economic Agenda

A Message from Commissioner Daniel C. Esty

Since joining the Department in March 2011, I have had the opportunity to discuss many issues with staff and constituents. The cleanup of pollution and redevelopment of Brownfields and historically degraded properties has been a very common conversation. I have heard from all parties a common message: we need to find a more efficient, streamlined and result-oriented approach for dealing with these, at times, complex projects.

Topics

Guiding Principles

Time Frame

Comprehensive Transformation Materials

Stakeholder Input and Public Participation

Guiding Principles

INCLUSIVE
All stakeholders are invited to engage and participate. Key stakeholder groups include the Department, the regulated community, other state and federal entities, municipalities, environmental constituencies, and citizen/neighborhood groups.

TRANSPARENT
The Department will make information relative to this process available for all to access. Documents, updates, and meeting notices will be posted on the transformation web pages.

TIMELY
The Department will complete this evaluation and transformation no later than December 15, 2011. Therefore, the Department will be timely in requests for stakeholder input and posting of information on the transformation web pages, and will expect timely input from stakeholders.

THOROUGH
This evaluation and transformation will consider all laws that influence pollution cleanup in Connecticut. While not all issues can be fully evaluated prior to December 15, 2011, issues outside of the scope of this evaluation and transformation will be referred to the Department's Remediation Roundtable or other forums for further consideration.

Critical to the success of the comprehensive evaluation is robust involvement by the public. There are many stakeholders who participate in the cleanup of pollution releases in Connecticut and many more that will benefit from a well-formulated cleanup program. Major stakeholder groups are identified in the insert.

Public Visioning Session

DEEP conducted the initial public visioning session on June 27, 2011 to begin the comprehensive evaluation process. The purpose of this meeting was to receive stakeholder input on what they expect from a cleanup program, what the goals of a cleanup program should entail, and what the most important roles and functions of each party involved in contamination cleanup are. Approximately one hundred stakeholders attended an afternoon session to begin the work on setting the vision for the cleanup program for Connecticut. Representatives from state and local government, the regulated community (including responsible parties, brownfield redevelopers, and property owners), representatives from state-wide environmental and environmental justice organizations, licensed environmental professionals, and environmental attorneys attended this session. Information and materials used at this session were also made available on-line so those who could not attend could provide input and share their vision.

KEY STAKEHOLDERS

Current and Future Citizens of Connecticut

State and Federal Government
DEEP, Dept. of Economic and Community Development, Dept. of Public Health, Attorney General, US Environmental Protection Agency

Regulated Community
Responsible Parties
Brownfield Redevelopers
Property owners

Municipalities and Regional Planning Agencies

Banks and Insurers

Licensed Environmental Professionals

Attorneys

Constituent Organizations
Environmental Constituents
Environment Justice Organizations
Connecticut Council on Environmental Quality

A report that summarizes this process is included as ***Appendix B***. More information about the vision is included in the Recommendations section of this report.

Draft Visioning Session Report and Follow-up Questions

Following the Public Visioning Session, DEEP released the Draft Visioning Session Report for public review and comment on August 4, 2011. The report includes documents prepared by each of the ten breakout groups from the Public Visioning Session. In addition, DEEP posted on-line follow-up questions to the Visioning Session for stakeholders to provide additional feedback to DEEP.

Public Meeting: Evaluation Workgroups Discussion

DEEP again convened a meeting of stakeholders on August 9, 2011 to summarize the visioning process, and led a discussion on establishing evaluation workgroups. During this meeting, DEEP

presented evaluation topics based on the charge of Public Act 11-141, and solicited additional ideas from meeting participants.

Meeting participants contributed many thoughtful ideas that helped shape this process. DEEP and the participants then worked to refine the ideas to ten topics that represent a broad cross-section of the ideas identified during the meeting. Meeting participants then selected their five top priorities through a ballot vote. The refined list ranked in order of stakeholder interest and the percentage of first priority votes received is shown below.

Rank and Percent of 1st Priority Votes	Workgroup Topics
1 (33%)	What is the finish line? How does risk influence the finish line and factors that influence closure?
2 (17%)	Entry Points into Current Connecticut Remediation Programs
3 (8%)	Defining and Measuring Success
4 (10%)	Evaluation of Various Cleanup Program Models
5 (0%)	Licensed Environmental Professional Program Performance and Utilization
6 (2%)	Defining Responsibility for Pollution – Taking into Account Historical Contamination Scenarios
7 (6%)	Evaluate Factors Influencing Current Remediation Program Timing
8 (13%)	Single Remediation Program Evaluation
9 (8%)	Evaluate the Best Practices With Other State Cleanup Programs
10 (2%)	Evaluate Connecticut's Liability Relief Provisions

With this information in hand, and based on the results of the visioning process, DEEP further condensed these ideas and information into a specific charge for six evaluation workgroups. More information about this process can be found in the Evaluation Workgroup Discussion Summary Report included as ***Appendix C***.

Evaluation Workgroups

With the release of the report summarizing the formulation of the workgroups (***Appendix C***), DEEP solicited a broad array of stakeholder volunteers to participate in the six workgroups. Since there was considerable stakeholder interest, DEEP increased the size the workgroups to accommodate more participants. Each workgroup was made up of sixteen members, selected

to ensure balanced stakeholder participation. Volunteers' workgroup preferences were accommodated where possible. Each of the six Evaluation Workgroups was assigned a DEEP co-lead, and each workgroup self-selected a non-DEEP co-lead. A list of participants in the workgroups is included as ***Appendix D***.

DEEP provided each workgroup with its scope and charge, as shown below, and gave some preliminary guidance. After this initial guidance, the workgroups operated independently and submitted questions to DEEP through their DEEP co-lead, as necessary.

Evaluation Workgroups
Evaluation of Connecticut's Cleanup Programs - Current State
Scope: Evaluate the current state of the Connecticut cleanup programs. Gather and evaluate information relative to these programs, such as the number of properties that have entered into each program, the rate by which properties enter the programs, the number of properties that have completed the requirements of each program, and determine factors that may influence the length of time to complete investigation and remediation under existing programs.
Deliverable: Present information from this evaluation and discuss factors that may influence the length of time it takes to complete an investigation and remediation. Suggest potential mechanisms or programmatic approaches that could increase the speed of investigation and remediation.
Evaluation Finish Lines and How Risk and Other Factors Influence Closure
Scope: Evaluate the current requirements for closure (the finish line) under the Connecticut cleanup programs. Document and evaluate the factors that influence the time needed to reach completion of investigation and remediation, evaluate how risk and other factors influence when closure is achieved, and evaluate how interested parties rely on closure and whether the current finish lines meet their needs and expectations.
Deliverable: Present information from this evaluation and discuss ways that closure could be obtained more quickly while meeting the needs and expectations of interested parties.
Entry Points and Triggers into the Current Connecticut Cleanup Programs
Scope: Evaluate the trigger mechanisms and points of entry into the current Connecticut cleanup programs. Determine what situations would compel action under a cleanup program and under what circumstances could parties voluntarily enter a cleanup program. Evaluate if the triggers are capturing all high-risk sites or releases and if low-risk sites or releases are unnecessarily entered into programs.
Deliverable: Present information from this evaluation and suggest general trigger types and entry points that would compel the highest risk sites or releases to enter a program and still allow parties to voluntarily enter when formal review and approval (including LEP verification) is sought.
Evaluation of LEP Program Performance and Utilization
Scope: Evaluate the Connecticut Licensed Environmental Professional (LEP) program. Compile and evaluate data on the performance of the LEP program, including number and percentage of verifications that undergo the audit process, the frequency by which sites or releases are delegated to LEPs, roles that LEPs can and cannot serve during the investigation and remediation processes, additional roles that similar licensed professionals serve in other states, and the authority of the LEP oversight board in Connecticut compared to other states with similar licensed professional programs.
Deliverable: Present information from this evaluation and suggest how the audit process, utilization of the LEP, and the oversight board could be modified to expedite investigation and remediation.

Evaluation Workgroups
Evaluation Pollution Responsibility and Liability Relief Provisions
Scope: Evaluate what parties are responsible for the investigation and remediation of pollution under current Connecticut cleanup programs and liability relief provisions in law. Compare the Connecticut responsibility and liability relief structure to other state structures, distinguishing between types of potentially responsible parties (e.g., creators, successors to the creator, owners and operators, potential owners and developers).
Deliverable: Present information from this evaluation and suggest responsibility and liability relief structures that would help effectuate investigation, or remediation, or both of sites or releases.
Evaluate Best Practices of Various State Cleanup Programs
Scope: Evaluate best practices of successful state cleanup programs and states with a single remediation program. Compare the best practices from state cleanup programs and the single remediation programs to the Connecticut cleanup programs, and determine how these best practices and program structures address the needs of all investigation and remediation stakeholders.
Deliverable: Present information from this evaluation and suggest which best practices and program structures appear to be the easiest to implement, have the clearest requirements, and meet the needs of all investigation and remediation stakeholders.

Each workgroup delivered a draft report to DEEP that responded to its scope and deliverable. These reports were posted on-line, and stakeholders were encouraged to provide comments on these reports or any other topics that they felt should be shared with DEEP. DEEP asked the workgroup co-leads to review comments specific to their workgroup and adjust their report as they believed appropriate. Final Evaluation Workgroup Reports were prepared that addressed any public comments specific to statements contained in the reports. (Hyperlinks to these reports can be found in ***Appendix E***.)

Each workgroup report contains a wealth of information. Workgroup members represented a broad array of stakeholders and brought to this process hundreds of years of professional experience in their respective fields. While the full reports are available electronically on the DEEP Transformation webpage, the specific recommendations and discussions of each report are contained in ***Appendix F***.

Public Comments

Stakeholders were encouraged to submit concerns, ideas, and questions to the dedicated e-mail account or engage with DEEP at various public meetings or speaking engagements. DEEP received public comments throughout the comprehensive evaluation process.

Every document produced during this process was posted on the DEEP Transformation webpage, and comment periods were held open for as long as possible. For example, the Draft Visioning Session Report was posted on-line on August 4, 2011 and the comment period

remained open until October 17, 2011. For the Evaluation Workgroup Reports, DEEP accepted public comments from September 29, 2011 until November 14, 2011.

Comments pertaining to the visioning process can be found in the Final Visioning Session Report (***Appendix B***). Numerous additional comments, ranging from specific to general, were submitted to DEEP throughout this process pertaining to the current and potential future state of the cleanup program. These comments are contained in ***Appendix G***. In addition, DEEP summarized and categorized the public comments received by topic. This summary of public comments is included as ***Appendix H***.

Recommendations

Throughout this comprehensive evaluation and transformation process, the level of interest from stakeholders was significant. Few environmental protection initiatives directly impact such a broad array of interests – citizens, businesses, non-profit organizations, and federal, state, and local government. While there was not always agreement on exactly how the program should be changed, there was consensus that the status quo was not acceptable and change was needed for public health protection, environmental restoration, and economic factors alike. Left unaddressed, these contamination issues have the potential to continue to negatively impact public health and the environment and slow economic growth.

The stakeholder and public engagement process directly shaped the recommendations that are contained in this section of the report. Stakeholder input also pervades the vision and the conceptual design for a transformed cleanup program, and the recommended next steps for implementation of the transformation.

Vision for a Transformed Cleanup Program

In 1971, the General Assembly created the Department of Environmental Protection (now the Department of Energy and Environmental Protection) and declared that the policy of the state of Connecticut is to conserve, improve and protect its natural resources and environment and to control air, land and water pollution in order to enhance the health, safety and welfare of the people of the state – now and in the future. The cleanup of pollution releases that pose a potential risk to public health, public welfare, and the environment is integral to achieving this policy of the State, particularly for future generations.

The State must encourage the productive re-use of developed sites, such that there will be sufficient land available upon which the Connecticut economy can continue to grow and prosper. With a robust, clear and efficient cleanup system, land will be available for its highest and best use, and the current and future citizens of Connecticut will not be burdened with risks to their health, a degraded environment, and a weakened economy.

Throughout this process a broad array of stakeholders presented their various ideas and suggestions on their vision for the paramount cleanup program. Although many thoughts were offered, there were common themes that were apparent in a review of the stakeholder input which can be found in the Final Visioning Session Report (***Appendix B***).

Common Cleanup Program Vision Themes

Protective: Protect public health and the environment

Prioritized: Focus on the highest risks

Flexible: Allow site-specific decision-making

Efficient: Create more self-implementing options

Simple: Unify the program

Reasonable: Balance level-of-effort with risk and economic factors

Transparent: Improve guidance, public participation, and access to data

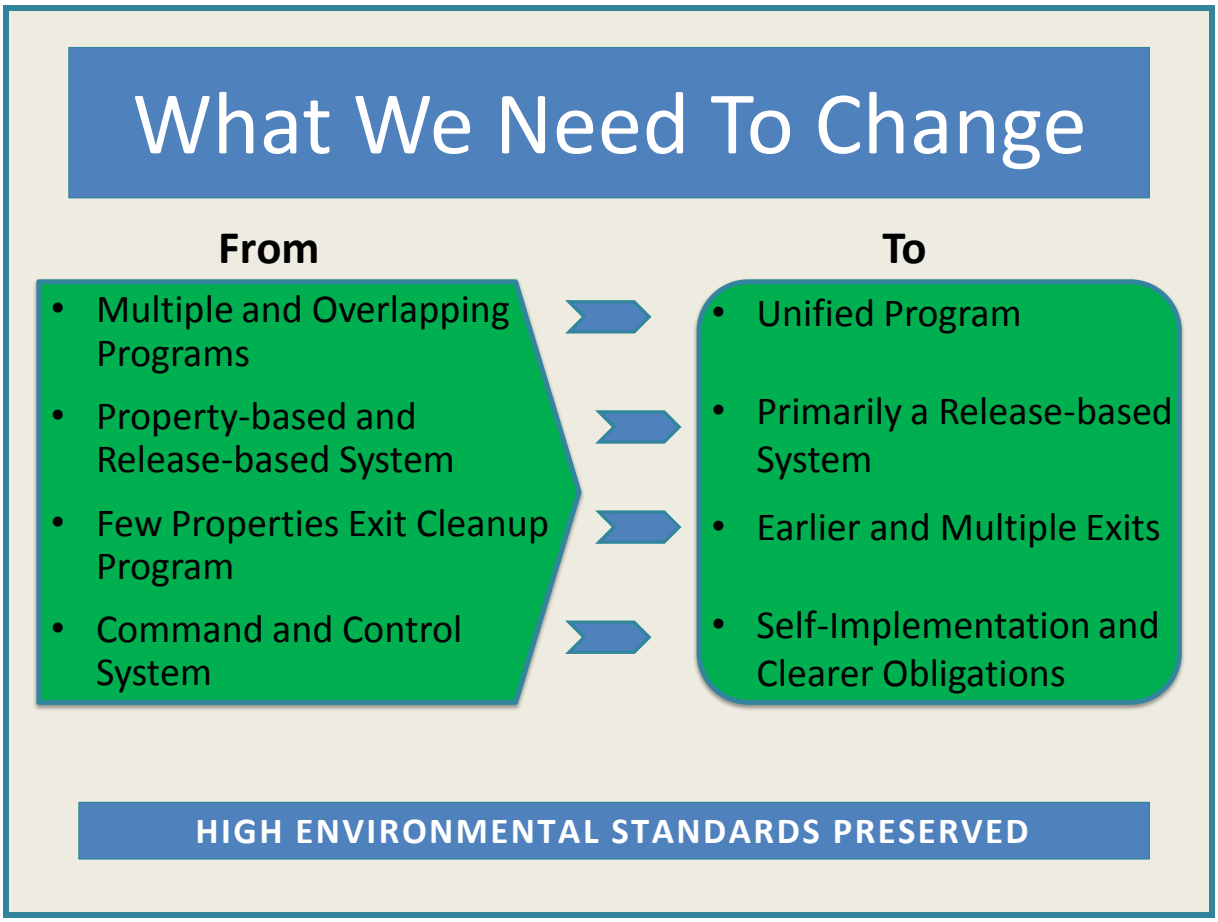
Certain: Establish clear and multiple exits with interim milestones

DEEP offers the following as a vision for the future cleanup program for the State of Connecticut:

> *Connecticut will have a cleanup program that is simple to implement; focuses the greatest level of effort on the highest risks to public health and the environment; has obligations that are clear to all stakeholders; provides certainty; maximizes self-implementing options with robust checks and balances; has flexible endpoints that are commensurate with risk; provides for meaningful public participation; creates transparency of process and information for all stakeholders; encourages sustainable remediation outcomes; and helps unlock the economic value of degraded properties without burdening any segment of the population with a disproportionate share of the risks and consequences of environmental pollution.*

Conceptual Design for a Transformed Cleanup Program

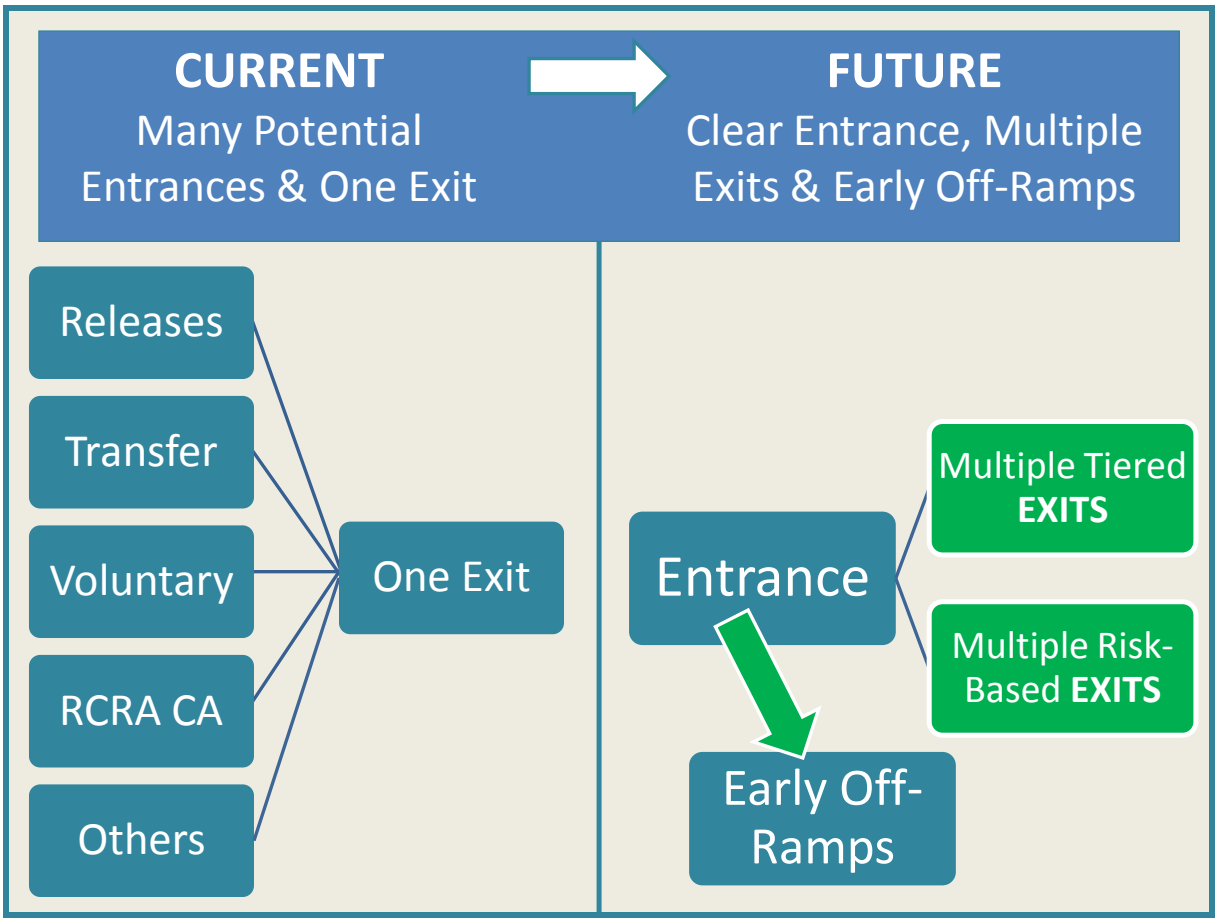
The following figures present the concept for a transformed cleanup program. This system will best serve the stakeholders that rely upon the cleanup program and the Connecticut economy.



Since there was little disagreement that the current cleanup program requires a top-to-bottom review and transformation, the primary evaluation questions and suggestions that emerged focused on the future state construct. The figure above shows the changes proposed by DEEP in response to consistent stakeholder requests, suggestions and complaints regarding the current construct.

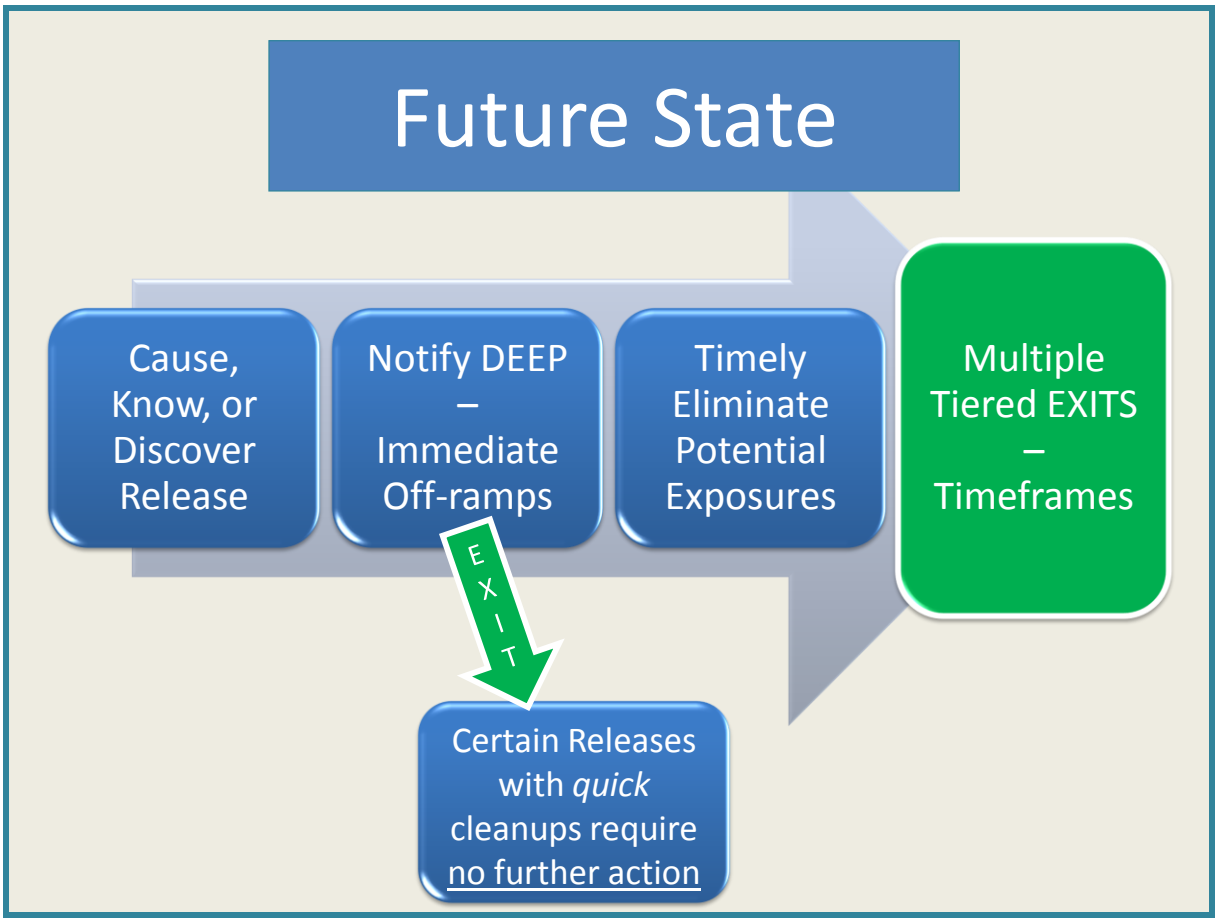
The current system is scattered throughout the General Statutes, and has little consistency in its implementation, save the exit. Currently there is only one exit, a completely remediated site, and this represents a major impediment to progress. A multiple exit construct that is based primarily on releases will allow for quick wins for new releases and certainty for those that undertake cleanup, because under the current system addressing a new spill and short-term risk does not necessarily translate into satisfying property cleanup requirements. A multiple exit program will also provide more flexibility in the levels of cleanup, dependent on site use.

Changes to the Remediation Standard Regulations (RSRs) will be needed to provide for increased flexibility in cleanup approach, such as allowing self-implementing risk-based cleanups. The current and future entrance and exit systems are compared in the figure below.



As the above figure illustrates, the current system has many entrances, and multiple triggers and requires action on a broad range of properties and releases – some of which may pose a high risk to public health and the environment and others that may not.

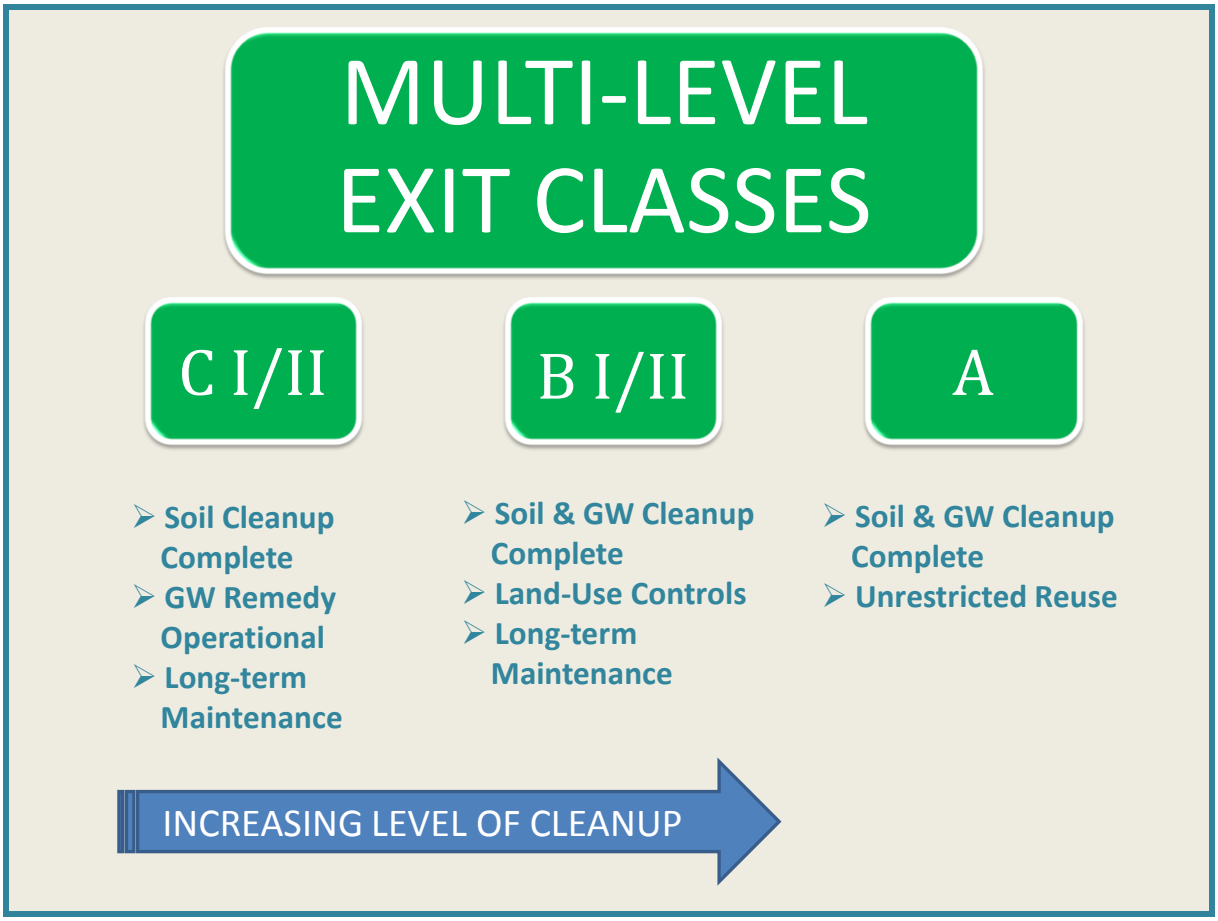
The future entrance will provide certainty for those who may fall into one of the sixteen different statutory authorities that require cleanup or other action, prohibit maintaining pollution, or authorize DEEP to take action against a party maintaining pollution. While the entrance is becoming broader, it is coupled with early off-ramps that will provide certainty and predictability that currently does not exist, and multiple and early exits from the program, often through self-implementing cleanups. More significantly, reasonable risk-based cleanup approaches will be an option for parties that enter the program. Further details on the proposed future state and multi-level exits are shown in the figures that follow.



The future state of the cleanup program is one that is simple to understand for the regulated community, prioritizes addressing the highest risks, provides incentives for those that wish to move quickly, and provides the party undertaking the cleanup the authority to make a business decision when it comes to determining the most appropriate cleanup approach. The future state will also require DEEP to operate a robust education and auditing program, and to maintain enforcement authorities that can be used to compel cleanup where the risks posed from the contamination are high and parties have failed to act.

In many cases, it is efficient to cleanup contamination to the greatest degree using default cleanup standards and approaches. In fact, some parties have chosen to cleanup to a degree greater than specified by the default cleanup standards for marketability or philosophical reasons. Cleanup scenarios that do not warrant the highest level of cleanup may be appropriate in some cases. Most importantly, a common component of each exit is that they all are protective of public health and the environment.

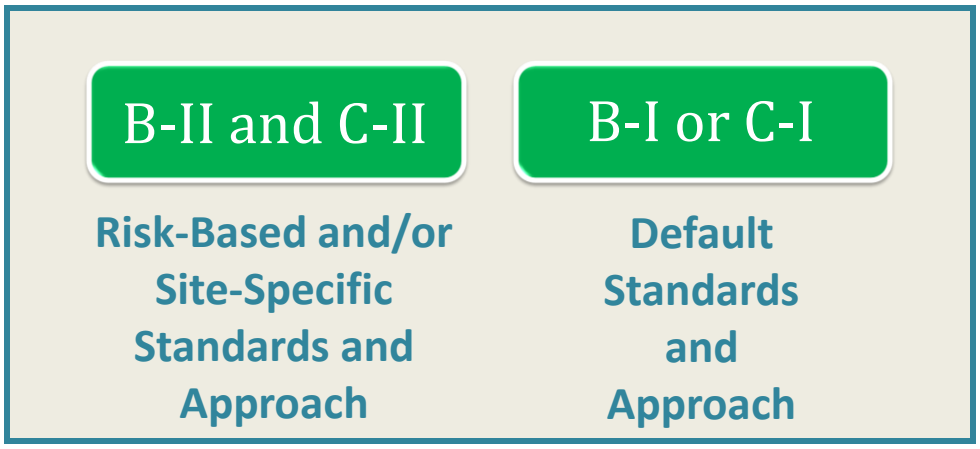
The future multi-level exit concept is further detailed in the figures below.



While the degree of cleanup increases from Class C to B to A, all cleanup levels must be protective of public health and the environment. Under a Class C exit, soil remediation has been completed, the groundwater remedy is operational or post-remediation groundwater monitoring is active, and there is a long-term stewardship obligation in place. A Class C exit would be typically representative of completion of approximately 80% of the active work yet could represent only 20% of the time toward ceasing all work or passive monitoring. When a certificate of completion for a Class C cleanup is attained, the majority of the cleanup is complete and significant additional property value can be realized.

Parties can also chose a Class B exit that represents completion with remaining stewardship obligations, or a Class A exit that represents scenarios where there are no additional obligations and no limitations on reuse.

Classes C and B are further divided into Type-II and Type-I cleanups. As the figure below illustrates, Type-II cleanups utilize risk-based and/or site-specific standards and approaches. Whereas the Type-I cleanups utilize the default standards and approaches.

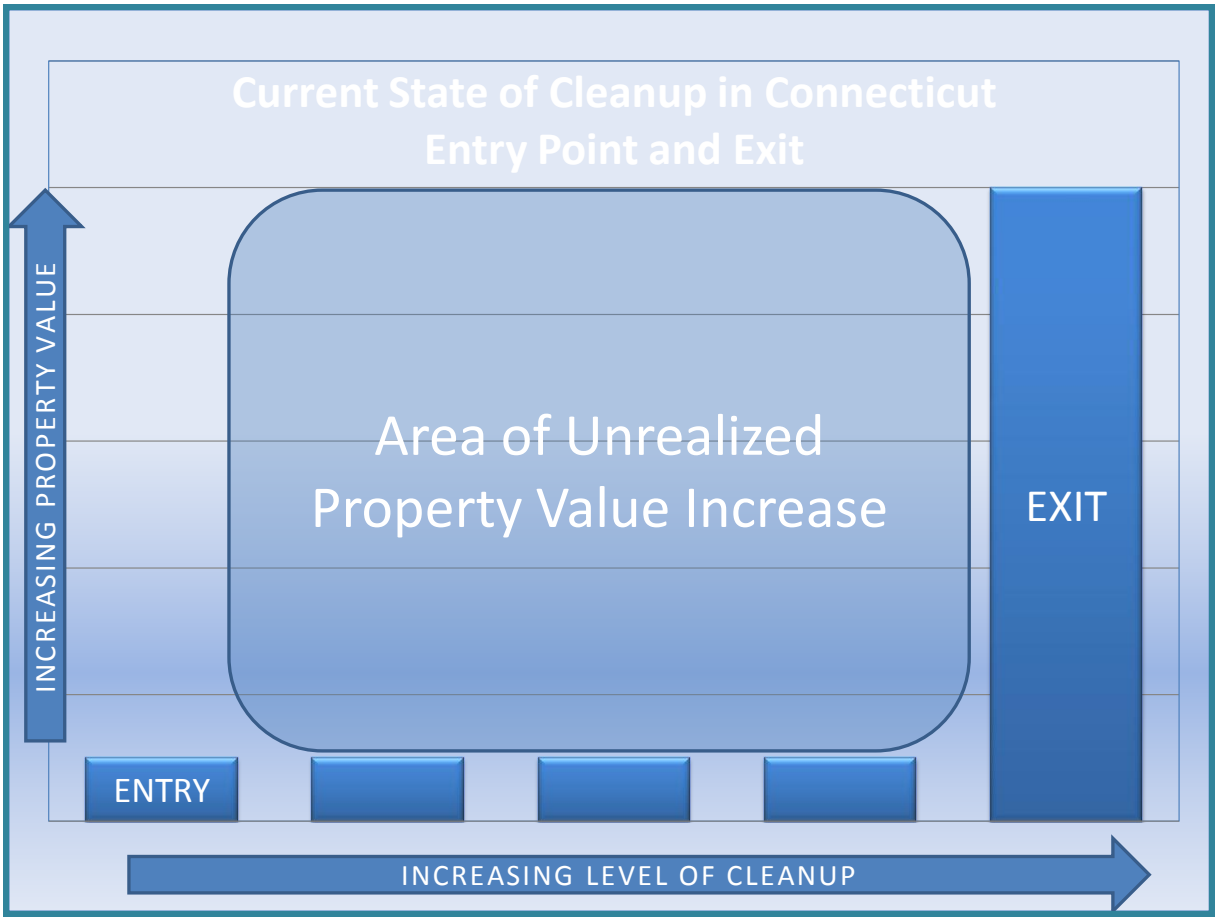


While the specifics of the new cleanup program will ultimately need to be further discussed with stakeholders in a public and open forum, key features of the new cleanup program are highlighted below.

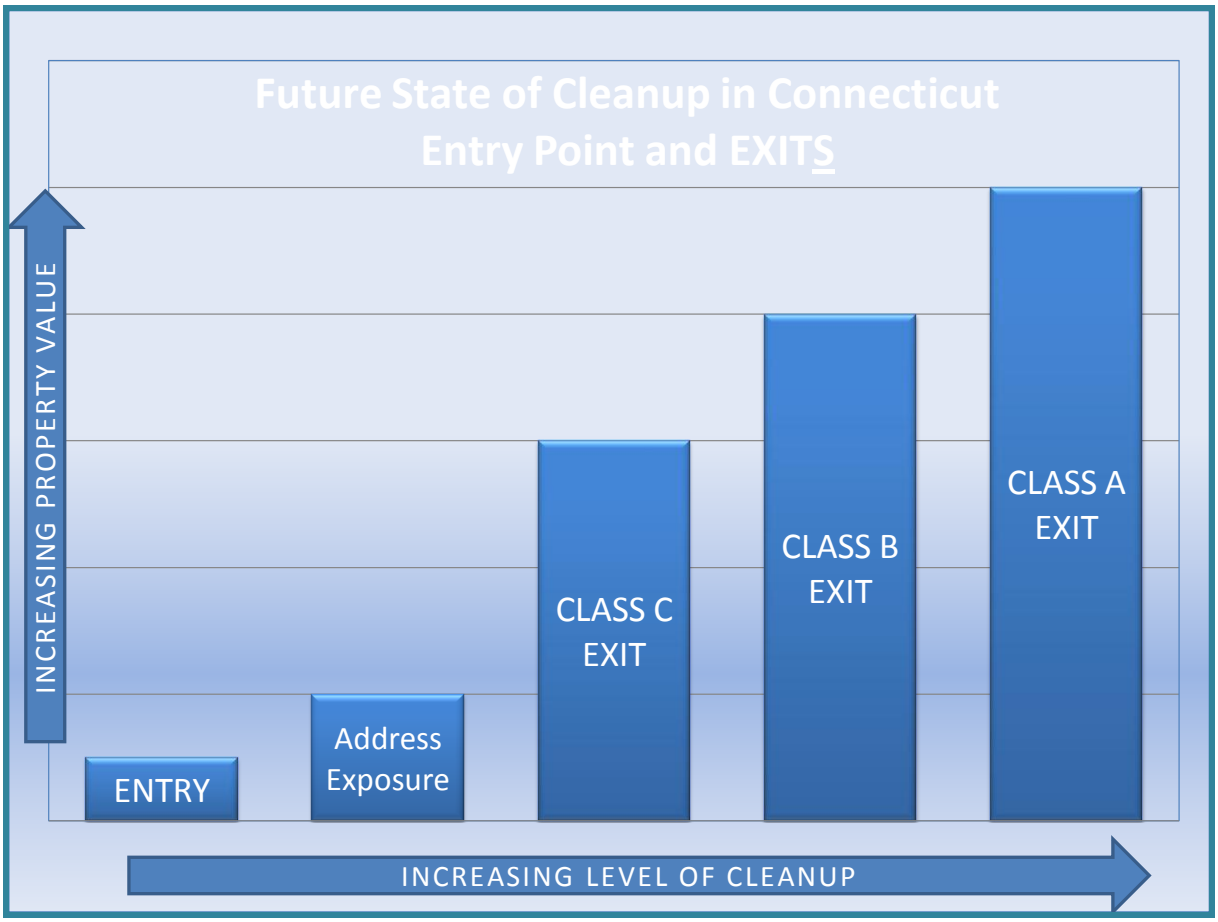
Key Features of the New Cleanup Program

- Unified cleanup program that addresses the highest risks posed from releases of pollution in a consistent manner
- Primarily release based, while preserving a property-wide voluntary cleanup program
- Clearer obligation to report releases and address contamination
- Connecticut maintains high environmental standards
- Self-implementing process for determining site-specific and risk-based cleanup approaches
- Responsible party can choose from five cleanup exits
- Many exits can be reached much sooner in the process – with remaining obligation being addressed through a transferable stewardship obligation
- Timeframes for eliminating potential exposures are commensurate with risk and level of effort
- Program milestones will require verifications to provide for certainty and predictability while ensuring adequate oversight
- DEEP maintains enforcement authority to require cleanup
- Streamlined *in situ* remediation approaches and encourage sustainable remediation outcomes
- Post-remediation groundwater monitoring provisions tied to the likelihood of impact to groundwater
- Transparent with programmatic metrics
- Centralized and local public notices to encourage meaningful public participation
- Increased audit and enforcement capabilities by DEEP, including clear field validation authority
- New self-implementing land-use controls to manage pollution

DEEP believes that an important outcome of the transformed program is that the system will unlock property value. As illustrated in the graphic below, the current system delays increases in property value until properties reach completion. With completion being tied to a one size fits all exit, this increase in value can be delayed for many properties.



With the new conceptual design explained in this report, parties that enter the program can make business decisions regarding cleanup and exit selection. This will allow parties to achieve completion in a timelier manner and at level commensurate with risk. While any selected cleanup approach will need to be protective of public health and the environment, there are certain instances where alternate exits make more sense given certain site-specific conditions or intended uses of the property. This will, in turn, allow value to be unlocked as illustrated below. Again, each exit will be protective of public health and the environment.



Next Steps

DEEP truly appreciates the enthusiastic and productive stakeholder participation in the visioning, evaluation and transformation process. DEEP believes that this report contains a vision and conceptual designs for a transformed cleanup program that satisfies many requests of the broad array of stakeholders that participated in this process.

An appropriate next step is to collect stakeholder input on this report and the vision and conceptual design for a transformed cleanup program contained herein. As has been the approach from the beginning of this process, DEEP needs to hear from stakeholders.

In addition, DEEP must provide more information to interested stakeholders in an iterative process to maintain a true dialogue in the spirit in which it began in this Spring. Further, DEEP commits to hosting two large-format public meetings (one to be held in the evening hours) so stakeholders can provide feedback on these recommendations and the details of the transformation as they emerge over the next several weeks.

Appendices

Appendix A – Comprehensive Evaluation of Connecticut's Site Cleanup Programs

Appendix B – Final Visioning Session Report

Appendix C – Evaluation Workgroups Discussion Summary Report

Appendix D – List of Evaluation Workgroups and Participants

Appendix E – Final Evaluation Workgroup Reports

Evaluation of Connecticut's Cleanup Programs - Current State

Evaluation of Finish Lines and How Risk and Other Factors Influence Closure

Evaluation of Entry Points and Triggers into the Current Connecticut Cleanup Programs

Evaluation of LEP Program Performance and Utilization

Evaluation of Pollution Responsibility and Liability Relief Provisions

Evaluation of Best Practices of Various State Cleanup Programs

Appendix F – Recommendations and Discussions of Evaluation Workgroups

Appendix G – Public Comments

Appendix H – Summary of Public Comments

Comprehensive Evaluation of Connecticut's Site Cleanup Programs

January 2011

I. Introduction

The Department of Environmental Protection (DEP) is committed to ensuring that Connecticut's site cleanup and Brownfield programs are achieving the results intended by the underlying laws. DEP believes the time has come to take a comprehensive look at the state's environmental site cleanup programs, particularly as they relate to underutilized sites that typically been subject to multiple releases over time – commonly referred to as Brownfields.

The cleanup or remediation of contaminated sites is critical to the protection of human health and the environment. Remediation is also critical to the reuse of previously degraded and currently underused properties. In the last twenty-five years, a strong foundation for the remediation of these sites has been laid. That foundation includes spill reporting and response laws that first appeared in 1969, passage of the Property Transfer Act in 1985, adoption of the Remediation Standards Regulations in 1996, the licensing of the first Licensed Environmental Professionals (LEPs) in 1997, creation of the Voluntary Remediation programs in 1995, and ongoing development of guidance documents in conjunction with the regulated community.

The cleanup of sites that have been subject to releases of pollutants is largely driven by state law. Some states, such as Connecticut, have a multitude of different laws that apply to discrete situations. Other states have or are moving to a single cleanup program. Federal law is limited with respect to remediation of sites that have been subject to releases that have polluted land and water. The primary federal site cleanup program known as Superfund deals with only the most contaminated sites, and there are only a relatively small number of federal Superfund sites in each state, for example Connecticut has 14.

This document provides a baseline of information on Connecticut's site cleanup programs. The information is designed to assist in an evaluation of the extent to which intended results are being achieved, identify opportunities for improvement and efficiencies, and evaluate the potential of any changes to the site cleanup programs. The DEP hopes the evaluation will lead to greater success in the remediation of contaminated sites, which will not only improve risk reduction, but will also aid in the reuse of the State's Brownfields.

II. Current Cleanup Construct

A. Statutory Programs

In Connecticut, if a company knows it has had a past release of a hazardous substance, it may not be clear at times what the cleanup "finish line" is or within what timeframe cleanup must be finished. Any one or more of fourteen different laws might apply depending on the specific facts of the matter. Generally, the laws have different procedures for action and different finish and timeframes, if any.

Below is a list of laws that govern releases and pollution in Connecticut, and the year the original law was first adopted:

Authority	Statutory Reference	Date
Pollution or discharge of waste prohibition	CGS 22a-427	1967
Commissioner's authority to issue an order to require person to correct potential source of pollution	CGS 22a-432	1967
Commissioner's authority to issue Orders to a landowner, or municipality	CGS 22a-433 and 428, respectively	1967
Release Reporting	CGS 22a-450	1969
Release Response	CGS 22a-451	1969
General, Spills, Marine Terminals	CGS 22a-449(a)-(c), RCSA 25-54cc-1 through 7	1969
PCB program	CGS 22a-463 – 469a	1976
Potable Water Program - DEP authorized to provide short-term water to residents/schools if they are served by a contaminated private well, to investigate for the source of such contamination, and to issue orders to either the responsible party (or if such party not known, to municipality) to supply safe drinking water.	CGS 22a-471	1982
Commissioner's authority to issue order to abate pollution	CGS 22a-430(d)	1982
Underground Storage Tanks	CGS 22a-449(d)-(h), RCSA 22a-449d-106	1983
Property Transfer Act - If and when certain properties defined as "establishments" are transferred, they must be investigated by a party to the transfer and then remediated.	CGS 22a-134	1985
State Superfund	22a-133e	1987
Voluntary Remediation Programs	CGS 22a-133x and -133y	1995
Significant Environmental Hazard Notification	CGS 22a-6u	1998
Resource Conservation and Recovery Act (42 U.S.C. §6901 et seq.; "RCRA") Corrective Action regulations	RCSA 22a-449(c)-105(h)	2002

B. Tools

In addition to the laws identified above, the following tools facilitate remediation of contaminated sites in Connecticut.

1. Environmental Land Use Restrictions (ELURs) (CGS 22a-133n through -133s). Enacted in 1994. An ELUR is a deed restriction, given by a property owner to the Commissioner, which runs with the land. It allows contaminants to remain on a property as long as activities on the property are limited to prevent unacceptable exposures to the contamination. The deed restriction "locks in" the assumption about future activities – for example, no residential use.

2. Remediation Standard Regulations (RSRs)(RCSA 22a-133k-1 through -3). Adopted in 1996. These regulations provide a common endpoint for cleanups of some sites, but do not apply to all releases and contaminated sites. RSRs also contain alternatives to the standards, some of which are self-implementing and others that require DEP approval. Some alternatives are widely used at brownfield sites, such as Engineered Controls, and ELURs.

3. Licensed Environmental Professionals (LEPs)(CGS 22a-133v). Established by statute in 1995 and licensed by the Board of Examiners of Environmental Professionals, LEPs are authorized to oversee the investigation and cleanup of sites under the Transfer Act, Voluntary Programs and RCRA Corrective Action, if oversight is delegated by DEP. Working with an LEP allows responsible parties to proceed at a faster pace than the traditional process of submitting reports for DEP review and approval. DEP retains authority to audit the cleanup work. It also frees up DEP's limited resources to focus on higher priorities.

4. Guidance Documents. The DEP has issued a series of guidance documents to provide certainty and information to LEPs and parties conducting cleanup work. Guidance documents provide transparency, and identify a standard of care that DEP has found acceptable over time. Such standardization and transparency provides efficiency and certainty for regulated parties and DEP, while still allowing other "custom" site-specific approaches to meet requirements. Guidance is usually drafted by a committee of DEP staff and other technical professionals, such as LEPs.

5. RCRA Corrective Action delegation from US EPA to DEP. Delegation occurred in 2005. This allows DEP to administer the federal program. This tool applies to cleanup of releases at certain sites regulated by RCRA. Regulations to administer the program are adopted at RCSA 22a-449c-105(h).

6. State financial incentives and assistance:
    a. administered by DECD's Office of Brownfield Remediation & Development in cooperation with DEP:
        i. Urban Sites Remedial Action Program
        ii. Special Contaminated Property Remediation & Insurance Fund
        iii. Dry Cleaning Establishment Remediation Fund
        iv. US EPA Revolving Loan Funds awarded to DECD - Hartford & Statewide
        v. US EPA Site Assessment Program awarded to DECD
        vi. Regional Brownfield Redevelopment Loan Fund
        vii. Municipal Brownfield Pilots
    b. administered by DEP and a Review Board: UST Petroleum Cleanup Account (CGS 22a-449a through -449i, and 22a-449p), has been involved with the remediation of approximately 1,400 commercial tank sites, and 4,500 residential tank sites since 1992. Reimburses costs of investigation and cleanup.

7. Liability incentives. Prominent examples include:
    a. Municipal Liability Relief:
        i. Transfer Act exemptions for Municipalities
        ii. Remediation Grants from DECD: no additional liability (32-9ee)
        iii. Investigation: will not incur cleanup liability by entering property to investigate (22a-133dd)
    b. Abandoned Brownfield Cleanup Program. Enacted in 2009. Allows an innocent new owner, who acquires a brownfield (unused since 1999) to redevelop, cleanup the property and avoid any state law obligation to investigate and cleanup off-site contamination.
    c. Transfer Act audits: three year window on DEP's authority to audit a final cleanup
    d. Covenants Not to Sue (22a-133aa and -133bb), includes provisions to assist brownfields
    e. State Liability Relief for innocent owners (defined at 22a-452d)
    f. Third Party Liability Relief (22a-133ee): non-responsible parties that own a contaminated property, and investigate/remediate it, have no liability for costs or damages to any

person other than state or federal government for pollution on or from such owner's property that occurred prior to such owner taking title

There have been many recent activities to improve the above-referenced tools. For instance, the LEP regulations are currently undergoing a proposed amendment process; the public hearing was held in November 2010. In addition, recent guidance documents include Site Characterization (2007, updated 2010), Verification (2008), Engineered Controls (2009, updated 2010), Well Receptor Survey (2009), Laboratory Quality Assurance and Quality Control (2006-2009, updated 2010) and ELURs (2010).

As part of DEP's commitment to a lean culture, site cleanup-related "Lean Teams" used a "kaizen" event (a week-long event to take apart a process, identify waste, and reassemble the value-added steps) to improve efficiency and quality. The three teams are implementing improvements on:

- Engineered Controls - application/approval process,
- ELURs - application/approval process, and
- Potable Water program – supply of short-term safe drinking water.

C. Comparison of themes/actions

Each cleanup law has its own trigger and targeted outcome, which may differ in some way with the other laws.

Current Legal Requirement for Regulated Parties to perform response actions

Statute	Required to Control short-term hazards	Required to Timely Control Migration of Pollution	Trigger for Requirement to Act	Requirement Applies to Release or Site-wide	Required to Self-implement Action (don't wait for DEP to require action)	Published, standardized finish line	Published Timeline to Finish Cleanup
Spills/releases 22a-450 and 451	Yes	Yes	Release exists	Release	Yes	No	No
Transfer Act 22a-134	No	No	If and when a property transfers, if property meets definition of an "Establishment"	Site-wide	Investigate -Yes Cleanup – No (pre 10/09) Cleanup – Yes (post 10/09)	Yes - RSRs	Only if property transferred after 10/2009
Voluntary 22a-133x and 22a-133y	No	No	Voluntary	Release or Site-wide – 22a-133x Site-wide – 22a-133y	No	Yes - RSRs	No

Statute	Required to Control short-term hazards	Required to Timely Control Migration of Pollution	Trigger for Requirement to Act	Requirement Applies to Release or Site-wide	Required to Self-implement Action (don't wait for DEP to require action)	Published, standardized finish line	Published Timeline to Finish Cleanup
Significant Hazard Notification 22a-6u	In part	Potentially	Knowledge of release above thresholds	Release	No	No	No
Underground Storage Tanks (CGS 22a-449(d)-(h)	Yes	Yes	Release exists	Release	In part	In part – RSRs	No
RCRA Corrective Action regulations (RCSA 22a-449(c)-105(h))	No	No	Release exists at facility that held RCRA permit	Site-wide	In part	Yes - RSRs	No
Potable Water 22a-471	In part	No	None	Release	No	No	No
PCB Program (CGS 22a-463 – 467)	Yes	Yes	Release exists	Release	In part	Yes – RSRs and federal requirements	No
Sites not subject to a site cleanup program	No	No	No	Site-wide	No	No	No

D. Data

It is difficult to measure how well the site cleanup programs are working, due to a variety of factors. There is no direct measurement for risk reduction. We can measure "cleanups completed," though not all cleanup laws/programs have finish lines, and those that do may have different finish lines. As we look at data, two caveats apply. One, some laws do not specify a "finish line," and instead merely initiate a process, leaving vague what the law intended as a successful endpoint or final compliance. Two, a site may not have reached a formal, clear "all done" finish line, yet significant cleanup and risk reduction may have been achieved at the site.

The following table summarizes major site cleanup program cleanup data.

Site Cleanup Program Cleanup Data

Statute Program	Number of Sites (approx)	Number of Cleanups Completed (approx)	Average Years to Complete Cleanup (approx)	Average New Sites per Year (approx)
Transfer Act	**3,762**	**395**	**7 years for those that complete**	**200**
State Superfund	**12**	**4**	**data not available**	**<1**
Federal Superfund (National Priority List)	**14**	**8**	**15 years**	**<1**
Voluntary 22a-133x	**381**	**23**	**data not available**	**23**
Voluntary 22a-133y	**78**	**11**	**data not available**	**6**
"Significant Hazard" notifications	**600**	**No complete cleanup required by statute**	**No complete cleanup required**	**55**
RCRA Corrective Action	**238**	**34**	**data not available**	**0**

The above data can provide the basis for further analysis of site cleanup in Connecticut. For instance, under the Transfer Act, after 25 years relatively few sites have achieved the final cleanup endpoint. An evaluation of the extent to which one or more of these and other potential factors play a role should be conducted:

- no statutory deadline to complete cleanup,
- over-reliance on expecting a future owner to do the work,
- a cleanup system that can make it hard to achieve the regulatory endpoint even after best efforts have been taken,
- timeliness of DEP action if required,
- sites where contamination is decades old, creating complex challenges such as off-site migration, bedrock impacts, or ground and surface water impacts, and/or
- waiting years for a transfer to trigger an investigation.

III. Past Evaluations and Changes

A. Recent amendments to site cleanup laws

The site cleanup program statutes have evolved over time. Many statutes have been amended a little at a time, usually independent of other cleanup statutes and regulations. That has led to what some call a "patchwork" of laws, each operating on its own instead of as part of a single system. Some past amendments to cleanup laws are highlighted below:

- 1996: Transfer Act amended to
    - create affirmative requirement to investigate releases;
    - allowed DEP to delegate oversight to LEPs;

    - prior to 1996, parties had no affirmative requirement to conduct investigations.
- 2003: RCRA regulations amended
    - to make 100 of the 268 Corrective Action sites subject to affirmative requirement to complete investigation and, when cleanup complete, to meet RSRs.
- 2007: Transfer Act amended to provide
    - affirmative obligation to submit investigation completion reports and RAPs by deadlines: promotes level playing field, makes information more transparent to the public, and establishes practical milestones;
    - quicker delegation to LEP oversight; and
    - audit certainty: 3 year window for DEP to audit cleanup at LEP-lead sites
- 2009: Transfer Act amended to provide 8 year timeline to complete cleanup or achieve interim status for new Transfer Act filings. Also, expanded exemptions for municipalities.

B. Brownfields action

The legislature has set up various Brownfield Task Forces over the past several years to explore opportunities to promote the cleanup and reuse of brownfield properties, and to make recommendations for public and private sector actions. See sections II.B.6 and 7 above for some of the legislative results stemming from the efforts of those Task Forces. See also the website of the Office of Brownfield Remediation and Development – www.ctbrownfields.gov – within the Department of Economic and Communities Development, for additional information on the state's brownfield programs.

IV. Opportunities for the future

A comprehensive evaluation of the site cleanup programs is worthwhile to evaluate opportunities for improvement. In conducting such an evaluation it's important that Connecticut seek broad stakeholder input to ensure all interests are represented. Improvements as determined could come in the form of statutes, regulations, guidance, program administration, best practices guidelines, and/or education. Recommended goals and analysis include the following:

A. Desired outcomes

1. Healthy Connecticut
2. Brownfield Reuse
3. Improving and preserving natural resources for future generations
4. Healthy economy and job growth
5. Sustainable communities
6. Environmental Justice

B. Overarching analysis

1. Is the current framework achieving the goals of the existing laws?
2. If not, what mix of improvements could achieve better results?
3. Is there value in a comprehensive overhaul of laws governing remediation?

C. Evaluate other states

Other states have conducted significant and comprehensive site cleanup program revisions over the years. It would be important to see if desired outcomes are being significantly achieved in these states. In addition, it would be important to evaluate other systems in other states to ensure Connecticut evaluates all options to improve the site cleanup system. Potential states for evaluation:

1. New Jersey
   New Jersey recently performed a comprehensive evaluation of its cleanup programs from 2006-2008. The evaluation resulted in significant changes to its cleanup laws in 2009. New Jersey adopted a system that moves aggressively towards a single cleanup system for most releases/sites, an affirmative process, and use of licensed professionals (LSPs – similar to LEPs) to oversee most sites.
2. Massachusetts
   In the 1990s Massachusetts adopted a single cleanup system for all releases of hazardous materials. It is an affirmative program, with broad categories of Responsible Parties obligated to act, clear deadlines for completing and reporting each phase of investigation and cleanup, and reliance on licensed professionals at all sites.
3. Other states

D. Promote sustainable communities

Effective and efficient site cleanup promotes Brownfield remediation and reuse, which is a critical to supporting responsible growth and transit oriented development (TOD). In addition, increasing Brownfield remediation and reuse in the State could grow opportunities for renewable energy and low impact development (LID). The following points should be considered in a comprehensive evaluation of the State's site cleanup programs:

1. Environmental protection is benefited by many patterns of sustainable development and resource use. Can remediation programs be coordinated with them to increase incentives for both cleanup and sustainable use?
2. Although tools exist now to make cleanup cost-effective for brownfields, can additional cost-saving tools be identified for brownfields without creating real or perceived less protective standards than exist for other locations?
3. Can sustainable reuse of a site – e.g., LID, TOD, renewable energy – and the anticipated environmental benefits allow for more flexible cleanup standards or tools for clean up?
4. Could pilot/demonstration projects – publically and/or privately financed - be initiated at abandoned brownfields, such as solar "brightfields?"

To effectively evaluate Connecticut's site cleanup programs, a broad array of stakeholders is essential. A broad stakeholder process will ensure all issues are uncovered, discussed, and addressed before changes are made.

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws

Final
Visioning Session Report

December 15, 2011

79 Elm Street, Hartford, CT 06106-5127
www.ct.gov/deep

Table of Contents

Introduction

The Department of Energy and Environmental Protection (DEEP) is undertaking a comprehensive evaluation of the state's environmental cleanup laws. The DEEP intends to complete this evaluation and present a report and recommendations to the Governor and to the joint standing committees of the General Assembly having cognizance of matters relating to the environment and commerce in advance of the 2012 Legislative Session.

To initiate the discussion, DEEP released a Comprehensive Evaluation White Paper that provided baseline information on Connecticut's site cleanup programs and the underlying laws that effect pollution cleanup. The white paper offered a summary of the current cleanup construct, past evaluations and changes to the program, and started the discussion on the opportunities for future improvement.

A public Visioning Session was held at DEEP headquarters in Hartford, Connecticut on June 27, 2011. This event was the start of a robust and transparent public participation process to solicit public input from a broad array of stakeholders who have an interest in the effective and efficient cleanup of pollution and redevelopment of Brownfields in Connecticut. Almost one hundred of our partners in this process attended a full afternoon session. Representatives from government, municipalities, the regulated community (including responsible parties, brownfield redevelopers and property owners), environmental constituents, licensed environmental professionals, and environmental attorneys attended this session.

Objective of Visioning Session

The goal of the Visioning Session was to determine what is important in achieving a successful transformation and, in broad terms, what would good look like. Put another way – What does an excellent remediation program provide and what do we, as a state want from our remediation program?

Breakout Group Process

In order to have as many productive conversations and solicit ideas from the largest number of people, DEEP divided the meeting attendees into ten breakout groups. Each group was lead by a DEEP facilitator, who provided each group with a series of questions to be answered by the group. The questions were designed to capture a broad spectrum of ideas and to focus the groups to a consensus on some topics.

The sign in sheet for each breakout group is located in ***Appendix A***. The guided questions used by each breakout group are located on the Stakeholder page of the Comprehensive Evaluation and Transformation of Connecticut Cleanup Laws web page. Each work group had two hours to go through the guided questions and record their collective and group responses. At the end of the breakout group exercise, a representative from each group participated in a panel report out. Panel members presented their respective breakout group responses to the guided questions.

Breakout Group Results

Each breakout group appointed a reporter who recorded answers to the series of questions. These answers are presented in their original form in ***Appendix B***. DEEP reviewed these responses and has provided a high-level summary of these responses as ***Appendix C***.

Follow-up Questions and Public Comments

Following the Public Visioning Session, DEEP released the Draft Visioning Session Report for public review and comment. The report includes the documents prepared by each of the ten breakout groups from the Public Visioning Session in their original content. In addition, DEEP posted follow-up questions to the Visioning Session on-line for stakeholders to answer and transmit to DEEP. Comments on the Draft Report, responses to the Follow-up Questions, and visioning process were received through October 17, 2011.

Responses to the Follow-up Questions in included as ***Appendix D*** and public comments DEEP received relating to the visioning process are included as ***Appendix E***.

Appendices

Appendix A: Breakout Group Sign-In Sheets

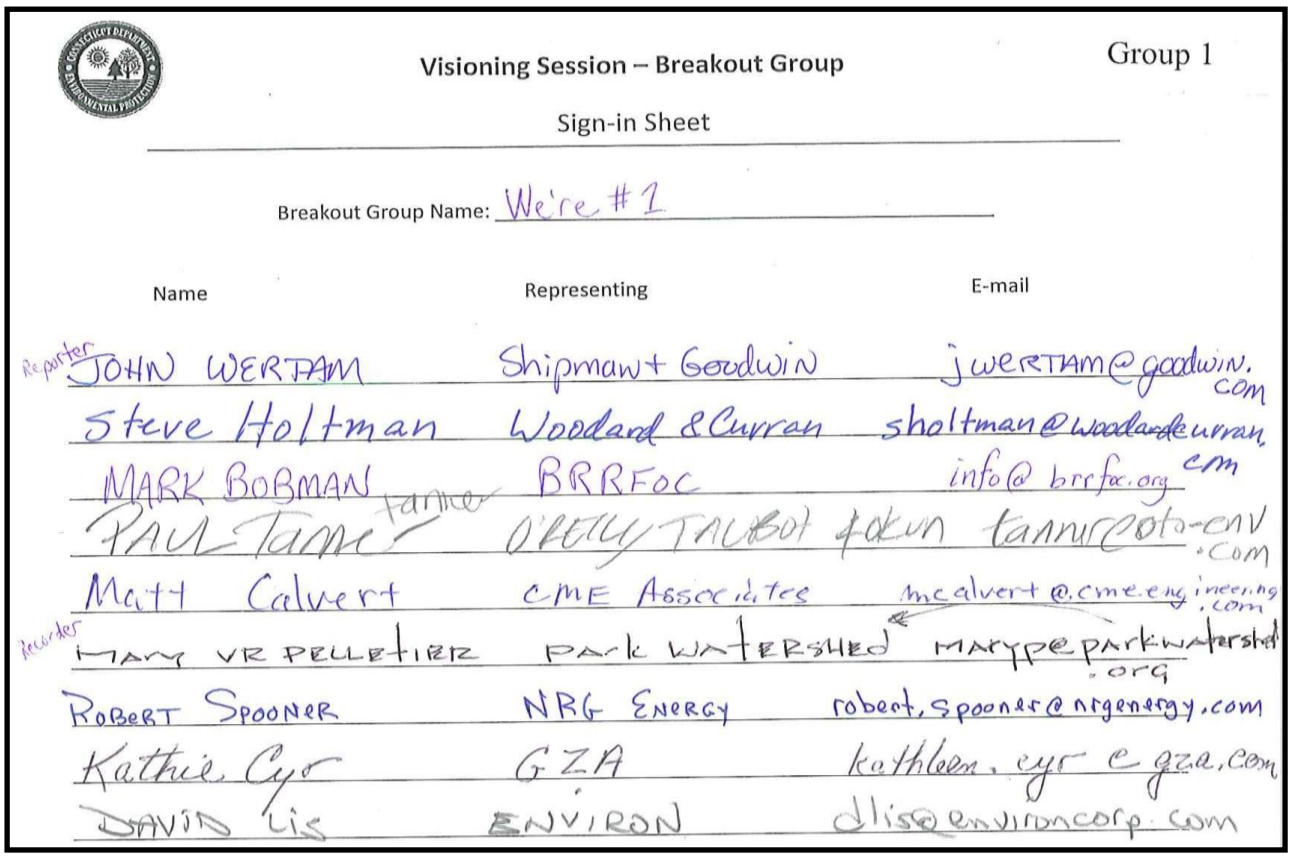
Appendix B: Breakout Group Answers to Questions

Appendix C: Guided Questions Summary

Appendix D: Responses to Follow-up Questions

Appendix E: Public Comments on Vision

Appendix A: Breakout Group Sign-In Sheets



Visioning Session – Breakout Group — Group 1

Sign-in Sheet

Breakout Group Name: We're #1

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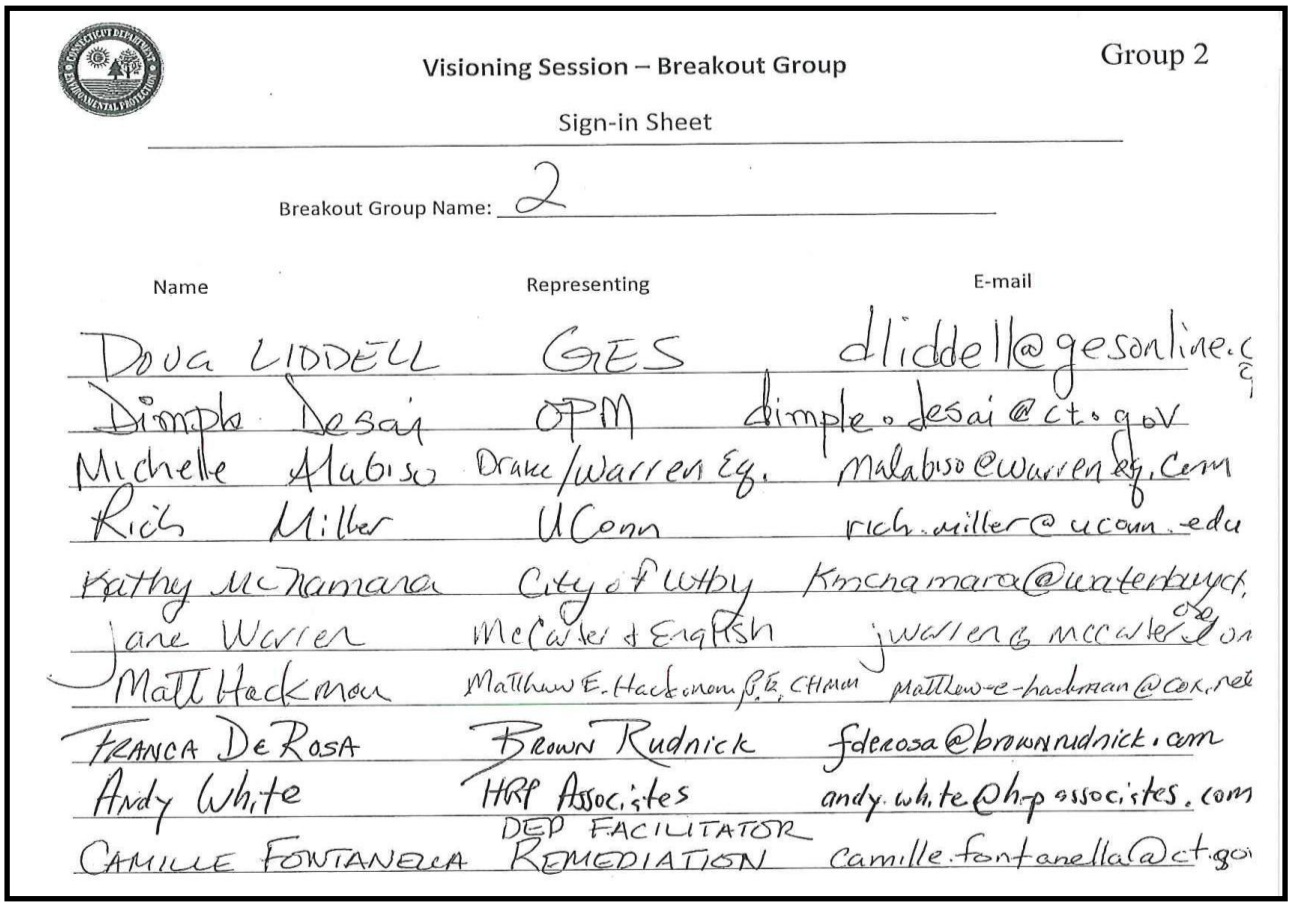

Visioning Session – Breakout Group — Group 2

Sign-in Sheet

Breakout Group Name: 2

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Group 3

Visioning Session – Breakout Group

Sign-in Sheet

Breakout Group Name: Group 3

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Group 4

Visioning Session – Breakout Group

Sign-in Sheet

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→ John Zbell	CBG	
→ Ken Grant	Winstanely Enterprises, LLC	

Group 5

Visioning Session – Breakout Group

Sign-in Sheet

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Group 6

Visioning Session – Breakout Group

Sign-in Sheet

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Group 7

Visioning Session – Breakout Group

Sign-in Sheet

Breakout Group Name: Rocket-Propelled Flying Squirrels

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Group 8

Visioning Session – Breakout Group

Sign-in Sheet

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Group 9

Visioning Session – Breakout Group 9

Sign-in Sheet

Breakout Group Name: 6 of one half dozen of the other

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Group 10

Visioning Session – Breakout Group

Sign-in Sheet

Breakout Group Name: Mgg. 7

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Appendix B: Breakout Group Answers to Questions

Numbered Questions – the group should discuss the numbered questions and record the various perspectives of the group members.
Lettered Questions – these questions will require the group to further refine your answers and try to come to a consensus answer. Where consensus was not easily reached, opposing ideas should be documented.

Numbered questions are more brain storming ideas – in order to put out a lot of ideas
Letter questions are to synthesize the details into a consensus

1. WHAT SHOULD BE THE GOALS OF A CLEANUP PROGRAM? LIST ALL THAT APPLY.

Group 1: Reasonable remediation standards, Protect human health and the environment in balance with risk and economic factors, Truly risk based, Reasonably accomplishable, Economically viable, Restore some ecological habitat

Group 2: Clean-up sites in a cost effective and timely manner, Protection of human health and the environment, Incentivize economic redevelopment of contaminated properties, Encouraging collaborative process between regulated community and regulators

Group 3: Risk Management – environment, social, economic, Protection of public health and the environment, Marketable properties

Group 4: Protect human health, Protection of environmental resources, Certainty, Clarity, Easily understandable, Attainable, Support, Encourage economic development, All encompassing, Universe of sites need to be well defined, Every site needs to have a "home", Not one size fits all, Establish goals and triggers, Find way to simply deal with urban fill and asphalt fragments appropriately (Cap/ELUR)

Group 5: Many sites into and out of program, Easily implemented, Clean water, Clean soil, Clean air, Get properties back into use and quickly, Protect green fields, Protecting health of residents and neighborhoods, Incentives to do the right thing, Certainty, Improve the environment, Integrated/streamlined with other regulations, Economic feasibility of cleanup that is still protective of human health and the environment

Group 6: A simple yet flexible program that is consistently applied, Risk-based, Yet adequately protective of human health and the environment. The program shall be used to promote economic viability of existing entities or productive reuse of properties.

Group 7: Promote sustainable economic development, protect public health, Protect the environment, Site closure to no further action stage, Clear exit strategy, Improve quality of life

Group 8: Reduce risk, Protect human health and the environment, Protect natural resource(s), Facilitate economic development or re-development, Environmental justice, Better use of public and private resources (self-implementing options), Promote green technology, Enhance public use

Group 9: Protect human health and the environment, Expedite clean-up as economic tool, Managing risk in cost effective manner

Group 10: Protect human health and the environment, The cleanup program should be a "one stop shop;" one program, Attract economic development, Should be simplified, Need greater consistency, Use of guidelines to allow different DEP staffers to arrive at similar results when presented with similar issues, Should result in expedited, or if not expedited, predictably timed cleanups, Lower the "final level" of approval for final decision (i.e., not every final decision should require Commissioner approval). Once established, publicize who at DEP is responsible for which decisions, Flatten management structure so that fewer pairs of eyes are required for approvals

2. WHAT ARE THE MOST IMPORTANT ATTRIBUTES AND BENEFITS OF A GOOD CLEANUP PROGRAM? TRY TO LIST AT LEAST TEN.

Group 1: Equitable and uniformly applied, Uniform criteria for entry into the program, Inclusive conversation about what would benefit the community, Cost effective, Timely, Risk based standards based on good science, Definite end point of the clean-up process, Definite starting point – what are the triggers?, Stable and predictable process the does not change (during the process), Flexible with respect to advances in feasible modifications, The process ought to result in a marketable property , There ought to be limitations on liability

Group 2: Clear, concise, easy to navigate, eliminate ambiguity, Common sense reasonable standards, risk based, Cost and economic considerations, Understandable to lay people, Flexibility to accommodate endpoint usage, Predictability and certainty, Opposite of one size fits all, Timeliness, Integrated remediation approach – including standards, agencies, local authorities and financing, Provides direction for eligibility of applicant for funding, Flexible framework regardless of scale of project

Group 3: Consistency of process & predictability of result, Realistic cleanup goals, Value-based decisions, Optimize resources, Well-trained staff – consistency of competence, Consistency of ethical perspective, Staff that's not afraid to make decisions (fear of retribution), The Governor and the commissioner are the clients (and your backstop) – not the environment, Those outside the agency have greater success dealing with the managers / supervisors than the staff, Guidance that can be relied on, Self-implementing, Timeliness, Managers that manage their staff in a way that encourages them to make decisions, Stakeholders may not have expectations of staff's familiarity/authority with respect to particular programs, Better internal coordination among staff assigned with different responsibilities

Group 4: Protect human health and environment, Self-implementing, Meaningful oversight, Agile (ability to change), Remove fear of making mistakes, Move sites forward, Risk based, Maximize use of engineered controls (ECs), Flexibility w/VOCs

Group 5: Flexibility, Incentives, Protective of human health and the environment, Easily understandable, Self implementing, Economic feasibility, Certainty, Timely

Group 6: Protective of public health, Safety, Welfare and the environment, Cost effective, Understandable, Well defined, Flexible, Appropriate for the setting, Allows for the documentation of closure, Reflective of reuse, Consistent in review process

Group 7: Predictability, Efficient, Timeliness, Transparency, Encourages business growth, Makes CT more competitive, Encourages redevelopment, Improves quality of life, Improves property values and tax receipts, Decreases future liability, Pollution prevention, Improves historic preservation, Maintains green space – preserves open space, Flexibility, Clear identification of roles and responsibilities, Self-implementing.

Group 8: ATTRIBUTES: Economic viability and growth, Clarity, Efficiency, Certainty, Fairness, Transparency, Reasonability, Public outreach and awareness, Prioritization, Consistency with terminology, Flexibility (schedules and timeframes) Communication, Incentivize, Standards and Process

BENEFITS: Real estate values, Clean water, air and soil, Public Health Recreation, Image of the State, Improve natural habitats, More efficient use of government resources

Group 9: Assign priority for clean-up to highest risk issues of particular sites, Inclusive program (not one size fits all approach) allowed to leave site at different levels of risk, Assign priority for clean-up to highest risk sites, Quick response protocol by all stakeholders, Simplicity, Certainty, Consistency by the Department with the review process, Flexibility, Where there is further difference of opinion a dispute resolution can be conducted

Group 10: Needs to be inclusive of all stakeholders, Provides guidance/source of information to go to with questions, Predictability and consistency – An LEP or DEP staffer, when faced with the same factual pattern, should reach the same (or at least a similar) answer, Cleanup should be achieved at a lower cost, so long as the environment is not compromised – efficiency is key, The most recent technology for remediation should be available as an option, without needing to go through permitting – See, for example, the New Jersey program (NJCAT), If you roll all programs together, you have to have one set of standards; you need to have one standard of care across all programs, Need to have agreement as to the standard of care to be used between LEPs and DEP, Clear timelines established – both for private party action as well as DEP action

A. WHAT'S THE MOST CRITICAL GOAL OF A CLEANUP PROGRAM, AND WHAT ATTRIBUTES WOULD HELP ATTAIN THIS GOAL?

Group 1: Protect human health and the environment in balance with risk and economic factors, Risk based standards based on good science, Cost effective, timely with definite starting and ending point

Group 2: Remediating an impacted property to an appropriate level that is protective of Human Health and the Environment and returns it to beneficial use. Attributes: Certainty in regulations with flexibility to accommodate endpoint usage, Commonsense, reasonable and cost effective and risk based standards, Timeliness with a certain path to obtain closure documentation

Group 3: See above answer

Group 4: Protect human health and the environment – Timely revisions of standards and ability to change outside of regulatory process, getting sites done, Certainty & endpoints, cleanup based on Risk/ Notice of Release

Group 5: Improve the environment and human health by getting 'dirty' sites cleaned up and protecting Greenfields

Group 6: To allow for an achievable end point. Consistency/flexibility.

Group 7: To improve the quality of life

Group 8: Protection and preserve human health and the environment by employing the following attributes, Reasonable, Fair, Consistent, Prioritization, Efficient use of public/private resources, Economic viable

Group 9: Managing risk and economic development

Group 10: Achieving protection of human health and the environment is the most critical goal. Therefore, you need a way to measure success. Right now, there is not a great deal of measurement of success, and what is measured is what will drive a program to various goals. There are several ways to measure success: number of properties in a remediation program; number of properties successfully completed a remediation program; reduction/elimination of risk to human health or the environment; more severely contaminated properties properly prioritized; amount of economic development gained by remediation, etc. There should also be a formalized program of interim milestones for the remediation, with recognition that achievement of certain milestones diminishes risk to human health and/or the environment. In addition, greater predictability, in terms of scope, cost and time of remediation, will be beneficial for getting remediation projects completed, and completed in a timely fashion.

3. HOW SHOULD POLLUTION BE ADDRESSED, BY RELEASE AREA, BY PROPERTY, OR OTHER GEOGRAPHIC AREA? IF BY GEOGRAPHIC AREA, WHAT WOULD THIS AREA BE? WHY?

Group 1: Yes, by geographic area, based on watersheds, Release areas, Pollution should be based on a risk perspective

Group 2: Release Area (5 group members): That is where the contamination is located and to address known liabilities. Property (4 group members): More conducive to economic development

Group 3: Not a one-size-fits-all. It depends, first and foremost on the risk posed to the environment and public health. Areas – not areas of concern (AOC) but rather site-specific flexibility, Current site characterization guidance document doesn't provide adequate flexibility or presumptive remedies

Group 4: Release area =defines endpoint for each release, Release area for recent spills/whole property for historical industrial sites, By release area for more recent Industrial Sites (site developed post environmental law), If release area leaves property and to address off-site

Group 5: Release area helps create certainty in cleanup process, by property for risk assessment purposes

Group 6: Any of the above as determined by risk

Group 7: By release area because it focuses on release source

Group 8: Release area, but there may be times that the geographic area is considered (i.e. aquifer protection area, public water supply watershed).

Group 9: Assigning priority of the level of risk for larger scale development where there is economic development potential, Characterization of sites can be burden (yearly monitoring, etc.) and sometimes impossible, Look at different remediation process based on the level of risk for smaller sites

Group 10: By release area

4. SHOULD THERE BE ONE TRIGGER OR MULTIPLE TRIGGERS TO INITIATE INVESTIGATION/REMEDIATION AND WHY? IF MULTIPLE, WHEN AND WHY WOULD THEY BE APPROPRIATE?

Group 1: One trigger would be the goal, Is it a reportable quantity (MA has flexible clean-up processes, based on multiple trigger types, including MA a merge of parcel and release area), Multiple triggers would be appropriate, The transfer act raises awareness about liability that is not raised in other states, however it initiates high standards (rather than a reasonable remediation program). A stumbling block is that there is no easy way out of the clean-up process. However if a property owner manages to clean-up a property, it increases the value of a property, Spills, transfer acts, and release areas (3 primary ways into a clean-up process)

Group 2: One (4 group members): contamination which requires remediation is present, Multiple (5 group members): one trigger would be too broad and implicate too many sites. The number of triggers is not the issue; it is the consequences of the triggers

Group 3: Multiple triggers: ex. 22a-6u imminent environmental hazards. Reporting of events, Cost-effective and efficient triggers *(DEP: The general concept of due-diligence has matured in industrial settings but not retail or agricultural)*

Group 4: Multiple triggers => spills One=>whenever there is pollution, Detections (becoming aware of historic release), Industrial site when transferred, Becoming aware of contamination

Group 5: No Response

Group 6: Multiple triggers. Current spill or significant environmental hazard, private transactions (voluntary as part of due diligence), state carrot and stick

Group 7: Upon knowledge, how do you get knowledge?

Group 8: Multiple triggers, would account for variability in site conditions

Group 9: Should be based on property transfer, development, significant environmental hazard and/or proactive response by the Department

Group 10: Since the group does not believe that a single trigger will be possible, we opt for multiple triggers.

5. SHOULD THERE BE A DIFFERENCE IN HOW WE TREAT HISTORICAL AND CURRENT RELEASES? IF SO, WHAT IS THE DIFFERENCE AND WHY?

Group 1: Liability is different, If there are reasonable standards, it does not matter when you became the property owner, the goal is to have healthy environments, Changing the use of a site can make historic pollutants problematic, The time frame and the remedy for the clean-up of historic pollutants ought to be reasonable with respect to the stability of the pollutants on the site, Yes there is a difference in how we treat historic and current releases. Why, that there is a difference in time frame, depending upon urgency of the condition based on the stability of the release.

Group 2: No Difference (1 group member): Technical issue with the definition of current/historical release (trigger mechanism). Should not be the role of the agency to differentiate responsibility. Yes there should be a difference (8 group members): Recognize and properly allocate the liability and to encourage parties to address historical contamination.

Group 3: With respect to reporting – may need to deal with differently, With respect to remediation – need to apply principles discussed above. Treat potentially differently with respect to remedy and "responsible" party.

Group 4: Historic: Every site needs a home, Process for addressing current/historical need to be different.

Group 5: Yes, because when there is a current release can act quickly to address the issue, Historic may not be from current owner, laws have changed

Group 6: Yes, current releases should be evaluated immediately and addressed in a timely manner on a risk basis. Historic contamination addressed on a risk basis on a schedule that makes economic and health risk sense.

Group 7: Yes, because of large number of historic fill issues; No because it is historic doesn't mean that there is reduced risk; Yes – current releases easier to address and can be handled in an expeditious manner; Yes – prioritize historic releases to address first.

Group 8 Yes, it should be a risk-based evaluation and considerations for economic liability (who is paying for the historical contamination).

Group 9: Yes, there is a difference. Site use and risk of the contaminants on-site

Group 10: They should be treated differently. For current releases, one can use a reportable quantity standard, much as is done under federal spill reporting requirements (i.e., a release in excess of a reportable quantity of a substance over a period of 24 hours necessitates reporting). Reporting of historical releases is far more difficult. There is no consensus among the group as to what would be an appropriate trigger for reporting historical releases.

6. WHAT SHOULD A GOOD CLEANUP PROGRAM ADDRESS?

Group 1: Trust the LEP, The science and legal details ought to be understandable to average (or relatively informed) citizens, Site wide risk assessment, Reasonable Standards

Group 2: See answers 1 and 2

Group 3: Already discussed above. Should effectively and efficiently address the most pressing environmental or public health risks, Any property that presents a "risk" should be pulled into the data-base but there must be risk-appropriate decision-making on what, if any action should be taken. The innocence of owners of properties with deeply historic contamination from the past. This should be treated as a social expense. Special consideration for homeowners who suffer from UST releases.

Group 4: See above, Industrial properties at transfer (independent of hazardous waste manifesting)

Group 5: Refer to question 1.

Group 6: Eliminate risk pathways. Increased self-implementing mechanisms / privatization. More flexibility in implementing solutions. Foster risk assessment options.

Group 7: Imminent health risks, Target economic development areas and transportation nodes, Target sensitive receptor areas, Long-term health risks, Proper communication with local and health officials, Environmental equity, Prioritize risks, Technical oversight, Public participation, Standardization.

Group 8: High risk sites, Voluntary, self-implementing option to address impact, Clear guidance for farm and agricultural lands, Urban lands

Group 9: What is the risk appropriate to site use?

Group 10: True risks to human health or the environment, Economic realities/balancing between cost and benefit of remediation, Should address stakeholder concerns for significant remediation activities

7. WHAT SHOULD A GOOD CLEANUP PROGRAM EXCLUDE?

Group 1: Excessive bureaucracy, Exclude meticulous audit at the end of the process. Exiting the Ct program is excessively difficult due to minor technicalities, where appropriate, remediate urban fill on-site, or exclude contaminated fill.

Group 2: State standards which are not in line with federal standards, Inconsistent standards, Long term indefinite regulatory review process (need responses from all parties in timely manner), Inability to access site specific information (Online data and document/permit submittals), Delineation/responsibilities for entire parcels with multiple tenants

Group 3: Minor releases that pose no meaningful risks to human health or the environment should be excluded. Different treatment based on hydro-geological setting**,** If you've been through an approved cleanup, you should not be required to go back later on and conduct further cleanup based on a change in standards.

Group 4: Ambiguity for categorical triggers which no longer make sense (e.g. dry cleaners that don't use PCE), Triggers for small waste generators.

Group 5: Liability against boniafide prospective purchaser; should exclude the applicability of a change in cleanup standards after obligation to clean up taken on

Group 6: Minimize the NEED for agency involvement and emphasize the support role Current definition of "establishment"

Group 7: Deminimus conditions, Low risk releases, Overreliance on engineered controls, Undue meddling by DEP – streamline review process by DEP

Group 8: The "Esthetics" associated with the "revised RSR language", Deminimus spills/releases

Group 9: Complicated Process

Group 10: Unless there is a significant environmental risk demonstrated, the following should be excluded: Urban fill, Background levels of contamination (e.g., pesticides in the Connecticut River Valley), Politics, Naturally-occurring materials (e.g., arsenic, radionuclides, lead, etc.)

B. WHAT SHOULD BE TREATED DIFFERENTLY FOR INVESTIGATION AND FOR REMEDIATION? WHY?

Group 1: Characterize what's important – identify the issues as you need to resolve the problem, rather than seeking out other site conditions. Is the site characterization document useful or does it led to excess detail? The exposure risk within heavily populated areas ought to be treated differently

Group 2: What: Metals, ETPH/TPH, Standards of Care, Water (surface, ground et al) Usage. Why: Existing/Future Property use, Human Risk/Exposure

Group 3: See responses Below

Group 4: Usual building materials (PCB caulk, lead paint, etc.), Urban fill, asphalt, Parking lot runoff, Legal pesticide application

Group 5: No Response

Group 6: No Response

Group 7: Investigation – sites/releases with sensitive receptors should have more thorough and expeditious investigation. Remediation - yes focus on end use and sensitive receptors; prioritize risk

Group 8: Sites where the remedy is known upfront and will address all COCs, can you forgo additional site characterization and move right into remediation. Can ELURs be placed on the property without completing site characterization? Groundwater monitoring

Group 9: No Response

Group 10: See response to question #3. If release areas are the geographic area that forms the basis of the remediation program, then it is the release areas that should be investigated, and the release areas that should be remediated. The two activities should be as closely linked as possible

8. WHAT ARE THE MOST IMPORTANT ROLES FOR STATE GOVERNMENT TO SERVE?

Group 1: Protect human health and the environment in balance with risk and economic factors

Group 2: Generating policy and rule making, establishing clear goals, Guidance, Enforcement, Overseeing licensure, permitting

Group 3: DEP: Provide answers in a meaningful timeframe, Make existing spill-response program more simplified robust by conducting the type of investigation and remediation that would be satisfactory to the DEP, Streamlined permitting – for certain types of activities in certain areas – quick streamlined process, Better communication with the consulting community and advocacy community Legislature: Ensure authority granted is clear and balances a variety of social interests; Governments should be more inclusive of responsible parties

Group 4: Establish the standards, establish the "universe" and Triggers (clear and unambiguous), educate the regulated community

Group 5: Protect human health and the environment; improve degraded environment; promote economic vitality and community well-being; protecting private property rights; improve quality of life of its residents; level playing field

Group 6: To Protect and to Serve (the stakeholders)

Group 7: Expedited review and response when required, Guidance and policy (scientifically based), Regulatory Oversight and enforcement, Advocate protection of the environment, ensure safe drinking water impacted by pollution

Group 8: Analyzing risk, Policy leadership, Fairness, level playing field, Trust and verification

Group 9: Expediter, financier and regulator

Group 10: Collector and distributor of information – be a resource to environmental professionals. If the Commissioner's proposal to go paperless in two years, the group would be thankful. The more information that is available on line, the better. Also, consistency, and the ability for DEP staffers to provide answers to LEPs is key. The technical staff should be facilitators of cleanups and providers of information, not "regulators" in the classic sense where they are looking to find fault with individuals undertaking remediation. This is particularly important for when a party comes to a point of decision (a "fork in the road") where DEP staff input would be helpful before a decision is made.

9. WHO SHOULD BE RESPONSIBLE TO INVESTIGATE POLLUTION?

Group 1: The MA Contingency Plan – there are multiple ways to enter and exit the plan and there are specific time tables for remediation. Entry is based on parcel conditions and __. This is a private sector approach, because the owner may never test the property – and may transfer the property. However the bank or buyer can ask for site test. The responsible party, the polluter, ought to be responsible to investigate, Whoever volunteers (as a contractual matter), Where no responsible party is available, municipal, state or federal government ought to investigate

Group 2: Property owner, Person who caused release, Potential buyer/developer

Group 3: Those who caused the pollution.

Group 4: One who created pollution, whoever contractually agrees to investigate, Current property owner

Group 5: The financial responsibility should fall on any one of a variety of responsible people as long as one is actually responsible for every release area--polluters, owners and operators

Group 6: The polluter (current/new pollution); the person taking responsibility (private business deal).

Group 7: Polluter – responsible party, Property Owner, State, Town, Federal government

Group 8: Responsible party (Polluter) * some disagreement

Group 9: Whoever agrees to it More discussion necessary

Group 10: Where possible, the responsible party should investigate the pollution, although other parties can certainly do so.

10. WHO SHOULD BE RESPONSIBLE TO REMEDIATE POLLUTION?

Group 1: Based on the MA Contingency Plan, the responsible party is the owner and/or the polluter.

Group 2: Person who caused release, if the party that caused contamination does not exists; the parties can identify a certifying party, Property owner

Group 3: Those who caused the pollution.

Group 4: One who created pollution, whoever contractually agrees to remediate, Current property owner

Group 5: The person who caused the pollution (where a current entity exists) or is otherwise contractually obligated to do so (at least for current polluter) For historic contamination public and private consortium

Group 6: No response

Group 7: Polluter – responsible party, Property Owner, State, Town, Federal government

Group 8: Responsible party (Polluter) * some disagreement

Group 9: Owner? EPA (under imminent threat)? Whoever agrees to it – should be polluter. No answer to question

Group 10: Once contamination has been identified, the burden should shift to make sure that the responsible party performs remediation.

C. SHOULD DEP EXPEND MORE RESOURCES ATTEMPTING TO COMPEL PARTIES THAT DON'T ADDRESS POLLUTION WITHIN A REASONABLE TIME PERIOD TO TAKE ACTION OR ASSIST PARTIES THAT ARE FULFILLING THEIR OBLIGATIONS? WHY?

Group 1: Focus DEP resources on parties that are fulfilling their obligations, by working with these parties in constructive ways, Clarify a project engineer that actually answer the telephone, and follow a project through the clean-up process, Find cost effective incentives to motivate voluntary clean-up. What are the triggers for polluted sites that are being ignored? Assist parties that are fulfilling their obligations (80% of DEP time), there ought to be a special group that focuses on the conditions of state property

Group 2: Assist parties who are trying to fulfill their obligations (7 group members), Enforcement (2 group members). Need to establish reasonable time frames

Group 3: Assistance is preferable. Orders and other tools can be used to address problem cases

Group 4: Want both => both are important

Group 5: Yes, the DEP should expend more resources on enforcement because it helps to level the playing field for businesses that are doing the right thing (stick).They should also assist parties that are fulfilling their obligations as incentive to do the right thing (carrot).

Group 6: Both, more resources to enforce, but also assist parties that are trying to fulfill their obligations.

Group 7: Assist parties that are fulfilling their obligations, because it is a better economic return and more sites cleaned up (4 Group members). Enforcement, because it levels the playing field and promotes compliance and restores public confidence (3 Group members).

Group 8: Generally yes. Educate smaller businesses re their potential for cost and liabilities.

Group 9: Regulatory agencies should have ability to do both - 50/50. Assisting those parties who are making the effort

Group 10: Why can't the DEP do both? Indeed, the Department has to do both. It has to go after the "bad guy," if for no other reason than to act as a deterrent to others who are considering similar bad acts. In addition, those who are complying with regulatory standards should be given assistance. They should not be treated as adversaries.

11. SHOULD THERE BE TIME FRAMES FOR INVESTIGATION, REMEDIATION, OR BOTH? WHY? SHOULD TIMING VARY BY TYPE OF RELEASE, TYPE OF CONTAMINANT, TYPE OF PROPERTY USE, PROXIMITY OF RECEPTORS, OR BY OTHER FACTORS?

Group 1: Yes, there ought to be time frames, yet the time frames ought to be flexible. There ought to be sliding scales of time table that are dependent on property use and the proximity of receptors. (Other states have such sliding scale time tables)

Group 2: There should be time frames but with the ability to extend based on site specific conditions.

Group 3: Regulations and statutes can set timeframes for assessment based on conditions, need to have flexibility, Timeframes often already exist based on transaction language and development plans.

Group 4: Should be benchmarks instead of timeframes. Timeframes should vary by type of release, based on risk, an EPA stabilization type approach, off-site vs. on-site investigation, etc.

Group 5: Yes, for both because it fosters clean ups. Yes, the timing should vary.

Group 6: Certainly by type/risk – proposed by responsible party and agreed to by the parties involved. Step program based upon elimination of immediate hazard/stabilization.

Group 7: Yes, to ensure that investigation and remediation do get conducted, sensitive receptors should be addressed more quickly; also different contaminants should be handled on different schedules; type of property use should also play a role in timing. The more mobile the contamination the more quickly it should be remediated.

Group 8: Yes

Group 9: Yes for both. With the ability for extensions depending upon site conditions, which should be periodically reviewed. Time frames and cost should be clearly defined.

Group 10: Without time frames, there is no completion of remediation. See, for example, progress with the current Transfer Act. Exceptions could be made for parties who have limited ability to pay, but are making good faith progress on remediation, consistent with their limited ability to pay.

12. WHAT PROGRAMMATIC TOOLS OR PROCESSES DO YOU THINK COULD OR DO HELP EXPEDITE INVESTIGATION, REMEDIATION, OR BOTH?

Group 1: Online click-it-fix-it programs that would allow citizens to report pollution, and for there to be a public record of the location of the sighting and the date reported. Institutional controls, such as land use restrictions, A "case officer" who can take a project through different DEP divisions, Align and coordinate DEP divisions around a specific larger goal for an area – such as the North Branch Park River Watershed Management Plan, Use averaging as a process to determine if clean-up is needed. The current regulations are so strict that it is difficult to look at the data in meaningful increments. Thus, refine the statistics based criteria.

Group 2: EFILE, Policy statements, Guidance Documents, Flexibility to receive communications in writing and interim feedback on demand, Default remedial options, Standard forms

Group 3: Should be alternatives to site characterization document (ex. Brownfield – the effort should be more realistic). Amend the document to alleviate the extent of vertical and horizontal characterization. Even the accelerated site-characterization process is unnecessary, other state programs are more effective / sensible, Potential buyers need to know what the problem is and that a specific solution is going to be acceptable to DEP. Use presumptive remedies – 90/10 rule that the remedy is going to work. That's good enough because an insurance company can cover the remaining risk –If the remaining risk is quantifiable from an actuarial perspective. To expedite: Must define criteria. Don't require approval / wait from DEP. Guidance on how to calculate a parameter for pollutant not listed in the RSRs.

Group 4: Standards for all EPA normal testing methods, and a way to update the standards outside of regulatory approval. Clear guidance on Urban fill, Clear guidance on ecological risk

Group 5: Self implementation; flexibility in approach (not standards); meaningful, targeted risk-based investigation (real risk); timelines; shorter audit timeframe; broader trust/use of LEPs; increased access to information/transparency

Group 6: Risk assessment. Flexible approach/flexible intensity of assessment. Assessment with end use in mind.

Group 7: Risk based standards, Risk based assessments, Triad Approach to investigation, Institutional/Use limitations, one cleanup program.

Group 8: Presumptive remedies, General permits, Education, Ecological risk assessment, Additional polluting substances, engineered controls, More self-implementing options, Communication amongst related agencies

Group 9: Continuing with advisory groups on regular schedule, Review of case studies, Ongoing communication through website, Database for current and historic sites (sort by location or remediation type) and clean-up methodology, Consideration of presumptive remedy

Group 10: If you establish deadlines, then programmatic changes can be made simpler. The standard of care and the standard of cleanup can be indexed to when a particular cleanup was started. So, for example, if standards change, those changed standards can be applied prospectively, or at least not to all sites that are still pending remediation.

13. WHAT WOULD MAKE A PROGRAM(S) SIMPLE?

Group 1: SEE ABOVE

Group 2: Knowing who to submit documentation to, Default criteria, Checklist, Ability to close out minimum releases, Access to DEP files electronically (more file room time), More transparency in files, One Preemptive Program, Ability to opt into a program, One all encompassing program

Group 3: Presumptive remedy, One trigger / one process, Remove ecorisk assessment, Keep ecorisk assessment, Simplify ecorisk assessment, Get everyone on the same page as to what level of risk is acceptable

Group 4: More options

Group 5: Real accountability, clarity, streamlining, moving away from transfer act?

Group 6: Clear standards. See question #2. Flexibility. TSCA – like

Group 7: One cleanup program with multiple exit points, Public access to standards and guidelines.

Group 8: See Above

Group 9: Consistency with agencies (state and federal) involved, One clean-up program

Group 10: Consistency, predictability, and standardized time frames. Also, one set of standards for all programs should be enacted.

14. WHAT ARE THE BENEFITS OF HAVING MULTIPLE PROGRAMS WITH MULTIPLE PROCESSES?

Group 1: Multiple programs can create a clear time table, flexibility of process and successful remediation with respect to specific types of pollution (such as underground tanks).

Group 2: None, Flexibility

Group 3: Multiple programs – yes, provides flexibility**,** Multiple processes under multiple programs – no**,** If you're willing to sacrifice flexibility for speed, than single process**,** Increased coordination can lead to more "I'll get back to yous"**,** No conflicting federal / state programs

Group 4: Can tailor program/process to type of trigger (most flexibility)

Group 5: None

Group 6: None. Need a program that encompasses all scenarios but provides flexibility.

Group 7: Flexibility

Group 8: Specialized Expertise

Group 9: Benefits are that clean-up can be accomplished based on risk and site use

Group 10: Developing the "one size fits all" program will require significant investment up front, because such a program will need to be scalable to cover all contingencies. However, once that investment is made, it should pay dividends.

D. WHAT ARE YOU WILLING TO SACRIFICE TO EXPEDITE THE INVESTIGATION AND REMEDIATION OF POLLUTION?

Group 1: Fully defining the extent and the degree of the pollution when it does not matter, The site characterization document (not consensus) is unnecessarily aggressive, for example, the AOC that do not really need to be investigated. Technical and impractical ability ought to expanded.

Group 2: 100 percent certainty, Money for an expedited review and approvals, pristine environment, RSRs

Group 3: Near-zero risk (ex. 1 in a million risk if you eat a certain amount of dirt every day for 70 years). Reasonable timelines for the regulated community if DEP would abide by reasonable timelines (DEP has resource issue).

Group 4: Lower priority for lower risk, Set standards and give roadmap, sacrifice DEP command & control.

Group 5: Transfer Act

Group 6: No response

Group 7: "GA" standard closure if site use is non-residential

Group 8: some degree of certainty and risk

Group 9: Acceptance that some sites would be remediated to some remaining level of risk, More rigid process for less stringent level of risk

Group 10: If one accepts the axiom that a project can be done with two out of three of the following: speed, low cost and/or high quality, then this issue narrows, since speed is pre-supposed by the question. Therefore, since the Department is likely unwilling to sacrifice quality, it would appear that the only consideration is to pay more for a faster process. There is a question as to whether that's fair. Occasionally, you can sacrifice investigation for speed. For example, remediation of a small oil spill can just involve removal of supposed contaminated soil, rather than testing, waiting for test results and completing remediation. That won't always work.

15. WHEN IS CERTAINTY MORE IMPORTANT THAN FLEXIBILITY? IS THIS CERTAINTY IMPORTANT TO EVERYONE?

Group 1: Where the public health and environmental risk is high – certainty is more important. For example, drinking water standards are essential. Flexibility that results in certain improved condition

Group 2: Property development situations, Certainty when financing, Certainty once endpoint is selected/achieved. Yes, certainty is important to everyone

Group 3: It depends on conditions

Group 4: High risk to public health. Standards are risk based, therefore if sufficient data then flexibility should be available.

Group 5: Certainty can be more important when looking at highly sensitive receptors

Group 6: It depends. Need off-ramps

Group 7: When client wants no liability, Sensitive receptors are impacted

Group 8: Risk Based

Group 9: Certainty is important in transactions.

Group 10: Certainty is more important at the beginning of the project, when there are so many unknowns. Often, users are willing to perform "over and above" standards, in order to obtain such certainty. Therefore, if there is a step that reasonable individuals could disagree is necessary for remediation, a party may agree to take this step in order to achieve certainty.

16. WHEN IS FLEXIBILITY MORE IMPORTANT THAN CERTAINTY? IS THIS FLEXIBILITY IMPORTANT TO EVERYONE?

Group 1: Where the risk is minimal, such as the fill beneath asphalt.

Group 2: Flexibility when developing an approach/endpoint. Yes, flexibility is important to everyone

Group 3: It depends on conditions

Group 4: Low risk sites

Group 5: Flexibility can be more important when looking at less sensitive receptors

Group 6: It depends. Need flexible off-ramps

Group 7: Site use, Immediate Economic potential

Group 8: Economic driven considerations, Knowledge of risk

Group 9: When level of risk is less with connection of use of property and there are no transactions

Group 10: Once the remediation is undertaken, that's when flexibility becomes a more desirable commodity. Not every site is alike, and every site will present unique challenges. Therefore, at that time, flexibility is desired, so long as such flexibility does not unduly increase risk of harm to human health or the environment.

17. WHAT CAN BE DONE TO PROVIDE MORE CERTAINTY FOR PARTIES INVESTIGATING OR REMEDIATING POLLUTION?

Group 1: Provide definite start and end points to the clean-up process. No open-ended audits.

Group 2: Regulatory approvals, Default standards, Interim communications/approvals from regulatory personnel during process (i.e. at a completion of investigation), Less review after work is complete, Consistent direction and policy directives, Rewarding/consequences for regulatory staff (i.e. performance based evaluation)

Group 3: Preferred not to discuss

Group 4: Lower priority for lower risk, Set standards and give roadmap, sacrifice DEP command & control

Group 5: Ensuring that the initial investigation is reviewed and audited before clean up begins

Group 6: Multiple layers of approvals / DEP and/or LEP depending upon need

Group 7: Closure letters, Periodic DEP input – milestone reviews, More rapid response from DEP

Group 8: Education and clear expectations

Group 9: Solidify or make RSRs up-to-date, Staff only enforces enacted regulations

Group 10: Identifying who the decision maker for a given decision within the Department is (preferably, not the Commissioner), and getting decisions from that decision maker, preferably in writing. Even better would be decisions that are posted on the Department's web site. This also needs to be tied into clearer and more concise regulations.

18. WHAT CAN BE DONE TO PROVIDE MORE CERTAINTY FOR THE GENERAL PUBLIC AND OTHER THIRD PARTIES REGARDING THE EFFECTIVENESS AND SPEED OF A CLEANUP?

Group 1: Involved informed environmental organizations throughout the process, at specific input points, (forward public notices directly to these groups). Include the public in the review of the clean-up goals the determination of what actually will benefit the public.

Group 2: Making information publically accessible, Building a level of trust

Group 3: Preferred not to discuss

Group 4: Prepare a fact sheet for dissemination to general public (post of website)

Group 5: Access to information and transparency

Group 6: Education as to risk and increased transparency.

Group 7: Release accurate information, No false promises, LEP Training and auditing; LEP grading system, Transparency –, Public accessibility - find site/case status more easily.

Group 8: Risk communication, transparency

Group 9: Clearer rules, clearer process, clearer timeframes and clearer standards, Allowing for risk and site use

Group 10: Putting those decisions up on the website, as well as all backup documentation upon which that decision is based. The more information that is available on the Department's website, the more transparent the Department's decisions will be.

E. [TIME PERMITTING] WHAT QUESTION HASN'T BEEN ASKED TODAY THAT YOU THINK SHOULD HAVE BEEN ASKED? WHAT IS THIS QUESTION AND WHAT'S THE ANSWER?

Group 3: Predictability, certainty, timeliness, Presumptive remedies especially in GB areas, GB easier than GA, Expedite groundwater reclassification – especially to rightfully classify areas that are GB, to be GB. Prioritization, Reasonable risk, Economic considerations, Most significant risks addressed first, Appendix D cleanup criteria – "crazy low" for compliance in certain settings (wetlands), Definition of "responsible party", Widespread polluted fill – especially in urban areas – creative solutions beyond paving, Don't be too politically sensitive – especially to 11th hour interests "parachuting" into the process. Give groundwater time to attain compliance with criteria over time in the release areas.

Appendix C: Guided Questions Summary

The guided questions provided the structure for a broad array of stakeholders to present their various ideas and suggestions on what a good clean-up program look like. Although many thoughts were offered there were some common themes that provided by the 10 workgroups. These common themes were repeated in many of the answers provided to the guided questions.

- Protective: Human health and the environment
- Prioritize: Risk based assessment and standards
- Flexible: Set cleanup goals and timelines based on land use
- Efficient: More self implementing options
- Simple: One process for all sites with uniform time tables
- Reasonable: Balance economic factors with clean up goals
- Transparent: Additional guidance and public interaction (database)
- Certainty: Establish entry points and exit points with interim milestones

The guided questions summary combines all workgroup answers into the most common themes or suggestions. This summary is not intended to capture all suggestions provided. Please refer to Appendix B for the complete workgroup answers.

1. WHAT SHOULD BE THE GOALS OF A CLEANUP PROGRAM? LIST ALL THAT APPLY.

- Protect human health and the environment
- Balance with economic factors while protect green fields and reduce risk
- Truly risk based, managing risk in cost effective manner
- Incentivize economical viability, clean-up sites for reuse in a cost effective and timely manner
- Encourage public outreach process between regulated community and regulators
- Reasonable, Attainable, Consistent, Clear and Certain to get properties back into use and quickly
- All encompassing and integrated with other regulations into a “one stop shop;” one program
- Establish goals and triggers with incentives to do the right thing
- Find simpler ways to deal with issues slowing down site redevelopment (urban fill, asphalt fragments)
- Clear exit strategy with established milestones throughout the process
- Environmental justice
- Better use of public and private resources (self-implementing options)

2. WHAT ARE THE MOST IMPORTANT ATTRIBUTES AND BENEFITS OF A GOOD CLEANUP PROGRAM? TRY TO LIST AT LEAST TEN.

- Protect human health and environment
- Equitable and uniformly applied with predictable results
- Cost effective that encourages business growth and makes CT more competitive
- Prioritization: assign priority for clean-up to highest risk issues
- Improves historic preservation, encourages redevelopment and maintains green space
- Reasonable standards based on good science centered around risk resulting in realistic cleanup goals
- Well defined definite starting point (triggers) and end points (exits)
- Stable and predictable process the does not change (during the process)
- Limitations on liability
- Timely, clear, easy to navigate, understandable

- Transparency with more guidance and education opportunities
- Maximize use of institutional controls (ELURs, EC, TIs) and self-implementing options
- The most recent technology for remediation should be available as an option

A. WHAT'S THE MOST CRITICAL GOAL OF A CLEANUP PROGRAM, AND WHAT ATTRIBUTES WOULD HELP ATTAIN THIS GOAL?

Goal:
- Protect human health and the environment in balance with risk and economic factors
- Improve the quality of life

Attributes:
- Risk based standards based on good science
- Prioritization, managing risk that increases economic development
- Consistency, Certainty, Cost effective and timely with definite starting and flexible ending point
- Timely revisions of standards and ability to change outside of regulatory process
- Reasonable, Fair, Efficient use of public/private resources
- Ability to measure success
- Interim milestones, certain milestones diminish risk to human health and the environment
- Greater predictability, in terms of scope, cost and time of remediation

3. HOW SHOULD POLLUTION BE ADDRESSED, BY RELEASE AREA, BY PROPERTY, OR OTHER GEOGRAPHIC AREA? IF BY GEOGRAPHIC AREA, WHAT WOULD THIS AREA BE? WHY?

Geographic Area:
- Sensitive areas: aquifer protection area, public water supply watershed, historical industrial sites
- If release area leaves property and to address off-site
- More conducive to economic development
- Current site characterization guidance document doesn't provide adequate flexibility

Release Area:
- Where contamination is located and addresses known liabilities
- For recent spills or more recent Industrial Sites (site developed post environmental law)
- Focuses on release source
- Helps create certainty in cleanup process
- Allows for site-specific flexibility
- Defines endpoint for each release

Both Geographic and Release Area:
- Not a one-size-fits-all
- Assigning priority, first and foremost on the risk posed to the environment and public health

4. SHOULD THERE BE ONE TRIGGER OR MULTIPLE TRIGGERS TO INITIATE INVESTIGATION/REMEDIATION AND WHY? IF MULTIPLE, WHEN AND WHY WOULD THEY BE APPROPRIATE?

One Trigger:
- Reportable quantity
- Contamination which requires remediation is present
- Upon knowledge (What is knowledge?)

Multiple Triggers:

- Spills, transfer act, significant environmental hazard, proactive response by the DEEP or Detections
- Multiple triggers, would account for variability in site conditions
- One trigger difficult and would be too broad and implicate too many sites
- The number of triggers is not the issue; it is the consequences of the triggers

5. SHOULD THERE BE A DIFFERENCE IN HOW WE TREAT HISTORICAL AND CURRENT RELEASES? IF SO, WHAT IS THE DIFFERENCE AND WHY?

- Yes, there should be a difference in how we treat historical and current releases. Historical pollutants are different because they make changing the use of the site more difficult. For historical releases the liability is different, there needs to be proper allocation of the liability to encourage parties to address historical contamination. Also, remedial time frame for the clean-up of historic pollutants ought to be reasonable with respect to the stability of the pollutants. Historic contamination needs to be addressed on a risk basis on a schedule that makes economic and health risk sense. There also need to be a difference in how historical releases are reported. Current releases should be evaluated immediately and addressed in a timely manner also on a risk basis.

- No, historical and current releases should be delta with the same. If there are reasonable standards, it does not matter when you became the property owner; the goal is to have healthy environments. Also, no because it is historic doesn't mean that there is reduced risk

6. WHAT SHOULD A GOOD CLEANUP PROGRAM ADDRESS?

- Site wide risk assessment the eliminate risk pathways
- Prioritize imminent health risks targeting sensitive receptor areas
- Reasonable Standards
- Innocence for owners of properties with deeply historic contamination
- Special consideration for homeowners who suffer from UST releases
- More flexibility in implementing solutions and increased self-implementing mechanisms
- Target economic development areas and transportation nodes
- Proper communication with local and health officials
- Technical oversight and guidance on environmental issues causing delays
- Public participation: the science and legal details ought to be understandable to average citizens
- Economic realities/balancing between cost and benefit of remediation

7. WHAT SHOULD A GOOD CLEANUP PROGRAM EXCLUDE?

- Minor releases that pose no meaningful risks to human health or the environment
- Exiting the CT program is excessively difficult due to minor technicalities and meticulous audits
- State standards which are inconsistent and not in line with federal standards
- Inability to access site specific information
- Delineation of responsibilities for entire parcels with multiple tenants
- Different treatment based on hydro-geological setting
- Categorical triggers which no longer make sense (PCE free dry cleaners, small waste generators)
- Liability against boniafide prospective purchaser
- Change in cleanup standards after obligation to clean up taken
- Excessive bureaucracy and long term regulatory review process
- Overreliance on engineered controls

- Unless there is a significant environmental risk excluded: urban fill, background levels of contamination and naturally-occurring materials

B. WHAT SHOULD BE TREATED DIFFERENTLY FOR INVESTIGATION AND FOR REMEDIATION? WHY?

- Characterize what's important, identify the issues to resolve the problem
- Prioritize exposure risk, heavily populated areas ought to be treated differently
- Focus on end use and sensitive receptors
- Water (surface, ground et al), Metals, ETPH/TPH
- Standards of care
- Usual building materials, urban fill, asphalt, parking lot runoff, legal pesticide application
- Remedy that is known upfront and will address all COCs, forgo additional site characterization
- ELURs be placed on the property without completing site characterization
- Groundwater monitoring
- Investigate and remediate by release areas

8. WHAT ARE THE MOST IMPORTANT ROLES FOR STATE GOVERNMENT TO SERVE?

- Protect human health and the environment in balance with risk and economic factors
- Promote economic vitality and community well-being; improve quality of life of its residents
- Establishing clear goals by generating policy and rule making (universal trigger, exit points)
- Better communication and education with the consulting community and advocacy community
- Expedited review and response when required
- Inclusive of responsible parties and conduct enforcement to level playing field
- Simplify existing spill-response program, investigation and remediation satisfies the DEEP
- Financier & Legislature: Ensure authority granted is clear and balances a variety of social interests
- Analyzing risk, protecting private property rights (ensure safe drinking water)
- Collector and distributor of information – be a resource to environmental professionals.

9. WHO SHOULD BE RESPONSIBLE TO INVESTIGATE POLLUTION?

- The responsible party (the polluter)
- Whoever volunteers (as a contractual matter)
- Where no responsible party is available, municipal, state or federal government ought to investigate
- Property owner
- Potential buyer/developer

10. WHO SHOULD BE RESPONSIBLE TO REMEDIATE POLLUTION?

- The responsible party is the owner and/or the polluter.
- Person who caused release
- No responsible party the parties can identify a certifying party
- For historic contamination public and private consortium
- EPA (under imminent threat)

C. SHOULD DEP EXPEND MORE RESOURCES ATTEMPTING TO COMPEL PARTIES THAT DON'T ADDRESS POLLUTION WITHIN A REASONABLE TIME PERIOD TO TAKE ACTION OR ASSIST PARTIES THAT ARE FULFILLING THEIR OBLIGATIONS? WHY?

More resources for parties not fulfilling obligations:

- Find cost effective incentives to motivate voluntary clean-up
- Need to establish reasonable time frames
- Orders and other tools can be used to address problem cases
- Helps to level the playing field for businesses that are doing the right thing
- Promotes compliance and restores public confidence
- Special group that focuses on the conditions of state property
- Educate smaller businesses of their potential for cost and liabilities
- Deterrent to others who are considering similar bad acts

More resources for parties fulfilling obligation:

- Focus DEEP resources (80% of DEEP time), by working with these parties in constructive ways
- Incentive to do the right thing
- Better economic return and more sites cleaned up
- Those complying with regulatory standards should be given assistance, not be treated as adversaries

11. SHOULD THERE BE TIME FRAMES FOR INVESTIGATION, REMEDIATION, OR BOTH? WHY? SHOULD TIMING VARY BY TYPE OF RELEASE, TYPE OF CONTAMINANT, TYPE OF PROPERTY USE, PROXIMITY OF RECEPTORS, OR BY OTHER FACTORS?

- Yes, there ought to be flexible time frames based on site specific conditions
- Sliding scales of time table that are dependent on property use (risk) and the proximity of receptors
- Receptors should be addressed more quickly upon elimination of immediate hazard/stabilization
- Different contaminants should be handled on different schedules (more mobile, more quickly)
- Without time frames, there is no completion of remediation

12. WHAT PROGRAMMATIC TOOLS OR PROCESSES DO YOU THINK COULD OR DO HELP EXPEDITE INVESTIGATION, REMEDIATION, OR BOTH?

- One cleanup program
- Online click-it-fix-it programs that would allow citizens to report pollution
- EFILE and database for current/historic sites with clean-up methodology
- Ongoing communication through website
- Align and coordinate amongst related agencies around a specific larger goal for an area
- Refine the statistics based criteria and have an update process outside of regulatory approval
- Create policy statements, clear guidance/documents, general permits, and standard forms
- Use presumptive remedies – 90/10 rule that the remedy is going to work
- More self-implementing options; don't require approval / wait from DEEP
- Standards for all EPA normal testing methods
- Flexibility in approach (not standards)
- Targeted risk-based investigation (real risk)
- Shorter audit timeframe
- A "case officer" for institutional controls to take a project through DEEP process
- Triad Approach to investigation

13. WHAT WOULD MAKE A PROGRAM(S) SIMPLE?

- One Preemptive encompassing program with multiple exit points
- Ability to close out minimum releases
- Establishing what level of risk is acceptable
- Clear standards with default criteria
- Moving away from transfer act
- Expand Voluntary programs
- Presumptive remedy
- Standardized time frames
- Real accountability, clarity, streamlining
- Consistency with agencies (state and federal) involved
- Knowing who to submit documentation too
- Better access to DEP files electronically
- Checklist

14. WHAT ARE THE BENEFITS OF HAVING MULTIPLE PROGRAMS WITH MULTIPLE PROCESSES?

- Flexibility of process and successful remediation with respect to specific types of pollution
- Can tailor program/process to type of trigger
- Clean-up can be accomplished based on risk and site use
- Create a clear time table
- Specialized expertise
- None - Need a program that encompasses all scenarios but provides flexibility
- Multiple processes under multiple programs not efficient

D. WHAT ARE YOU WILLING TO SACRIFICE TO EXPEDITE THE INVESTIGATION AND REMEDIATION OF POLLUTION?

- Fully defining the extent and the degree of the pollution when it does not matter
- 100 percent certainty
- Money for an expedited review and approvals
- Pristine environment; lower priority for lower risk
- RSRs
- Reasonable timelines for the regulated community if DEEP would abide by reasonable timelines
- Set standards and give roadmap
- DEP command & control
- Transfer Act
- “GA” standard closure if site use is non-residential
- Sites would be remediated to some remaining level of risk
- More rigid process for less stringent level of risk

15. WHEN IS CERTAINTY MORE IMPORTANT THAN FLEXIBILITY? IS THIS CERTAINTY IMPORTANT TO EVERYONE?

- Where the public health and environmental risk is high
- Property development situations when financing or want no liability
- Once endpoint is selected/achieved

- Beginning of the project, when there are so many unknowns.
- Perform “over and above” standards

16. WHEN IS FLEXIBILITY MORE IMPORTANT THAN CERTAINTY? IS THIS FLEXIBILITY IMPORTANT TO EVERYONE?

- Where the risk is minimal, such as the fill beneath asphalt
- When developing an approach/endpoint.
- Site use has immediate economic potential
- When there are no transactions
- Once the remediation is undertaken
- Does not unduly increase risk of harm to human health or the environment

17. WHAT CAN BE DONE TO PROVIDE MORE CERTAINTY FOR PARTIES INVESTIGATING OR REMEDIATING POLLUTION?

- Provide definite start and end points to the clean-up process
- Lower priority for lower risk
- Default clear, concise and up-to-date standards
- Sacrifice DEP command & control with less review after work is complete
- More rapid response from DEEP
- Multiple layers of regulatory approvals
- No open-ended audits with Closure letters
- Rewarding/consequences for regulatory staff (i.e. performance based evaluation)
- Education and clear expectations
- Staff only enforces enacted regulations
- Identifying DEEP decision maker for a given decision and getting decisions from that decision maker

18. WHAT CAN BE DONE TO PROVIDE MORE CERTAINTY FOR THE GENERAL PUBLIC AND OTHER THIRD PARTIES REGARDING THE EFFECTIVENESS AND SPEED OF A CLEANUP?

- Involve informed throughout the process and forward public notices
- Include the public in review of the clean-up goals of what actually will benefit the public
- Making accurate information publically accessible, building a level of trust
- Education as to risk and increased transparency
- No false promises
- LEP Training and auditing; LEP grading system
- Allowing for risk and site use

Appendix D: Responses to Follow-up Questions

The homework assignment includes four questions as a continuation of the Visioning Session Guided Questions. The homework assignment answers are provided below.

1. What are the pros and cons of the current cleanup programs? Why?

PROS:

- Some flexibility on cleanup requirement based on risk and site use
- The use of LEPs to leverage DEEP resources and address more sites than a standard 'command and control' regulatory approach
- We want a clean / cleaner environment and to know any issues prior to or at the time of a business/property transfer
- Risk based clean up criteria; provides flexibility to address cleanups.
- Provides a mechanism for a regulatory driven cleanup process; this provides comfort to lenders, buyers and sellers.
- Forces investigation and cleanup; which otherwise may go unchecked.
- Prescribes the process of clean up and dictates how site should be studied.

CONS:

- Multiple programs make it more difficult to have consistent, quality cleanups, than having one standard cleanup program.
- There is too much DEEP agency interaction required in the current programs; DEEP has an obvious lack of trust with the LEP community in making any decision (example is current policy on using 2005 criteria)- this is the opposite mindset needed for a effective, privatized cleanup program
- Despite the high level of required DEEP agency interaction, DEEP is unwilling to accept responsibility for its decisions (it is all the responsibility of the LEP even where the LEP has no authority), so the tendency is for very long decision schedules and deferring decisions on complex issues.
- Programs lack sufficient self implementing flexibility (ie. risk based approach) to cleanups
- Programs do not make sufficient distinction between decisions and the types of risk involved – there is too much of an emphasis on trying to be 'perfect' and cover every contingency, no matter how remote the possibility, than being good enough for what the site and circumstances dictate. Leads to very expensive site investigations.
- Current program treats all hazardous wastes the same, whether a current issue or an historical issue. Current remediation process appears to be too restrictive…either remove it or cover it… Does not appear to take into consideration historical issues (those prior to establishment of DEP in 1980s); if there is no known risks; or take into consideration the site surroundings, etc.
- Historical issues are quite different than current issues and therefore should be treated differently when there has been no know health or environmental risk. And the risk of each hazardous waste item may be different from the other items.
- Remediation of historical items is too time consuming, too costly, too restrictive on the owner and user… especially when owner purchased the site prior to DEP regulation were established in the 1980s. Current owner is now responsible for historical problems.

- Investigation requirements (per State guidance) are too rigorous (costly and time consuming). There is no need to over examine how contamination got there, just what is the extent and how do I treat it. The approach pushed by the State is overly structured.
- Some criteria are too stringent (i.e., meeting Appendix D of the WQS) for wetlands;
- Not any easy mechanism to get criteria approved. CTDEEP should have mechanism to routinely update criteria. For additional polluting substances, development of these criteria should be self-implementing like alternative SWPC (i.e., use formula and toxicity from approved agency list).
- RSRs often force capping as a solution because showing compliance with PMC or other criteria are too difficult because of the need for commissioner approval. Overall, capping is a poor solution, because the contamination will never be cleaned through natural processes (i.e., biologic, phyto or dissolution);
- Too many alternatives/variances require commissioner approval; to expedite cleanup, LEPs should be allowed to approve.
- PMC are not based on real world values. Recommend that these values be based on experience or science (i.e., this concentration leaches and shows up in groundwater above applicable standards).
- Many criteria are often too low for their setting (commercial/industrial facilities). The industrial/commercial standards provide little flexibility because clean up criteria for key constituents (benzo(a)pyrene, arsenic, etc) have the same cleanup standards.
- Criteria are set too low for many constituents, when there are some studies that show problems occur at low concentrations (i.e., lindane causing hermaphrodites in frogs). The problem is that we identify a high end threshold where these chemical cause problems, and then arbitrarily set a low end where they are safe. Unfortunately, these chemicals may be safe in a middle zone (many studies for dioxins also suggest this).
- If ecological is to be part of the investigation/clean up; there must be standards.
- Removes a lot of the creativity that any individual may add based on site knowledge and creates a cookie cutter approach.
- It also filled with jargon and language most citizens cannot understand and they are reliant on their LEP to be a translator.
- Cons of Transfer Act
    - Discriminatory – by including only a small subset of the population of the
    - Doesn't include enough dirty sites
    - Includes too many clean sites – costs tens or hundreds of thousands of dollars to address a site that has no significant releases and poses NO RISK
    - Allows multiple certifying parties, each responsible for exactly the same thing, which makes it impossible to enforce fairly, and results in stagnation; law suits are the only way to rectify the situation and allow the property to redevelop.
    - Tied to property transfers, but with a great many exceptions, resulting in a great many sites that are never cleaned up.
    - Little or no enforcement. No effort by DEP to identify transferors who fail to file, and little or no penalty to a transferor if such transfer is discovered, thereby rewarding non-compliance. I know of at least five sites at which the transferor did not file and has had no consequences.
    - Occasional quality control problems and little consistency from DEP when responding to Form III filings; example: DEEP recently ordered my client (certifying party) to spend hundreds of thousands of dollars to install a sewer connection, on property he no longer owns, to prevent a

possible future release of contaminants to a legally-installed septic system that receives only domestic wastewater.

- Cons of Significant Environmental Hazard
  - Not a good name! From the minute a property is tagged as a "Significant Environmental Hazard" and this is recorded on the municipal land records, the property is forever stigmatized. Who would ever want to buy a property (or give a loan for a property), that has the moniker "Significant Environmental Hazard?"
  - Sometimes, there are notifications that are made that are NOT significant at all. A common example is the detection of pollutants in a private well – which must be reported under 22a-6u, but which might mean nothing. Example – the presence of low level organic compounds, which might come from electrical tape (toluene) used to wrap pump wire to water line, or from other well construction materials.
  - Even if contaminants are present in a well, if the source of the contamination is from an offsite plume, the designation of "Significant Environmental Hazard" might be attached to a property that is the innocent victim of someone else's pollution. The victim's property should not be stigmatized in this manner. This is a surefire way to create brownfields – sites that no one wants.

2. Please diagram what you envision as the ideal cleanup program, including triggers, submittals, LEP roles, DEP roles, etc.

- The ideal program would cover releases regardless of mechanism or trigger (e.g. tank, spill, Brownfield, etc..) and have the LEP have broader authority in using EPA approved risk based approaches to cleanup. Have as many decisions as possible be made by the LEP on a self-implementing basis; technical reports (Phase I, II, III, RAP, etc) to be submitted to DEP annually (electronically preferred). Once an LEP verification has been submitted DEEP should have maximum of 90 days to decide on whether or not to audit.

- Suggest two categories when reviewing Transfer Act requirements – Current and Historical. Each should be treated differently depending on the hazard, risk, site, etc. We now have a very expensive, time consuming process that may not be value added to the future. It appears the LEP is too cautious because of potential liability and potential loss of license… therefore this adds to costs (like medical costs).

- In some cases the site can be left as is with possibly a note in the deed that there is this historical "hazardous" material from a certain time period; in other cases some remediation may be needed; and it others full remediation may be needed.

- Regarding current issues, this may want to be put into 2 categories also… known and unknown consequences… if known issue it is one thing but if it is unknown (and these are issues from the 80s and 90s) then it may be treated differently. Example: what triggers a Phase II… any 1 month of > 100Kg of waste removal; what if in the 1980s and 1990s an organization properly stored what was thought to be hazardous waste and then properly disposed of if but it exceeded the limit. Paperwork is minimal but if it was just over the limit for over a 12 or 18 month time in the 1980s, the organization becomes a site because of the limit… time is not considered and the level was not known at that time.

- We are not far off, as long as the cons above are addressed. LEPs should be given broader ability for approvals. Biggest problem is that there is no regulatory mechanism to clean up residential properties. I don't want to force costs on homeowners, but we turn blind eyes to environmental problems where they matter most.

- The ideal program would not be selfish but service oriented and would reserve the most complex sites for DEP oversight. The ideal program would include more data sharing and cooperation between departments and agencies and less turf wars and confusion over who does what. In addition there would be a more seamless transfer of sites between departments with less lag time. Finally all of the departments would agree on the most serious of sites and focus their effort accordingly in a more disciplined manner.

- See Massachusetts Contingency Plan – it is not "ideal," but probably comes as close to ideal as a state program can get. CT would do itself a great service if it were to simply adopt the MCP in its entirety, and to discard virtually all aspects of most other cleanup programs. This would benefit the environment and the economy of CT. I believe that attempts to fix the many existing CT cleanup programs will likely fall far short of the State's goals, resulting in another decade of disappointment. Sure, there are problems with the MCP – but many problems have already been solved.

3. Please provide some suggestions on how parties can or must transition to new program(s), if new programs are created.

- Being a small State, there are a relatively few environmental professionals with an excellent communications network (EPOC) to describe a new program. Communication through the DEEP website and targeted e-mail notices (similar to DRS notices to businesses) can compliment direct meetings with the regulated community. LEP education on the new program (with multiple sessions) could be accomplished within six months of roll out.

- If new program is developed, to be fair, we must be able to review sites already established to any new criteria. Prioritize the real hazardous sites and free up the non hazardous sites so that they do not become an economic problem for the future.

- We are not suggesting new programs, just revisions to existing ones. However, there should be an alternative cleanup standard for Brownfield sites. Also, there should be release verification for GB sites (similar to Voluntary GA).

- The DEP has changed the program so many times since the 1980s that new changes would only add to the confusion. Make it simpler, streamlined and accessible to the layperson. Also more emphasis should be placed on the aquifer as a whole not individual sites. Finally the environment and groundwater not just business and LEP pressures need to be in your thinking, it seems your focus is more to serve the lawyers and the LEPs than the citizens of the state of Connecticut.

- This is where adopting the MCP would be especially helpful. It is a single program, which means that all sites in the various CT programs could be absorbed into the CT version of the MCP with the least amount of difficulty. Properties already in the Transfer Act or other CT program could be given the option of remaining in that program until closure, or to enter into the new MCP-type program. Few sites that have completed the investigation under the Transfer Act of CT VRP would opt to switch, but many sites where little investigation has yet been conducted would likely opt to switch.

4. **In your experience what states' cleanup programs should be reviewed during this Evaluation? What are the "good" aspects of each of these state programs?**

- The State of West Virginia has a very good program under its Voluntary Remediation Program and Redevelopment Act. Uses Licensed Remediation Specialists (LRSs) who can use broad, definable discretion in making cleanup decisions; includes a good guidance manual; and uses EPA approved risk-based approach to cleanup. Covers a large number of cleanup situations and relatively easy to navigate

- Always ask what is the most practical, timely and cost effective approach to resolving a problem; DEEP needs to help the "customer" to resolve the issue. And remember, while it would be nice to have everything go back to being perfect, it may not be practical. And just knowledge of a potential issue may be all that is appropriate.

- All programs should be reviewed. Comments from above should be addressed.

- Any state program would be better where enforcement is consistent and occurs on a predictable basis. Massachusetts, The Carolinas and New York data and GIS programs are superior and that allows staff and the public the ability to find the sites, the files and the person in charge of a site without hours of effort.

- The clean up is only part of the process agreeing on what is a site, what is a high risk site and focusing on the environment is done very well in Wisconsin and they have a good model for working with business and getting things done for the environment too.

- Massachusetts is best. Most other states I have worked in are far better, including: Pennsylvania, New York, New Jersey, Minnesota, New Hampshire. Even Rhode Island's cleanup programs are better, despite its many flaws. Each has its pros and cons, but all are better than CT at moving a site through cleanup programs. The good aspects of the other state programs include: True risk-based cleanup – human and ecological; Clearly defined endpoints, with multiple options to achieve these endpoints; Universal standards; Better use of self-implementing options; Better policies to address polluted fill, particularly with respect to avoiding cleanups that do not significantly improve the environment; and Streamlined approach

Appendix E: Public Comments on Vision

- Why not have an option that the certifying party can pick a person at the DEEP, i. e. the Environmental Analyst, with whom they prefer to work (otherwise someone will be assigned as is now the case). This would introduce some natural market driven feedback for the DEEP over time.

- As our session continually alluded to, introduce the "super LEP" where the LEP can really "call the shots" instead of what is the current case. The LEP is nothing more than an administrator; sort of speak, for the DEEP.

- Grant more "common sense" waivers and ELURs

- Immediately accept the SESOIL model which is used by 20 other states including, NJ and MA.

- If a property is zoned industrial, then treat it as industrial property.

- If nothing is in the ground water, then significantly reduce the ground water monitoring requirement in both terms of length of time (number of quarters) and the number of wells monitored

- Truly take into account the specific factors of each particular case in terms of the true, i. e., real environmental risk of the site, impact on jobs, economic impact on the community, the State of Connecticut, and the nation. These elements better be factored in if Connecticut has an interest in addressing its economic ills.

- Place a premium on CASH and JOBS. Currently, money and spending seem to have NO meaning with the current transfer program. And it seems that JOBS don't really mean much as well.

- Three steps that Connecticut DEEP could take to improve their cleanup program include:
    a. Delegate more responsibility for cleanup decision making to LEPs;
    b. Place greater emphasis on the use of site specific risk assessment as the preferred tool for determining when site cleanup is sufficient; and
    c. Revise the current groundwater protection classification system by differentiating between long term water quality objectives and realistic shorter term expectations for water quality given historic land use

- The definition of success should be informed by and consistent with state policy and and agency goals as defined in statute.
    a. "conserve, improve and protect its natural resources and environment";
    b. " control air, land and water pollution in order to enhance the health, safety and welfare of the people" ;
    c. "improve and coordinate the environmental plans, functions, powers and programs of the state";

d. "manage the basic resources of air, land and water to the end that the state may fulfill its responsibility as trustee of the environment for the present and future generations."[i]
e. " use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Connecticut residents."

- Synthesizing these policies and goals with respect to DEP's remediation programs into a definition of "success" is a subjective exercise, but here is our suggestion, incorporating language from each of the policy and goals statements listed above:
    a. "It is the goal of DEEP's remediation programs to improve the environment and enhance the health, safety and welfare of the people through a coordinated approach, using practicable means and measures that foster sustainable development and fulfill the social, economic and other requirements of present and future generations."

- The most important goal of any cleanup program should be to protect human health and the environment, particularly in environmental justice communities. Part of ensuring that human health and the environment are protected is ensuring that as many sites as possible are cleaned up to the appropriate standards and returned to productive use. This will help minimize the risk of exposure to health and environmental hazards while also encouraging redevelopment as opposed to new development in Greenfields.

- Prioritization: The biggest flaw with the Transfer Act is that outside of a property sale, the state has no authority to prioritize sites and require them to enter the program. As a result, we are not focusing our resources on the most important sites and assuring that they are cleaned up in a timely manner. Given the limited resources of the Department, this should be part of any cleanup program.

- Timelines/Deadlines: Strict timelines and deadlines will help to ensure that once projects enter the program, they continue to move forward at a reasonable speed and ultimately reach completion. There should be timelines both on the person undertaking the project and the Department.

- Milestones: Providing milestones throughout the cleanup process can be a good way of gauging progress while also ensuring that the project is proceeding according to the plan. This also gives people or entities engaged in the cleanup the opportunity for good public relations and positive reinforcement.

- Meaningful Oversight: It is important that the Department engage in consistent, meaningful oversight to ensure that the program is being administered appropriately and that sites are actually being cleaned up the right way to the right standards. Without meaningful oversight from the Department, projects might linger in the program longer than they should or people might cut corners if they think no one is watching them.

- Clarity: The cleanup program should be as clear and easy to understand as possible. One result of a clear program will be more certainty, something that is also important for cleanup programs. Currently there is a lot of confusion about which program to enter, when to enter, and how to

exit—much of which could be eliminated if there were more clarity.

- Certainty: Providing more certainty to people entering the cleanup process could alleviate some of the reluctance people currently feel about entering the program. Of course some things are bound to change as the project proceeds, but providing certainty wherever and whenever possible should be a goal of any cleanup program. This is beneficial not only to the person undertaking the cleanup, but also to the Department and the public.

- Incentives: Any good cleanup program should provide meaningful incentives. Incentives can come in a variety of forms, and do not have to be solely financial. For example, providing an expedited review process for certain projects could prove to be an effective tool.

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws

Evaluation Workgroup Discussion Summary Report

August 16, 2011

79 Elm Street, Hartford, CT 06106-5127
www.ct.gov/deep

Introduction

As is required by Public Act No. 11-141, the Department of Energy and Environmental Protection (DEEP) is required to conduct a comprehensive evaluation of the Connecticut property remediation programs and provisions of the general statutes that affect property remediation. On or before December 15, 2011, DEEP must issue a comprehensive report on this evaluation to the Governor and to the Environment and Commerce Committees of the General Assembly. Along with this report, DEEP will be submitting our recommended legislative changes to the general statutes. This legislative proposal will be based on the overall vision of an excellent remediation program offered by stakeholders, and it will be based on information, data, and suggestions presented in workgroup reports submitted to the DEEP. The additional steps to come in this evaluation and transformation process will further assist DEEP in developing the legislative proposal and supporting information that meets the needs of all stakeholders and creates a more streamlined and efficient remediation process in Connecticut.

On August 9, 2011, DEEP hosted a public meeting to solicit stakeholder support in identifying workgroup topics that will help DEEP form workgroups. These workgroups will collect information and data and suggest improvements that will inform the transformation. The presentation from this meeting is available on the Transformation webpage on the Stakeholder Input and Public Participation webpage. At this meeting, DEEP identified four workgroup topics that spring from the evaluation requirements of Public Act No. 11-141 and stakeholders identified an additional twenty-five (25) topics for consideration. The twenty-nine (29) total workgroup topics identified are listed below with the goal of each topic in no particular order.

	Workgroup Topic Idea	Goal
1	**Evaluate factors that Influence Timing under CT Remediation Programs ***	Using baseline program statistics, determine factors and suggest ideas that may influence inv/remediation timing
2	**LEP Program Performance and Utilization ***	Determine baseline and suggest ideas to expedite investigation and cleanup using LEPs
3	**Single Remediation Program Evaluation ***	Compile info and evaluate single remediation programs and compare to current Programs
4	**Evaluate CT's Current Liability Relief Statutes ***	Evaluate existing liability relief provisions
5	**Defining and Measuring Success (ensuing success can be measured)**	Creating goals and guiding principles for the Remediation Program
6	**Case Studies – What went wrong?**	Analyze several cases that did not go smoothly to help identify potential solutions
7	**Addressing current vs. historical issues (50-100+ yrs old)**	Evaluate how current versus historical contamination should be addressed

	Workgroup Topic Idea	Goal
8	**Entries Points into Current CT Remediation Programs**	What are best entry points for each (business transaction/discovery/on-going releases) Program
9	**Widespread contamination issues – urban fill and pesticides**	Evaluate and suggest a uniform, fair, practical, and protective approaches
10	**Soil and GW characterization and cleanup objectives**	Evaluate cleanup objectives in light of types of site, setting and receptors, and evaluate use of GIS system to generate site-specific standards
11	**What is the "finish line" and how is it defined in different Programs?**	Evaluate the finish line in Programs for consistency and clarity
12	**Evaluate the best practices with other state cleanup programs**	Evaluate the general framework and suggest processes that would benefit CT
13	**Review process for approval of site-specific cleanup criteria**	Evaluate and suggest a timely process
14	**Development of criteria – base assumptions for criteria**	Evaluate the assumptions used in the development of criteria
15	**Standards or guidance for residential or non-applicable sites (not in program)**	Establishing guidance for dealing with sites not in program and suggesting how sites can use current tools
16	**Release Registry**	Evaluate a new mechanism to report releases detected and mechanisms to address releases
17	**Transition and phase out/transfer from existing to new programs**	Evaluate mechanisms by which parties can and/or must transition out of existing Programs and into any new Programs suggested
18	**Prioritization of sites by risk – human health**	Have appropriate level of effort based on risk posed by site conditions and receptors
19	**Defining responsibility for pollution – taking into account historical contamination scenarios**	Explore polluter pays when the actual polluter does not exist or is no longer viable
20	**Streamlining resolution of potable and other public health WQ issue problems**	Evaluate ways that resolution for potable water and community septic systems problems can be streamlined
21	**Streamline institution and engineered control process**	Evaluate ways by which to expedite these processes
22	**Clarification of existing Transfer Act entry points**	Evaluate ways to clarify an provide for more consistency given the many confusing exemptions to entry into the Transfer Act
23	**Issues of uniformity within existing Transfer Act (differing requirements)**	Evaluate issues posed by having multiple requirements within the Transfer Act and recommend solutions
24	**Issues of federal/state overlap**	Evaluate areas of investigation and cleanup that have state and federal overlap of authority and suggest streamlining improvements
25	**Self-implementing vs. DEEP approval**	Evaluate approval roles for DEEP and LEPs to determine what should be self-implementing, what can be approved by LEP, and what DEEP must approve

	Workgroup Topic Idea	Goal
26	**Looking to eliminate overlap within existing programs**	Evaluate programs that have overlap of authority and suggest streamlining improvements
27	**Groundwater monitoring requirements**	Evaluate groundwater monitoring requirements and suggest streamlining improvements
28	**Consistency of any new program and existing program with established goals**	Evaluate existing programs and any new program with yet to be established goals and principles
29	**Evaluation of various program models**	Evaluate forms of transformation: keep existing programs and modify, consolidate existing programs, or consolidate into single program
*** Required per Public Act No. 11-141**		

Workgroup Topic Discussion

At the August 9, 2011 meeting, DEEP explained that these identified workgroup topic ideas were not necessarily the actual scope for a workgroup. It was explained that one identified topic could be refined to develop the scope for a workgroup or several identified topics could be combined to comprise the scope for a workgroup. In order to gauge interest in the identified workgroup topic ideas, there was a discussion on the identified ideas. The discussion resulted in similar ideas being refined into more comprehensive or more concise workgroup topic ideas. Still, several of the workgroup topic ideas shared common themes.

While there was consensus on the value of most of the identified workgroup topic ideas, not all identified topic ideas received broad support from meeting participants, including topic ideas stemming from Public Act No. 11-141 and offered by DEEP. There were several identified workgroup topic ideas that received support, but for which there was no consensus. As stated by DEEP in the meeting, all identified workgroup topic ideas are worthy of evaluation, but it is important that topics most critical to assisting DEEP meet the statutory time frame and charge of Public Act No. 11-141 receive early attention. Some identified topic ideas will need to be evaluated but may be most appropriate to be evaluated after other information and data is compiled and presented. It was discussed in the meeting that there are certain workgroup topic ideas that would be valuable to evaluate regardless of the direction that the transformation takes.

A discussion also ensued on the value of identified topic ideas that relate to revising the cleanup regulations (the Remediation Standard Regulations or RSRs). The RSRs affect cleanup of many sites and releases in Connecticut. It was suggested by some that a workgroup or workgroups should evaluate the cleanup objectives and certain specific provisions of the RSRs. Others suggested that DEEP should utilize information compiled during a multiyear stakeholder process that attempted to rewrite these regulations. In 2009, DEEP chose not to continue the

RSR revisions that were the result of this process, as there was no consensus reached by stakeholders on the complete regulation revision package. DEEP has learned from this process and will be looking to pursue incremental changes to the RSRs, particularly where there is consensus, in the near future. Certain meeting participants suggested that each workgroup should consider in their evaluation any issues related to the RSRs, others cleanup tools, or policies that influence the topics being evaluated by their workgroup.

Meeting participants worked to refine the identified topics further to ten workgroup topics that represent a broad cross-section of the ideas discussed during the stakeholder session on August 9, 2011. Some topics were refined from several of twenty-nine (29) identified workgroup topic ideas, while others were carried over without much refinement. While consensus was not reached on all of the ten workgroup topics, DEEP asked stakeholders to identify what they believed were the most critical five topics to be evaluated at this stage of the comprehensive evaluation and transformation of Connecticut's cleanup laws. The ten topics are shown below in order of most interest expressed through voting. (For tallying the vote, a first priority vote received five points down to one point for the fifth priority.) The table below also shows the percentage of 1st priority votes each topic received from the voting stakeholders.

Rank and Percent of 1st Priority Votes	Workgroup Topics
1 (33%)	**What is the finish line? How does risk influence the finish line and factors that influence closure?**
2 (17%)	**Entries Points into Current Connecticut Remediation Programs**
3 (8%)	**Defining and Measuring Success (ensuing success can be measured)**
4 (10%)	**Evaluation of Various Cleanup Program Models**
5 (0%)	**LEP Program Performance and Utilization**
6 (2%)	**Defining Responsibility for Pollution – Taking into Account Historical Contamination Scenarios**
7 (6%)	**Evaluate Factors Influencing Current Remediation Program Timing**
8 (13%)	**Single Remediation Program Evaluation**
9 (8%)	**Evaluate the Best Practices With Other State Cleanup Programs**
10 (2%)	**Evaluate Connecticut's Liability Relief Provisions**

Evaluation Workgroups

As discussed in the August 9, 2011 meeting, DEEP has taken the twenty-nine (29) identified workgroup topic ideas, the refined ten workgroup topics, and the stakeholder voting results and further distilled these concepts into workgroups with a specific scope and deliverable. This has resulted in the selection of six evaluation workgroups that represent the most critical topics requiring evaluation at this stage of the comprehensive evaluation and transformation of Connecticut's cleanup laws.

Selected Evaluation Workgroups
Evaluation of Connecticut's Cleanup Programs - Current State
Scope: Evaluate the current state of the Connecticut cleanup programs. Gather and evaluate information relative to these programs, such as the number of properties that have entered into each program, the rate by which properties enter the programs, the number of properties that have completed the requirements of each program, and determine factors that may influence the length of time to complete investigation and remediation under existing programs. Deliverable: Present information from this evaluation and discuss factors that may influence the length of time it takes to complete an investigation and a remediation. Suggest potential mechanisms or programmatic approaches that could increase the speed of investigation and remediation.
Evaluation Finish Lines and How Risk and Other Factors Influence Closure
Scope: Evaluate the current requirements for closure (where is the finish line) under the Connecticut cleanup programs. Document and evaluate the factors that influence the time needed to reach investigation and remediation closure, evaluate how risk and other factors influence when closure is achieved, and evaluate how interested parties rely on closure and whether current finish lines meet their needs or expectations. Deliverable: Present information from this evaluation and discuss ways that closure could be obtained more quickly while meeting the needs and expectations of interested parties.
Entries Points and Triggers into the Current Connecticut Cleanup Programs
Scope: Evaluate the trigger mechanisms and points of entry into the current Connecticut cleanup programs. Determine what situations would compel action under a cleanup program and under what circumstances could what parties voluntarily enter a cleanup program. Evaluate if triggers are capturing all high-risk sites or releases, and are low-risk sites or releases be unnecessarily entered into programs. Deliverable: Present information from this evaluation and suggest general trigger types and entry points that would compel the highest risk sites or releases to enter a program and still allow parties to voluntarily enter when formal review and approval (including LEP verification) is sought.
Evaluation of LEP Program Performance and Utilization
Scope: Evaluate the Connecticut Licensed Environmental Professional (LEP) program. Compile and evaluate data on the performance of the LEP program, including number and percentage of verifications that undergo the audit process, the frequency by which sites or releases are delegated to LEPs, roles that LEPs can serve and those that they cannot during the investigation and remediation processes, additional roles that similar licensed professionals serve in other states, and the authority of oversight boards in Connecticut compared to other states with similar licensed professional programs. Deliverable: Present information from this evaluation and suggest how the audit process, utilization of the LEP, and the oversight board could be modified to expedite investigation and remediation.

Selected Evaluation Workgroups
Evaluation Pollution Responsibility and Liability Relief Provisions
Scope: Evaluate what parties are responsible for the investigation and remediation of pollution under current Connecticut cleanup programs and liability relief provisions in law. Compare the Connecticut responsibility and liability relief structure to other state structures, distinguishing between types of potentially responsible parties (e.g., creators, successors to the creator, owners and operators, potential owners and developers). Deliverable: Present information from this evaluation and suggest responsibility and liability relief structures that would help effectuate investigation, or remediation, or both of sites or releases.
Evaluate Best Practices of Various State Cleanup Programs
Scope: Evaluate best practices of successful state cleanup programs and states with a single remediation program. Compare the best practices from state cleanup programs and the single remediation programs to the Connecticut cleanup programs, and determine how these best practices and program structures address the needs of all investigation and remediation stakeholders. Deliverable: Present information from this evaluation and suggest which best practices and program structures appear to be the easiest to implement, have the clearest requirements, and meet the needs of all investigation and remediation stakeholders.

Discussion

There are additional topics not covered by the six selected evaluation workgroups that are important to this evaluation and transformation of Connecticut's cleanup laws. As mentioned earlier, certain topics would benefit from information that will be generated through this evaluation workgroup process. This includes the third and fourth ranked workgroup topics – based on stakeholder voting – Defining and Measuring Success (ensuing success can be measured) and Evaluation of Various Cleanup Program Models. The transformation process cannot be completed successfully without an evaluation of these concepts. They will, however, benefit from the information and data collected through the selected evaluation workgroups. Workgroups should ensure that their discussions and final report identify all issues that affect the scope of their workgroup. This includes the RSRs, governmental policies and practices, and other related factors.

Public Participation

To ensure the success of the workgroups DEEP requires broad stakeholder participation. Please fill out the **Workgroup Participation Request Form** located on the Transformation webpage on the Stakeholder Input and Public Participation webpage and submit the completed form to DEEP by e-mail no later August 24, 2011. Depending on stakeholder response, DEEP may have to cancel or modify the workgroups listed above. As discussed at the meeting, each workgroup will be co-lead by a DEEP staff person, and workgroups will be asked to select a co-lead from the workgroup members to help lead the workgroup. Ideally, DEEP will attempt to match

volunteers with one of their highest workgroup preference. However, DEEP will also try to ensure that workgroup members represent the broad array of stakeholders involved in this process, and DEEP will attempt to maintain reasonably-sized workgroups (10-15 participants).

Workgroup assignments will be made by e-mail no later than August 26, 2011. It is anticipated that the first workgroup meetings will be conducted at DEEP headquarters in Hartford, Connecticut during the week of August 29, 2011. The tentative deadline for workgroup reports is September 28, 2011.

DEEP thanks all stakeholders for their participation and continued cooperation in this comprehensive evaluation and transformation of the Connecticut's cleanup laws. This process is critical to creating a streamlined and efficient cleanup program that will address risk and increase economic development opportunities in Connecticut. If you have any comments or questions on this report or this process, please e-mail DEEP at DEP.cleanup.transform@ct.gov.

Appendix D – List of Evaluation Workgroups and Participants

Workgroup 1: Evaluation of Connecticut's Cleanup Programs - Current State	
Participant	**Representing**
Rob Robinson	**Connecticut Dept. of Energy and Environmental Protection**
Todd Berman	**Robinson & Cole**
Doug Pelham	Cohn, Binbaum & Shea P.C.
Jean Perry Philips	Pullman & Comley, LLC
Karl Wagener	Connecticut Council on Environmental Quality
Moses Boone	Environmental Justice Network
Donald Friday	Connecticut Dept. of Economic and Community Development
David Went	Alliance Energy
Patricia DeRosa	Connecticut Dept. of Energy and Environmental Protection
Peter Frick	TestAmerica
Evan Glass	ALTA Environmental Corporation
James Olsen	Tighe & Bond, Inc
Rachel Rosen	ARCADIS U.S., Inc.
Wayne Bugden	CME , Associates, Inc
William Schnell	Energy Solutions, LLC
Rick Standish	Haley & Aldrich, Inc.

Workgroup 2: Evaluation Finish Lines and How Risk and Other Factors Influence Closure	
Participant	**Representing**
Camille Fontanella	**Connecticut Dept. of Energy and Environmental Protection**
Kelly Meloy	**ALTA Environmental Corporation**
Ann Catino	Halloran & Sage, LLP
John Wertam	Shipman & Goodwin, LLC
Mark Mitchell	CT Coalition For Environmental Justice
Martin Mador	Sierra Club - Connecticut Chapter
Meg Harvey	Connecticut Dept. of Public Health
Lauren Levine	United Technologies Corporation
Maurice Hamel	Connecticut Dept. of Energy and Environmental Protection
Eric Henry	Kleinfelder, Inc
David Sherman	Apex Companies, LLC
Kevin King	Environmental Resources Management
Jessie McCusker	GEI Consultants
Gary Cluen	GZA GeoEnvironmental, Inc.
Matthew Coldwell	NewFields
Nicholas Hasting	Woodard & Curran, Inc.

Workgroup 3: Entries Points and Triggers into the Current Connecticut Cleanup Programs	
Participant	**Representing**
Carl Gruszczak	**Connecticut Dept. of Energy and Environmental Protection**
Sam Haydock	**BL Companies**
Gary O'Connor	Pullman & Comley, LLC
Pamela Elkow	Robinson & Cole
Lisa Wadge	Citizens for Clean Groundwater
Margaret Miner	Rivers Alliance
Martin Hilfinger	Cumberland Farms, Inc.
Michelle Alabiso	Drake/Warren Equities, Inc.
David Clymer	United Technologies Corporation
Peter Zack	Connecticut Dept. of Energy and Environmental Protection
Mitch Wiest	Roux Associates, Inc
Plato Doundoulakis	Altas Environmental
Bill Swanson	CDM
Jeff Lambert	Conestoga-Rovers Assoc., Inc.
Matt Hackman	Matthew E. Hackman, P.E. CHMON
Paul Tanner	O'Reily, Talbot & Okun Associates, Inc.

Workgroup 4: Evaluation of LEP Program Performance and Utilization	
Participant	**Representing**
Paul Clark	**Connecticut Dept. of Energy and Environmental Protection**
Rob Sernoffsky	**GeoLogic, LLC**
Sarah Kowalczyk	Murtha Cullina LLP
Lee Hoffman	Pullman & Comley, LLC
Peter Hearn	Connecticut Council on Environmental Quality
Andrew Harris	AMEC
Gary Robbins	UCONN
Lorella Struzzi	Promold Plastics
Raymond Leather	The Cumberland Gulf Group of Companies
Peter Hill	Connecticut Dept. of Energy and Environmental Protection
Gregory Beach	AECOM
Lynne Baumgras	AMEC
Kevin Bogue	Anchor Engineering Services, Inc
Guy LeBella	BL Companies
Robert Potterton	Fuss & O'Neill
George Gurney	Stantec

Workgroup 5: Evaluation Pollution Responsibility and Liability Relief Provisions	
Participant	**Representing**
Tom RisCassi	**Connecticut Dept. of Energy and Environmental Protection**
Anne Peters	**Carmody & Torrance**
Kathleen Conway	Law Offices of Katherine Conway
Jane Warren	McCarter & English, LLP
Mark Sussman	Murtha Cullina, LLP
Jessica Morowitz	CT Fund for the Environment
Diane Lauricella	Norwalk Neighborhoods for Environmental Justice
Dimple Desai	Connecticut Office of Policy and Management
Eric Brown	CBIA
Jan Czeczotka	Connecticut Dept. of Energy and Environmental Protection
Michael Cote	AMEC Environmental & Infrastructure
Mark Barmasse	ARCADIS U.S., Inc.
Cory Nachshen	Dewberry
Michael Harder	Loureiro Engineering Associates, Inc.
Sydney Neer	URS Corp
Robert Carr	Zuvic, Carr & Associates, Inc.

Workgroup 6: Evaluate Best Practices of Various State Cleanup Programs	
Participant	**Representing**
Robert Bell	**Connecticut Dept. of Energy and Environmental Protection**
Jamie Barr	**Langan Engineering & Environmental Services**
Alfred Smith	Murtha Cullina LLP
Lauren Vinokur	Robinson & Cole
Amey Marrella	Volunteering for Connecticut Coalition for Environmental Justice
Dermont Jones	Connecticut Dept. of Public Health
David Weeks	Shell Oil Products
Thomas Nunno	TRC
Faith-Gavin Kuhn	Utility Contractors Association of Connecticut
Allison Forrest	Connecticut Dept. of Energy and Environmental Protection
Herb Woike	Groundwater & Environmental Services, Inc.
John Bogdanski	BL Companies
Dave Hurley	Fuss & O'Neill
Gregory Gardner	Gardner Environmental Partners, Inc.
Michael Ainsworth	HRP Associates, Inc
John Zbell	Leggette, Brashears & Graham, Inc.

Appendix E – Final Evaluation Workgroup Reports

Evaluation of Connecticut's Cleanup Programs - Current State

Evaluation of Finish Lines and How Risk and Other Factors Influence Closure

Evaluation of Entry Points and Triggers into the Current Connecticut Cleanup Programs

Evaluation of LEP Program Performance and Utilization

Evaluation of Pollution Responsibility and Liability Relief Provisions

Evaluation of Best Practices of Various State Cleanup Programs

Appendix F – Recommendations and Discussions of Evaluation Workgroups

Table of Contents

Evaluation of Connecticut's Cleanup Programs - Current State

Recommendations

Unified Remediation Program

There are currently a large number of pathways for sites to become involved in DEEP remedial programs, but very few clear pathways to closure. Our primary recommendation is to integrate the various programs outlined into a release-based unified program, self-implementing in nearly every way by LEPs, and administered in an executive/audit capacity by the DEEP with respect to record keeping and benchmarking. See Appendix C for a conceptual model graphic of the program.
A significant number of resources will be needed to facilitate the implementation of this program given the complexities of underlying statutory requirements and/or funding arrangements.

Common Benchmarking Milestones

All programs should have common benchmarking standards. The "Threshold" or "Benchmark" milestone points of remedial status must embody all of the following:

- be measured and data based with date fields for future forensic process control analysis;
- be consistent between programs;
- be transparent and accessible online; and
- be thoughtful with respect to risk status and market status.

The program must also have compliance mechanism to ensure reporting to DEEP when benchmarks are achieved.

Enforcement Must be Improved

Emphasis should be increased with respect to recalcitrant parties. Increased coordination between DEEP and the AG's office should yield more consistent enforcement that stakeholders can rely upon and will improve the performance of our state's remedial programs. DEEP and the AG's office must develop more time/cost efficient processes for advancing meaningful enforcement actions. Compliance with the statutes and regulations needs to be the norm in environmental law, as it in other areas.

Standards Should be Risk Based

Site remediation should be protective of human health and the environment, and should facilitate the achievement of closure in a timely manner. To balance these goals, DEEP should incorporate risk-based standards into its programs. For example, DEEP should:

- Provide more flexibility with respect to using risk-based criteria developed for a specific site in a self-implementing manner.
- Where the site lends itself to a presumptive remedy, dramatically streamline the investigation process.
- Make pragmatic public policy decisions regarding urban fill, pesticides and broad use of a wide variety of institutional controls.

Other Programmatic ideas

The group arrived at other miscellaneous suggestions:

- Develop specific cost optimization strategies for sites with low uncertainty and risk in order to support a more direct and cost effective path to risk mitigation and a return to productive use.
- Reallocate resources toward the Remediation Division staff and infrastructure (for example, increased training and educational opportunities, increased information technology capabilities and support). If state government is to transform itself in a way that significantly aids the mission of remediating and redeveloping contaminated properties, then DEEP must have the resources.
- Cleanup criteria should be incorporated into revised regulations and vetted through legislatively mandated processes.
- Provide opportunities for LEPs to discuss DEEP staff decisions with supervisors if necessary.
- Increase flexibility in using interim remedial measures and interim verifications, letting property owners, the community and the marketplace know when important remedial goals have been achieved.
- ELURs are too complex – DEEP should consider Uniform Environmental Covenants.
- Post remediation groundwater monitoring for minor soil remediation sites with no groundwater impacts should be simplified and reduced/eliminated for minor releases.
- Expanded use of "self-implementing" tools, such as:
    - Environmental land use restrictions
    - Engineered controls

    - Calculation of alternative criteria and criteria for additional polluting substances
    - Develop a mechanism for self-implementing Ecological Risk Assessments.
- Fees should encourage timely progress
- LEPs should retain the freedom to select the most efficient means for attaining cleanup criteria.
- Streamline the process for Additional Polluting Substances.

Discussion

The work group evaluating the current state of Connecticut's Cleanup Programs asked the question:

What should most fundamentally characterize an excellent Connecticut cleanup program (or set of programs)?

And the work group's unanimous conclusion is this:

An excellent program or set of programs that addresses pollutant releases in a protective, cost efficient and timely manner, inclusive of recent and historical releases.

Then the work group set out to evaluate to what degree the current programs meets this objective, what impedes meeting the objective, and what recommended actions would lead to meeting the objective.

The work group concluded that the current patchwork of programs fails to meet the objective because:

1. Most releases are not addressed by any of Connecticut's cleanup statutes or programs (rather, most releases identified by due diligence environmental site investigations), and there are no requirements for investigation or remediation for this universe of releases.
2. A very large number of releases are addressed only with respect to short-term/acute risks (for example, "spills") where the existing program does not have defined requirements for investigation and remediation.
3. A relatively small number of releases are in a program with defined requirements for investigation and remediation (for example, those in the Transfer Act Program, and UST Program), but the program requirements are often not met or are not met in a timely manner for a variety of reasons discussed further in this report.

Accordingly, the work group's overall recommendations can be summarized as follows:

1. Ensure that all releases are appropriately addressed by cleanup statutes and/or regulations;
2. As outlined in the recommendations, revise the existing structure of remedial programs to facilitate completing investigations and remediation in such manner that quality, consistency, throughput, recordkeeping and public disclosure are greatly increased.

Evaluation of Finish Lines and How Risk and Other Factors Influence Closure

Recommendations

Each subgroup provided recommendations to address the issues that were identified in achieving site closure.

Recommendations for Areas 1 and 2: Factors Influencing Site Closure

Recommended potential solutions for each factor influencing the achievement of site closure are listed and described below. These recommendations suggest ways in which these factors may either become non-issues or the ways in which the time it takes to resolve these issues may be reduced.

1. **Technical Complexity –** Although it is difficult to resolve many of these issues, recent Brownfields legislation (Public Act 11-141) has eliminated some of the above complexity for certain sites relating to releases which have migrated off-site by eliminating the requirement to investigate or remediate such off-site impacts for certain eligible sites. Such solutions could be broadened or expanded upon. Solutions pertinent to ecological risk assessment and NAPL issues are addressed under Items 2 (Risk Endpoint) and 5 (Public Policy Considerations) below. If additional regulatory or statutory deadlines are to be considered (e.g., in connection with Item 9 (Statutory or Regulatory Deadlines) below), technically complex facilities should be specifically considered during such regulation or statute development. It is recommended that the deadlines be varied, dependent on size and complexity of the site being investigated and remediated.

2. **Risk Protection Endpoint -** Different finish lines exist for different remediation programs in Connecticut. It is suggested that a greater variety of risk protection endpoints that are more closely aligned with current and foreseeable future uses and risks be provided. Possible solutions include:

    - The remediation of sites that fall into the current RSR "residential" category, but that are not used strictly for residential purposes (e.g., recreational sites), would benefit from development of default risk-based standards that take into consideration the less frequent and intensive exposures associated with such land uses. Provide separate closure endpoints to address current and reasonably foreseeable future risks, including clear milestones to demonstrate to the public that current exposures and risks are under control.
    - Refine aquifer classifications and groundwater remediation standards for GA/GAA areas to incorporate different closure endpoints and pathways based upon consideration of such factors as aquifer yields and quality, current and reasonably

foreseeable groundwater uses, and use of institutional controls to eliminate the contamination pathway to potential drinking water receptors. Evaluate mature programs from other states (including Massachusetts and New Jersey) and EPA. Develop risk-based guidance to facilitate achievable groundwater cleanups, including such topics as Technical Impracticability variances, development of alternative risk-based criteria, alternate compliance methods, groundwater classification/reclassification based on yields, quality and uses, and use of institutional controls to maintain elimination of potential drinking water receptors.

- Institutional controls are essential to ensure maintenance of certain land uses and to allow activities consistent with the selected remedial approach, which is critical to provide protection from future risks. Evaluating a greater variety of institutional controls and adopting models that have been successfully used elsewhere, including Activity and Use Limitations (AULs, as implemented in Massachusetts), restrictions consistent with the Uniform Environmental Covenants Act (UECA, as implemented in Pennsylvania), zoning design districts (e.g., Hamden's Newhall site) and permitting databases (e.g., Stratford's Raymark site), should be explored. The controls put in place need to be available and accessible to the public, transparent, and enforceable.
- Provide more end-use, risk based standards, and a self-implementing process for development of alternative risk-based standards (similar to MA). One options would be to adopt the U.S. EPA risk assessment guidance for use in developing site-specific, risk-based remediation standards, as well as remediation standards for additional polluting substances (as detailed below under Item 3).
- Provide guidance for the NAPL remediation standard which better aligns remediation to risk protection endpoints. There is a need for consistency between programs and guidance because the endpoint is unclear.
- In establishing new and/or different risk-based endpoints (especially any that are more stringent than existing standards), develop a transition plan to ensure that release areas already remediated under existing standards or release areas where active remediation is already underway, are appropriately grandfathered. Certainty is important.

3. **Need for Regulatory Agency Approvals or Permits -** Modification of the areas where the privatized LEP program is not currently operating in a privatized (self-implementing) manner (similar to MA), would involve further development of the DEEP auditing process of LEP verifications. Furthermore, in modeling other States' programs (including MA, NJ and TX) that have followed this type of approach, DEEP will need to adopt guidance on certain additional topics, as detailed below:

    - Allow for self-implementing development of risk-based remediation standards by LEPs, including use of site-specific risk assessments. To do so in a consistent, protective and scientifically defensible fashion, we recommend that DEEP adopt the federal EPA guidance on human health and ecological risk assessment that is widely accepted as being protective using current and sufficiently robust science, which scientific methods have been independently peer reviewed by numerous internal and external qualified experts (including from other EPA programs and other federal

agencies), and accepted through consensus by the various stakeholders following a lengthy and interactive development process. Such guidance has been adopted by many other states in the country according to the Interstate Technology and Regulatory Council. Furthermore, EPA has successfully applied its risk assessment guidance process and methodology for many years at many sites in the Superfund and RCRA programs. Connecticut's past proposals to adopt risk-based approaches that vary significantly from the federal approach have consistently involved more stringent approaches, and have led to repeated failures due to concerns regarding the scientific defensibility of such proposals, and whether an appropriate balance had been reached between sufficient environmental protection and adverse economic impact.

- Allowing LEP-approved ELURs (akin to current allowance of such for LEP-lead sites under Voluntary Remediation Program in GB areas and similar AUL approach in MA).
- Given the extensive experience with historic urban fill in Connecticut commonly posing potential risks associated with direct exposure and DEEP approvals to date of certain common types of engineered controls to restrict direct exposure to such fill, we recommend that DEEP formally adopt such existing types of engineered controls for statewide use (e.g., in regulation or by General Permit) at eligible sites.
- Improve the DEEP audit process to increase its robustness. This may involve specialized training of existing staff and/ or addition of specifically qualified staff.

4. **Technological, Chemical, and Physical Limitations -** Potential solutions include:

   - Consider aquifer classification/reclassification, alternate remediation standards, alternate compliance methods and points of compliance (similar to EPA and MA) to develop an appropriately protective groundwater remediation and compliance approach that is feasible and that considers such factors as groundwater usage (current and reasonably foreseeable), groundwater availability, and potential use of institutional controls.
   - Improve or revise the process for obtaining Technical Impracticability variances by issuing appropriate guidance and streamlining the process to improve the clarity and certainty associated with such variances.
   - Expand use or types of institutional controls, as warranted, to eliminate exposure pathways for plumes not able to be sufficiently mitigated to meet existing groundwater remediation standards.

5. **Legacy Considerations -** Potential solutions include:

   - Consider whether to continue to regulate and require remediation of historic urban fill (not required by MA) and/or develop feasible self-implementing methods for remediation of historic urban fill (see Item 3 above). If remediation will be required, allow for LEP use of pre-approved remedial approaches for historic urban fill posing potential risks by direct exposure only.
   - Clarify that the DEEP/DPH policy (regarding soil mixing) for former agricultural sites may be used for sites subject to the Transfer Act and other Connecticut remediation

programs. Consider alternative compliance approaches for former agricultural sites, due to the inability to feasibly meet current RSR remediation standards (e.g., most commonly associated with but not limited to the GA PMC for soil).

- Adopt substantive guidance (similar to EPA) for completing human health and ecological risk assessments and evaluating appropriate risk management options, acknowledging that such impacts are routinely due to a number and variety of current and/or historic contributors and numerous potentially responsible parties.
- Consider addressing impacted sediments on a watershed basis (similar to EPA and other state programs), with watersheds prioritized for evaluation and mitigation based on degree and extent of current impacts and sensitivity of current ecological receptors. A site by site approach commonly results in a minimal (if any) long term environmental benefit but a significant cost to the small number of regulated sites required to undertake such work. Focus resources on most impacted water bodies. Establish earlier milestone of determining which sites need eco-risk and which do not. More guidance on risk-management decisions and comparison to benchmark criteria.

6. **Financial Considerations -** Potential solutions include:

- Acknowledge that progress is directly related to financial issues and that addressing any imminent hazards is a way to handle significant risks until better financial times.
- Work with the State and Federal Government to make more public monies available to perform remediation at higher priority sites.
- Provide decisions in a timely manner if a company is eager to move forward and has allocated the resources to accomplish the cleanup. Consider fees for expedited approval.
- Provide education and certainty to lenders with respect to remediation endpoints to facilitate lending and investment for contaminated sites.

7. **Business Considerations -** Potential solutions include:

- An improvement in the economic cycle leading to an overall increase in property values will likely make remedial projects become more economically feasible. The business bottom line and potential adverse impacts on jobs must be considered.
- Applying ideas like the Targeted Brownfield Remedy could limit investigation costs and disruption on all sites and potentially make remedy implementation more feasible and therefore likely to be done.
- Increase economic incentives and regulatory relief programs to incentivize redevelopment of contaminated (brownfield) sites versus choosing to develop previously undeveloped sites.

8. **Site Use and Reuse considerations -** Potential solutions include:

- Provide more types of ELURs, with greater transparency, accessibility to public, and better enforcement (see #3 above).

- Provide clear endpoints so that property acquisition, use, development and expansion decisions can be made with some certainty.
- Develop risk-based decision-making criteria for LEPs.

9. **Statutory and Regulatory Deadlines** - Imposition of additional regulatory/statutory deadlines could serve to expedite cleanups for sites not currently under any such deadlines. It is suggested that additional deadlines be established in conjunction with a programmatic structure that allows for self-implementing, LEP-lead oversight with a more robust DEEP audit program (similar to MA). Potential solutions include:

    - Expand tracking of progress towards deadlines and potentially new interim milestones.
    - Increase enforcement on recalcitrant parties.
    - Acknowledge that a "one-size-fits-all" set of deadlines will not work.
    - Create incentives for more timely progress towards site closure (e.g., tax credits, liability relief).
    - Create disincentives for lack of progress, such as an assessment of annual fees for sites until site closure is reached (similar to MA) and categorization of sites by risk level that would be downgraded as acute and/or significant chronic risks are mitigated and the site moves closer to no further action being warranted (similar to NY).

10. **Legal Issues -** Potential solutions include:

    - Consider revising the definition of "verification" under the Transfer Act to be consistent with certifying party obligations by adding the language included below in italics: "Verification" means the rendering of a written opinion by a licensed environmental professional on a form prescribed by the commissioner that an investigation of the parcel has been performed in accordance with prevailing standards and guidelines and that *pollution caused by any release of a hazardous waste or hazardous substance from the* establishment has been remediated in accordance with the remediation standards;
    - Attempt to clarify rules of which party is responsible for which contamination, especially with sites that have undergone multiple property transfers with multiple certifying parties.
    - Consider adopting an alternative ELUR-type mechanism, an activity and use limitation (AUL) mechanism (similar to MA), and/or other state models that are more consistent with the Uniform Environmental Covenants Act (UECA).

11. **Political Considerations and Community/Public Interest - Potential Solutions:**

    - Consider the need for increased public involvement for certain high visibility sites or sites where significant local interest or concern is expressed during the already-required public notice and comment periods (similar to EPA Region 1 RCRA corrective action process), to assuage public concerns, identify legitimate concerns

that were not addressed by the remediation plans, demonstrate transparency, and increase the public trust. These actions may include:

- Early involvement of local government.
- Production and distribution of fact sheets/comment forms describing site conditions, proposed action, and a list of significant documents pertaining to the site (Phase 1, 2, 3 Reports, RAP, etc.).
- Providing an electronic copy (usually on a CD) of important documents to the local public library so that they may be readily accessed by interested parties, until an internet database is available.
- Perform a public meeting at key milestones.

12. Public Policy Considerations – Potential solutions include:

- If DEEP (and the legislature) seek to develop a fully privatized (self-implementing) system (potentially similar to MA, NJ, and TX), then the goal of such system must be aligned with new regulations and guidance developed by DEEP such that the program is truly self-implemented. Further development of the DEEP auditing process (and the alignment of resources necessary to perform auditing) of LEP verifications under the privatized program would be necessary. Public confidence would also be enhanced through the development of clear regulations and an audit program, whereby the work of the LEP could be audited by DEEP.
- Create clear statutory authority to allow for two types of analyses, as may be applicable: (a) a cost/benefit analysis that would allow for balancing the cost of remediating the property against the overall risk and long-term environmental benefit and (b) balancing the benefit associated with undertaking remediation on a site-by-site basis with the continued risk that exists resulting from offsite areas.
- Provide accessible funding sources (grants, loan guarantees, tax incentives) to provide financial resources, which are key to conducting and completing remediation.

Recommendation for Area 3: Interested Parties to Site Closure

Currently, outside of the parties undertaking the work, information concerning environmental issues and progress being made toward site cleanup is not easily accessible to other interested parties. Better information availability to all parties might provide opportunities for meaningful input by others and thereby result in a greater certainty in the ability to manage risk and make informed decisions, regardless of the type of interested party. The following recommendations are offered:

1. Provide a web based system for all stakeholders to access information about the milestones. Notifications about attainment of certain milestones (see matrix) could be sent via e-mail to interested parties, with information on where the information can be accessed for review. The system information concerning the milestones needs to be kept current (e.g., updated weekly). In recognition that all interested parties may not be computer literate or have access to electronic mail, the current public

notification requirements of posting of signage, notification in local newspapers or mailings to certain parties may still be necessary at primary milestones.

2. Define and develop meaningful public input for primary milestones. This may go beyond the typical 30-day or 45-day public notice period and involve public participation meetings in certain circumstances, especially where interest in a certain site has been expressed. Information in such a case should also be available in the local library for review.

3. Establish reliable, verifiable and approved information at established milestones in order to make reasonable determinations about the status of site progress towards closure. There should be some level of DEEP review at the primary milestones, such that all parties can have confidence that the primary milestone has actually been met, rather than just a report has been submitted. Parties need to be able to rely upon the information provided and that work on a site actually meets the milestone.

4. Greater public participation in remediation activities in Connecticut may be warranted in certain circumstances, such as with contaminated sites located near residences, day care centers, large aquifers, or other sensitive receptors. This will help to achieve the following:

    - Greater protection of human health on the site, currently and in the future;
    - More informed decision-making about the site by neighbors and other interested parties throughout the process and into the future;
    - More acceptable outcomes that might limit community opposition that could slow down or stop the cleanup process;
    - Increased community support for expenditure of public funds for clean up and redevelopment of properties;
    - Development of the properties consistent with that of neighboring properties; and
    - Greater public confidence and acceptance in the remediation process, and of the role of LEP's in the process.

Exactly what information and how it would be made available, this group did not determine. Current public participation processes and procedures should be evaluated to understand adequate levels of public participation which would make the public participation process more meaningful, workable, and balanced. Amendments to the current public participation process should be developed with input and advice from all appropriate stakeholders. While this group did not attempt to outline a procedure and process for meaningful public input, it is vital that any remediation program do so and make provisions for adequate funding for public education and engagement. We recommend a separate group be established for that discussion.

Recommendation for Area 4: Achieving More Expedient Site Closure

Recommendations for ways in which site closures could be achieved more expeditiously are described below, including some ideas in which differing exit pathways for different programs might also expedite site cleanup.

1. **Difficulty of Investigating and Remediating Active Facilities –** Possible solutions include:

- An alternate path (similar to the recently proposed Targeted Brownfields Remedy) could allow active facilities to minimize the intensity of the investigation to ensure that significant exposure pathways have been addressed (examples include off-site VOC plumes, non-compliant SWPC plumes discharging to water bodies, impacts to drinking water wells and VOC vapor entrainment to occupied buildings) to protect workers and the public while minimizing operational impacts.
- Consider approaches for expedited site investigation (e.g., EPA's Triad Approach), which allow for more rapid investigation and, therefore, are more easily budgeted by businesses.
- An interim timeline could be allowed for active facilities by creating a milestone that indicates that current exposure to humans is under control similar to the Environmental Indicators published under RCRA Corrective Action. Completion of a Sensitive Receptor Survey would be critical under this option. This option would be predicated on current use of facility. Changes in use, including termination of operations, would trigger re-evaluation of potential exposures or investigation in accordance with prevailing standards and guidelines. This could also create a progress milestone in the program toward eventual satisfaction of the RSRs that would be useful to the public.
- Development of an alternate path and interim timeline (as discussed above) for sites that are not abandoned, but are undergoing a sale that will change the use of the facility, provided that the new use is not residential, a school, day care or other similar sensitive use. For example, an alternate path could be used for commercial/retail sites with large areas of impervious surface that serves as a cap.
- For sites with multiple release areas (whether active or inactive sites), upon completion of an investigation on a release area basis, allow for verification and auditing of individual or groups of release areas. Such a process would provide certainty and finality as to that release area(s) which would be useful for a certifying party where the area may be in use by another party.
- Prompt and/or expedited decision making by DEEP (when DEEP approval is needed) such that meaningful financial planning can occur.

2. **Need for DEEP Approvals on LEP-lead Sites Can Delay the Closure Process –** Possible solutions include:

- *Alternative Criteria and Criteria for Additional Polluting Substances:* DEEP and DPH have been working on improving the approval process/turn-around time through LEAN. Consider further streamlining the process for the use of approved site-specific criteria

more broadly (state-wide) as part of any review request rather than the current process of requiring submission of calculations to justify the use of "new" criteria for every site.

- *Urban Fill:* A regulatory solution to address urban fill in urban areas and fill in non-urban areas that has been impacted by historical filling is suggested. Education is also warranted for the community to understand the issue and to provide assurance that the remedy will be protective of public health. The urban fill workgroup, consisting of DEEP staff and external stakeholders, is evaluating best practices and regulatory solutions to address this issue, in addition to developing guidance.
- *Asphalt:* Develop a standardized approach for addressing the presence of petroleum hydrocarbons and/or polynuclear aromatic hydrocarbons that are residuals of degraded asphalt, maintenance of paved surfaces, or parking of motor vehicles, given the common past remedy for such areas being addition of new pavement.
- *Engineered Controls:* Standardization of approval process for commonly used types of engineered controls, such as General Permits, and improvements to the approval process/turn-around time through LEAN. Further guidance and standardized application forms from DEP will help to expedite approvals.
- *Environmental Land Use Restrictions (ELURs):* The LEAN process for ELUR review has been completed, and a more streamlined application process is currently being developed by DEEP. Development of an alternative approach for subordination agreements or an alternative institutional control, such as a Notice of Activity & Use Limitation (similar to MA) or the adoption of uniform environmental covenants is suggested. To address the public information and participation concerns, an expansion of the information published about the proposed ELUR and public participation requirements for larger or more complicated sites, such as holding a public information session prior to finalizing the ELUR, is suggested. To address issues regarding the availability of information regarding an existing ELUR, it is recommended that a searchable database be available so that property managers and the public can see what restrictions are in place for a particular property.
- *Soil Reuse:* Additional guidance regarding requirements for approval and an application package would simplify DEEP review and reduce time needed for review.
- *Ecological Risk Assessments (ERAs):* Guidance is needed to help direct LEPs in how to identify the need for and properly perform such assessments. Additionally, better-defined requirements, standardized procedures, and self-implementing options will allow ERAs to be conducted iteratively in association with site characterization. DEEP is aware of this issue and is looking at options to streamline review and potentially provide sediment criteria.

3. **Difficulty Meeting GWPC and Groundwater Monitoring Timeframes -** Possible solutions include:

- Map and classify "non-productive" aquifers, i.e., aquifers that do not produce enough water for potable water production. This may mean adding another classification, other than the GA and GB classifications currently available. Michigan has a process by which the MIDNR can make a determination that a site lies in an unproductive aquifer where no public or private production wells are in use with a commensurate reduction in

groundwater remedial standards reflective of a reduced risk scenario. Alternatively, potential use of aquifer reclassification based on urban density could reduce the number of sites required to meet drinking water standards where such use is highly unlikely.

- A streamlined process to address the residual risk for these sites, which is generally low, could facilitate the closure of many sites. An option may be amending §22a-133k-3 to include options for the derivation and use of risk-based groundwater criteria similar to the Method 3 process under the MCP and options for discontinuation of monitoring of demonstrated steady state plumes that meet these risk-based criteria.
- Provide guidance for or revise the RSRs to include options for assessing the stability of groundwater plumes (similar to NJ's Classification Exception Areas).
- LEAN analysis could reduce this review time for DEEP approval of discontinuation of monitoring requests, but an LEP-lead option could expedite less-complex sites.
- Provide guidance for requests for discontinuation of groundwater monitoring.
- Consider under what conditions groundwater criteria could be risk-based to speed closure. If the groundwater ingestion pathway is incomplete and it is rendered incomplete for future use, then the GWPC should not apply, regardless of groundwater classification.
- Revise groundwater monitoring requirements to include options for steady-state groundwater plumes, including a general permit for steady state and/or decreasing plume and guidance for obtaining TI waivers.

4. **New Releases / Contamination Resulting from On-going Operations** - Possible solutions include: Expand new/recent spill cleanup requirements such that RSR compliance or some other definitive endpoint is achieved, documented, and confirmed. It is suggested that the remedial work be limited to release areas and that there is close out of individual release areas.

5. **Expanding the Usability of ELURs and Alternate Mechanisms –** Possible solutions include:

- Evaluate potential use of a greater variety of institutional controls and adopt those that have been successfully used elsewhere, including Activity and Use Limitations (AULs, as implemented in Massachusetts), restrictions consistent with the Uniform Environmental Covenants Act (UECA, as implemented in Pennsylvania).
- Consider establishing an ELUR registry, where notices of ELURs in zoning, land use, and building permit records could be posted.
- Consider development of Special Zoning "Historical Development Design" Districts where pollution may be widespread and identify areas that may be subject to restriction. This may obviate the need for ELURs on a parcel by parcel basis. Districts would be developed based upon changes to zoning maps and zoning regulations in each Town. Similar to the model aquifer protection regulations, DEEP could develop model regulations as to the types of restrictions and what is required for a town to adopt.
- Creation of a website, with a readily accessible database that includes environmental information about a site, including the ELUR, prior reports, adjacent sites (similar to the California Geotracker). It is suggested that reports be required to be submitted in both hard copy and electronic format and certification made, at the time of filing the hard

copy, that the report has been uploaded to the database system. Due to limited DEEP resources and the specialized type of database contemplated, consider granting procurement for a sub-contractor to outsource development of such a tool in an expedited timeframe. Once established, a nominal filing fee is suggested for each submission to defray the cost of development.

6. **Remedial Obligations for Historical Pesticide/Herbicide Impacts –** Possible solutions include:

- Under the Massachusetts MCP, releases (indicated by residues in the environment) resulting from the application of pesticides and herbicides consistent with their labeling are exempt from notification and therefore the MCP process. However, releases of pesticides/herbicides that do not this meet this exemption are presumed to present a potential risk and therefore are subject to the requirements of the MCP.

- Provide options for statistical evaluation of contaminant concentrations in the environment to evaluate potential risk.

7. **Consideration of Differing Exit Pathways for Different State Cleanup Programs versus One Exit Pathway for a Variety of Cleanup Programs –** Possible solutions include:

- Create one, standard way out for all programs, including those that do not fall under the RSRs (e.g., spills, UST releases, solid waste). Allow for closure of a single release area so that certainty exists for a lender (or borrower or tenant) that no more work is needed in that one area.
- If the Transfer Act continues to exist, clarify that Certifying Parties / LEPs must verify the remediation of areas identified in the Phase II in accordance with Public Act 11-141.
- Consider accepting a Phase II on a release area basis and allow closure for those release areas, even if a Phase II for the entire site may not have been completed.
- If the Transfer Act continues to exist, REC investigations should not be revisited, recycled and redone in connection with changes in the underlying ownership if the actual owner of the property or establishment does not change.
- If the Transfer Act continues to exist, exempt certain transfers from filings under the Act based upon the historical classification (e.g., if Transfer Act forms were previously filed, the establishment is already undergoing investigation and remediation by a certifying party, and the new owner wouldn't otherwise be an establishment).

Recommendation for Area 5: Current State of Site Closure in CT versus Other States

Information on types of finish lines that are successful in other states to achieve site closure is provided below. Conceptually, some of these may be able to be applied to CT's remediation programs, given the caveat that programs in each state might work because of the given laws in that particular state. With current CT state laws, piecemeal changes may

not be appropriate. It is necessary to ensure that the statutes and regulations governing compliance end points work in concert with the laws that require sites to enter into a remedial program and the laws that allow that program to be carried out.

Based on the comparisons performed as described in the Areas of Evaluation Section above, the following areas are recommended for potential incorporation in Connecticut's remediation programs. For each category, some example state or federal programs that have addressed the topics are provided.

1. **Risk-Based Standards with More End-Use Options -** a wider range of receptor and or end-use based options would help move sites toward appropriate risk-based closure where it would have previously been unattainable. Examples from other states include:

→ **Massachusetts** - MCP Risk-based Criteria. This program offers the following tools and options:

- Wider variety of soil standards based on common exposure scenarios;
- Calculation of exposure point concentrations; and
- Site-specific risk characterization.

→ **New York - Subpart 375-6: Remedial Program Soil Cleanup Objectives** have look-up tables for:

- **"Unrestricted use"** is a use without imposed restrictions, such as environmental easements or other land use controls.
- **"Restricted use"** is a use with imposed restrictions, such as environmental easements, which, as part of the remedy selected for the site, require a site management plan that relies upon institutional controls or engineering controls to manage exposure to contamination remaining at a site. Restricted uses include:
  - (i) **"Residential use"** is the land use category which allows a site to be used for any use other than raising live stock or producing animal products for human consumption. Restrictions on the use of groundwater are allowed, but no other institutional or engineering controls are allowed relative to the residential use soil cleanup objectives. This is the land use category which will be considered for single family housing.
  - (ii) **"Restricted-residential use"** is the land use category which shall only be considered when there is common ownership or a single owner/managing entity of the site. Restricted-residential use (a) shall, at a minimum, include restrictions which prohibit any vegetable gardens on a site, although community vegetable gardens may be considered with Department approval, and single family housing; and (b) includes active recreational uses, which are public uses with a reasonable potential for soil contact.
  - (iii) **"Commercial use"** is the land use category which shall only be considered for the primary purpose of buying, selling or trading of

merchandise or services. Commercial use includes passive recreational uses, which are public uses with limited potential for soil contact.

(iv) **"Industrial use"** is the land use category which shall only be considered for the primary purpose of manufacturing, production, fabrication or assembly processes and ancillary services. Industrial use does not include any recreational component.

- Soil standards for **Protection of Ecological Resources** and **Protection of Groundwater** have also been developed.

→ **Pennsylvania: PA Code (title 25) Uniform Cleanup Standards** function on three levels:

- Background - Mimics CERCLA (restore property to condition prior to contamination): Background concentrations are based on site characterization and must be approved by the PA DEP.
- Statewide Health - Mandated standards for residual contamination post remediation.
  - Groundwater: Used Aquifer and Non-Use Aquifer Criteria *(residential and non-residential standards)*
  - Soil: Residential *(0-15 feet)* and Non-Residential Standards (*surface soil 0-2 feet and Subsurface Soil 2-15 feet)* Soil to Groundwater standards are presented for SPLP comparison.
- Site Specific Health - Site is remediated to a specific standard based on the site's future use. A risk assessment and PA DEP approval are required.

2. **Wider Variety of Finish Lines for Different End-uses** – A site would have a better chance at closure using different pathways available. Sites could be prioritized, and closure could be expedited based on priority. Some examples from other states include:

→ **Massachusetts:** 9 categories can be used to demonstrate that closure has been achieved. Permanent solutions and Temporary solutions are available.

→ **New York:** The Brownfields Program has 4 different tracks for clean-up:

Track 1: Unrestricted use;
Track 2: Restricted use with generic soil cleanup objectives;
Track 3: Restricted use with modified soil cleanup objectives; and
Track 4: Restricted use with site-specific soil cleanup objectives.

→ **Pennsylvania:** There are 3 endpoints for clean up:

1) Unrestricted use (no deed restrictions, liability relieved);
2) Deed restriction only if remediated to non-residential standards (no industrial/ commercial use, release from liability); and
3) Deed restriction required (must be approved, release from liability).

3. **More autonomy for licensed professionals acting on behalf of the State (including appropriate guidance and audit provisions) –** More options, including those that are

self-implementing (i.e., no DEEP approval required), would help move sites toward closure and decrease administrative delays. This would provide expediency and consistency when working to an endpoint. An example would be:

→ **Massachusetts:** The MCP is designed to be fully "self-implementing" and is supported by policy and guidance documents for all significant portions of the MCP. The LSPs are overseen by a robust audit program that allows the State to audit at any and all phases of a project.

→ New Jersey's program was not included as experiential evidence, given the young age of the program, was not available in any meaningful way.

4. **Formally Documenting Project Progress –** This process could help the process move more expeditiously with closure as the ultimate goal. Some examples from other states include:

→ **Massachusetts** - Address releases per the MCP process and adhere to the following milestones:

- Phase I Preliminary Site Investigation
- Phase II Comprehensive Site Assessment (source and extent) and Risk Assessment
- Phase III Identification and Selection of Remedial Action Alternative
- Phase IV Implementation of Remedial Action Alternative
- Phase V Operation and Maintenance (including Remedy Operation Status)

→ **New York** - Inactive Hazardous Waste Sites have different classifications based on site risk and stage of project. Five classifications for hazardous waste sites are specified in the Environmental Conservation Law:

- Class 1 Site: Causing, or presenting an imminent danger of causing, irreversible or irreparable damage to the public health or the environment - immediate action is required.
- Class 2 Site: Significant threat to the public health or environment - action required.
- Class 3 Site: Does not present a significant threat to the environment or public health - action may be deferred.
- Class 4 Site: Site properly closed - requires continued management.
- Class 5 Site: Site properly closed - does not require continued management

→ **RCRA Corrective Action** Environmental Indicators and Event Codes: Progress on Corrective Action sites is tracked on a national basis by EPA and authorized states. Important milestones include Groundwater and Human Health exposures under control, Remedy Selection, and Construction Complete, among others. Key phases of Corrective Action projects are documented by the Event Code in the EPA database (see Appendix C5, "Nationally Required Corrective Action Events");

http://www.epa.gov/reg3wcmd/pdf/rcrainfo_nationallyRequiredCorrectiveActionEvents.pdf)

Discussion

Common themes began to emerge throughout the Workgroup's process of evaluating the current requirements for closure (finish lines) under the various Connecticut cleanup programs and making recommendations to improve the way Connecticut's cleanup programs work. These common themes included the need for more self-implementation by LEPs, the need for a more robust DEEP audit system and guidance, the need for a uniform approach for sites with legacy issues, the need for more levels of risk-based standards other than residential and commercial/industrial, and the need for more milestones and established timeframes.

The Licensed Environmental Professional (LEP) program was created to allow oversight of investigation and remediation activities in lieu of DEEP. Experience has shown, however, that the LEP program does not effectively operate independently due to the practice of and sometimes regulatory requirement to seek DEEP review and approval of LEP decisions which allow for site closure to be accomplished in a protective but feasible and cost-effective manner. Obtaining DEEP approval for variances from the RSRs, such as for technical impracticability variances, engineered and institutional controls, alternative risk-based standards and/or environmental land use restrictions, can increase the time it takes to achieve site closure. Less dependence on DEEP for approvals and increased numbers of DEEP remediation staff along with more autonomy for LEPs, with increased protocols, guidance documents, and audit provisions would help move sites toward closure sooner.

In addition, a uniform approach to certain categories of sites would likely serve to decrease administrative delays and provide expediency and consistency when working to a remediation endpoint, while maintaining public trust in the process. A few legacy issues were identified that often cause delays in attaining site closure, including sites involving historic urban fill, residual agricultural impacts associated with pesticide applications, and/or impacted sediments. The workgroup agreed that a framework should be established to improve how these conditions are addressed, with the goals of such framework being sufficient protection of human health and the environment, flexibility, clarity, consistency and increased self-implementation by LEPs. These legacy issues often involve the need for approval of engineered and/or institutional controls and environmental land use restrictions to allow for affordable yet protective remediation. The development of a more uniform approach, aligned with the risk presented that also takes into account the cost of the solution and the relative benefits achieved, may move these properties more quickly toward a beneficial reuse.

Under the RSRs, different standards/remediation criteria are applied depending on site use. Currently, there are two sets of remediation criteria: residential and commercial/industrial (essentially whatever is considered not to be a residential use). However, certain types of properties currently defined as "residential" may involve much less frequent and intensive exposure than is associated with a true residential property. Therefore, the group generally agreed that there should be appropriate default risk-based standards established for that

class of sites (and perhaps other types of land uses) that can be used in a self-implementing fashion. Other states have developed programs that offer a wider variety of closure endpoint standards based on expected end uses of the property. Alternative pathways with different finish lines can provide increased flexibility for achieving site closure and allow for a better chance of attaining risk-based site closure in light of existing economic and limited DEEP resources.

While other states have set milestones and time frames, the Connecticut programs largely have not. Milestones and timeframes will enable DEEP to improve tracking of site progress, provide this information to the public, and set deadlines for site closure. Coupled with incentives and disincentives for reaching site closure, established milestones and timeframes could help move sites toward closure faster. Additionally, establishment of more milestones may provide an increased opportunity for public involvement during the course of site investigation and remediation, especially for those high visibility sites or sites of significant public interest.

While the group consisted of various interested parties, the themes above were acknowledged albeit in varying ways by all the subgroups. The following is a summary of common recommendations based upon these themes:

- Endpoints should:
    - Be better aligned with the current and future risk presented;
    - Address other categories of end-use beyond residential and commercial/industrial;
    - Exist at various stages of remediation (e.g., by release area);
    - Be flexible to permit closure of areas when a new release occurs;
    - Address incidental releases in a more uniform manner (e.g., impacts from petroleum hydrocarbons or polynuclear aromatic hydrocarbons [PAHs] from roads/parking lots);
    - Realistically account for aquifer viability and legacy properties (those affected by urban fill, pesticide contamination and contaminated sediments based upon watershed);
    - Allow an alternate path for existing and active properties when significant exposure pathways have been addressed until a change in use or change in ownership occurs; and
    - Permit closure for sites with stable groundwater plumes.
- General Permits should be developed to standardize the approval process for commonly used types of engineered controls.

- Guidance documents should be developed that describe option that are acceptable to DEEP as to how an issue may be addressed (but it must be made clear that it is guidance only and other methods may be appropriate). Where available, DEEP should utilize and take advantage of EPA research and source documents (i.e., the EPA risk assessment guidance) to aid in risk-based decision-making and enhanced self-implementation of site cleanup by LEPs.

- Business and financial considerations must be a factor in the remediation, schedule and timeliness of approvals.

- Public monies should be made more readily available to areas where contamination may be widespread and where jobs may be created and/or retained.

- Options for institutional controls, land use restrictions and activity and use limitations beyond the existing Environmental Land Use Restriction (ELUR) scheme should be explored – particularly in areas of historic impacts. The ELUR process itself should be simplified to overcome processing delays and issues presented by inability to obtain subordination agreements.

- Balance technical achievability and cost with human health/environmental benefits.

- Modify the relevant statute relating to the LEP verification to align the scope of the LEP verification to a certifying party's remedial responsibilities.

- Develop meaningful timeframes and provide for a transparent process and public involvement, potentially with public information sessions at various remedial milestones.

- Develop a searchable, public website database that provides information including all environmental reports and DEEP approvals/notices so that a database of information is developed that can inform the regulated community. Provide DEEP with the authority to procure the development of the website.

Upon providing a better road map, with more certainty to the regulated community and allowing for flexibility as to the scope of cleanup under various scenarios and the utilization of risk-based assessments, the regulated community may be able to achieve site closures in a manner that is cost-effective, timely, and protects of human health and the environment, while maintaining public trust in the process.

Whereas the subgroups and the workgroup at large reached consensus on the topics discussed above and most recommendations provided, consensus was not always reached for some of the assumptions or particular recommendations within a given topic. The following provides a discussion of these areas and what the minority view concerns were:

- Many recommendations called for increased autonomy for the LEPs to use their professional judgment and have additional self-implementing alternatives at their disposal without requiring DEEP to review and approve them. Some members stressed that DEEP should proceed with caution to ensure that such additional delegation only be granted in areas where an appropriate level of confidence and public trust in the process can be maintained via appropriate guidance, public participation, and robust DEEP auditing, similar to that in other states (MA).

- A number of recommendations were made based on the collective experience of some workgroup members that a majority of sites get delayed at the point in a remediation project when DEEP approvals on variances and other alternative approaches are needed. However, not everyone agreed that a majority of sites get delayed for this reason. Specifically for ELURs, although there was agreement on the need to address issues related to developing alternatives to subordination agreements, there was disagreement on whether the timeframe has been reduced for reviewing ELURs, as the improvements to the process through DEEP's recent LEAN effort may not yet be realized.

- Although the group as a whole recognized the need for clear and scientifically defensible methods and guidance to develop Alternative Criteria and criteria for Additional Polluting Substances, there were differing opinions as to how to go about this. The current approval process can be lengthy and highly uncertain. An example cited during the discussion recalled the significant controversy that arose during attempted modification of the remediation standards in 2008, during which concerns were raised by several groups of stakeholders, including whether the proposed risk-based standards were feasible and achievable; whether such proposed limits were economically or technically achievable; whether such proposed standards were based upon the best available scientific information; and why such proposed standards were not consistent with federal standards. There are differing perceptions within the workgroup about how the state process and methodology for developing such standards works. Not all group members agreed with the concerns in the above example, particularly the recommendation that DEEP adopt specific federal risk assessment guidance as the sole methodology for development of risk-based remediation standards.

- There were differing perceptions about DEEP staffing demands versus oversight needs. Although most believed that DEEP is currently severely understaffed, others questioned whether staffing resources are being directed appropriately and how that will change if the remediation programs and associated DEEP review and approval processes are revamped. The consensus view appeared to be that it will have to evolve over time as changes are instituted. The challenge will be to fund the DEEP with appropriate resources to match the demand of the transformed remedial programs and the regulated community. A proposed recommendation to offer expedited DEEP review for an

additional fee was viewed as being potentially unfair to certain regulated parties by some group members.

- The group reached consensus that more public participation is useful, but disagreed as to the timing and availability of information provided to the public and local government. Some asserted that more frequent public involvement increases certainty and reduces the overall time to closure, while others opined that it can increase the timeframe.

Entry Points and Triggers into the Current Connecticut Cleanup Programs

Recommendations1

As discussed above, currently 16 different environmental remediation or pollution reporting programs exist in Connecticut, some with overlapping obligations and others without triggers or without remediation obligations. To develop concise and fair entry points that would obligate a responsible party to act in response to pollution conditions, the Trigger Workgroup agreed that a single unified, cohesive and comprehensive environmental statute governing pollution released to the environment, which protects human health and the environment, should be developed to replace the current system of 16 different programs. It is recognized that some programs, such as the Resource Conservation and Recovery Act Corrective Action (RCRA CA) and the Toxic Substances Control Act (TSCA), will survive any future regulatory revisions and consolidation. The unified statute can be crafted to meet the goals of RCRA CA and TSCA, such that by complying with one there is compliance with the other. The unified statute should provide a "level playing field" with well-defined entry points, tiered response actions, and multiple exit points commensurate to the site-specific situation.

Recommendation 1 (Unified Environmental Remediation Statue)

The recommended Unified Environmental Remediation Statue or "Super Statue" would enable the development of clear, risk-based, unambiguous, and practical regulations that would include required actions from discovery to closure that are protective of human health and the environment. The Super Statue should include:

(1) Science-based tiered trigger regulations;

(2) Science-based response actions commensurate to the nature of the triggering event (i.e., reporting, investigation and/or remediation);

(3) Multiple science-based tiered exit points, potentially including a "window of opportunity" to address the event or condition in a timely manner that could preclude DEEP notification and entry into a formal program; and

(4) Transition program for sites currently in an existing program.

Additionally, the proposed Super Statue will require the incorporation of the liability provisions already in existence or the creation of new schemes to help capture sites that the

[1] Several workgroup members have first-hand experience with the Mass Contingency Plan (MCP 310 CMR 40.0000), which is considered a useful model regulation with a successful science-based set of entry and exit points. As CT and Mass are contiguous, with similar geology and history of industrial use and pollution issues, the MCP was discussed often as a useful model for a CT program. In sections below, references are made to certain concepts or portions of the MCP.

existing Transfer Act was originally designed to address. Examples of liability systems designed to help identify or discover sites (i.e., encourage and reward thorough due diligence) include the Massachusetts' Oil and Hazardous Material Release Prevention and Response Act ("21E") that imposes strict, joint and several liability upon current owners or operators of contaminated property regardless of fault.

Recommendation 2 (Unified Entry Points)

The Trigger Workgroup recommends that the regulations promulgated under the proposed Super Statue include a clear and unambiguous set of events and/or conditions that define the circumstances in which a responsible party or agency must take certain, specified actions to comply with the environmental statue.

Entry into the unified and comprehensive environmental statute governing pollution that protects human health and the environment will be mandatory if certain unambiguous triggers are known to exist or voluntary to afford eligible persons[2] liability protections:

(1) **Compulsory / Mandatory Triggers** - Knowledge of an Event or a Condition that poses a threat or potential threat to human health and/or the environment and which requires action in accordance with regulations; or

(2) **Voluntary Compliance** - Decision to perform a voluntary evaluation of conditions at a real property with the purpose of determining whether there is an Event or a Condition that poses a threat or potential threat to human health and/or the environment and which requires action in accordance with regulations. For those sites where Events or Conditions requiring action do not exist, the voluntary option would allow establishing and documenting baseline conditions as a means of future liability relief/protection.

Along with these entry points, the Trigger Workgroup developed the following definitions:

Proposed Event Definition

Release or threat of a release to the environment of a hazardous substance in exceedance of a reportable quantity. Reportable quantities from a spill, leak, or other event include either a mass or volume of a polluting substance that would be science-based and published in the future regulations (i.e., pounds, gallons etc.). The definitions of "release" and "threat" were discussed at length by the Workgroup and examples of possible definitions of "release" under development by the ASTM E50 committee and "threat" included in the Massachusetts Contingency Plan and provided by the ASTM E50 committee are provided in **Appendix C**.

Proposed Condition Definition

[2] Eligible person as defined by the Brownfields Act (PA11-141) or to be redefined for the proposed Super Statue.

Presence of a hazardous substance in soil, soil vapor, groundwater, and/or surface water at a concentration in exceedance of a reportable concentration. Reportable conditions include concentrations of a polluting substance detected in groundwater, soil, soil vapor, or surface water that would be science-based and published in the regulations. Reportable concentrations have not been established by the workgroup, but will be required as part of the future regulation.
The Triggers Workgroup has not attempted to identify all potential Triggers. A partial list of potential triggers discussed during the workgroup meetings is included in **Appendix D**.

Proposed Action Definition

"Action" as incorporated into the definitions of Events and Conditions, refers to series of tiered responses a responsible party shall undertake that are commensurate with the severity of the Event or Condition as determined by a standardized evaluation of:

(1) The toxicity of the polluting substance;

(2) The quantity released or the concentration detected;

(3) The nature of the exposure pathway (i.e., drinking water source, surficial soils in a residential settings, deep soils in an industrial setting, etc.); and/or

(4) The potential for the above in the case of a threat of a release.

"Actions" may include:

(1) Limited immediate removal actions for small releases that can be successfully completed in a short period of time (e.g., 120 days or less). Reporting to DEEP would not be required for this Action; however, there would be a record keeping requirement. This option is proposed to incentivize rapid remediation of minor pollution Events or Conditions that now linger in the current regulatory system ;

(2) Immediate Abatement action for threats such as, failed tank tightness tests, bulging drums or tanker truck incidents were no release had yet occurred. If the Condition was successfully abated within a certain time period (e.g., 7 days) without a release to the environment, reporting to DEEP would not be required for this Action; however, there would be a record keeping requirement. This option is proposed to incentivize and reward abatement of threats soon after discovery and to prevent releases from occurring;

(3) For all other events or conditions, actions would require reporting to DEEP and subsequent investigation and / or remediation as specified in the proposed Super Statue and corresponding future regulations. Reporting time frames should be tiered and commensurate with the severity of the Event or Condition:

a. High tier reporting (e.g., 2 hours) is recommended for Events or Conditions at residential areas, parks, and schools, or near drinking water supplies or other sensitive receptors with actual or potential threat to such land uses, resources or receptors (similar to the current Significant Environmental Hazard Notification requirements found at CGS 22a-6u) ;

b. Medium tier reporting (e.g., 7 days) for Events or Conditions that do not pose immediate threats to human health or environment; and

c. Low-tier reporting (e.g., 120 days) for smaller Events or Conditions in low risk settings, which could potentially be bypassed by an immediate removal action along with a record-keeping requirement.

Proposed Knowledge Definition

The definition of knowledge as used in the proposed entry points is the same as used in the Massachusetts Contingency Plan:

(1) Actual knowledge; or

(2) Knowledge a person acting in a reasonably prudent and intelligent manner would have, but for that person's willful, knowing or negligent avoidance of learning about the fact or facts in question. In determining whether a person has acted in a reasonably prudent and intelligent manner, any specialized knowledge or training possessed by that person and the circumstances surrounding the fact or facts in question shall be taken into account.

Proposed Applicable Parties – Responsibility to Report or Act

The following is a partial list of persons, entities, or others that the workgroup proposed would be required to report and/or act if they possess knowledge of an Event or a Condition that poses a threat or potential threat to human health and/or the environment and which requires action in accordance with the proposed Super Statue and regulations:

- Current or Past Property Owners / Operators;
- Environmental Consultants (reporting only)[3];
- Department of Energy and Environmental Protection; and
- Other State/Local Agencies (reporting only).

[3] Consensus on Environmental Consultants (i.e., LEP) reporting requirements was not reached, as some in the group would limit reporting requirements to clients while others suggested extending reporting requirements to DEEP or the property owner, if different than the client, depending on the severity of the Event or Condition.

Recommendation 3 (Comprehensive List of Triggers)

As previously stated, a list of potential triggers provided by members of the workgroup is included in **Appendix D**. A subsequent workgroup will be required to develop a comprehensive list of triggers.

Discussion

The Triggers workgroup was able to reach consensus regarding the need for a single environmental statute with sufficient triggers, both mandatory and voluntary, to protect human health and the environment, and which captures all properties currently in one of the existing programs as well as sites subject to new events or conditions. In the event that it is not possible to replace all or most of the existing 16 statutes with a single statute, the workgroup believes that the existing statutes must be revised with respect to triggers and/or entry points in order to create uniform and consistent requirements for entry into one of the cleanup programs. Again, the single statute/program (Super Statute) is preferred.

During meetings and discussions, there were differing opinions over several issues, including but not limited to:

- The inclusion of economic development as a material concern associated with environmental protection and remediation programs. While it is the experience of many of the workgroup that most cleanups are driven by development and redevelopment, other stakeholders within the group felt that the effectiveness of cleanups is diminished when both economic and health/environmental concerns are given consideration during the decision-making process.
- The use of triggers as a means for a member of the general public to drive a requirement to investigate any Site with the potential to have an event or condition as defined herein. Some members of the workgroup were looking for triggers as a means of investigating any site with the apparent potential for releases and contamination. The majority of the group did not feel this was appropriate or practical.
- The inclusion of an effective program for public reporting was an important issue in order to give the public a voice and to help keep the public informed. Concern was expressed that, currently, notification is made to DEEP and there is no way for the public to find out what actions resulted from the notification. Subsequent discussion on this issue determined that reporting mechanisms exist but need to be improved to aid in the ability to track response and provide transparency.
- The inclusion of exits points in the discussion of triggers. Some in the workgroup felt that we spent too much time discussing getting out of the program, which diluted the focus on entry points or triggers and required response actions. However, it was very clear that the majority of the workgroup members believe that the State of

Connecticut cannot impose new triggers without developing pathways to closure commensurate with the risk and magnitude of the event or condition.

The intent of the most of the workgroup's proposals is to remove obstacles or disincentives, real or perceived, and to create incentives for the timely response to all events or conditions that could pose a threat to human health or the environment. With that in mind, it was felt by many in the workgroup that it is important to consider exit options at the same time as considering entry points, and that allowing a greater number of exit options that are commensurate with the nature of the risk presented to human and the environment would allow for a greater number of entry points in the unified program.

Evaluation of LEP Program Performance and Utilization

Recommendations

The recommendations presented below are, by necessity, general in nature because of the compressed timeframe in which this Workgroup met. One of the most important recommendations that we make is that additional workgroups be created to address each of the recommendations made herein.

The goal of our recommendations would be to improve the LEP program such that the public and private sectors have confidence that the original intent of the legislation is being met and to encourage site clean-up. To accomplish this goal, it will be necessary to create tools and regulations that allow the current LEP program to realize its full potential and close out sites. These recommendations reflect a workgroup consensus, with the condition that they are not stand alone, but in fact, many are interrelated and must be implemented together. These include, but are not limited to:

- Enacting regulations that address the process by which sites move through the program;
- Establishing a single cleanup program under which spills and historical contamination are addressed;
- Accepting electronic submittals;
- Establishing milestone reporting and interim submittals to track progress and expedite investigation and remediation;
- Establishing an appropriate fee structure and timelines to support site closure;
- Increasing DEEP transparency on policy, decision making and tracking metrics;
- Developing tracking metrics within DEEP to measure effectiveness of the LEP program and site closure, then publishing the results of those metrics on a regular basis;
- Enacting regulations that create an audit program at DEEP that is similar to the Massachusetts model;
- Increasing transparency with LEP Board oversight;

- Developing an investigatory process by the LEP Board that achieves timely review and consistent outcome of disciplinary actions;

- Creating DEEP policy and guidance that establishes a clear expectation for standard of care by LEPs, including but not limited to, guidance and checklists for each step of the process;

- Continuing DEEP's development of educational programs, which may include partnering with the private sector. A percentage of required education should be associated with DEEP procedural education (RSR course, Audit course, etc.)and directed by DEEP (for example Audit Case Studies similar to Massachusetts); and

- Creating an ongoing workgroup to examine the effectiveness of the LEP program, including solicitation of input from all affected parties.

Discussions

Although there has been insufficient time to discuss the details, it is clear that some changes will be easier to implement than others. Clearly changing to one overall program is easier to suggest than to implement. The same is true for the enforcement of timelines and assessing compliance fees and the enactment of suitable regulations to embrace the privatization of the LEP program. However, we believe these issues overlap with the scope presented to other workgroups.

The workgroup discussed the different approaches to transformation being either:

- Complete overhaul of the program, as was done Massachusetts and in New Jersey, with New Jersey providing a transition period; or

- Continued incremental changes consistent with Connecticut's past changes.

The incremental changes made to date have had a positive impact, but have not fully produced the changes necessary to accomplish the original goals of the legislation, which were to expedite the investigation and remediation of sites. Consequently, the workgroup recommends that for effective transformation to occur, Connecticut should move forward with a complete revision of the program, which may include some elements of the existing program.

The Workgroup recommends that Connecticut move forward using a standardized approach to the solicitation of stakeholder input and evaluation of Connecticut's environmental programs.

Evaluation of Pollution Responsibility and Liability Relief Provisions

Recommendations

The Workgroup developed the following recommendations by first proposing potential recommendations for group discussion, and then ranking those potential recommendations via a voting process. The group then discussed the most highly-ranked topics and ultimately decided on our primary recommendations. In determining these recommendations, the Workgroup sought to identify and address overarching themes and issues that affect responsibility and liability relief that make it more difficult or uncertain for parties to either re-develop brownfields or invest in Connecticut.

Develop a Unified Law

Workgroup 5 recommends that the legislature adopt a unified law that covers all pollution responsibility and liability relief in Connecticut. The Workgroup suggest that Connecticut legislators consolidate the multiplicity of statutory and regulatory provisions that currently apply to pollution responsibility and liability relief into a single unified statutory program that applies to the remediation of environmental pollution caused by spills. A comprehensive and clear cleanup program is needed, for the effective protection of human health, safety, and the environment. The unified cleanup program should include varying degrees of liability relief, incentivize cleanups and allow for financing and insurance mechanisms. Under such a unified law, all releases to the environment would be addressed and parties would be better able to efficiently and expediently determine the degree to which they are responsible for pollution and their options for achieving liability relief. Currently, it is extremely challenging for parties to determine their rights and responsibilities, which makes the process of remediation, clean-up, and re-development extremely time-consuming and costly. A unified law that is easier to understand and work with will provide incentives to clean up, and will help bring about the development of sites that are currently abandoned and are not being remediated, which has an adverse impact on the entire community.

The Workgroup reached a consensus that such a unified law should be promulgated and adopted, but the Workgroup did not reach a consensus as to what the precise liability provisions of that unified law should say. Different types of limitations were discussed as well as a number of conditions for conferring such protections but the Workgroup did not reach a consensus on the types of or conditions for limitations and recommends follow-up discussions on this topic.

Strengthen the 'Polluter Pays' Model

The Workgroup reached a consensus that polluters should be held liable for their pollution and the existing laws and regulations strengthened to enforce that responsibility. However, it is often difficult to find the "polluter" (i.e. the person or entity that caused or exacerbated

the pollution) in the case of historic contamination, as opposed to current spills. A tiered responsibility system should be developed as follows:

- Tier 1 – Polluter (party who caused the release) and exacerbator
- Tier 2 – Property owner (not exacerbator)
- Tier 3 – State (to protect public health and safety)

The tiered responsibility system should include clear, consistently defined, objective standards for relief from liability, especially for innocent landowners. For example, trustees and other fiduciaries as well as owners of properties contaminated by an upgradient source should be insulated from liability.

The Workgroup also reached a consensus that state and municipal government should be able to acquire polluted property without being held liable, unless the government caused that pollution, and that persons who own property that they did not pollute (innocent owners) should have limited liability. There was robust debate within the Workgroup on whether property owners should be responsible for pollution just on the basis of property ownership. Although no clear consensus was reached, a slight majority agreed that liability should be similar to that in Michigan, which bases liability on a party's acts or omissions rather than on one's status as a landowner.

The Workgroup did acknowledge the concern that liability relief provisions should not allow responsible parties to evade their obligation, but must nonetheless encourage the opportunity to cause properties to be remediated for the public good. The concern that certain liability relief provisions may inadvertently cause the State to become financially obligated to conduct remedial actions was expressed; but the opinion that the parties who are innocent of facilitating, causing, or exacerbating the pollution should not be considered as responsible parties solely to protect the financial interest of the State was a majority view.

Streamline the Liability Relief Process

Workgroup 5 recommends that the aforementioned unifying law include milestones or benchmarks in the remediation process corresponding to DEEP approvals or the equivalent so that parties engaged in remediating sites have assurance that they are proceeding appropriately and are on track (or not) for ultimate approval of their remediation by DEEP or, where applicable, by a Licensed Environmental Professional. Such approvals should be provided to DEEP in a timely manner, which may require the unified regulation to include prescribe review and comment periods for DEEP. This is important because there are currently few, if any, milestones or benchmarks, thus making the remediation process extremely nebulous and potentially never-ending for parties that undertake remediation, particularly if remedial standards change during the remediation process. The Workgroup did reach a consensus on streamlining the liability relief process by use of milestones or benchmarks. A minority view that empowering the Licensed Environmental Professionals to provide documentation of achieving milestones consistent with prevailing standards, thus privatizing certain responsibilities was expressed.

Workgroup 5 gained consensus and therefore recommends that the aforementioned unifying law include a directive that DEEP work with EPA to enter into an agreement, so that sites that receive state approval also obtain federal approval and liability protection against federal enforcement. This is important because it will give parties engaged in site remediation a simplified objective for both state and federal approval and will make the overall process eminently more efficient, thus promoting remediation and re-development. Even without a unifying remediation law, both the promulgation of milestones or benchmarks and the agreement between DEEP and EPA can be achieved, and if the unifying law ultimately does not take form, both streamlining processes should be attempted nonetheless.

Develop More Powerful Statutory Tools for Private Causes of Action

Workgroup 5 recommends that the legislature, either as part of the aforementioned unified law or as separate from that law, develop more powerful tools for private causes of action that allow private parties to facilitate the cleanup of pollution. In other words, the legislature should strengthen the rights of private citizens to pursue persons who cause or exacerbate pollution and compel them to clean-up the properties that they have polluted. This is important because as the law now stands, both parties that own property abutting polluted properties and innocent parties that acquire polluted properties through no fault of their own have very weak state tools by which they can pursue the parties responsible for the pollution. For example, the Connecticut Supreme Court in Connecticut Resources Recovery Auth. v. Refuse Gardens, 229 Conn. 455 (1994) has interpreted Conn. Gen. Stat. § 22a-452(a) to require a party seeking the reimbursement of clean up costs to demonstrate that the party who caused the contamination was negligent or otherwise culpable in contrast to the strict liability imposed by other environmental laws. Parties that own real estate abutting polluted property or acquire polluted property through no fault of their own have great incentive to clean those properties up, and should be further enabled to do so by statute. It is in the best interest of both the public-at-large to hold the entities responsible for the pollution liable and to get the properties cleaned up. The Workgroup reached consensus on developing more powerful statutory tools for private causes of action.

Discussion

Workgroup 5's recommendations are aimed at making it less difficult and less an uncertain proposition for entities to re-develop polluted sites and invest in Connecticut, while still ensuring that public health and safety and the environment are adequately protected. The Workgroup believes that the promulgation of a unifying law applicable to all pollution responsibility and liability relief, a tiered approach to pollution liability with a strengthening of the polluter pays model, the streamlining of the liability relief process, and the development of more powerful statutory tools for private causes of action in the context of site clean-up will all help bring about future successes in the remediation, clean-up, and re-development of sites in Connecticut.

A majority of members of the Workgroup expressed an opinion that the Remediation Standard Regulations required modifications to better achieve site cleanups, and that there need to be better and more efficient ways to exit the remediation process. As previously mentioned, many Connecticut sites are contaminated by historic urban fill for which there is no clear "polluter." DEEP, either by regulation or an amendment to the General Statutes should establish a mechanism to limit the need to actively remediate urban fill, by for example, setting clear and reasonable standards to limit exposure to such fill to protect human health and the environment. The present Remediation Standard variance for urban fill is very restrictive and does not provide an easy path to complete remediation. Another example is to incorporate risk-based analysis into the cleanup standards. Additionally, Connecticut's cleanup standards should be comparable to other states in the region.

Evaluation of Best Practices of Various State Cleanup Programs

Discussion

The Workgroup reached consensus on certain inter-related concepts that appear integral to success in the states we evaluated. These concepts are:

- Affirmative system – that is, obligation to clean up once you have entered the system
    - Entry points need to be defined

- Single cleanup system, whatever the method of entry with clear rules and process

- Timelines for achieving milestones and for achieving cleanup endpoint

- Early identification of higher risks, and obligation to quickly address

- Flexibility for closure
    - Risk-based alternatives to state's numeric cleanup standards

- Clear "all done" certainty and documentation
    - no consensus on details: some recommended self-implementing Licensed Professional (LEP, LSP, LSRP) approach; others recommended state review and approval approach

- Transparency
    - easy to use website
    - good guidance
    - cleanup reports and agency decisions on-line
    - opportunity for robust public/community involvement

The workgroup members generally recognize that these features are valuable and practical only as a "package". The systems that rely on licensed professionals, self-implementation, flexible risk-based standards, and few if any state reviews, are packaged with affirmative obligations, timelines, public participation opportunities, and appropriate checks and balances (audits, robust licensing board, etc).

Consensus was reached with respect to the recommendation that the States achieving success have a public advisory board. The boards assist with the implementation of the programs including technical guidance, policy choices, and public feedback.

The Workgroup did not reach consensus on recommending any one particular state system as significantly better in producing results (sites cleaned up) than other states. Each of the 5 states reviewed have positive attributes that various members of the Workgroup identified.

For example, some but not all states, offer a voluntary cleanup option. Many of these attributes can be projected onto a single site scenario to demonstrate how the attribute facilitates the cleanup of the site – flexibility, clarity, ease of use, speed, certainty, etc.

Compared to the above, it is harder to identify whether a state's system for cleanup is achieving an overall high level of success both statewide and on a continuous basis. One way to evaluate "which state systems are achieving great success" is to compare the states to each other. We attempted this comparison, but did not reach any conclusions as a group. This effort required (1) setting standard evaluation criteria, (2) learning the state cleanup system's laws, metrics, procedures, structure and practical application, and (3) normalizing the information to be able to compare "apples to apples". The workgroup did not have sufficient time to complete all of these steps, and we recommend that the DEEP do so.

Appendix G – Public Comments

DEEP received comments during the Comprehensive Evaluation and Transformation process that were specific and general and pertained to the current and potential future state of the cleanup program. Below are the comments that were received through the dedicated e-mail account set up for this process (E-mail Submittals) and comments submitted in document form (Document Submittals).

Parties Providing Comments to DEEP

E-mail Submittals

Anne Peters
Bill Finch
Gail Batchelder
Jane Warren
Ken Feathers
Martin Mador
Matt Hackman
Michael Harder
Russ Downey
Russell Bartley
Thomas Nunno
Wayne Bugden

Document Submittals

1000 Friends of Connecticut
Anne Peters
Brownfield Advocates in CT
Connecticut Coalition of Environmental Justice
Connecticut DOT
Connecticut Petroleum Council
Cumberland Farms
Elsie Patton
Environmental Community Group
Environmental Professional of Connecticut
Ken Feathers
Maurice Hamel
Margaret Miner
Meg Harvey, DPH
NRG Energy, Inc
Peter Hill
Sierra Club
Wayne Cobleigh

E-mail Submittals

Anne Peters

I plan to submit a few specific comments on the six Transformation Reports but I wanted to provide a few general comments on the process, now.

First, I was more than pleased to be included a Workgroup; it was absolutely worth the time commitment. I learned a great deal from my fellow workgroup members, especially from those who represented other constituencies than I usually deal with. The process reinforced my belief that one key to resolving environmental disputes is to understand all the different parties' priorities and the best way to understand those priorities is to talk, face to face. Different constituencies have always expressed their concerns to DEEP and/or the legislature but putting us all in one room to discuss policy, rather than the specifics of a particular case or dispute, was, in my view, informative and helpful to us all.

Second, I was impressed by the degree of consensus that each workgroup achieved and by the common themes seen across the 6 reports.

Third, I think there is great value in examining a program from the 50,000 foot level, as this process did. We all have to climb out of the trenches from time to time, look around, and decide whether we are digging in the right direction.

Fourth, I thought that selecting you, as someone who is familiar with the current remedial programs but who is not directly in charge of implementing those programs, to coordinate and manage the process was very important to its success. I believe that it is critical that you are able to continue that independence throughout the process. This effort will fail if it becomes like a Congressional enactment - where every constituency adds an amendment or rider as a condition of approving the rest of the bill.

Finally, I have no doubt that the process required a significant commitment of scarce agency resources, but I hope that DEEP will organize similar processes for other initiatives, including both statutory changes in other areas, regulation making.

Bill Finch

Interesting situation regarding Arsenic. A new High School in Fairchild Park, which has been a woodlands park for well over 100 years, is being constructed and land moving has begun. The top soil is sought to be used in another new park, but the soil (beautiful, native New England humus and sub soil) has failed the test for Arsenic. Instead of making a new park with soil which has been used for at least 100 years for a park, we are now having to store the soil off site, at added costs, and purchase other fill from another site. This is just nuts! If it was good for the previous park and users, why is it not good at a slightly different location. Let's look at ubiquitous substances like this and revise our standards. Otherwise we should remove all soil from all Connecticut parks that will fail if tested. Let's get some science on this and revise our standards.

Gail Batchelder

Workgroup #4, the LEP Program, specifically the comment I had regarding a misstatement in the report about the Massachusetts program. That statement is noted below, along with my comment. Since I'm not sure how widely disseminated the Work Group reports will be, I'm not sure how important it is to

correct in the report, but it is very relevant to understanding how the program works and keeps track of how LSPs are doing throughout the MCP process. I think it is a very important aspect of the Massachusetts program to convey correctly.

On page 14 (second paragraph) of the report, it is stated -- "Unlike Connecticut and New Jersey, the Massachusetts DEP audit program currently only audits verifications (not certification or the other LEP opinions)."

Since the terms are different in both states, I am making an assumption that the writers were intending to say that the audits in Massachusetts were only conducted on final closure documents for a site. That is certainly not a correct statement. In fact, it seems to be a more correct statement about the audit process in Connecticut.

In Massachusetts, LSPs are required to stamp and submit many documents during the investigation and remediation process identified in the MCP. In fact, there are submittals required at almost all stages of the process from Immediate Response Actions and Release Abatement Measures through the Comprehensive Phase II investigation (basically like Connecticut's Phase III investigation) and Risk Characterization to Response Action Outcomes (similar to Connecticut's verification), Downgradient Property Status reports, and Remedy Operation Status Reports (for on-going remedial actions). Along the way, there are also Status Reports that must be stamped and submitted. Any of those signed and stamped documents are considered to be LSP "Opinions" and all LSP Opinions are subject to audit, not just the final Response Action Outcome statement (the closure document).

The ability to audit any and all submissions by an LSP has been an important part of the process because the Department can recognize whether there are typical problems encountered by LSPs at specific stages in the process. This, in turn, helps to identify training needs or whether some other compliance assistance may be appropriate, or whether regulatory are needed to clarify the agency's intent or expectations. LSPs may find out that they are not on the right track early enough in the process to make corrections in a timely fashion, and the DEP can find out if they might want to provide a bit more scrutiny over subsequent submissions by a particular LSP or for a particular site. Audits in Massachusetts can be totally random (they apparently used a random number generator at one point) or targeted, either for particular types of submissions to get information about how that aspect of the program is working, for example, or to address particular concerns they may have noticed about an individual LSP's work. They do not specifically target LSPs on a personal level, but the quality of work can raise concerns that might increase the likelihood of an audit of future submissions.

Because I think the ability to audit at any stage in the process is a significant factor in the program's success in allowing more independence on the part of LSPs, while still providing a mechanism for protecting public health, safety, welfare, and the environment, I want to make sure that statement in the Workgroup #4 report is clarified in any future discussion of that aspect of the Massachusetts program.

If the language in the report is to be revised to reflect what occurs in Massachusetts more accurately, additional clarification may be necessary to more accurately reflect the procedures in each state referenced in the report. I can't speak to the New Jersey process in terms of whether or not clarification is necessary to accurately reflect their audit process.

Jane Warren

Understanding that this short article summarizes a federal statute, and not CT law, this is exactly the kind of thing that keeps developers awake at night, and, I believe, part of what we were trying to fix in our little task force. Here, a redeveloper was sued by the PRP when he demolished the building for allowing rainwater to infiltrate the contamination. For the DEEP folks in our group, of course I understand that this might spread the existing contamination, but if you want someone to come in and try to make these sites cleaner and/or get them back on the tax rolls, this is the kind of thing that has to be avoided.

Ken Feathers

Many site cleanups become difficult when sediment is involved, for several reasons

1. Characterization timelines may be long, and often there are disagreements regarding what amount of pollution is contributed by the site/RP
2. Cleanup may be inappropriate until upstream sources are controlled to limit re-pollution
3. Remedies are not simple for larger problems; there is significant environmental impact and restoration cost associated with a dredging cleanup
4. There is often uncertainty as to what remedy will finally be approved as feasible, and the perceived timeline for approval is long
5. Timelines for implementation may be long

All of the above contribute to project schedule problems and may cause project delays.
Also, they affect the ability to monetize the problem to accurately establish overall costs early in the project.
These factors can tend to make a site with a significant sediment problem less marketable.

Consider the following interrelated concepts, which will require resources and possibly statutory changes:

A. Develop a set of drainage basin based *sediment* TMDLs to formulate an overall sediment restoration and management strategy (not sure if have statutory authority to expand from water pollution to sediment in TMDLs)
   - Allows DEEP and site RPs to understand the big picture, fostering better understanding of environmental goals
   - Creates an overall framework for review of individual projects in perspective, allowing early focus on the most appropriate remedy
   - Reduces arguments about upstream sources by defining sediment conditions and dynamics in a published high level perspective, excluding site biases
   - Identifies basin-wide planning for optimal scheduling of individual remedial projects

B. Allow sites with remedies that are for technical/regional reasons not immediately implementable to "buy out" by payment of a fee in lieu of cleanup (This concept would probably need an enabling statute that should also develop a state natural resources damages authority).
   - Concept has analogous models in other fee-in-lieu-of programs
   - Second conceptual foundation is in the assessments for natural resource damages (pay if can't clean up)
   - Could apply also to aquatic impact offsets, and has been accepted by the EPA and Army CoE as a concept for offsets
   - Could also apply concept to long term groundwater management issues (separate concept submittal coming)

- Allows early monetization by using a straw man-default remedy based on regional basin plan
- Allows quick timeline for exit from site by paying for and “transferring” clean-up obligation to state or other party

C. Develop a revolving dedicated fund(s) to focus resources on the TMDL priorities through state grants (probably best to develop statutory fund protections)
   - Could be combination of state and fee-in-lieu-of funding
   - Allows state guided focus of resources on TMDL defined priorities, getting the highest environmental return for remedial dollars expended
   - “cashed out” remedial projects would be funded by this source when they rise to the top of the priority list, leveraging/redirecting these private dollars to highest priorities and greatest gain
   - Would be able to work synergistically in coordination with appropriately implemented private party remedies for some areas
   - Potential to develop for individual regional basins and also for LIS
   - Administration could be third party non-profit that would also accept donations and provide added value
   - Especially if third party administered could, for LIS, engage NY as well; similarly, for CT river, could involve upstream states

The Elizabeth River Restoration Trust in the Chesapeake Bay watershed (http://www.livingrivertrust.org/index.htm) provides a possible model for some aspects of these concepts

Martin Mador

The participants in this process (unanimously) agree that the recommendations contained in this report cannot succeed without adequate resources at DEEP to see them though. If the legislature and governor wish to see the state seriously and significantly address remediation of the thousands of state brownfields and other contaminated properties so that the environment is protected and the land put back in to productive use, then DEEP must have the remediation staff and resources such as computing and communication capabilities to do their job. Otherwise, we face the same continuing failure to effectively address this chronic problem which we have endured for several decades. While adequate funding by itself does not guarantee the results desired, it is a necessary prerequisite.

Matt Hackman

I strongly encourage the environmental regulatory agencies of MA, CT and RI to consider implementing a GIS data collection program similar to that implemented by NYSDEC. This program benefits the regulatory agency, by having the data ("Electronic Data Deliverables" or EDD, see http://www.dec.ny.gov/chemical/62440.html) input by consultants working in their programs, and benefits the regulated community and the public, by making the data available in GIS databases, providing geospatil information as well as technical data.

More information is available on NYSDEC's Environmental Remediation and Brownfields website: http://www.dec.ny.gov/chemical/brownfields.html

"The DEC has implemented an Environmental Information Management System (EIMS). The EIMS uses the database software application EQuIS™ (EQuIS) from EarthSoft® Inc. (EarthSoft)." (see: http://www.earthsoft.com/products/edp/edp-format-for-nysdec/) While other states may choose other software, I suggest that adopting the same software would significantly ease the burden on environmental consultants working in multiple states.

Michael Harder

Thank you for the opportunity to provide comments on the draft workgroup reports prepared as part of the Department's effort to improve its remediation programs. I was fortunate to have been part of one of the workgroups (Pollution Responsibility and Liability Relief), and I realize that implementing the necessary program changes will require a huge amount of time and resources by the Department, and others. However, if done in a careful and comprehensive manner, it would be time well spent.

Before I provide my detailed comments I would like to offer a few over arching concerns. First, while there are some changes that could be implemented in the near term, including some that would not require any statutory or regulatory amendments, we should not rush to make changes just to get something done. Rather, the Department should include in its recommendations to the Governor that a committee be formed, to be lead by the Department, and given adequate time to propose all those changes needed to the state's remediation programs. Most importantly, this will allow for a complete and public discussion on the many significant changes that will be proposed, and will hopefully preclude efforts to make short term changes targeted at a narrow issue or group, without consideration of the overall goals of the program. As has been discussed in many of the work group reports, one of the shortcomings of the state's program is that it has been put together over the years in a piecemeal fashion, which has lead to gaps in coverage, confusion about how some of the program requirements apply, and a less comprehensive program.

Also, while changes to the program are needed, and while economic development should clearly be one of the main drivers for these changes, we should make sure that we maintain focus on the central goal of the program: proper clean up of contaminated sites in a manner that is protective of human health and the environment. We need to make sure that our efforts to streamline and improve the program do not take on the appearance of a race to the bottom in which we try to simply speed up a process or eliminate a requirement, and thereby cause harm to the program or put unacceptable burdens on the taxpayers of the state.

My more detailed comments that follow are presented in no particular order of importance. Also, since most if not all the groups addressed topics outside the one assigned to them, I will not associate my comments with any specific group unless it is necessary for the sake of clarity.

1. Many of the work group reports recommended creation of a single program, or even a single statute, that would cover all situations requiring remediation, in some cases referring to a long list of Connecticut requirements as evidence of unacceptable complexity. In fact many of the "programs" cited are necessary statutes that simply provide critical authority to the Commissioner, or impose specific obligations on certain parties, and do not constitute separate remediation programs. Some support not only the remediation program but also other areas such as the point source discharge program. Even if we make the changes that need to be made, we will need to retain many of these laws

as they have served Connecticut's environmental programs well for over 40 years. Rather than wasting time and energy by being driven to create a "single" program, I think the more appropriate recommendation made by some groups is to "unify" the various program elements and work toward addressing the gaps and weaknesses that exist.

2. Another recommendation common to several work groups is for the state to impose more milestone requirements on those parties undertaking remediation. They correctly point out that because some Connecticut programs have no deadlines for certain requirements, it is difficult to determine how many sites have been fully remediated. While this would be useful information to have, as the saying goes, "Be careful what you ask for." More deadlines means more enforcement obligations and expectations by the Department, the public, local officials and the legislature. If additional deadlines are imposed I would recommend that automatic, and meaningful, penalties be included as they are in some states, thereby creating self-implementing incentives to meet the deadlines and limiting the amount of follow up work for the Department.

3. Most work groups recommended that many of the provisions of the remediation program be made more self-implementing, especially as it relates to the LEP program. I agree, and think that the program can benefit greatly from these types of changes. However, if some of these changes are made, the resulting role for the Department would be akin to the Board of Professional Engineers, one limited to administrative oversight and licensing. That would be a mistake, and we need to make sure that the Department retains a more active, relevant role in the overall remediation process in Connecticut.

4. Several concerns were expressed that procedures in the RSRs for utilizing ELURs, ECs, variances and other means of limiting the extent of remediation required are overly cumbersome and slow down the process unnecessarily. If that is the case I agree that these procedures should be revisited so that appropriate streamlining changes can be made, including more use of LEP authority.

5. Several groups recommended that more "exit pathways" be identified. In some cases that apparently means having a program that allows a responsible party to be considered in compliance if it cleans up an individual release as opposed to an entire property, or providing a sign-off when only the significant risks have been addressed, as opposed to fully remediating the site.

I don't have a problem with giving the Department and LEPs the authority to issue release based verifications, as long as the referenced clean-up is consistent with the RSRs, and as long as those verifications are not misconstrued or misused for something inappropriate. My fear is that creating a process whereby parties are given some kind of sign off after only a partial clean-up will in effect amount to a slashing of the RSRs, because in many of those cases the full remediation will never happen. Perhaps this is an argument for significant penalties for failure to follow through and fully remediate. We also need to consider that implementing this change will add work load to the Department's staff, and ask will that change really result in meaningful improvement. I wonder what banks will lend money, and what buyers will buy property, based on the clean-up of only part of the property. How critical is this kind of change to the overall improvement of the state's program that people are demanding?

6. I agree with comments that have been made that the required extent of post-remediation monitoring should be revisited. A huge volume of monitoring data is generated and submitted to the Department that is reviewed only to a very limited extent.

7. Several reports included recommendations for liability relief, including the following examples:

- Work Group 2 suggested that the relief provided in PA 11-141 from the obligation to remediate off-site contamination be broadened to all sites, not just a few Brownfields sites.
- The suggestion was made by Work Group 3 to allow liability relief to owners if a baseline investigation were performed, as long as certain specified conditions, or knowledge of such conditions, did not exist.
- The Work Group 5 report recommended that "non-polluting parties" (presumable property owners that did not actually cause the contamination) be relieved of liability to clean up their sites "to the extent possible."

I would recommend that the Department not agree to such changes, with the possible exception of limited situations in the first scenario where a qualified buyer pays into a fund or has truly eliminated any further contribution of contamination to the off-site property. In many situations this kind of relief will only shift the burden of clean-up to the state's taxpayers.

8. The point was made in the report from Work Group 3 that it would be difficult to move ahead with spill reporting regulations without eliminating some programs such as the Property Transfer Program. I don't see the connection, and I think that the Department should revive its effort to adopt spill regs for at least part of the universe of spills. Remediation of most new spills could be completely overseen by LEPs without the Department's involvement once the immediate emergency, if any, is abated.

Russ Downey

For certifying parties of LEP lead sites who need assurance/certainty at some point in their investigation/remediation process prior to the verification. The idea is to allow LEP-lead sites to submit reports and plans (whatever they need) to DEEP for review. Submittals would be accompanied by a transmittal form and a fee to cover the cost of DEEP staff to review. This would be purely optional. It would maintain the flexibility of the LEP program, but would allow certainty when needed.

I am fortunate to work for a company that has the resources to address environmental matters but I also understand that the request for CTDEEP to review documents and subsequently pay for it must be voluntary within the LEP program. The reason that I think it important to allow flexibility for a company/responsible party to have the opportunity for CTDEEP review is for the simple fact that time delay is often costly to a project and companies/responsible parties do not want to necessary take the risk by moving ahead without consultation with CTDEEP, even under LEP oversight, for the fear of completing a project and moving forward with an initiative (e.g. marketing property for sale, commercial development) to only have the investigation, risk assessment (including eco-assessment), and cleanup scrutinized many years later by a CTDEEP audit and the case reopened.

I do think the LEP program is very good but sometimes at certain critical points of the process (e.g. moving from investigation to risk assessment or cleanup; determining that there is no eco-risk) the responsible party/company wants reassurance from CTDEEP before they move forward. Each LEP

interprets the regulations slightly different and such a review by CTDEEP gives the responsible party/company comfort versus only relying on a LEP. There are many regulated parties who have a much less grasp of the regulations and could benefit significantly by interaction with CTDEEP from time to time (on an optional basis). The privilege of having CTDEEP review the documents or meet to discuss the project would be granted based on a request from the responsible party/company via filing a form and paying a fee.

Russell Bartley

Some problems with the Property Transfer Act with 1980s Hazardous Waste generation as the trigger for site action are:

- Most of the significant environmental problems are the result of mismanagement of hazardous substances that occurred prior to 1980 when there were no significant regulations that addressed handling of hazardous substances
- Many problems sites are not sold, but are leased or sit idle because the owner or potential buyer do not want to enter the system. These sites can be causing significant exposures that are not addressed.
- If a site is an establishment, it will always be an establishment. If it is not, it will likely never be an establishment. It does not seem appropriate to continually investigate sites that have been through the system when current regulations, spill reporting, etc. make it unlikely of ongoing contamination of sites.

A set of alternative triggers for entering the system that might be more appropriate are:

- Lower the Significant Environmental Hazard reporting trigger concentrations to close to or at the RSRs criteria, then if a problem becomes known at any site it will be addressed within the system. This could be made retroactive to a certain date. Realize that most any commercial or industrial site that is sold has some amount of environmental investigation performed if a problem may exist because the mortgage lender or buyer will require the investigation.
- Establish reportable quantities for spills such that a spill of a substance greater than a certain quantity must be addressed and verified by a LEP. Also require that any spill that impacts groundwater be addressed and verified by an LEP.

Problems with CT spill reporting are:

- All spills must be reported which leads to too many insignificant spills entering the system and taking up resources.
- Spills are overseen by coordinators that are not required to and do not see that the situation is eventually addressed to RSRs criteria. This allows many significant situations to fall through the cracks and results in double standards.

Potential solutions are:

- Establish reportable quantities for spills such that a spill of a substance less than a certain quantity need not be reported. Also, establish different reportable quantities for indoor and outdoor spills.
- Establish reportable quantities for spills such that a spill of a substance greater than a certain quantity must be addressed and verified by an LEP.
- Require that any spill that impacts groundwater be addressed and verified by an LEP.
- For the most part the impacts of spills that are responded to within a short time period are apparent. Therefore, do not require post remedial groundwater monitoring for spills that do not

impact groundwater and where the soil is cleaned to PMC criteria within a reasonable time period. This will allow most spills to be verified in a short time period.
- Create a specific form for verification of soil spills that are immediately excavated to RSRs criteria to make verification simple.

There is little room for professional judgment in the verification process. Every item in a very long RSRs checklist must be addressed and checked off even if it is apparent that significant exposures do not, and will not exist. This leads to long verification time frames and inefficient and inappropriate expenditure of resources. DEEP is increasing flexibility in the system by starting to issue guidance that will address certain situations such as urban fill, but guidance cannot address every situation. Professional judgment should be exercised. Also, Many sites are in limbo because there is no easy or ideal solution and no one will make a judgment call for fear of repercussions.
I suggest that sites can be submitted to a LEP committee for guidance, or resolution (i.e., immediate verification) where:

- an owner or LEP feels that it is inappropriate to continue through the entire checklist process, or
- where a solution is difficult, or
- where site circumstances dictate a non-standard remedy that does not fully conform to the technical requirements of the RSRs.

The committee can consist of four LEPs randomly chosen and the DEEP site manager as a source of information and guidance. The committee can meet for two full days and review all available material. The outcome will be a "committee" verification or short, succinct, written, situation-specific guidance. A certifying party can request a committee review upon a payment of $10,000. Each LEP will be compensated $2,000 for time and $2,000 will go to the DEEP for resources. The committee LEPs will remain anonymous to all but a confidential file kept by DEEP, so there is no undue influence on the committee members, and the LEP committee members will not fear repercussions from certifying parties or other LEPs. This can be accomplished within the legislative process because the LEP are authorized to "act for the commissioner". It may require legislation language that will allow the committee to wave certain technical requirements of the RSRs. Any verification by the committee must be by at least a 3 of 4 vote. The committee members must certify that the actions to date at a particular site are protective of human health and the environment and the members will be subject to disciplinary action if their decision is negligent. Verifications of the committee will not be subject to audit as it is to be assumed that if three of four LEPs in their judgment determine and certify that the actions to date are protective of human health and the environment, the decision is appropriate. Situation specific guidance by the committee should be given significant weight in determining further actions for a site. This process will reduce the backlog of sites in the system, allow for site- and situation-specific remedies, and provide professional guidance for resolving difficult site problems.

Thomas Nunno

Email 1:
This was a very thoughtful report evaluating how the current programs deal with industrial / commercial releases; however, very little, if any, consideration was given in this report to how homeowner releases / contamination issues are dealt with in CT. As I understand it, these releases are currently dealt with outside the Transfer Act system. As such homeowners in CT are not currently affected financially the way they are in other states. Yes, there are cleanups and they are seemingly expensive from the homeowners perspective, but not nearly as expensive as a cleanup under a program such as the Massachusetts MCP Program. This report did not give credit to the current program in dealing with

homeowner problems in a very cost-efficient manner, nor did it note that perhaps these cleanups were occasionally ineffective or marginally effective.

I make this comment, because in an effort to create a "good" cleanup program, state agencies, consultants and other stakeholders tend to forget the homeowners, who after all are a significant group of taxpayers and voters. I did not see the homeowners' participation in this workgroup, nor have I seen their interests represented. This is particularly disconcerting. As a consultant who spent a few years of my career dealing with homeowner release insurance claims, I have seen the financial ruin that can ensue from a simple undetected No.2 fuel oil release. These programs, which appear simple and straightforward to consultants and regulators, are foreign and full of mystery and pitfalls to a 70-year old homeowner on a fixed income. So I urge the crafters of this new program to legislate or otherwise create some relief for homeowners. Massachusetts has eliminated some fees, but this is not enough. The costs associated with the comprehensive cleanup and documentation of a homeowner release are often less than $20,000, but they can run as a high as $50,000 to even $200,000. As much as it may be at odds with risk-based thinking, I urge the State of Connecticut to consider exempting homeowners from certain requirements to ease the financial burden associated with homeowner releases under a new so called unified program which would presumably bring homeowner releases under the same program umbrella.

Email 2:
First let me say that I am impressed by the breadth and/or depth of your proposed program reform, although the schedule to accomplish the goals of the workgroups was a bit too compressed. Secondly, please note that I participated in this workgroup, upon whose report I am commenting. Because some of my comments were too late to be considered as a consensus, they were not included, but the workgroup leaders felt that the comments were worth consideration by DEEP and as such encouraged me to submit them during this public comment period.

1. My first comment is that in Appendix A my affiliation is not listed, and since my company afforded me considerable time to participate in the workgroup they should receive credit. Thus, please list my (Thomas Nunno) affiliation in Appendix A as TRC.

2. My second comment is that while I thought that the workgroup did a great job in the time allotted, I was surprised that after all that effort, they failed to identify a top state program. So in a effort to tip the scales I offer the following additional observations based upon my 30 years experience in site remediation, including working in at least ten different state programs and teaching at Northeastern University. My personal and professionally-based preference would be the selection of the Massachusetts Program. While my opinion may be biased, having worked with the Massachusetts Contingency Plan (MCP) since 1988 and as an LSP under the privatized MCP (1993) for the past 17 years, I offer the following basis for this opinion.

   In the selection of a program by DEEP, additional consideration might be given to 1) regional familiarity of the Massachusetts program; and 2) attributes that tailor it to the socioeconomic and hydro-geologic environment of the New England states. These are not issues that were specifically reviewed by the workgroup, but might be considered when choosing a program to emulate.

   Regional Familiarity of the Massachusetts Program - Regarding regional familiarity, if the state of Connecticut were to adopt the Massachusetts system (or a system with

many of its attributes), they would be one of four states in the region using a similar risk-based tiered approach to groundwater and soil classification. Likewise the privatized system would be similar to that already in place in Connecticut, as well as those of Massachusetts and New Jersey. Thus, this inherent regional experience of local professionals would make transition into the program more streamlined. Likewise by choosing to emulate the Massachusetts program, DEEP could be taking advantage of 17 years of improvements/adjustments that have been made to the privatized MCP since 1993.

Socioeconomic and Hydro-geologic Environment of the New England states - In addition, the Massachusetts program incorporates specific socioeconomic and hydro-geologic elements that are unique to the New England states. Examples of such elements include: 1) a system that considers groundwater and surface water characteristics (depths, geology, etc.) and resource uses typical of the region; 2) exemptions associated with, a) historic industrial use of coal, and b) use of demolition fill in urban areas; 3) agricultural pesticide uses typical in tobacco farming – once a mainstay of Connecticut; 4) riparian water rights system typical in eastern states; 5) property values and income typical of the region; and 6) the importance of public opinion in densely populated eastern states.

In essence, Connecticut is a New England state, similar in many ways to Massachusetts. The Massachusetts system has been shown to be very effective in cleaning up sites and to some degree in stimulating the economy through these efforts. It has always amazed me that the states have wasted precious resources by creating 50 different programs to accomplish similar goals. So I urge DEEP to build upon the strengths of the Massachusetts program, rather trying to create something new. Finally I want to thank the work group organizers for conducting a well-balanced forum for discussion.

Wayne Bugden

I recently participated in the DEEP's Remediation Working Group and Visioning Sessions, and through the many hours of discussion I was repeatedly reminded that the problems with the Connecticut remediation programs have largely been overcome in Massachusetts. Therefore, I recommend that Connecticut use the Massachusetts Contingency Plan as a template and guide with which to overhaul Connecticut's remediation programs. In my professional opinion, the MCP (and its related laws and guidance) come closest to achieving the goals of a "good" remediation program. Using the MCP offers the best means to reach these goals for our state.

Alternatively, we could attempt to modify CT's existing programs to achieve these goals, or we could "start from scratch." However, I believe that these alternatives would take far too long, cost far too much money, and will ultimately fail to accomplish the objectives. Instead, using the MCP to the extent practicable will be the most efficient and cost effective means to the desired end.

There are many reasons Connecticut should adopt the provisions of the MCP; some of the most compelling are:

- The MCP has most of the attributes that the DEEP's Working Groups and Visioning Sessions have identified as desirable in a state remediation program; it is a unified program, it relies on risk-based cleanup standards, it encompasses nearly all releases, and it provides a clear and efficient

means to achieve compliance. Connecticut should aspire to achieve the MCP's proven efficiency in cleaning up and closing out contaminated sites.

- The MCP has been developed over the past two decades with a vast commitment of the Commonwealth's resources. Moreover, many of the bugs inherent in all rules and regulations have already been worked out, which will save Connecticut the time and expense that would occur by repeating the same errors.

- The aspects of the MCP that address federal rules (RCRA, CERCLA, USTs, etc) have already been fully vetted by the USEPA; thus, using the MCP as a model should streamline the process of federal review of our new statutes and regulations. In fact, I expect USEPA staff will welcome this approach and provide Connecticut with valuable guidance and insight.

- Massachusetts and Connecticut share common industrial histories, cultural resources, geology, hydrology, soils and climate. These relevant factors were considered in developing the conditions and criteria of the MCP, and would be the same factors that Connecticut would need to consider to develop a new remediation program.

- The efficiency and comprehensive nature of the MCP is also a measure of its effectiveness in protecting human health, welfare and the environment; in contrast, the large number of Connecticut sites which are not closed out, and the great many more that are never entered into a State cleanup program, are evidence of the failure of the current programs to achieve this primary goal.

- The MCP can be adapted to supersede many existing CT remediation programs, including the Transfer Act (a failure by most measures), Significant Environmental Hazard, RCRA, USTs, etc.

- The replacement of these programs with an MCP-like unified program will allow CT to retain (and improve) many of CT's valued programmatic tools, including the LEP, RCP, SCGD, Quality Assurance Guidance, Brownfields Programs, etc.

I understand that adapting the MCP for use in CT will require a major overhaul of state laws and regulations, and that these tasks may appear daunting. I am also aware of the differences between Massachusetts and Connecticut, not the least of which is the fundamentally different approach to groundwater quality regulation (which makes true risk-based corrective action in Connecticut difficult). I expect opponents will cite these issues as reasons not to use the MCP as a template for Connecticut's unified program. However, I believe the similarities between Massachusetts and Connecticut are more significant than the differences. I firmly believe that the MCP offers a valuable tool that can help Connecticut achieve its goals of effective and efficient site cleanup. Connecticut would be wise to use this tool.

Document Submittals

CARMODY & TORRANCE

Carmody & Torrance LLP ▪ Attorneys at Law
Waterbury ▪ New Haven ▪ Southbury

M. Anne Peters
Partner

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November 14, 2011

Graham Stevens
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

RE: Comments on Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws WorkGroup Reports

Dear Graham:

I am writing to comment on the WorkGroup reports issued as part of the DEEP's Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws. First, I would like to reiterate how much I appreciated the opportunity to participate in the process; I learned a great deal, in large part because of the diversity of interests as well as the depth and breadth of knowledge of the participants. I believe that the final reports reflect that diversity and knowledge and I hope that DEEP will employ similar stakeholder groups going forward. In particular, I was encouraged by the consistency among the WorkGroup reports, including the need for:

- a unified environmental remediation statute;
- a consistent regulatory scheme;
- sensible, clearly defined entry and exit points;
- well defined remedial benchmarks;
- schedules for achieving benchmarks;
- incorporation of risk-based considerations and greater flexibility in achieving closure;
- a largely self-implementing program;
- clarity and consistency regarding who is liable for remediation;
- transparency/improved recording keeping; and
- better enforcement tools for both the State and the private sector.

I believe that a legislative revision that incorporates the above principals will simultaneously foster additional remediation and business development in Connecticut while protecting public health and the environment.

CARMODY & TORRANCE

In addition to endorsing the general recommendations of the WorkGroups, I would like to propose some additional suggestions for consideration. First, one of the questions our WorkGroup, #5, considered was whether the owner of property that was the source of pollution should be liable if that owner had neither caused nor contributed to the pollution. A slight majority of the group favored making liability independent of one's status as a landowner, with a large minority holding that landowners should have limited liability. While I favor a legislative program that does not link liability to one's status as a property owner, I believe that there is a way to reconcile those two positions: if any liability is to attach, make the property liable, not the owner. Making the liability non-recourse, i.e. requiring that the creditor look only to the value of the land to recoup the debt, is admittedly not a perfect solution but it might be a reasonable and fair balance of interests and of public policy objectives.

Second, while I endorse the need for more agency enforcement, I ask that the agency not forget the associated need to give recipients of NOVs and other informal enforcement an opportunity to dispute and correct factual errors in the allegations. The opportunity need not be a full hearing but there should be a simple process for correcting factual errors, like the hearing that Adjudications holds for "red-tagged" underground storage tank systems, before a notice of violation becomes part of a permanent, immutable record of environmental noncompliance.

Finally, I believe that public education of and outreach to the community at large as well as stakeholders and legislators will be critical to the success of any legislative and/or programmatic initiative. A clear statement of policy and objectives is always a good starting point in legislation and can be used as a springboard for public education. Simplicity is good. And, while the agency has struggled with regulation-making in recent years, I encourage the DEEP to consider regulations as the means to add detail and specifics to a statutory scheme, rather than attempt to incorporate all the details in the language of the statute, itself.

Thank you, again, for all the effort and energy that you and your colleagues have committed to this process.

Very truly yours,

M. Anne Peters

MAP/rml

COMMENTS FROM A GROUP OF BROWNFIELD ADVOCATES IN CONNECTICUT

November 14, 2011

Mr. Graham Stevens
Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106

Dear Graham,

As a group of practitioners who were very pleased to have the opportunity to work with the Department of Energy and Environmental Protection, the Department of Economic and Community Development, the Connecticut General Assembly, and the Governor toward passage of Connecticut's landmark brownfield legislation earlier this year, we have an intense and continuing interest in DEEP's activities associated with its "Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws" initiative. We appreciate this opportunity to comment on the draft workgroup reports made available by DEEP.

We understand there are further milestones to be met in the course of DEEP's progress toward the development of the report and recommendations DEEP is required to submit to the legislature under section 6 of Public Act 11-141. We feel, though, that it is important to communicate to DEEP now our collective reservations regarding where the process stands as of today and our perception as to where it may be heading.

We strongly believe that transformation of any programs in Connecticut – legislative or regulatory, environmental or otherwise - must be designed and implemented in a manner consistent with and supportive of the top priority of Governor Malloy and the General Assembly to grow our economy and create jobs. In reading the workgroup reports, we are concerned that they may be signaling a rush to create the framework of a dramatically new, comprehensive and inventory-driven system. Without proper foundation, legislating such a framework could have the effect of increasing exponentially the universe of sites and incidents pulled into the state program and thereby put before the existing DEEP staff for action and without a clear path out. This direction, without more, carries a corresponding potential for crushing impacts on both the economy and DEEP's ability to discharge its responsibilities consistently, predictably, fairly, and in a timely and cost effective manner that is protective of the environment.

We urge DEEP to resist the urge to craft, in a few short months, an entirely new cleanup program for Connecticut. Rather, we recommend that DEEP focus on the foundational elements essential to building a program that will be risk-based, self-implementing, priority-driven, and effective in driving economic and job growth while protecting our environment, which elements are common themes emphasized in each of the draft transformation initiative

reports. We would be delighted to work with DEEP once again in the coordinated and comprehensive development of a foundation based on these principles.

As a starting point for building this strong foundation, we recommend DEEP focus on revising the state's Remediation Standard Regulations ("RSRs"), which were promulgated in 1996 as required by Section 22a-133k. We recognize and, subject to seeing a draft, support DEEP's recently proposed "consensus" amendments to the RSRs. As you know, DEEP shared a conceptual overview of these amendments with the regulated community at DEEP's Remediation Roundtable presentation last week. But these amendments are not enough to provide the necessary and critical foundation of the type of program DEEP's draft reports seem ultimately to be urging. Unlike earlier failed efforts to amend the RSRs, we are confident that with appropriate focus on the Governor's message and the clear and unwavering principles identified herein, Connecticut can be well on its way in relatively short order to having a cleanup program that protects the environment and fosters sustainable economic development.

Sincerely,

Elizabeth Barton
Partner
Day Pitney LLP

Eric Brown
Director, Energy & Environmental Policy
CT Business & Industry Association

Pamela Elkow
Partner
Robinson & Cole, LLC

Lee Hoffman
Partner
Pullman & Comley, LLC

David Hurley
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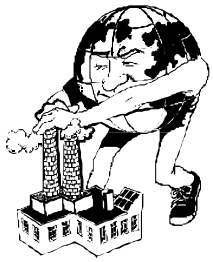
Nancy Mendel
Partner
Winnick Ruben Hoffnung Peabody & Mendel, LLC

Barry Trilling
Partner
Wiggin & Dana, LLP



Connecticut Coalition for Environmental Justice

10 Jefferson St., C-1 Hartford, CT 06106-2515 • Phone (860) 548-1133 Fax (860) 548-9197
ccej@environmental-justice.org www.environmental-justice.org

October 27, 2011

Daniel C. Esty, Commissioner
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106

Dear Daniel C. Esty,

Thank you for DEEP's current interest in reforming Connecticut's current laws pertaining to the clean up of contaminated sites. DEEP's efforts in this area are essential in the promotion of good health and economic development across the state.

Please accept this as a formal request to meet with a small core group of CCEJ staff and volunteers to discuss Connecticut Coalition for Environmental Justice's interest in this project. Primary concerns pertain to the need for clarity in the laws, public involvement and efficiency in carrying out clean ups. CCEJ's interest is founded on the fact that communities across the state have long been burdened by the blight and health risks allowed under current law.

The primary leader for this initiative will be Joe Wasserman who can be contacted at **joe.wasserman@environmental-justice.org**. A representative group from CCEJ is willing to meet with you or a member of your staff at your convenience. Attached is a list of the priorities we would like to discuss with you. Joe will contact your office in a few days to set up a meeting time.

Thank you in advance for your attention to this request.

Sincerely,

Thomas M. Colligan
Interim Executive Director

cc: CCEJ Volunteers Amey Marrella, Zack Bestor, Joshua Joy, Shawn Ingraham

Connecticut Coalition for Environmental Justice's (CCEJ) Recommendations for a Responsible Cleanup and Remediation Policy

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Below are the goals, ideas, and recommendations generated by the CCEJ for what must be included in a responsible, environmentally conscious, health-oriented, and community-inclusive policy for the cleanup and remediation of contaminated property in Connecticut.

- The principle goal of the policy must be the protection of public health and the environment, while still providing for the secondary goal of economic development and revival.
    - The policy's key concern must always be public health and must never sacrifice health standards in pursuit of other ends.
    - Economic development goals must be pursued only in accordance with the principle goal for a high standard of public health and the environment.
- Cleanup standards and public attention ought to be uniform across the board, and not unfairly favor areas of greater economic value.
- For the purpose of clarity, the policy ought to be drafted as a single overarching applicable statute or act, constructed to encompass and control all contamination cleanup and remediation. It must include:
    - A clear definition of "Brownfields" and policies tailored to combat the unique problems associated with them.
    - Clearly defined "triggers" for both investigation and cleanup.
    - Clearly defined endpoints for cleanups.
    - A clear liability structure. (Who is responsible for the costs of investigation and cleanup?)
    - Clear oversight structure. (Who enforces compliance of all parties?)
- More positive education of communities on the policy itself and their rights under the policy.
    - Creation of a permanent Community Advisory Board to facilitate the communication of information to communities.
        - The Community Advisory Board could work with LEPs directly to communicate the required notice out to the communities
            - This system could help establish through a working relationship, a greater trust in the LEPs by the communities.
        - The Community Advisory Board could work directly with the LEP Oversight Board to report instances of non-compliance among the LEPs.
- Funding for education programs set up within the policy
    - by private party via a fixed percentage of remediation costs

    - by the state via grants
- LEP qualifications and regulation should be stringent.
    - Compliance enforcement.
        - Strict rules and enforcement
        - Requirement for LEP to document each stage of cleanup and report to the DEEP
        - Publically available record of all LEP malpractice or incidents.
    - Community oversight, including sitting members of local communities on LEP oversight boards.
        - Training should be offered to interested community members about how to monitor cleanups and spot issues with property maintenance and repair.
- Affirmative requirement to notify neighboring property-owners, residents, tenants, and communities of potential contamination, investigation results, health risks, and remediation plans, including all transportation routes for contaminated material.
    - Neighborhoods need to be informed any time that hazardous material will be transported though them, and communities must have the ability to affect the decisions of where and when this occurs.
    - Adequate barriers must be erected and maintained to keep humans and animals from accidently encountering contamination.
    - There must be clearly visible signage on and around the contaminated property, on all sides, and at all entrances. The signage must explicitly state the specific health risks.
- Set up and management of a single database with a list of all contaminated sites (akin to the sex offender registry).
    - This database ought to include information such as the address, date of discovery of contamination, type(s) of contamination, level of contamination or risk factors, name and phone number of the LEP, and all planned remediation information.
- State requirement to investigate all suspected historical contamination that falls under the definition of being a Brownfield.
    - Based upon priority of risk to public health and the environment, state requirement to systematically cleanup and remediate every Brownfield or provide adequate incentive to private developers to remediate each Brownfield.
- More inclusive investigation triggers for all contaminated properties that do not fall under the definition of Brownfields.
- Inclusion of a community petition provision to trigger site investigation
- Cleanup and remediation triggers based upon health risks.
    - Cleanups triggered immediately upon the discovery of contamination in excess of specified healthy levels of specified substances.
    - Cleanup triggered by an objective expert determination that the site poses a health risk to neighboring residents or to the community as a whole.

    - Cleanup triggered by an objective expert determination that the site poses a risk of contaminating drinking water or publically accessible ground water.
    - Cleanup triggered upon the migration or significant risk of migration of contamination off of the property.
- Cleanup timelines need to be specified and enforced.
    - Timelines should be categorized by the health risks posed by the contamination, and expedited for immediate threats to public health and the environment.
    - Timelines should be based on the minimum necessary time to complete each step of the cleanup.
    - There should be economic incentives for speedy cleanups.
    - There must be penalties for missed deadlines, or for every year that the site remains in the system.
    - Cleanup timelines and finish lines may vary by type of contamination and severity.
- Increased state outreach to communities for input, and inclusion of communities in decision-making processes, from the creation of Remediation Action Plans, to the selection of LEPs, to the prioritizing of cleanups and future beneficial uses of properties.
    - Communities ought to be able to petition for public meetings to be held to discuss the remediation plans and costs.
    - Local health officials should be notified whenever contamination poses any risk to the community.
    - NRZs and other relevant local community groups should be notified and included during every step of the cleanup process.
    - The public should be notified and kept aware of all planned remediation methods, timelines and deadlines in a format that is accessible to the layperson.
- The program ought to establish funds or accounts, funded equally across the state by tax dollars, which communities can access for purposes such as: community education on environmental policy, technical assistance to communities on options for specific properties, need-based grants for LEP training to community members, and compliance enforcement.
- Whenever public funds are being used in the cleanup, contractors local to the community must be used to conduct the cleanup whenever possible and available.
    - The state ought to conduct or fund training opportunities for local contractors to become licensed to perform these cleanups.
- Emergency response ought to be detailed and accounted for in the policy.

Finally, while we commend the DEEP for the public outreach that has been sought thus far in this process, we feel that there must be an additional period for public comment on the document produced by the DEEP. Public outreach and appropriate research time will be vital to adopting a responsible cleanup and remediation policy, even if it means that the document's deadline must be extended.

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546
Phone:

November 7, 2011

Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Gentlemen:

Subject: Comments In Response to Draft Reports (dated September 29, 2011)
Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws

The Connecticut Department of Transportation (ConnDOT) appreciates this opportunity to provide comments to the recent series of draft reports prepared by the Workgroups for the *Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws.* We realize the magnitude of this current undertaking and applaud the Department of Energy and Environmental Protection's (DEEP) efforts to reevaluate the existing environmental program in Connecticut to provide a more efficient and effective system in the State for the management of environmental cleanup issues.

It should be noted that ConnDOT, as a fellow public agency, is significantly impacted by the current multi-faceted range of environmental laws and regulations and strives to ensure continued compliance with such, including those affecting cleanup of impacted environmental media. ConnDOT's mission is "to provide a safe and efficient intermodal transportation network that improves the quality of life and promotes economic vitality for the State and the region." To that end, ConnDOT works to provide these services as cost-effectively as possible, while complying with applicable environmental regulations.

The following comments are provided in response to the September 29, 2011, Draft Evaluation Workgroup Reports:

Reuse of Soils

ConnDOT notes the conspicuous absence of an in-depth discussion regarding the subject of soil reuse in the six draft reports. ConnDOT manages hundreds of construction projects each year. The majority of these projects involve some level of excavation and management of soils that ultimately require reuse or disposal. A large proportion of these soils are subject to the various environmental

restrictions, severely limiting reuse. As a result, ConnDOT is forced to dispose of soils posing minimal risks to human health and the environment at licensed facilities located in New England and elsewhere (e.g., Michigan) at a significant cost. Currently, the majority of these soils are transported to Massachusetts for disposal at permitted landfills due to the lack of suitable facilities within Connecticut. In 2009, ConnDOT evaluated the capacities of these landfills, and our research has shown that remaining capacities are rapidly diminishing, with the potential for many to cease accepting material as soon as three years from now. A worksheet summarizing our findings is enclosed. As our "local" landfills reach their capacities, this will become a more pressing issue for the entire regulated community from both a logistical and cost perspective.

ConnDOT requests that particular attention be placed on the significant issue of soil reuse in order to develop appropriate regulations, guidance and suitable DEEP philosophy which will facilitate the cost-effective reuse of construction soil where possible. One suggestion is the development of regulatory provisions which will facilitate the management and reuse of soils by developing a clear, streamlined process for soil reuse statewide. ConnDOT believes such a provision can enable cost-effective reuse of large quantities of minimally impacted soils.

Responsibility for Pollution

ConnDOT concurs with the statement that "state and municipal government should be able to acquire polluted property without being held liable, unless the government caused that pollution. . ." In many instances ConnDOT projects involve state or privately owned properties that have been contaminated by others. ConnDOT supports a more reasonable DEEP philosophy regarding the cleanup and final disposition of materials polluted by others, particularly those materials that are minimally impacted and/or there is no clear "polluter."

Cost/Benefit Balance

ConnDOT strongly supports the suggestion that there be an appropriate balance of technical achievability and cost with the actual health/environmental benefits. For example, in the context of the statements above regarding soil reuse, it is ConnDOT's opinion that the expenditure for waste material disposal (e.g., minimally polluted soil) must be commensurate with actual risk reductions achieved. In accordance with recent State and Federal sustainability mandates, ConnDOT believes all of the associated impacts must be considered in this analysis. For example, a life-cycle analysis may indicate that the transportation of minimally impacted soil to a Massachusetts landfill creates significant fuel waste and vehicle emissions. That material may be suitable for use as subbase or fill beneath another nearby roadway project, where it would be essentially capped, thereby reducing any direct exposure or pollutant mobility issues. All of these factors should be evaluated in the development of reasonable new environmental programs.

Urban Fill

The current Connecticut regulations make no practical accommodation regarding the widespread nature of historical contamination from anthropogenic and natural sources. Many ConnDOT construction projects encounter extensive areas of impacted soils that contain detectable levels of constituents of concern, including polycyclic aromatic hydrocarbons (PAHs), metals, and/or pesticides/herbicides. Potential sources of these indigenous contaminants are numerous and include a long history of industrial and agricultural activities. While the regulator and regulated alike recognize this phenomenon, the current regulatory framework, most notably the Remediation Standard Regulations (RSRs), provide no relief from the requirement to characterize, manage and dispose of these materials. While the RSRs do provide a possible variance for "widespread polluted fill" under CGS 22a-133k-2(f)(1), the requirements to achieve this variance are onerous and very difficult to secure.

Given the prevalence of widespread polluted fill, the difficulty in achieving a variance under the RSRs, the typically low risk afforded by these materials, and the substantial cost to the taxpayer to manage, transport and dispose of such at licensed disposal facilities, ConnDOT strongly supports the concepts described in Report 2 to develop a more flexible risk-based program to manage these materials. It is suggested that other states' programs be further researched to determine if their urban fill exclusions or provisions may be more appropriate in the new Connecticut program.

Property Transfer Act Entry Points / "Establishment" Definition

ConnDOT concurs with the Workgroup evaluation of current cleanup programs that under the Transfer Act, there is "disconnect between the "trigger" and the risk posed by the site." Specifically, it would be a benefit to the regulated community as a whole to reevaluate how an "establishment" is defined, as that clearly has a significant impact on the regulatory status of a site. In particular, parties such as ConnDOT that are responsibly handling and lawfully disposing of waste in an attempt to promote best management practices and good "housekeeping" should not be penalized for attempting to reduce risk. As such, the act of lawfully shipping and disposing of 100 kg of manifested waste within one month as a trigger mechanism for determination that a site is an "establishment" requires additional consideration.

Private Causes of Action

ConnDOT believes that ample mechanisms for concerned citizens to engage the appropriate regulatory bodies regarding real or potential pollution issues exist within the current regulatory framework. ConnDOT feels that these mechanisms should remain in place, as is.

Licensed Environmental Professional (LEP) Program

ConnDOT agrees with the Workgroup report which indicates the need for reevaluation and potential revision of the current Licensed Environmental Professional (LEP) Program in order to increase the success rate of site closures.

Conclusion

ConnDOT appreciates the efforts put forth by the DEEP to develop a more effective, cohesive environmental program. We fully support the goal for the overall program of balancing the technical achievability and cost with human health and environmental benefits. We hope that you will find our comments constructive and helpful to your process. We look forward to the opportunity to provide additional input as you complete the draft vision for the transformed cleanup program and subsequent conceptual legislative proposal.

Should you have any questions regarding the comments and input provided above, please do not hesitate to call me at (860) 594-3404.

Sincerely,

Gregory M. Dorosh, P.E.
Transportation Principal Engineer
Bureau of Engineering and Construction

Enclosure

Soil Disposal Facility Capacity Summary*

Facility Name	Daily Acceptance (Approximate)**	Remaining Operational Duration as of Date of Initial Communication with Facilities	Estimated Remaining Soil Capacity As of the Date of Initial Communication with Facilities (Rounded)***	Remaining Operational Duration (Extrapolated from Initial Estimates)	Estimated Remaining Soil Capacity (Extrapolated from Initial Estimates - Rounded)
Turnkey Landfill (NH)	6,500 tons (All waste types combined - they could not specify for soils only)	188 months	26,880,000 tons (All waste types combined)	161 months	23,023,000 tons (All waste types combined)
South Hadley Landfill (MA)	500 tons	53 months (if the plan is approved to extend landfill life by three years)	580,000 tons	26 months (if the plan is approved to extend landfill life by three years)	286,000 tons
Chicopee Landfill (MA)	400 tons	56 months	400,000 tons (Facility-provided estimate from April/May 09, calculated estimate = ~490,000 tons)	29 months	255,000 tons
Worcester Landfill (MA) - Capping Project	Not provided (Calculated value = ~1,000 tons/day based on the total estimated amount of soil needed for the project)	44-56 months	1,400,000 tons * Facility-provided estimate	17-29 months	374,000 - 638,000 tons

Notes:

* - Information obtained by TRC through telephone communications in May 2009 and updated in August 2009.

** - Approximate tonnage as estimated by each facility (all based on operational factors - none are governed in this regard by their permits).

*** - Calculated value, except where noted (assume daily value x 22 operational days/month x # of months of remaining operational duration as provided by each facility).

October 12, 2011
CTPC to DEEP

Connecticut Petroleum Council

October 12, 2011

Via E-Mail {DEP.Cleanup.Transform@ct.gov}

RE: Six Draft Evaluation Workgroup Evaluations Reports:

1) Connecticut's Cleanup Programs
2) Finish Lines and How Risk and Other Factors Influence Closure
3) Entry Points and Triggers into the Current Connecticut Cleanup Programs
4) LEP Program Performance and Utilization
5) Pollution Responsibility and Liability Relief Provisions
6) Best Practices of Various State Cleanup Programs

The Connecticut Petroleum Council (CPC) appreciates the opportunity to comment on the Connecticut Department of Energy and Environmental Protection's (DEEP's) six workgroup evaluation reports.

Introduction

The DEEP has begun a transformation process that includes an evaluation of the entire remediation program. Stakeholder teams were established to review critical areas of the program. This effort is timely, as the EPA released in September its report on LUST State Programs backlog and CT ranked 49th amongst States in progress towards reducing backlog and was one of only three where new cases exceeded the closure rate. CPC supports the process the DEEP has initiated to transform the program.

We recognize the importance of the DEEP's stakeholder input and public participation process in its Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws. All stakeholders can agree with the DEEP's stated desired outcomes of:

1. Healthy Connecticut
2. Healthy Economy and Job Growth
3. Sustainable Communities
4. Environmental Justice

October 12, 2011
CTPC to DEEP

The Workgroups had a very short time to prepare their reports and CPC acknowledges that their work product makes substantial recommendations that would significantly improve the program. CPC agrees with many of the recommendations and submits this response to highlight general areas of agreement as well as make several further detailed recommendations to:

1) Simplify the Program to Promote Site Clean-up and Economic Development

2) Build a Sustainable Risk Based Program

3) Continue Stakeholder Participation in the Transformation Process

Attached please find more detailed comments on each of the workgroups reports. CPC looks forward to ongoing dialogue with DEEP and other stakeholders on this developing program. Please do not hesitate to contact me if you have any questions about these comments or require further information. Thank you for your time and consideration.

Sincerely,

Steven Guveyan
Executive Director

Attachment

October 12, 2011
CTPC to DEEP

Workgroup 1

Evaluation of Connecticut's Cleanup Programs – Current State

The purpose of this workgroup was to evaluate the status of the current cleanup programs in Connecticut in regards to factors such as effectiveness and functionality. A review of the various "programs" currently in place determined that there was a lack of available or usable information to form detailed conclusions; however, this also confirms that the current programs are disjointed and lack effective and clear direction to perform protective, cost efficient and timely cleanups of contaminated properties.

The recommendations of the group were to develop a more unified program to handle the reporting, investigation, and remediation of releases and contaminated sites. The program would contain specific milestones points in the process, allow for improved and increased regulatory enforcement, and the use of risk based standards.

Based on our review of the workgroup report, we are in agreement with the findings of the current status of cleanup programs in Connecticut. It is difficult to navigate through the various regulations and requirements which at times are vague and inconsistent with other programs. Currently, only a small number of contaminated sites actually fall within a defined program which can lead to problems during property transfers or with third party issues. If the entireties of all the workgroups recommendations are implemented, then there would be significant benefits to having all sites under a single regulatory structure.

We are in agreement that a simpler, unified or more structured program should be implemented which would allow for quicker and more efficient cleanups all the while being protective of human health and the environment. We emphasize the recommendation for a sustainable risk based approach which we believe will address all concerns and allow for the completion of more property clean-ups in Connecticut which will overall, be a benefit to the environment and the economic growth of the state. The risk evaluation and site specific clean-up standards should take into account many factors including but not limited to site location, sensitive receptor pathways, and current and future use of the site. More self implementing options should be built into the new program but that may also require the need for modifications to the current LEP program which was addressed in more detail by Workgroup No. 4.

Enforcement should be focused towards recalcitrant parties. There should also be a focus on adopting programs or portions of programs from other states where the program in place is known to work.

October 12, 2011
CTPC to DEEP

Workgroup 2

Evaluation of Finish Lines and How Risk and Other Factors Influence Closure

A comprehensive effort to identify the current barriers about finish lines and risk on site closure was undertaken by the CT environmental agency. As stated by the workgroup, it is evident they need to seek a risk-based approach to be protective of human health and the environment and expedite closures in Connecticut. Our views of the key points are classified in three main groups:

1) Findings of the working group

We agree with common issues highlighted by the report:

- The need of a clear understanding of site conditions (i.e. water use, plume stability),
- the way that groundwater is classified ,
- the process of establishing site specific remedial goals,
- the current and potential future land use,
- the lack of clear risk- endpoints,
- the option to use institutional controls is one of the most representative findings.

A particularly important finding is the special focus on balancing cost against the overall risk and long term environmental benefits, demonstrating the intention of including sustainability principles in the decision-making process.

2) Opportunities to formulate a cost effective, sustainable, risk-based program

Additional consideration needs to be taken into account to transform the current CT scheme to a sustainable risk-based program, below some key points that are recommended to examine:

1. Adoption of the EPA guidelines, as recommended by the workgroup, represents the most practical approach. This guidance has been widely recognized in different states in the US as well as best practice for the international community.
2. Development of comprehensive conceptual site model. Focus on source-pathway-receptor is essential to effective risk management strategies.
3. A well recognized point of discussion is the presence of NAPL in wells and its misconceptions about realistic recoverability and associated risk. The risk-based framework needs to recognize the latest scientific developments about NAPL migration and composition and allow site closure when NAPL plumes are stable and its presence does not represent risk[1].
4. A clear definition of the need for remediation should be included; this involves the development of a tiered approach and acceptable levels of risk. For instance,

[1] API. Interactive LNAPL guidance.

acceptable risk limit is generally adopted as $1X10^{-6}$. However, some states (i.e., Kansas and Michigan) adopted different values (i.e., $1X10^{-5}$). Misconceptions about risk acceptability are discussed in reference material (Kelly) [2].

5. For the specific case of hydrocarbons, the use of TPH is not helpful in risk evaluation. The TPH indicator was envisioned as a screening tool to assist selection of compounds of concern, and not to be used as a compound of concern by itself. Cost-effective risk-based approach should incorporate those compounds potentially representing health and ecological hazards (e.g., benzene, toluene, ethylbenzene, xylenes, naphthalene, etc).
6. Inclusion of multiple alternative risk-based endpoints is considered an important tool to be protective and expedite sites closures. Demonstration of technical impracticability[3], plume stability, mass flux, mass discharge, low treat sites, overall sustainability, are some examples of potential alternatives to be considered in the Connecticut risk-based scheme.
7. Sustainable remediation is a developing concept that is evolutionary to Risk Based remediation and should be allowed to develop in CT. The Sustainable Remediation Forum (SURF), Interstate Regulatory Council (ITRC), and American Society for Testing and Materials (ASTM) have either published or are developing frameworks and guidance on how to do Sustainable Remediation and CT should incorporate these into its program.

3) Support information from global sustainable risk-based schemes

In US the use of risk-based approach is well recognized. The report from the working group pointed out some differences among states. An ITRC[4] report was published in 2005 and examined the risk-based screening values for corrective action or end-points among several states in US. The main findings of the report are the lack of alignment between each state (particularly in the scientific basis), transparency of the use of default values and communication of the results. All can be solved by the adoption of the EPA guidelines by CT.

In the international context, a risk-based approach is recognized as best practice. An important fact to highlight is countries facing land use constraints, such as UK and the European Union[5], effectively implemented risk-based management in their regulations. Particularly in the case of UK, regulators and the regulated community are moving beyond the technical risk to a more holistic view, incorporating social and economic dimensions.

Key elements supportive of sustainable risk-based remediation from international sources:

[2] Kelly, Kathryn. The myth of 10^{-6} as a definition of acceptable risk. (1991). Delta Toxicology Inc.
[3] U.S. Army Environmental Center. Technical impracticability assessments: Guidelines for site applicability and implementation. (2004).
[4] Examination of risk-based screening values and approaches of selected states. ITRC. 2005
[5] Assessing risks from contaminated sites: Policy and practice in 16 European countries. (1999). http://www.commonforum.eu/publications_caracas.asp

- Risk-based approach is protective of human health and the environment. Researchers have reported that after product releases, a minimal percentage of those releases may impact sensitive receptors (Daines, et. all)[6].
- The most sustainable approach to managing potential risk to water quality from industrial facilities is to take a site-specific, risk-based approach to prevention and remediation[7]
- Given the variability of hydrogeological factors, site specific is a more suitable approach for risk management, instead of generic approach
- Understanding of site specific conditions and process acting on compounds of concern is considered the basis for risk management[8].
- Balancing cost and environmental, social and economical benefits it is a priority for the current economical environment[9].

[6] Daines et all (2011). An analysis of the environmental sensitivity of retail filling stations locations across Europe. Quarterly Journal of Engineering Geology and Hydrogeology 2011; v.44; p. 307-319
[7] Idem
[8] Smith, J.W.N. (2006). Assessing risk to groundwater from contaminated soils. Soil and use management.
[9] Applying sustainable development principles to contaminated land Management using the SuRF-UK framework.

October 12, 2011
CTPC to DEEP

Workgroup 3

Evaluation of Entry Points and Triggers into the Current Connecticut Cleanup Program

The purpose of this workgroup was to evaluate the current trigger (entry) points for potential responsible parties into the various environmental cleanup programs in Connecticut and evaluate if these points are clear, if they are risk based or release based, if they are applicable to the type of release, and if the "way out" of the remedial program was risk based and also commensurate with the circumstance. The findings were that the existing statutes (of the various programs) did not include uniform, consistent triggers, did not create a level playing field for the various polluted sites, and created a strained regulatory system bogged down with low risk/low priority sites that could be affecting the remediation of larger high risk sites.

The recommendations of the group were to develop a more unified, cohesive, and comprehensive environmental statute (Super Statute) that governs pollution, define a clear and unambiguous set of events or conditions that define when a responsible party must take action, and also create a similar process for defining the required actions for closure that is protective of human health and the environment. The workgroup expressed concern that the proposed vision may be difficult to achieve and recommended that in the absence of achieving the "one program" vision, that revisions to existing statutes could be implemented to improve the current system. Due to time limitations, the workgroup chose to use the Transfer Act (CGS section 22a-134), Voluntary Remediation Programs (CGS sections 22a-133x and 22a-133y), Significant Environmental Hazard Notification Program (CGS section 22a-6u), and Spill Reporting (CGS section 22a-450 and DEEPs proposed regulations) as the major programs to evaluate for the above noted triggers. The workgroup also discussed the ability to not report certain releases if remedial efforts were undertaken in specific time periods. Finally the workgroup developed an example of proposed entry points in certain circumstances, some of which were fairly detailed.

Based on our review of the workgroup report, we are in agreement that the current system does not provide clear guidance on entering the various current programs and that once entered into a program, a site can be viewed the same for a minor release that was remediated quickly as that of a site with a major environmental problem with multiple issues. It also acknowledges that some heavily polluted sites can avoid entry into regulatory programs while others default in with minor issues.

We agree that a transformation must be completed and that one uniform program would be the best solution although modification of current programs may also be beneficial in the short term. We feel that further careful evaluation of the trigger points must be conducted to account for as many known scenarios as possible to try and eliminate unnecessary reporting (for example, reporting based on a field screening reading of 5 ppmv in soil at a gasoline station does not seem practical).

We also believe that the reporting responsibility needs to be carefully considered as it would not be beneficial for the burden of reporting to fall on parties that are working on the site with historic problems but have no control over the current day to day operations of the site, which may be the cause of a newly reportable condition.

October 12, 2011
CTPC to DEEP

Workgroup 4

Evaluation of LEP Program Performance and Utilization

The purpose of this workgroup was to evaluate the current status of the Licensed Environmental Professional (LEP) program, review the current Audit process, and evaluate the use, functionality, and effectiveness of the LEP Board. The group had numerous findings following their review of available information which included a comparison of the LEP program against the privatized programs in place in Massachusetts and New Jersey. These findings determined that in CT, all releases to the subsurface are not captured under one regulatory program and that the LEP program in CT does not have a set of regulations that specifically establish the "standard of care" for an LEP.

It was shown that due to many factors, an extraordinarily high percentage of sites in the LEP program do not get closed out. Also, the LEP Audit process was shown to be lengthy and cumbersome with a high uncertainty in regards to the outcome and the Audit procedure is not set forth in regulation. It was also shown that although the LEP's investigation is completed using "prevailing standards and guidelines", it is remediated in accordance with the Remediation Standard Regulations (RSRs) which only specify endpoint concentrations that must be met.

The workgroup concluded that for effective transformation to occur, Connecticut should move forward with a complete revision of the LEP program, which could include some aspects of the existing program.

A few of the key findings which were ultimately determined to be recommendations are as follows:

- enact regulations that address how a site moves through the program
- establish a single cleanup program
- establish milestones to track progress of cleanups
- enact regulations for an Audit program that is similar to the Massachusetts LSP Auditing program,
- create a state regulatory process that allows LEP's a clear understanding of expectations and standards of care,
- create an ongoing workgroup that will continue to examine the effectiveness of the LEP program and will allow for input from all affected parties,
- further define the roles of the LEP and DEEP via regulations to allow for legitimate differences in professional judgment and opinion while protecting human health and the environment.

Following our review of the workgroup findings and recommendations, we agree that there needs to be a re-working of the LEP program to allow for more concise direction for the LEP's and transparency in the functioning of the program. The workgroup believes that adopting the Audit format of the Massachusetts LSP program would be beneficial. Additionally, prior to adopting any new regulations, all stakeholders involved in the LSP program, especially the LSP's be heard from to prevent creating a program with already known problems.

October 12, 2011
CTPC to DEEP

Workgroup 5

Evaluation of Pollution Responsibility and Liability Relief Provisions

Workgroup 5's recommendation that the legislature adopt a unified law that covers all pollution and liability relief in Connecticut makes sense in light of the expressed goal to make the unified law easier to understand and work with to achieve a common goal of efficient remediation of contaminated properties.

Traditionally, in many States, UST programs often have more streamlined rules due to their high site count and somewhat similar situations. For example, CT has a reimbursement program primarily for UST cases and UST cases have been exempt from Transfer Act which provide for incentive to remediate and efficient property transfers respectively. We recommend that these UST specific policies remain in effect under a unified system.

The suggested Tier responsibility system sets out the principle that the Polluter Pay, but there are some items that are overlooked. For example, as a gas station owner/operator or a former gas station owner/operator, certain monies were paid into the Petroleum Clean-Up Fund Account for the purpose of being able to seek reimbursement from this Fund as the Responsible Party set out to assess and clean up petroleum contamination. The following items should be addressed in this evaluation:

1. The Fund should be required to preserve the money paid into the Petroleum Clean-Up Fund in order to provide reimbursement to owners/operators of underground storage tanks ("USTs") who take on the responsibility of clean up;

2. The Regulations and Milestones that UST owners/operators must follow and meet should be simplified and the funds should be dispersed in an expedient manner;

3. Finally, there should be some modifications to the regulations that take into account Responsible Parties who are performing cleanup on Sites they no longer own or operate so that the requirements to qualify for reimbursement of the clean-up costs are simplified and reimbursement is more easily obtainable.

With regard to the suggestions regarding the recommendation to streamline the liability relief process to include milestones or benchmarks, this recommendation is important not only for the Responsible Party performing the clean up, but also the current owner or any potential purchaser. There should be some easily accessible documents that are readily available to all so that any interested party can keep track of the progress being made on the clean up and then a letter-of-closure should be issued to certify all standards have been met.

Finally, the suggestion/recommendation to incorporate risk-based analysis into the clean-up standards is an excellent recommendation that we strongly support. We believe a risk-based approach will allow for cost effective clean-ups to be completed which are protective of human health and the environment and still promote economic development in the State.

October 12, 2011
CTPC to DEEP

Workgroup 6

Evaluation of Best Practices of Various State Cleanup Programs

The purpose of this workgroup was to identify successful cleanup programs/systems in other States or countries, identify what makes them successful, and recommend in whole or in part in Connecticut. The team identified five States to review for best practices: Massachusetts, New Jersey, Pennsylvania, Michigan, and Wisconsin.

We agree with the team's recommendations of:

- an affirmative system
- single cleanup system
- timelines for achieving milestones (need to flexible and site specific)
- identification of higher risks (prioritization)
- flexibility for closure (risk based alternatives)
- clear "all done" certainty and documentation
- transparency
- institute a public advisory board

In addition to the team's recommendations, we would add that there are additional excellent resources (including guidance documents) available to the DEEP that could quickly be integrated into the program with little time or effort. For example the Interstate Technology & Regulatory Council (ITRC) has a multitude of technical regulatory (guidance) and other documents that have been developed by a wide range of stakeholders including a large number of State program specialists. These documents could be used by easily and quickly just be reference and the DEEP can have confidence in their technical soundness due to the rigid process used to develop them. Additional similar documents can be used from the US EPA, ASTM, ASTSWMO, API, and other States.

In the case of licensed site professionals, effective programs need to establish a process to reconcile professional differences in the application of rules and guidance. For example, New Jersey has developed an audit program that allows a board with licensed site professionals and agency to review decisions and make rulings. Flexibility is key in a program that is efficient and effective and technical differences between licensed site professionals and a proper technical dispute system needs to be established in such a manner that does not inhibit quick, effective progress in remediation.

November 14, 2011 Sent via email

Mr. Graham Stevens
Connecticut Department of Energy
and Environmental Protection
79 Elm Street
Hartford, Connecticut 06106

Re: Transformation of the Connecticut's Clean-up Laws and the Six Draft Workgroup Evaluations Reports

Dear Mr. Stevens:

On behalf of Cumberland Farms, Inc. (CFI), we appreciate the opportunity to provide these comments regarding the Connecticut Department of Energy and Environmental Protection (CT DEEP) Evaluation and Transformation process and the six stakeholder workgroup evaluation reports. CFI was an active participant in the process, taking part in two of the workgroups (Licensed Environmental Professional (LEP) Performance and Utilization and Entry Points and Triggers into the Current Connecticut Cleanup Programs) and we found the experience to be very positive, forward thinking, stimulating, and very well organized. The CT DEEP should be commended for this collaborative effort. We are hopeful that the many reasoned and sound recommendations put forth by the six workgroups can now be effectively implemented to foster a clean-up program in Connecticut that protects human health and the environment and also factors economic considerations that are critical for a healthy and vibrant economy.

We offer the following comments:

- We agree with the conclusion from multiple workgroups that a simpler, unified clean-up program should be implemented. The current multi-program approach is confusing and inhibits effective clean-ups. A unified program will facilitate quicker and more efficient remediation while still being protective of human health and the environment.

- Similarly, we agree with multiple workgroups that the clean-up program should incorporate a sustainable risk-based approach that takes into account many factors including but not limited to site location, sensitive receptor pathways, current and future use of the site and pertinent economic factors. We have significant experience working in Massachusetts and find the Massachusetts Contingency Plan (310 CMR 40.000) to be an exemplary model for effective regulations that can serve as a model for a new Connecticut program.

- We believe that there is a need to "level the playing field" when it comes to spill reporting and that a clear and unambiguous set of events or conditions that define when a

responsible party must take action should be developed. Reporting timeframes based upon the risk of the event or condition should also be developed. For example, gasoline surface spills over a designated volume (e.g, 10 gallons) that directly impact the environment should be immediately reported. However, reporting of incidental surface spills at service stations (e.g., less than 10 gallons) should not be required if these do not reach the environment and are cleaned-up immediately. This will significantly reduce the number of spills reported and will allow CT DEEP to focus valuable resources on spills that actually pose a risk to human health and the environment.

- We agree that there should be an expansion of the role of LEPs and that clear, concise guidelines should be established for all facets of the LEP program, including expanding their project oversight role and establishing clear guidelines for project progression, standard of care and audits. We recommend that the CT DEEP reference the Massachusetts Licensed Site Professional Program (309 CMR 1.00-9.00) as an example of an effective semi-privatized model.

- As part of the transformation process, we recommend that Connecticut adopt a more streamlined approach for the adoption of environmental regulations that removes the step of having to obtain legislative approval. While the need for legislative approval of the governing statue is absolutely necessary, promulgation of regulations by CT DEEP under the statute will allow the flexibility to issue and revise implementing regulations which reflect industry standard of care and best available science.

- Finally, we strongly recommend that the stakeholder process continue throughout the development of any new clean-up laws and associated regulations. The process was very effective in developing recommendations for the program, so it makes good sense to continue it to help ensure that the program is a success.

We hope that you will consider these comments and that the CT DEEP will see this process through to establish what all six stakeholder workgroups seem to so clearly have envisioned – a simpler, unified, risk-based program that ensures protection of human health and the environment but also recognizes the importance of achieving site clean-ups and encouraging economic development.

Please contact Martin Hilfinger of Cumberland Gulf if you have any questions regarding these comments or would like to speak further on the matter. Mr. Hilfinger can be reached at telephone number:

(508) 270-4484

Sincerely,

Martin F. Hilfinger, P.G., LSP
Senior Project Manager

Raymond F. Leather, P.E., P.O.E., LSP
Vice President of Environmental Affairs

Elsie Patton - Comments on Draft Evaluation Workgroup Reports

I believe that the best time to conduct remediation of historical contamination is when a site is redeveloped or otherwise transferred. This is the best time to bring financial resources to bear on contamination. It is also the best time to incorporate remediation strategies that are the most cost effective into the redevelopment process.

However, in addition to that, there should be an automatic obligation to address contamination upon discovery (regardless of whether the property is transferred) for new reportable spills (assuming that spill regs can ever be adopted) or for contamination that poses a significant short term risk to human health or which threatens the health of neighbors (e.g. significant environmental hazards with an additional threshold to address soil that poses a significant threat to groundwater quality)

Further knowledge of activities that could have resulted in contamination should trigger an automatic obligation to investigate (a base-line targeted environmental assessment) to determine whether any short term actions to protect public health are necessary. Then when the public complains that a property is just sitting there with no final remedial actions in sight, the agency can assure them that any short term risks have been addressed and that rest of the remediation will be accomplished when the site is redeveloped.

The obligation to investigate (at least in a targeted fashion) up front; to remediate significant hazards and to complete remediation at the time of transfer or redevelopment should apply to any property that is or was used for industrial purposes, and to commercial properties where petroleum products or hazardous substances were used or stored. Properties that are only residential should be carved out unless there is a reportable spill.

This approach would also work for the LUST program. For a gas station, any indication of a leak from an UST would have to be investigated, and any risk to off site drinking water wells, any volatilization risks and any floating product would have to be addressed immediately. That short term remediation could be considered sufficient closure for the purposes of reporting to EPA. Then upon transfer any residual soil or groundwater contamination would have to be addressed whether from a leaking tank or from a former drywell in the service bay. .

This approach also works for PCB contamination. The initial investigation would identify whether there is a remediation obligation under TSCA or remediation to address a significant risk, and then the rest could be addressed at the time of redevelopment.

Special Considerations for Urban fill, Asphalt-contaminated Soil and Pesticide-contaminated soil.

The Department will no doubt be under pressure to carve out the responsibility to address these wide spread pollution problems. However while widespread, these soil are not trivial risks to human health that can be ignored.

However, in recognition of the wide spread nature of these contaminants, for urban fill contaminated primarily with PAHs and perhaps some metals like arsenic and lead, and for soil that contains ground-up asphalt fragments, I would recommend an approach that limits exposure to these soils but with a less stringent and fewer long term regulatory obligations.

First, as the RSRs already does for typical urban fill, exempt them from compliance with the pollutant mobility criteria, provided no existing drinking water wells are contaminated by the fill or the pesticide contaminated soil. This is a big leap for pesticides, but if any drinking water wells that are affected by the pesticide contamination are provided an alternative source of water, then defaulting to natural attenuation in both the soil and groundwater would not involve a risk to human health.

Second, to address the direct exposure issues posed by fill with asphalt fragments, allow a more flexible approach (okay slightly less stringent approach). I used to approve rendering PAH contaminated soil inaccessible beneath pavement without the two foot buffer zone. If one were to excavate two feet of PAH contaminated soil, bring in two feet of clean soil and then pave, you would have the same or higher concentrations of PAHs from the paving process in that two foot buffer zone anyway. Now the Department considers such an approach as an engineered control and is looking for at least a long term monitoring and maintenance program and is requiring the monitoring plan to be incorporated into the ELUR. But I think you should be going in the other direction. I think that if the soil is beneath a pavement with a wearing layer, then only a notice on the land records (not an ELUR) should be sufficient to provide notice that contaminated soil is present. If pavement isn't workable then provide some other ways to easily cover the soil (a plastic warning layer with six inches of gravel or even topsoil in an area that is landscaped for example). Of course this is less protective than the traditional methods of rendering soil inaccessible in accordance with the RSRs, but this would be much more protective than carving urban fill and asphalt contaminated soil out of any requirement to remediate.

As for dealing with direct exposure criteria for pesticides, I think that there are enough options for achieving compliance under the RSRs including soil mixing or rendering it inaccessible. In my experience compliance with the PMC was the really problematic issue because compliance with the PMC could only be achieved by excavation.

Two other things you should consider regarding PAH contaminated soil. In the past, members of the Department of Public Health have stated in public that people shouldn't worry about exposure to PAHs at the concentrations in the RSRs. (Once for street

sweepings used as fill at a residential development in Milford (Gary Ginsburg), and once in a public meeting where we were proposing to remediate soil with an average BaP concentration of less than 2 ppb for a playground in Waterbury (Stewart Chute). In other words, the health department did not back us up on the remediation standard for BaP. You should consider working with DPH to adjust the criteria upward to a concentration that they consider actionable.

The other thing you should consider is that if you have less stringent requirements for ensuring that the PAH contaminated soil stays inaccessible, then it should be coupled with a solid waste program that complies with the existing law and ensures that PAH contaminated soil that is excavated is treated as solid waste and disposed of properly at a licensed disposal facility or is reused on the site in accordance with the RSRs. This will help control the spread of contaminated soil to sites that are otherwise not contaminated. You can't have Solid Waste program staff saying that such soil can be reused on the site willy nilly without regard to the RSRs.

Sediments

Remediation of sediment poses significant challenges for a program that addresses contamination site by site or release by release. First determining what the appropriate remediation standard is incredibly time consuming unless you default to the most stringent threshold criteria. This is particularly problematic when a Brownfields developer is trying to estimate the costs of remediation early on in the planning process. Then, when dealing with a stream with multiple sources of contamination, you can clean up one hot spot, only to have the upstream contaminated sediment transported in the natural stream flow regime into your remediation area. I just don't think that the approach that works for soil and groundwater emanating from a source is transferable to sediment.

So, one way to address sediment would be that any person who has created or is responsible for a source of pollution that has affected sediment should be responsible to pay an amount determined by the extent and degree of contaminated sediment into a "Sediment Remediation Fund" controlled by DEP. DEP could establish environmental priorities for sediment remediation projects by stream reach or segment that could be accomplished and result in real environmental benefits to the whole system. The Sediment Remediation Fund could then be used by DEP to establish the site specific sediment standard for that reach and perform the remediation projects that make the most environmental sense. At the same time, the party undertaking cleanup could have certainty as to the costs of remediation fairly early in the process.

I would hate to see sediment remediation just punted because it is hard to establish an agreed upon ecological standard. At the same time, even if you agree upon a standard, spot sediment removal in a larger contaminated system is not going to have any significant environmental benefit.

Graham Stevens
CT Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106

November 14, 2011

Re: Comments on Comprehensive Evaluation and Transformation of CT's Cleanup Laws

Thank you for the opportunity to submit comments. The undersigned environmental organizations provide these priority recommendations to DEEP as it considers its report to the legislature on revision of contaminated site remediation programs in the state.

Submitted by
Sierra Club-Connecticut Chapter, Martin Mador, Legislative Chair
Connecticut Coalition for Environmental Justice, Mark A. Mitchell, Senior Policy Advisor
Rivers Alliance of Connecticut, Margaret Miner, Executive Director
Citizens for Clean Groundwater, Lisa Wadge, Executive Director
Connecticut Fund for the Environment, Jessica Morowitz, Legal Fellow
Norwalk Neighbors for Environmental Justice, Diane Lauricella
ENE (Environment Northeast), Joyce E. Kung, Connecticut Director
1000 Friends of Connecticut, Nichole Strack, Executive Director (endorses this statement, but will submit recommendations separately on additional topics not included here)
Farmington River Watershed Association, Eileen Fielding, Executive Director

We recommend the phrase "contaminated site" be used, rather than the more restrictive term "brownfield". It encompasses far more sites in need of remediation, whereas the "brownfield" appellation specifically refers only to sites considering their reuse potential.

DEEP has engaged in a three month process to assemble recommendations for an overhaul of the state's remediation programs. The Visioning documents and reports of the six Working Groups constitute a considerable body of observation and comment. However, the time frame imposed by the legislature for an effort of this scope was clearly inadequate, offered little opportunity to engage the general public, and compromised the ability of the working groups to do much more than document the existing system. We are concerned that comprehensive legislative proposals to re-invent Connecticut's Contaminated Site laws and programs based on this process are premature. We recommend that the agency and legislature take the time necessary to get adequate public, local government, and other stakeholder input before conducting a major overhaul of the contaminated site remediation process.

A re-engineered Contaminated Site Remediation program cannot succeed without adequate resources at DEEP to see it though. If the legislature and governor wish to see the state seriously and significantly address remediation of the thousands of state contaminated sites so that human health and the environment are protected and the land put back into productive use,

then DEEP must have the staff and resources to do this. Otherwise, we face the same continuing failure to effectively address this chronic problem which we have endured for several decades.

DEEP must ensure that the agency at the management level effectively oversees the program, and that priorities for allocation of staff resources are clearly established.

As various agencies will "own" a piece of the remediation program, the transformation of the state's contaminated site cleanup program must ensure that agencies communicate at the commissioner and staff levels. This would include at least DEEP, DECD, DPH, DOT, OPM, and the Attorney General's office. It will be important to structure the programs so that divided responsibilities do not act to hinder remediation efforts.

A periodic report to the public detailing remediation progress, written as both a narrative and statistical overview, should be required, with input from all agencies with remediation responsibilities.

The LEP program has become an integral part of remediation since 1995. There are current proposals to significantly expand LEP authority. This presents a tangible conflict of interest for LEPs, which can lead to inadequate remediation and loss of public confidence in the program. The state must be wary of establishing a system where LEPs contracted to the Responsible Party (RP), paid directly by the RP, and reportable to the RP, have authority over all phases of remediation, including endpoints, with minimal oversight by the agency. This potential loss of public confidence can be minimized by:

-providing adequate agency managerial supervision and monitoring of decisions and progress
-ensuring effective agency management oversight of LEP activities
-instituting a robust auditing program, where an LEP has an expectation of periodic audits in addition to independent unannounced inspections and audits
-instituting robust sanctions for malfeasance
-instituting both disincentives and sanctions for substandard LEP performance which requires excessive agency oversight

Keep in mind that, whenever responsibility is outsourced for assessing contamination and performing remediation, the potential will exist for serious conflicts of interest and results which can fail the public interest.

DEEP should establish clear standards for when a site requires LEP involvement.

The state should create a public oversight board with designated membership such that environmental attorneys and LEPs do not dominate the board. They should ensure strong public stakeholder representation, including statewide environmental organizations, on the board. The board should be charged with oversight of the program overall as well as the LEP delegated authority structure.

All contaminated sites should be subject to affirmative cleanup obligations and deadlines. Priority attention should be based on risk assessments of the threat to human and environmental

health, with economic considerations as secondary considerations. Threats to public and private drinking water supplies and threats to the public of direct exposure should be prime priorities.

Contaminated sites which impact urban infill, revitalization of cities, and Transit Oriented Development should receive expedited attention and incentives for remediation.

Risk evaluations must be science based, and must address both human and environmental health. While economic considerations are important in determining site remediation efforts, they must not compromise or eclipse health assessments.

The state should develop economic incentive programs to facilitate site remediation where the risks are significant but the expense a major deterrence.

The new program must recognize the importance of enforcement in the remediation process, and include both the staffing and enforcement tools to ensure compliance. The tools must include clear and certain penalties for missing deadlines for compliance. The penalty levels must be high enough that they have a deterrent effect and cannot be simply considered the cost of doing business. Both the agencies and the Attorney General's office must have adequate staff resources to monitor performance and take enforcement action as needed.

The state should ensure that the body of remediation programs and strategies provide clarity, predictability and clear standards, which will create a level playing field for all participants.

Creation of additional remediation standards other than residential and commercial should be considered with great caution, and only where manifestly appropriate. Any new standards should not shortchange critical sites, such as schools.

Endpoints such as ELURs, which provide for less than complete remediation, must be appropriately chosen, and must not unnecessarily lock in contamination permanently in exchange for the economic savings they offer. There should be substantial community input in the selection of ELURs as a remediation option.

Regardless of changes to the existing remediation program, we must establish a publically web-accessible database of all contaminated sites, which will track those sites from discovery of contamination, triggers requiring a specific program, entry into a program, determination of remediation strategy and standards, remediation mileposts, through arrival at an endpoint and program release. In creating this database, the state should ensure that lay persons can effectively access the database. All identified contaminated sites must be tracked by this data facility, regardless of remediation program enrollment. Submission requirements must apply to all Responsible Parties, Certifying Parties, LEPs, and all others involved in a remediation effort. Additionally, the state should mandate timely submission of new information with penalties for non-compliance. The database should be geo-searchable.

The state should designate notice requirements for a contaminated site to abutting property owners and residents, neighborhood groups, town governments, local and statewide

environmental organizations, sanitarians and health districts, P&Z commissions, Inland Wetlands Commissions Economic Development commissions, Conservation Commissions, and Regional Planning Organizations. Requirements should include mandatory notice directly to some classes of stakeholders as well as notice to the general public.

The state should ensure that there is a robust opportunity for community input into site decision making, while adopting appropriate deadlines for comments such that extended windows for comment do not serve to unnecessarily delay remediation.

We suggest devising a method to conduct risk assessments and select remediation strategies using a model similar the EPA's TMDL program, where a "site" is defined by physical considerations, such as an aquifer, rather than strictly by property boundaries. This should particularly apply where multiple contamination sources exist.

While we recognize that current law is inadequate, we want to be sure that a new system of law provides the proper balance of interests to achieve both prompt and effective cleanup of contaminated sites. For example, our willingness to support additional LEP responsibility depends on the imposition of clear, affirmative deadlines for cleaning up contamination, as well as robust oversight of the LEPs' remediation decisions. We call on DEEP to make sure there is ample opportunity to review and comment on DEEP's forthcoming report and legislative proposal, so as to ensure that a robust and balanced program is achieved.

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October 28, 2011

Mr. Graham Stevens
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Dear Graham:

The EPOC Board of Directors has reviewed the workgroup reports submitted on September 29th in support of Commissioner Esty's 2011 initiative to comprehensively evaluate and transform Connecticut's cleanup laws, and we submit this document as a formal public comment.

Many EPOC members participated in the workgroups and we found the process to be a constructive one. We understand that DEEP is in the process of consolidating the key findings of the reports into one comprehensive report that will form the basis of future proposals to modify Connecticut's clean-up statutes and regulations. The EPOC Board strongly encourages DEEP to develop a comprehensive report that reflects the key findings and recommendations of the workgroups.

Although there was not always consensus within the workgroups, our review of the reports revealed several widely supported themes that EPOC supports. We believe that it is critical that each of these themes be presented and considered within the comprehensive report and resulting legislative proposal(s):

- **Consistent Regulatory Scheme**: Current programs do not require the same degree of investigation and remediation for all releases that are encountered, and many releases are not subject to any programmatic requirements (e.g., releases identified through private due diligence site investigations). Where program requirements do apply (e.g., for Property Transfer Act sites), too often such requirements are not met or are not met in a timely manner. The new regulatory scheme should ensure that all releases (including historical releases) are appropriately reported and addressed by cleanup statutes and/or regulations, and that closure can be attained for releases in a protective, timely, and cost-effective manner.

- **Unified Environmental Remediation Statute**: Develop a Unified Environmental Remediation Statue that would enable the development of clear, risk-based, unambiguous, and practical regulations that would detail required actions from discovery to closure that are protective of human health and the environment.

- **Sensible Exit Points**: Any new triggers that require entry into the environmental program must have exits commensurate with the degree and extent of risk to human health and the environment associated with an event or condition, otherwise the program could be

- overburdened with low-priority sites and will be ineffective in identifying priorities. Develop reasonable approaches for issues that broadly exist State-wide such as urban fill, asphalt, and legally applied agricultural pesticides.

- **Self-Implementing**: The program(s) should be self-implementing in nearly every way by LEPs, and administered and overseen in an executive capacity by the DEEP through development of guidance, periodic auditing, record keeping and benchmarking. By following DEEP guidance and without additional DEEP approvals, LEPs should be able to develop criteria for additional polluting substances, perform site-specific human health and ecological risk assessments, implement ELURs and implement some engineering controls.

- **Risk-Based Considerations**: Use of risk-based alternatives to State's numeric cleanup criteria should be encouraged. DEEP should utilize and take advantage of EPA research and source documents such as the EPA risk assessment guidance to aid in risk-based decision-making and enhanced self-implementation of site cleanup by LEPs.

- **Transparency**: Reports and agency decisions should be available on-line. DEEP should move toward a system of electronic deliverables and electronic data storage as has been done in many other states.

We applaud the Department for its initiative as it looks to develop a more holistic and practical set of environmental laws, regulations, and policies in the State of Connecticut and we look forward to being involved in a continued supportive role.

Sincerely,

Seth Molofsky
Executive Director

Ken Feathers – Comments on Draft Evaluation Workgroup Reports

Comments related to workgroup report identified in header. Page references to area of report triggering comment in many instances, however the Finish lines report was very stimulating and there are comments that are unassociated with any particular comment, or relate to several areas of the report. Many of the comments overlap or interrelate and this could be shorter with more editing, where concepts are in multiple reports they are repeated as identified.

Note that I think many of the criticisms of the remediation program do not need statutory changes to address, but could be addressed by policy clarification or regulatory changes. Having said this, there are some places where statutory changes could improve the program. Notably these are the following:

- Trigger for remedial requirements needs to be broadened to capture at least all potentially polluted non-active facilities
- Long term obligations should be defined in a transferrable stewardship permit that allows monetization, identification of subsequent responsible party, and a clear mechanism for a party to shed future obligation by permit transference.
- At sites where the remedial cost exceeds property value public funding would allow cleanup to occur and should be driven by either of two mechanisms: environmental priority and economic potential. In either case, the state should acquire an interest in return for the funding, and private parties cannot be allowed to benefit. Any funding of this by a dedicated fee program should be a protected trust not subject to legislative redirection, and should be on top of a reasonable state appropriation.
- If non-release "background" pollution is exempted from cleanup the state needs to establish a statutory program to deal with this holistically, with funding as appropriate.
- Statutory changes might be needed to create a sediment TMDL program.

One theme throughout the reports is that there needs to be consistency. I think this can be achieved by better education of DEEP staff (both line staff answering questions and those doing audits) and consultants as to the expectations associated with the regulatory language. A standing technical committee should be created as a resource for this activity. Staff training should include periodic discussion of each major area of activity and what the standards for review are, and each major area should have an identified go0-to person who is affiliated with the standing technical committee.

In addition, continued development of written guidance, where appropriate, will help with this communication and establish continuity. Such guidance could be created by the standing committee or task focused workgroups. Guidance should be based on science, and may need to be complemented by policy determinations or regulatory changes that incorporate other issues raised in the workgroups. Science based decision rules and non-science policy determinations need to be clearly identified, appropriately justified, and transparently documented.

In many cases there are existing federal or peer reviewed technical documents already published that cover most of the science based issues. DEEP should establish a framework wherein such documents (EPA, DoD, DoE, or organizations such as ASTM or ITRC) are identified clearly as appropriately acceptable for defining the standard of care. Only where DEEP believes there is a clear gap in such acceptable publications or a minor issue with any such documents should DEEP need to develop its own documents. All cited documents should be maintained in a public repository in the file room for reference by DEEP staff and consultants who do not own their own copies of a cited document. Training on these documents should be a regular part of professional development for DEEP staff. (ITRC, the Interstate Technical Regulatory Council at itrcweb.org provides a model for technical focused peer reviewed guidance document development and training)

Evaluation of Best Practices of Various State Cleanup Programs

Page 6 last bullet - consider a combination of positive incentives for more comprehensive cleanups with negative incentives for less. When the highest use of land is not achieved there has been an impairment of the state's resources, even if the cleanup is to a risk standard, and natural resource damages should be assessed for the impairment. In some cases a natural attenuation process would continue to reduce pollution levels and this could be taken into account in damage assessment but for other pollutants there is always some impairment with an attendant need to monitor the land use to ensure it is consistent with the cleanup level.

Page 8 introduction summary misleads readers comparing to CT statistics, since the comparisons are not as straight across as the words suggest. Only by reading the entire summary and inferring the difference to CT can the MA program be accurately understood.

Page 17 I found several interesting points in the NJ program that would warrant additional consideration and discussion to see how they envision these new program aspects to work, and how they came to these approaches.

1. Site entry is triggered by cessation of activity. This does not automatically compel cleanup upon discovery at an active facility but does capture all sites where jobs have left, and would avoid the long vacancy periods of CT where factories are idled but transfer has not occurred. Ths could be a real incentive to avoidance of brownfields.
2. Several classes of site condition or responsible party behavior trigger active oversight. This could focus resources of the department where most appropriate, but could require more resources than current for a period until the regulated community adjusts its approach to cleanup (the takeaway comment on page 19 deemphasizes this departmental involvement in emphasizing the overall self-implementing nature of the program)

3. Permitting and annual fees for engineered controls and land use restrictions supports the needed long term care for sites that may become orphaned, with attendant cessation of fee payment and need for state to assume oversight. It also provides incentive to conduct a cleanup that is not dependant on these remedies.

Page 20 Pennsylvania seems to have at least two problematic provisions

1. There are a high number of sites that opted for site specific risk determinations. The nature of their other criteria classes, and the type of site specific determinations conducted should be examined to better understand why this occurred, and what the departmental workload for oversight is.
2. The provision that exit reports are deemed approved if no commented within 90 days, coupled with a high percentage of site specific risk determinations, seems risky for having marginal work be approved by default.

Page 23 – Pennsylvania also seems to have allocated significant resources to providing guidance to consultants and educating the regulated community. Their model should be further examined to determine if a small state like CT could develop a similar program or if the resources needed exceed our capacity.

Page 25 The Wisconsin provision for a programmatic exit with ongoing natural attenuation should be further examined as an alternative to the form IV, when the party wishes to have a walk away condition. It has several possible problems for implementation in CT because there would need to be 1) a regulation that, or staff who, determine the insurance fee; 2) a bureaucracy to manage the sites; and 3) a funding pool that cannot be raided by legislative action.

Evaluation of Pollution Responsibility and Liability relief Provisions

Page 8 any modifications for "urban fill" need to consider that our risk based criteria indicate that the pollutants may actually pose some risk, even if they should be managed differently from cleanup of releases. There is a right to know that should be considered in developing a solution. I think the results of the roundtable urban fill group may address this issue sufficiently.

Page 9 I believe that brownfield cleanup is in part so expensive because many consultants in the state, in part because of fear of audit and in part due to working to short deadlines by waiting until the last minute, are limited in the cleanup approaches they use. There is only limited utilization of emerging technologies for more cost effective real time site characterization, or use of exposure pathway focused cleanups dovetailed with redevelopment. If the state creates a "Bank" it should commit to smarter approaches.

Page 12 Any agreement with EPA may increase the requirement to consider eco-risk.

Evaluation of LEP Program Performance and Utilization

The recommendation that DEEP define expectations is good. I think the creation of checklists to accompany guidance may not be appropriate. I have seen many instances where completion of checklists, and addressing all items included, became the definition of the task, rather than common sense use of the checklist as a guide for the thought processes that they attempted to capture. A comprehensive checklist, blindly followed, will not simplify effort or reduce cost.

If DEEP is to better define technical expectations but maintain flexibility both the DEEP and the regulated community will need to become more sophisticated in their technical capabilities.

Evaluation of Connecticut's Cleanup Programs – Current State

Please consider the following edit on page 7 regarding text describing the SEH program:
"…have reached a "controlled" status, which means that there is no longer an active exposure pathway and risk, although there is a continued potential risk that requires monitoring. In either case lesser levels of contamination above remedial standards …"

Page 10 – there is no ongoing groundwater monitoring requirement in the RSRs for minor exceedances, merely an obligation to, in the future when you think criteria are met, do compliance demonstration. The misconception that quarterly monitoring is required prior to compliance demonstration is not founded upon a regulatory requirement.

Page 10 -- the statement that the TPH standard is not risk based is correct. However, because the detection of TPH indicates the presence of a mixture of pollutants of varying toxicity there should be a concern. For sites where the TPH standard is a cleanup driver, DEEP should entertain approval of an alternative evaluation of any TPH detection, to identify the specific compounds causing the detection and an evaluation of their toxicity.

Page 10 – I agree that there needs to be credit for partial remediation efforts such as soil standards met or some releases cleaned up but am concerned that the remaining issues at a site will be "forgotten" and never addressed because it could appear that cleanup is done. Any partial cleanup verification must ensure that the remaining environmental issues at a site are also addressed.

The cost issues raised on page 11 may reflect inefficiency or unfocused effort on the part of the consultant rather than any regulatory driver.

Page 12 recommendation to foster use of risk based cleanup must be accompanied by a mechanism to ensure that the risk assumptions used for the cleanup remain valid for the site, even if the responsible party is long gone.

Page 12 recommendation for more pragmatic public policy is appropriate from an individual responsible party point of view, but must be implemented in a manner that ensures that the public remains protected. Implementation of pragmatic approach to

urban fill could have serious environmental justice concerns if CT does not also address the fundamental risks associated with urban fill that will not be addressed as a result of pragmatism.

Some of the recommendations seem to be worded using excessive jargon and could be made clearer.

Several of the recommendations regarding cleanup requirements are already being implemented at the regulatory adoption level, and need not be incorporated in statutory modifications. Many others could also be implemented without statutory changes.

Entry Points and Triggers into the Current Connecticut Cleanup Program

Remedial expenditure of effort commensurate with risk is appropriate, and in the case of the RSRs optimally all actions are to the same flexible risk based approach. I infer the intent of the discussion is in part to declare some pollution inherently less risky than other pollution because of how it was released and/or cleaned up, to trigger less action. However, any evaluation of risk requires adequate characterization, regardless of the nature of the pollution, and until this characterization (which could vary in effort depending on the nature and age of the release) has been made, any evaluation of what is a low priority vs. high priority site is not defensible scientifically, but relies on experience and judgment. Any attempt to simplify and codify "experience and judgment" to define classes of sites without considering the full complexity of site specific chemistry, hydrologeology, chemical transport, hydrochemistry and receptors is unlikely to completely succeed, and sites may be prematurely dismissed even though their specific circumstance could pose risk, or conversely. On the other hand, early action response for a release could limit the area impacted, and thus the area requiring investigation and cleanup, and should not be discouraged. It is not the class of site so much as the timing of response, with early intervention providing better, more cost effective results, and able to use a wider range of remedial options, instead of waiting for the problem to spread or need to be addressed in a short timeframe due to a pending sale.

Page 11 The SEH program should be distinguished from remedial programs. It addresses short term risk, which is not necessarily the same as high risk, especially in the case of the requirement to report wells that are polluted but meet established potability criteria. The programmatic provision that allows avoiding reporting if abatement is conducted only applies to direct exposure soil risk, and has no requirement to document that the work was conducted. It therefore does not result in a record being established for future site evaluation to consult, and provides no DEEP review for quality assurance that the risk is truly abated. The SEH statute clearly defines an exit in section k: "abate such that notification would not be required". The SEH program implementation also incorporates longterm periodic revalidation that any hazards controlled by limiting receptor pathways, but not meeting the statutory performance standard, remain controlled.

Establishing a universal trigger is desirable, to prevent the current CT practice of avoidance of cleanup responsibility by not transferring a site. The MA concept of reportable quantities is appropriate as a trigger. There would need to be some minimal universal investigative requirement or those CT parties who currently do not enter programs will merely not even investigate sites, avoiding the trigger. New Jersey's approach has merit in inclusion of all non active facilities, but doesn't capture any active facilities, which may still have releases with associated risk that should not be ignored.

It is appropriate to have required response deadlines, rather than actions, mandated for immediate hazard and "non time critical high risk" sites. Any list of actions would have the risk of excluding the most appropriate action for a given scenario. I would have assumed any immediate hazard conditions were currently subject to public safety requirements involving local authorities and the Spill Response units. The significant hazard program is intended to address primarily non immediate but short term risks. It could be made self-implementing for the initial response rather than having it triggered by an acknowledgement letter, but the statute would need to also define more clearly who is responsible for implementation of an action, not just who reports the SEH. The SEH program focuses on receptor protection not source control, and thus needs better linkage with a requirement for source remedy implantation for long term permanent protection. It may serve as a starting point to defining higher risk sites that should have shorter timeframes for characterization and response in remedial programs. (however any remedial prioritization should also incorporate a tiered soil PMC response; PMC is omitted from the SEH program because it does not pose short term risk) Consider a tiered receptor/source approach for the universal program as a means of focusing efforts.

Evaluation of Finish Lines and How Risk and Other Factors Influence Closure.

Any endpoints that consider aquifer viability and legacy properties should not be established in a manner that compromises future resource utilization. One such compromise in the current regulations is the limited remedial response required for source areas in GB areas, even if these are high yield stratified drift aquifers that may prove necessary for use by future generations.

If business and financial considerations are to be considered in DEEP remedial programs business must provide more transparency as to the true financial picture, and DEEP needs staff resources for evaluation of the financials.

Page 12 pesticides often also pose a DEC issue, as evidenced by several recent high profile playing field cleanups.

Page 12 While financial uncertainties certainly affect redevelopment I believe that much of the uncertainty is a result of inadequate characterization and contingency planning for remediation. Flexibility of methodology is not constrained except for any permit requirements, and should not be confused with flexibility of goals, which could perhaps be made greater and clarified.

Page 14. The only reason a lack of deadlines results in longer timeframe to achieve site closure is the responsible party's avoidance of or delay of implementation of a predicted necessary remedy to defer cost, often because there is no pending redevelopment to offset the cashflow needed for remediation. Imposing cleanup deadlines that don't interrelate to a viable site redevelopment will perhaps gain faster cleanups, but sacrifice the cost saving synergies that can be achieved when remediation and redevelopment are coupled. The end result could be vacant clean sites and higher expense.

Page 15-16 Any provision of public funds to offset the cost of cleanup at sites to encourage redevelopment should ensure that the benefit is public, and not to the redeveloper, or allowing the polluter to walk away with an undeserved gain. Perhaps the state should receive a minority interest in the redevelopment project in exchange for the provided funds, that could be sold later to replenish the funds pool if the project is a success. In addition, the project viability should be ensured to avoid project specific cleanups that must be redone for a successor project (New London Pfizer was second cleanup for old Oceanquest proposal at site)

Page 20 any imposed timeline at an active facility should be flexible, but such flexibility should also take into consideration use of nonconventional investigative methods that could provide some increased understanding of the environmental problems for which remediation will be deferred. I suggest that at active facilities a consent order determine what areas of concern will be deferred for investigation or remediation, identify the rational for deferral, identify the risks associated with deferral and how such risks will be managed (e.g. Vapor migration from under an active degreaser) and identify that such deferred activity be implemented upon factory reconfiguration or site inactivity. The statutes should be revised to accept this type of deferred obligation within the Property Transfer framework or its successor. If the consent order includes a schedule for progressive establishment of financial assurance an operator can ensure they are not blindsided by the deferred investigation and cleanup costs, and DEEP can ensure the site is not orphaned.

Page 21 urban fill is being addressed by a roundtable workgroup. The intent of the widespread fill provision was to exempt planned placement of large fill projects such as along I 95 in New Haven, it was never intended to address the common practice of vacant lot disposal of material in our cities. Larger disposal areas technically could be regulated as old landfills under a disruption or closure requirement if not under the RSRs, and consistency of policy and practice should be established.

Page 21 DEEP should develop a framework where MOAs with utilities establish BMPs for management of potentially contaminated soil (ranging from uncharacterized sites to sites where ELURs are in place) The ELUR program should include a provision for an automatic waiver of the subordination agreement requirement for any utility where a MOA is in place.

Page 21 Soil reuse, as opposed to disposal, should not delay construction projects if the concept was included in the planning. Delay results from last minute crises due to failure

to plan. Placement of not-clean fill should always be regulated by DEEP and with the knowledgeable concurrence of the receiving parcel's owner. A general permit might be an appropriate mechanism, registration would establish a record useful for future site investigations, and an approval option for some conditions could allow for higher oversight of placement of more polluted material or placement in sensitive areas.

Page 22 there is a common misconception that DEEP requires quarterly monitoring until site verification. The RSRs do not in fact compel long term quarterly monitoring and consultants doing so are not acting in the best interests of their clients. True, groundwater can remain at steady state levels above criteria for years, but there is no need to continually document this. The roundtable TI workgroup is working on recommendations for how to address this within the existing regulatory framework. Essentially, at many sites there is a recalcitrant source zone where groundwater may stay above criteria for years, but source zone treatment can achieve a minimal extent zone of such noncompliance that is in steady state due to natural attenuation, and the mass flux away from the zone poses no risk.

Page 23 ELURs are long term remedies and should not be implemented to address short term spill or hazard abatement actions. A more compete evaluation of migration and receptors is needed to ensure an ELUR is protective. The final sentence of this paragraph essentially summarized why point 5, arguing to expand ELURs, is not a good idea.

Page 26 I am troubled by the approach for dealing with the issue of technical complexity for offsite migration. Ignoring offsite migration is not dealing with technical complexity. Some party(ies) should have an obligation to evaluate the potential risk of the offsite migration and implement a remedy, as appropriate, before the offsite migration can be dismissed as inconsequential.

Page 26 the proposal to establish nuances of protection for GA and GAA areas may be problematic, in that it suggests we might protect some drinking water wells more than others. In both areas the Water Quality Standards have a goal of being able to drink the water without treatment. The GAA classification merely identifies <u>current</u> public water supplies, and not all of those that are bedrock public supply wells. If anything, a high remediation standard should be applied to all areas with future potential for development of public water supplies, regardless of water quality classification, to ensure long term resource protection. Note that even relatively low yield areas usually provide adequate water supplies for a suburban development with distributed private wells.

It might be possible to address urban fill and pesticide/herbicide issues by modification of the concept of background to recognize these contaminants as present in the environment in many areas. A similar concept is currently being proposed for parking lot fuel and asphalt contamination. The state would need to couple any such exemption with a need to ensure that site redevelopment does not foster exposure risk. In addition, the state would need to develop policies to "discover" or identify areas of the state where these

issues arise, and a strategy to deal with them holistically to limit public risk. Especially crucial since many of these areas are likely Environmental Justice communities.

The stewardship permit concept should be expanded beyond RCRA corrective action to address sites with engineered controls, Technical Impracticability demonstrations, and other RSR variances that require long-term delineation of obligations. RSRs could defer many of the long term requirement details to definition within the stewardship permit, providing greater site specific flexibility, but RSRs should broadly define overall long term care objectives. Issuance of a permit that runs with the site would allow transference of long term obligations from a selling party, providing the seller with a definable end point by establishing the framework by which future obligations can be monetized and considered in the sale. Such an expanded permit authority would also support issuance of general permits under CGS 22a-133z authority for sites where less than intensive review, or limited public involvement, is appropriate. These could be additional limited flexible remedial options as discussed below.

Consider development of a remedial general permit program as the main vehicle for implementing variances under the RSRs as they currently exist or may be expanded. CGS 22a-133z provides enabling language that should be reviewed to determine what changes are needed to widen the scope of remediation general permits. Within a general permit program fees may be collected, registrations may be maintained in a searchable database consistent with other DEEP programs, and certain activities may be self-implementing with, or without, registration, while others could require approval under the general permit or be deemed in eligible if detailed technical review or public input is warranted before a decision may be made. Something like the Engineered Control Lite would be suitable for a general permit as an example.

A general permit program could also provide an alternative management approach for sites where a residual source area or plume still undergoing natural attenuation exists. Effectively this would be a TI "Lite" with long term obligations defined in a general permit, allowing transfer of the permit and the long term obligation. Although a discharge permit likely could not be issued under 22a-430, DEEP should consider a general permit registration of these plumes as nonconforming pollution subject to further remediation or monitoring requirements, under a stewardship permit conceptual framework. Such registration would identify noncompliance areas for inclusion in water resource planning, identify a long term responsibility for the plume as a permit requirement, and, if there is an annual fee provision for such registrations, it could provide disincentives for leaving residuals that could be cleaned up. Such a fee could even be a sliding fee based on the degree of pollution remaining.

Consider establishing several additional DEC default remedies to deal with low level polluted soil and urban fill/pesticides. These would be keyed to the nature of the redevelopment and the expected controls thereon. They should be coupled with development of a BMP for management of urban/agricultural soils. Rather than ELURs the long term assurance of compliance would be through land use regulation, justifiable by using a cap on how much above a default remedy standard soils may be to use the new

default. Consider a 10 x cap over existing residential DEC for an urban residential site where the entire site is landscaped during redevelopment and no surface soil is untouched (e.g. blue back square) Similarly, if there is a nonresidential ELUR or a zoning precluding residential use, consider a parallel cap 10x above nonresidential. (10 x should keep any risk within EPAs risk range of 10E6 to 10E4, and thus apply to even RCRA sites.) (This would be conceptually similar to the NY description on page 37) A remediation general permit could possibly be developed to implement these remedies that do not need extensive individual engineering review, or they could be self-implementing within the RSRs if there are no long term obligations.

Note that the RSRs currently incorporate this concept of a multiplier for PMC soils in GA areas. I suggest that this concept be revisited to determine if sound hydrogeologic evaluation could produce a simpler implementation. Source soils that are only 10 times the GA PMC but occupy less than 10 percent of a well source zone actual infiltration area could potentially be determined to be of little risk, provided no NAPL is present. As another scenario, perhaps a GA area where water is available and the residual plume is delineated, stable, and registered with the town could be exempted from further requirements. Alternatively, the proposed remediation general permit may help provide flexibility for this scenario.

A regulatory or statutory mechanism to register such noncompliant zones, ensure they are steady state or declining, ensure longterm receptor protection, and perhaps pay a natural resource damage is an appropriate resolution.

Consider developing a watershed based sediment management framework such as a sediment TMDL. Within such a framework any individual site with a sediment issue could understand how it fit in the watershed sediment management future. If cleanup is inappropriate at the current time it could be deferred without incurring penalty. If the desire is to "exit" the site responsibilities a program to pay your way out could be established. Payment amount could be estimated based on the overall basin sediment characterization information, coupled with site specific data. Payments could be made to a revolving fund that was used, within that basin, to address the highest priority based on the sediment TMDL. The fund could also be replenished through cost recovery for any identified source RPs for what is cleaned up. When a site that had paid its way out comes to the top of the priority list, fund resources would be used to address its cleanup.

Critical Comment on Evaluation of Connecticut's Cleanup Programs - Current State Entry Points and Triggers

TO: Graham Stevens, DEEP
FROM: Margaret Miner, Rivers Alliance of Connecticut
DATE: October 9, 2011

As previously noted, Rivers Alliance supports the prime goals of the group, namely, creation of a unified statute for cleanup of contamination somewhat on the lines of the Massachusetts program. We also agree that the clean-up program should have clear criteria for all stages from start to finish.

Partly as a result of inadequate time allotment, the report submitted on September 28 includes a number of flaws. The comments below are arranged in order of the points in the September 28 document, not order of importance.

1) Workgroup Membership. **"There was a combined total of approximately 320 years of environmental experience in the group."**

This number appears to be low. The 35 people in the group must have more than an average of 10 years experience each. In any case, the statistic conveys almost no useable information. If it is to demonstrate that the group included experts, the affiliations do that. Recommend deletion.

2) "Responsible Party" Not Defined. The term first arises in the Executive Summary thus: **"The Triggers Workgroup has evaluated the current triggers that require a potentially responsible party to enter into one of Connecticut's 16 Environmental Programs."**

The terms "responsible party" and "responsible parties and agencies" appear at critical points in the report but without definition. Therefore, it is impossible to

tell whether the report expands or restricts the scope of the regulatory program. What does "potentially responsible party" mean here? Does it refer to someone suspected of causing pollution? Or someone who discovers pollution? Or what? At what point does a potentially responsible party become a responsible party or a not-responsible party?

The Vision Statement foresees a program in which there is: **A clear and unambiguous set of events and/or conditions that define the circumstances in which a responsible party or agency must take certain, specified actions to comply with the environmental statue.**

There is no clarity here as to who is legally obligated to take the specified actions. Who is a "responsible party"? A person who causes pollution? A lay person (not an environmental professional) who observes the pollution being generated or is otherwise aware of the problem? The employer of the bad actor? An environmental professional working for the client who caused the pollution? An environmental professional or scientist or student who becomes aware of a pollution problem not relating to any client? A property owner who did not cause the pollution but has been told by a reliable source that part of his or her property is contaminated?

<u>Recommend write definition of "responsible party" or substitute specific terms, such as a "property owner" or "consultant."</u>

3) Confusion between Triggers and Entry Points. In the Title, the Executive Summary, and elsewhere, there is confusion between "entry points" and "triggers." Thus, in the Executive Summary: **During our evaluation of Triggers, or Entry Points, our workgroup has put forth a vision for a single environmental statute ….**

The punctuation and sense here and elsewhere indicate that we are thinking of "entry points" as another way of saying "triggers." But, in other places, such as in the report title (**Entry Points and Triggers)** we treat them as separate entities. Sometimes we speak of a program containing the trigger; sometimes the trigger seems to exist outside a program, requiring an action, such as report, that might lead to entry into a program. This basic confusion will lead to more confusion down the road. A trigger is not an entry point. A trigger fires a bullet; an entry point is where the bullet hits the target.

The following statement of assumptions under Background, page 5, illustrates the muddle of definitions:

We began with the working assumption that a remedial program is most effective if it:
(1) clearly identifies those circumstances that bring an entity into the remedial program (i.e., the "triggers" or "entry points");
(2) those entry points are risk-based[2] or release-based, such that the all sites with similar circumstances are treated the same;
(3) the action necessitated by the trigger or entry point is commensurate with the risk posed by the triggering circumstance (e.g., small, contained spills would result in a different action than discovery of a significant solvent plume); and
(4) the "way out" of the remedial program is risk based, and also commensurate with the circumstance – one size does not fit all when it comes to responding to a variety of "triggers."

My belief is that the risk assessment should come post-trigger, otherwise one may have the parties responsible for paying for a cleanup assessing whether a cleanup is warranted. Incidentally, I do not get the reasoning that a small-risk event should be given a longer time for reporting than a large-risk event. In the case of the former, would not the report be shorter and easier to file?

Recommend: Define "entry point," especially in relation to "trigger." Use the terms carefully.

4) Questionable Assumption on the Status of State Clean-up Programs. In the Executive Summary is the statement that we have: **a strained regulatory system clogged with low-risk, low-priority sites while at the same time allowing high risk sites to fall through the cracks.**

I noted in my previous memo (email 9/28/11) that this claim should be backed up with data. What is the ratio of low-risk to high-risk sites? The system seems to me to be clogged with high-risk sites that are in negotiation for decades. Does "fall through the cracks" means never discovered or never cleaned up?

Recommend: Verify the facts concerning the clogging of the system, and state them clearly. This is a key observation on the character of the clean-up programs. Let's get it right.

5) The Fixation on Exits. Our group spent at least as much time on the importance of exits from a program as on what should trigger entry into a program. We

spent almost no time on what happens in between. Thus, in the Executive Summary: **Triggers that require entry into the environmental program must have exits commensurate with the degree and extent of risk to human health and the environment associated with an event or condition, otherwise the program will be overburdened with low-priority sites and will be ineffective in identifying priorities.**

An alternative approach is: "Triggers that require entry into a program must be followed by prompt action to clean-up the pollution to the point that there is de minimis risk to human health and the environment, otherwise the program will yield no improvement over the stagnant status quo. "

Recommend: Be sure that the final report gives equal weight to how to implement programs as to how to exit them.

6) Differing Points of View. The following passage I believe is intended to reflect points made by me and Lisa Wadge:

There were differing opinions over several issues including but not limited to:

- **The inclusion of economic development as a material concern associated with environmental protection and remediation programs.**
- **The use of triggers as a means for a member of the general public to drive a requirement to investigate any Site with the potential to have an event or condition as defined herein.**

Probably I was not clear, but I welcome economic development as a driving motive for environmental clean-up. My dissent would be better phrased as: "The inclusion of economic criteria in determining risks to health and the environment. Such risks should be assessed using scientific and medical data. "

On the second bullet, it is hard to tell if we had a disagreement, because the group never defined "responsible party." That, I believe, is the person who would be required to do an investigation.

There were two other bullets that were fine.

Recommend: Change the first bullet to read: "The inclusion of economic criteria in determining risks to health and the environment. " Or, if there is not disagreement on this, then delete.

7) Voluntary Projects.

Such a voluntary program would also provide the opportunity for responsible parties that triggered an action for one condition or event and chose to investigate and remediate the entire property to do so without having to then report each and every condition discovered during those investigation/remediation efforts.

This is confusing, in part because it is not clear if "responsible parties" refers to property owners, LEPs, or both. If they are "responsible," then their discovery of pollution should trigger a report.

Who is responsible for what becomes especially important if the property owner is going to represent that the entire property has been remediated to some kind of standard. This concept is stated thus:

Our workgroup concurred on the need to keep available the option of entering an entire property, or a portion of a property, into a voluntary investigation and remediation program, in order to provide property owners the opportunity to represent to potential buyers and the public that their property had in fact been investigated and, if necessary, remediated and that site conditions were now protective of human health and the environment.

With no complete record of the methods and scope of the investigation, the findings, and the remediation efforts, how can the representation that all is well be checked, or verified ? And if it cannot be verified, what legal force can it have?

On page 10, it is clear that we are aiming at a voluntary program that would lift liability. **For those sites where Events or Conditions requiring action do not exist, the voluntary option would allow establishing and documenting baseline conditions as a means of future liability relief/protection.**

<u>Recommendation: Clarify responsibilities under the Voluntary Program, and provide an additional layer of protection for the buyer or public with higher review or verification standards for a representation that a property has no pollution problems.</u>

8) Definitions of Events and Conditions. In the definition of Event (below), the occurrence is conflated with both the definition of "exceedance" and the requirement to report. This leads to the illogical conclusion that what is an event in one place or time might not be an event in another. (The definition of Condition uses a parallel construction.)

Release or threat of a release to the environment of a hazardous substance in exceedance of a reportable quantity.

Recommend: Draw the appropriate distinctions between an event (say, a spill), whether the event poses a risk (probably an exceedance quantity), and the requirement (if any) to report.

Conclusion

Much of the rest of my comment would be variations on the themes already discussed here and in my memo of September 28 (email message). Appendices C & D give more weight to particular definitions and standards than I believe is warranted at this time. On basic principles and goals, there seems to be consensus. However, the exact meaning of the text is often difficult to discern.

Margaret Miner, October 11, 2011

TO Graham Stevens November 2, 2011
FROM: Rivers Alliance of Connecticut

RE: Comments on Remediation Transformation:

Rivers Alliance of Connecticut is the statewide, non-profit coalition of river organizations, individuals, and businesses formed to protect and enhance Connecticut's waters by promoting sound water policies, uniting and strengthening the state's many river groups, and educating the public about the importance of water stewardship. Our 450 members include almost all of the state's river and watershed conservation groups, representing many thousand Connecticut residents.

Rivers Alliance welcomes the effort to transform and rationalize the state's remediation programs. We believe that brownfield clean-up and related remediation has the potential to benefit the state's environment, health, and economy simultaneously. As you know, this was the premise of our Naugatuck River Forum in February 2011; many of the illustrations used at that event also appear in DEEP's power point on Remediation Transformation.

We share the goal of many state remediation specialists of creating a unified program, with clear definitions of what is required under the law. We believe it is logical to prioritize tasks according to risk, as long as assessment of risk is based on up-to-date science. We favor a team approach to regulating complex projects, and believe that efficiency in permitting should be matched by efficiency in remediation work, monitoring and enforcement.

The schedule set out for developing recommendations is very tight, and relatively few environmental groups or other stakeholders have been represented so far. <u>The timetable and predominance of one constituency reduces the chances of developing a first-rate set of recommendations.</u>

We agree with the majority of views, wishes, and goals set forth in the work groups. I offer, however, the following comments, focusing on where we see red flags. The purpose is to delineate several principles.

Standards and Risk

We all agree, I think, that standards should be science-based and up-to-date. They should be protective of human health and the environment. I worry, however, that the qualifying words and phrases that are common in the various stakeholder documents weaken the concept of science-based standards. References to "*reasonable*" standards; standards that are protective "*in balance with risk and economic factors*;" and "*timely revision of standards and ability to change outside the regulatory process"* sound a little like code terms for weaker standards.

Economic Factors

The question of whether economic factors should be used to "balance" standards that are protective of health and the environment arises often, and more often every day. Our position is that economic factors do not change the science, and the standards should be based on science. The science may yields a statistical result, a risk calculation. A person who smokes 20 cigarettes a day is X times more likely to develop lung cancer than a non-smoker. Meanwhile, the tobacco business employs Y million people. That doesn't change the risk. The risk isn't X minus Y (or any quantity related to economic benefits). It is X.

We agree that risk is a factor to be considered in making certain decisions, such as work plans for implementation of cleanups. But any persons who will be put at risk by such decisions should be informed of the risk to which they will be exposed. This is truth in labeling applied to remediation.

"Timely" revision of standards is very desirable if science-based. We have advocated often for such revisions. Often the regulated community has been opposed. As for allowing change outside the regulatory process, this is tempting when one looks at the present Connecticut regulatory process, which is embalmed in the status quo. We support streamlining of the process for creating and adopting regulations. But without a comprehensive regulatory process, fairness and consistency would be impossible to achieve.

How Should Pollution Be Addressed?

The goal should be elimination of harmful pollutants in our environment. A clean-up program should be designed to approach that goal as closely as possible. A new or improved regulatory scheme should clarify who is responsible to report, investigate, assess, and manage the pollution. There should be no polluted sites or pollution generators for which no responsibility has been assigned. Even if resources do not allow

for timely, fully effective action, the problem should be recorded on a public data base and subject to a review at regular intervals. Incentives for cleanup should be provided.

One Trigger or Multiple Triggers to Initiate Investigation/Remediation?

Any report to a government official of known or suspected pollution should be investigated. The report should be a matter of public record at least for a period of time. (As with a police blotter, a minor problem, say, slashed tires becomes more obviously serious if it is repeated 100 times in three weeks in a small town.) There should be a way look at the possibility that a report of pollution is not an isolated incident but part of a pattern with cumulative impacts.

The question of who has a legal duty to report or to pass along a report was raised by, but not resolved by, the Triggers groups. A very sensitive question was whether an LEP or other consultant or employee or academic researcher who is aware of or reasonably suspects pollution on a property is required to report this to *anyone* (the property owner? DEEP? DPH?) ? Reporting can have negative results for the reporter. I believe it is important to address this question. There is excessive looking the other way.

We also did not reach a conclusion on whether the person who observes or is aware of pollution can make a determination as to whether it is sufficiently serious to report. The regulated community leans toward a system in which certain adverse events or conditions are "not reportable." Our position would be that any judgment as to seriousness should only be made by an appropriate government official or designee. That judgment should not be made by a lay person, nor a LEP (under our current system), nor a property owner, nor an official who has no authority relating to pollution. (If someone calls a probate judge about an oil spill, the judge should not have the right to decide it's not worth investigating. The judge should have the responsibility to refer the case to the right authority.)

Monitoring and Enforcement

Because government resources are so limited, the idea of self-implementation, and, in general, outsourcing investigation, oversight, and enforcement is very appealing. The state has partly done so with the LEP program. Unfortunately the conflicts of interest are so severe that even the most expert and honorable consultants are subject not just to temptation but to coercion to do other than what is right. Even when the LEP has done a perfect job, he or she has limited credibility in a public forum when people learn that the LEP is paid by the person responsible for cleaning up the mess.

If outsourcing and the honor system are going to be used to achieve remediation, I believe we will need to create a new class of quasi-adjudicatory professionals who are not dependent on income from clients. These independent overseers should be funded by the regulated community. But even if the regulated community supports a more disinterested process for review than now exists, the responsible government agency (whether DEEP,

or DPH, or the Siting Council) would nevertheless have to conduct fair frequent unannounced audits. We need more field work and less paperwork. Trust but verify.

Penalties

It is important that penalties be certain, fair, public, and sufficiently severe that they can't be accepted as mere cost of doing business.

Electronic Reporting

It is vital that the state adopt a uniform data base for polluted sites, permitting, reports by the permittee, generation of notices of violation, progress of enforcement actions, and so forth. Anything that can be done online should be done online. At this time, records relating to permits, compliance, and enforcement are all over the place and extraordinarily difficult to research, even for agency people. Those who have to file the paperwork are understandably irritated by what is so often a pointless exercise. With current technology, the report can be filed in the field with a handheld device.

PublicAccess

There are multiple benefits to rapid public access to all records relating to pollution and remediation. First, the public has a right to know of pollution conditions that pose a health risk, environmental risk, or economic risk. Second, the public can serve as the eyes and ears of an understaffed agency. Third, no person likes to be publicly identified as a wrongdoer.

Agency Funding and Staffing

No matter what reforms are undertaken, they will fail if the oversight agency lacks the resources to initiate independent audits, unannounced field inspections, verification of records, enforcement of reporting requirements, and so forth. If work is outsourced, those contractors must be checked. (We saw what happened on Rte 84 when not only the work but the oversight of the work was outsourced -- and no one from DOT looked to see if drains were actually being installed or just buried any which way.) Many projects need a clerk of the works responsible to see that permits conditions and remediation plans are actually being implemented. Penalties should be set for noncompliance.

The reform of remediation programs is an extremely important venture, and we thank you for the opportunity to participate.

Margaret Miner, Executive Director

To: Graham Stevens October 11, 2011

From: Maurice Hamel, EA III, Remediation Division

RE: Stakeholder Input and Public Participation
Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws

These are my comments on the reports generated by the six working groups for this step of the Transformation process. (I participated in Group 2).

Group 2 - Finish Lines

1. The Public Policy Considerations section on page 31proposes balancing the costs and benefits of a remediation with the associated risk posed by the site. However, it is unclear whether this is suggesting that no remediation be required through some use of alternative criteria under this option, or whether it is simply elaborating on the current informal cost/benefit assessment required under the application process for remedial options such as engineered controls.

2. The Interested Parties section on page 32 proposes some level of DEEP review at the primary remedial milestones to give all parties can have confidence that the milestone has actually been met. Assuming that this recommendation would apply to the majority of sites, current staffing levels would be insufficient to provide a meaningful review for each submission. This also seems inconsistent with the goal of allowing non-complex sites to proceed independently of the constant risk of being second-guessed by DEEP.

3. The Historic Pesticide section on page 35 does not mention the fact that in Massachusetts no protection is provided to the public in relation to the presence of pesticides which, though properly applied, still exceed health-based standards. That state has made a public policy decision that because of the manner in which the pesticides were applied, the health risk is acceptable regardless of changes in the land use. Presently, Connecticut law does not endorse that concept.

Group 3 - Entry Points & Triggers

4. Given the sweeping changes being envisioned, including the elimination of the transfer program, the lack of detail in what would be included in this new system of triggers is a concern.

5. In Recommendation 2, the way it is written it is hard to tell whether the "action … commensurate with the severity of the event" is referring to flexibility in the nature of the investigation, in the clean standard, or in the nature of the follow-up monitoring. It is important that it be clear that the clean standard should not be dependent on the type of release that occurred.

6. In Recommendation 2, a footnote associated with "Responsibility to Report or Act" indicates that consensus was not reached on having anyone other than the one funding the investigation being required to report on releases being identified. If the new approach would include the eliminating of the certifications that come with the current property transfer program, disclosure laws will needs to be strong. The idea that an owner/operator could site on an unfavorable report during the transfer of liability through some loop-hole needs to be addressed.

7. The example triggers in Appendix D will need quite a bit of work. Presently, it includes a requirement for notice within 2 hours for a calculation-based determination of NAPL being present in the soil, which is not practical. That should apply to visual/odor detections. (Especially since an elevated PID reading is listed as requiring a 7 day notification.)

8. Also, in Appendix D, no notice to DEEP would be required if all detections are below regulatory standards. While this makes sense, it would also need to include two additional factors.

    - Disclosure would still be needed as part of any future transfers, since the "regulatory standards" for notice to DEEP would be different than the clean standard for things like change of land use and off-site reuse of the soil.

    - There would need to be some opportunity to confirm the thoroughness of the characterization, either through audit or through peer review at the time of future transfer, since the conclusion would be based on the LEP's claim that the most impacted area had been characterized in the assessment of being below regulatory standards.

Group 4 - Evaluation of LEP Program Performance

9. The work group recommended "Enacting regulations that create an audit program at DEEP that is similar to the Massachusetts model" however, it neglected to mention the level of staffing which would be required to implement such a program is far beyond the roughly 2 full time equivalents of staffing that the current audit program has available.

Group 5 - Liability

10. Similarly, in Group 5's recommendations, depending on what type of program is implemented, the requirement to have DEEP generate timely approvals of milestones for large numbers of LEP lead sites is likely to require significant additional staffing resources.

11. In the liability relief for innocent land owners discussion, nothing appears to be said about government recouping the cost of clean-up for sites where landowners would reap a windfall benefit as a result of the expenditure of state funds. This would be for site which are not Brownfield projects where in infusion of state money was a factor in the funding of the redevelopment of the site.

12. On page 12, Group 5 recommended that new laws are needed to "strengthen the rights of private citizens to pursue persons who cause or exacerbate pollution and compel them to clean-up the properties that they have polluted". Care will need to be taken in how this approach is implemented to take into account the fact that remedial actions could be delayed by parties who would use private law suits to oppose a specific remedial approach allowed under the law or who might use it as a means to oppose a specific development project.

Also, based on my involvement with various working groups within and/or lead by the DEEP (Pesticide, Urban Fill, Technical Impracticability), several legislative or regulation changes should be evaluated as part of the Transformation process. Most of these items do not easily fit into any of the work group reports:

13. The ability to provide a final sign-off for a site (equivalent to what would support a Form II filing) would be enhanced if a permit could be issued for the long-term obligations under a Technical Impracticability variance. A statutory change is needed to allow the creation of a "Stewardship Permit" similar to what is being used under RCRA. This would create a framework for long-term obligations for the operation and maintenance of containment systems and treatment systems, inspection of especially sensitive engineered controls and other requirements that are presently being handled only under Orders.

14. Connecticut has no provision for assessing "natural resource damages" under a TI. New Jersey has a program which has the potential to serve as an example of a system that could deal with cases where either a site has caused pollution for which the technology does not exist to remediate the problem, or the release was to a resource which has been impacted by multiple parties and those other parties are not being required to address the problem at this time. Such sites become stalled in the remediation sign-off system because there is an unresolved impact. Damages collected could be used to create a pool of funds for priority clean-ups. This would be consistent with the recommendation from Group 5 to create innovative approaches for state-funded cleanups.

15. The current RSR language only allows ELURs to prohibit use of groundwater for potable or other domestic purposes. There are situations where it is in the DEEP's interest to prevent any use of groundwater which might deflect a contaminant plume. There should be changes made which would allow the prohibition of any groundwater use, other than environmental monitoring, assuming that the landowners affected are in agreement by placing the ELUR on their land records.

16. The Urban Site Work Group has expressed the need for a toxological assessment to evaluate whether the criteria for low level PAHs are for the form of that compound that is actually being detected. (For example, does the form of pyrene found in coal ash or asphalt have the same bioavailability as the risk assessment number assumes?)

17. Many Engineered Controls, especially those for mildly contaminated materials such as urban Fill, are simple and straight-forward. Considerable staff time and processing review delays could be address by a statutory change which would allow these ECs to be approved under a General Permit. This recommendation was also made on page 28 and 41 of the Group 2 Finish Line report.

CT Department of Public Health Comments on Draft Workgroup Reports to Support the CT Department of Energy and Environmental Protection's (DEEP's) Comprehensive Evaluation and Transformation of CT's Cleanup Laws.

November 14, 2011
Prepared by Meg Harvey

DPH offers the following comments on the Draft Workgroup Reports to Support DEEP's Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws.

A common theme present across the draft workgroup reports is that CT needs a unified statute for remediation and CT's multiple remediation programs should be consolidated into a single, release-based, fully self-implementing program. Emerging from this theme, several of the draft workgroup reports make recommendations pertaining to the development of risk-based cleanup criteria. DPH's comments are directed specifically towards those recommendations.

The workgroup reports recommend that more flexibility be added to cleanup standards. Specifically, it is recommended that default risk-based standards be available for more end use exposure scenarios (not just residential and commercial/industrial). Lower intensity land uses such as passive and active recreational and restricted residential (e.g. condominium complexes) are mentioned. Additionally, the workgroup reports recommend that there be more self-implementing options for the development of alternative and additional cleanup criteria. There were differing views regarding the criteria development process, with some workgroup members supporting increased autonomy for LEPs and others supporting the current system of DEEP oversight over criteria development and review (with DPH support and assistance).

DPH agrees that default cleanup standards for exposure scenarios beyond the existing residential and industrial/commercial scenarios will provide the regulated community with added flexibility that could speed the cleanup process for some sites. However, the advantages of residential and industrial/commercial scenarios should be kept in mind. Cleanup to these criteria allow maximal use of the resource without going back to do more cleanup if stakeholders decide to change land use in 20 or 50 years. We obviously cannot foresee the possibility for more intensive uses when a site is designated as, for example, passive recreational, but the potential may exist to shift to active recreational (e.g., camping, sports fields) or even residential in the future. If sites are remediated to the maximal scenario, then everyone can be assured that any future use will be acceptable and there would be no need for ongoing DEEP monitoring of the land use. Having this be a self-implementing option may tend to increase the number of lesser use scenario cleanups and involve less guarantee of compliance with the cleanup scenario (e.g., passive use is still passive use in 10 years), and potentially create a larger burden of reopened sites down the road.

Likewise, having more self-implementing options for alternative and additional cleanup criteria could also speed cleanup. In fact, the 2008 proposed RSRs would have brought many additional polluting substances into the regulation. The development of additional standards should be conducted by or at least reviewed by DPH in conjunction with DEEP so there is a uniform and even-handed approach to criteria statewide. It should be noted that development of default standards for additional exposure scenarios and criteria for additional polluting substances is resource-intensive and may be difficult for DPH without additional resources, depending upon the rate at which these requests are made.

Several of the workgroup reports recommend that development of risk-based cleanup standards needs to be more fully vetted and should be better aligned with federal EPA guidance and standards. There were differing viewpoints regarding the extent to which CT's existing standards follow scientifically defensible methodologies. Finally, the draft reports state in several places that CT's cleanup standards should be risk-based.

DPH supports the involvement of a wide range of stakeholders in the process to develop default cleanup standards. We feel that our risk methods are fully transparent and in agreement with practices in other states. DPH does not necessarily agree that its risk assessment methodologies should be better aligned with federal standards. Specifically, values on USEPA's IRIS system can be quite dated and surpassed by more recent science and risk assessment work in other states (e.g., California) or other federal agencies (e.g., ATSDR). Therefore, DPH routinely checks multiple sources of toxicity information in the process of developing potency information. This has led to cases in which DPH has developed standards that are less stringent than federal guidelines and in some cases, our numbers are more stringent. However, we maintain that our existing methodologies are protective of public health, are scientifically defensible, and are based on current scientific data. With regard to cleanup standards being risk-based, we recognize that in some cases, it is not possible or desirable for a cleanup standard to be strictly risk-based. For example, some criteria need to be background-based or even odor threshold-based because the organoleptic properties of the chemical or the background conditions are the driving force in setting a remedial target. In these cases, as well as in risk-based targets, the basis and rationale are provided and DPH is always available if greater documentation is needed. In conclusion, we are available to assist DEEP in addressing issues arising from the workgroup reports or any follow-on regulatory packages.

NRG Energy, Inc Comments on
Remediation Roundtable Workgroup Reports
Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws

NRG Energy, Inc. (NRG) owns four sites subject to the state's regulations and related guidance governing remediation in Connecticut. The four sites are located at NRG's power plants in Devon, Middletown, Montville and South Norwalk. These sites became subject to the Remediation Standard Regulations (RSRs) via the Transfer Act Program when NRG purchased them from Connecticut Light & Power in December 1999. Remediation at the sites is led by a Licensed Environmental Professional (LEP) in accordance with the Cleanup Laws. Since NRG acquired these sites, NRG has worked closely with the Connecticut Department of Energy and Environmental Protection (DEEP) and the United States Environmental Protection Agency (EPA) in connection with the remediation projects at the sites.

NRG welcomes the opportunity to comment on the Remediation Roundtable workgroup reports. These reports reflect a serious and thoughtful commitment on the part of the workgroups, and the state is fortunate to have so many professionals willing to dedicate the time necessary to conduct this review of the regulations and produce these reports. The reports are very comprehensive, identify many of the challenges NRG has faced over the last few years in connection with site remediation, and provide direction for sensible regulatory reform.

The prevailing concepts in the reports include risk-based remediation, preservation of a "Responsible Party's" economic well being, cleanup standards consistent with the EPA and adjacent states and consistent and predictable remediation endpoints. NRG believes that all of these concepts are extremely important and should be incorporated into the revised regulations.

After reviewing all of the workgroup reports, NRG offers the following specific comments:

Workgroup Report: "Evaluation of Finish Lines and How Risk and Other Factors Influence Closure" specific comments:

Risk Protection Endpoints

NRG agrees that, "… risk protection endpoints that are more closely aligned with current and foreseeable future uses and risks be provided." The NRG sites have been electric generating plants for at least 50 years. The sites are unlikely to be anything other than industrial sites for the foreseeable future. Having risk protection endpoints that align with site use will provide a cost and time effective process to having the remediation projects completed.

LEP Program – Risk-Based Remediation

NRG agrees that the LEP program should be fully realized, and should "…allow for self implementing development of risk-based remediation standards by LEPs, including use of site specific risk assessments." The NRG sites utilize LEP-led remediation. On many occasions, the LEP has developed a remediation strategy which has been presented to the DEEP for approval prior to incorporation into a Remedial Action Plan. Although discussing these strategies with DEEP provides NRG with a measure of confidence in advance of any remedial action implementation, the requirement to meet with DEEP and have their review of the remediation strategy adds months to an already years long remediation process.

Additionally, NRG strongly agrees that site remediation should take into account the risk to the local eco-receptors. All site cleanups should take into account the local surroundings and the current and future uses to pragmatically determine the appropriate cleanup standards.

Technical Impracticability Guidance

NRG agrees that the DEEP should, "Improve or revise the process for obtaining Technical Impracticability [TI] variances by issuing appropriate guidance and streamlining the process to improve the clarity and certainty associated with such variances." NRG, working with its LEP has considered the applicability of a TI variance in some circumstances. However, the precedential guidance with respect to TI variances is not well-defined or easily locatable; site owners seeking a TI variance must seek out previously-approved TI variances from other Responsible Parties (RPs) to determine if a project would be considered for a variance. This lack of guidance with respect to this option is problematic, particularly in light of the material economic ramifications of TI variances.

Engineered Control General Permits

NRG agrees that the DEEP should consider, "Standardization of the [EC] approval process for commonly used controls, such as General Permits." On the four NRG sites, the proposed Engineered Control (EC) consists mainly of providing additional ground covering. This solution is a fairly standard remediation strategy and should be governed by a General Permit.

ELUR Process

NRG agrees that the environmental land use restriction ("ELUR") application process must be streamlined, and should allow for, "an alternative approach for subordination agreements…" The ELUR process must be revised to take into account some parties' (including easement holders and adjacent landowners) reluctance or refusal to grant subordination on commercially reasonable terms, or, in some cases, at all.

Ecological Risk Assessment Guidance

NRG agrees that, “guidance is needed to help direct LEPs in how to identify the need for and properly perform [Ecological Risk] …assessments.” Additionally, better-defined requirements, standardized procedures, and self-implementing options will allow Environmental Risk Assessments (ERAs) to be conducted iteratively in association with site characterization. NRG and its LEP have completed a number of these assessments. The process to get both EPA and DEEP concurrence is unduly time-consuming and costly. While the discussions with the EPA and the DEEP result in an end product that is acceptable to all parties, these discussions add months to the remediation schedule.

Responsible Party Definition

NRG agrees that the DEEP should clarify the rules that determine the appropriate responsible party for a particular contamination, especially with respect to sites that have had multiple owners and multiple certifying parties.

Ground Water Monitoring Requirements

NRG agrees that the DEEP should revise groundwater monitoring requirements to include options for steady-state groundwater plumes, including a general permit for steady state and/or decreasing plume and guidance for obtaining TI variances.

Exiting the Cleanup Programs

NRG agrees that the DEEP should create one standard “way out” for all programs, including those that do not fall under the RSRs (e.g., spills, underground storage tank releases, solid waste). DEEP should permit closure of a single release area to provide certainty for the relevant parties (such as lenders and tenants) that no more work is needed in a particular area.

Workgroup report: “Evaluation of Connecticut's Cleanup Programs - Current State” specific comments

Risk Based Remediation

NRG agrees that, “site remediation should be protective of human health and the environment, and should facilitate the achievement of closure in a timely manner. To balance these goals, DEEP should incorporate risk-based standards into its programs.”

State Cleanup Standards should be the same as Federal Standards

NRG agrees that in some cases, Connecticut's default numeric cleanup standards deviate materially from the Federal cleanup standards. This causes confusion when dealing with both the Federal and State agencies.

LEP-led Remediation and "Self-Implementing" Standards

NRG agrees that there should be expanded use of "self-implementing" tools, such as:

- Environmental land use restrictions
- Engineered controls
- Calculation of alternative criteria and criteria for additional polluting substances
- Develop a mechanism for self-implementing Ecological Risk Assessments.

All of these tools will allow remediation projects to be completed in a shorter period of time and at a lesser cost while still being as environmentally protective as is the current situation.

Allow LEPs the Authority to Define Remediation

NRG agrees that LEPs should retain the freedom to select the most efficient means for satisfying cleanup criteria. It is the LEP's obligation, under his/her license, to be aware of the environmental issues surrounding the remediation and therefore, the LEP has the knowledge and skill set to perform this role.

Workgroup report: Evaluation of LEP Program Performance and Utilization specific comments

NRG agrees with the following Recommendations issued in the Report:

- Accepting electronic submittals;
- Establishing milestone reporting and interim submittals to track progress and expedite investigation and remediation

By implementing these Recommendations, the remediation projects will proceed faster than under the current process.

Peter Hill's – 11/14/11 Comments on Draft Evaluation Workgroup Reports

Workgroup 1

I concur with the majority of the recommendations of Workgroup #1. However, the adoption of the Uniform Environmental Covenant Act (UECA), will not simply the ELUR process because UECA imposes additional requirements which are not included in the applicable CT ELUR Regulations and Statutes and some of these additional requirements provide slight benefits. The most useful portions of UECA should be incorporated into the existing ELUR statutes and regulations.

Provisions for self implementing Deed Notices should be adopted.

Provisions for self implementing ELURs should only be considered if regulations and guidance are drafted which provide sufficient direction for the parties drafting and recording the ELURs. This level of care is needed because the State will be acquiring an interest in a property without any direct involvement. Provisions must be included to allow the State to unilaterally revoke any ELUR prepared in a self implementing program that is not protective or prepared incorrectly.

If a unified program is adopted, such a program should be implemented from its inception on a full, robust e-government platform with an appropriate data tracking system. Adequate time and funding must be provided for planning, development and implementation. Funding must be provided for support by experts including private e-commerce consultants and private data information management professionals to plan, develop and implement such a platform in coordination with DEEP, DOIT, and with input from the regulated community and public.

Workgroup 2

A certificate of completion should be provided for all sites or releases which are reach certain interim steps, or are closed. Such a certificate needs to be in plain language. An example of this is the Certificate of Completion for the RCRA Stewardship issued by MMCA.

There must be clear, well defined, and uniform exit points from all programs.

Workgroup 3

Appendix D – third bullet; this recommendation needs to consider analytical methods for which no RCP is published. For information regarding this topic see Section 6 of the Reasonable Confidence Protocol Guidance document found at:

http://www.ct.gov/dep/lib/dep/site_clean_up/guidance/rcp/qaqc_rcps_guidance_document.pdf

Also, see the preamble of the Data Quality Assessment and Data Usability Guidance document at:

http://www.ct.gov/dep/lib/dep/site_clean_up/guidance/qaqc/final_dqa_due.pdf

Workgroup 4

Liability protection for LEPs should be considered. For example, if the LEP presents his work and verification to a group of LEPs and environmental professionals for a detailed audit, his liability is limited in some manner.

Workgroup 5

No comment

Workgroup 6

No comment

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Martin Mador, Legislative Chair

Graham Stevens
CT Department of Energy and Environmental Protection
79 Elm Street
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November 14, 2011

Re: Comments on Comprehensive Evaluation and Transformation of CT's Cleanup Laws

The Sierra Club is one of the nine environmental organizations which submitted a joint statement forwarded to DEEP this afternoon.

We wish to independently recommend that the state invest in retaining an expert consulting firm to help develop a new Site Contamination Remediation program for Connecticut. The firm should receive a vision statement explaining where we would like to be after a comprehensive re-tooling of our remediation programs, and instructions that it should:

-review the visioning documents created last summer
-review the six workgroup reports
-conduct a detailed survey of successful remediation programs in other states
-provide an opportunity for comment from the general public
-focus on where we are going, rather than where we have been
-ensure that human and environmental consequences are always considered as important as economic considerations

The report from the consultant should then be used to craft comprehensive legislation.

So far, many environmental attorneys, LEPs, and, to a certain extent, state environmental organizations, have been involved in the process. While most of the general public may have little understanding of current programs, their shortcomings, and effective fixes, they nonetheless deserve a chance to participate, even if on a very limited basis.

It is critically important that the firm chosen for this task **not** be an engineering firm in the state with a stake in the process. While licensed LEPs should be consulted, they must not comprise the staff of the chosen firm.

We understand the state has little discretionary money available. However, we believe the small cost of commissioning such a study will result in a far stronger remediation program. Such a program will produce better results, faster, and at appropriate costs. Such a program will certainly pay significant dividends to the state. The cost/ benefit of this investment can only be strongly positive.

Sincerely,

Martin Mador

Martin Mador
Legislative Chair
Sierra Club-Connecticut Chapter

GZA
GeoEnvironmental, Inc.

Engineers and
Scientists

November 7, 2011

Connecticut DEEP Visioning Process Feedback

To DEEP Vision Team:

Subject: Comprehensive Evaluation and Transformation of Connecticut's Cleanup Laws GZA's Feedback on **Draft Evaluation Workgroup Reports**

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As an environmental consulting firm practicing in Connecticut, we thank you for the ambitious efforts you have taken in 2011 to improve the efficiency and effectiveness of environmental cleanup regulations. We believe your effort can complement the recent legislation to streamline permitting and improve accountability for permitting economic development projects. As you know these regulations have a profound effect on our clients' ability to operate and grow their businesses while simultaneously protecting the environmental health of our State's citizenry. During a time when so many people are without jobs, reform of Connecticut's cleanup laws has the potential to attract new businesses and accelerate business startups and redevelopment of our brownfields, urban centers, commercial and industrial zoned properties; improving the market for jobs.

We have limited our comments to one over-arching comment: Focus the cleanup law transformation effort to allow a tiered approach to reaching what you have referred to as the "finish line". One size does not fit all. High, moderate and low risk properties are not equal and should not be allocated equal resources. First and foremost the program must direct the staff resources of the DEEP and the financial resources of the regulated community to the elimination of real risk at the top tier sites. We believe use of the Significant Environmental Reporting program could play a significant role in determining which sites would fall into the top tier category.

In the next tier, where risk to the public is not driving the process, a focus on closure endpoints will enable white knight developers who enter the regulatory system to know they will get the technical support they need to accomplish their development goals and create opportunities for others. All stakeholders benefit if: the cleanup laws are understandable to the regulated, regulations are fundamentally based on a balanced perspective and the DEEP is accessible to clarify how to address innovations or any grey areas not addressed by the regulations. A "begin with the end in mind" approach that considers environmental health and safety, economic development and business realities will do the most good for the State of Connecticut, the environment and for the regulated community, whether they are in the system now or considering entering it.

As a final thought, we know that balancing all the competing concerns is not an easy task. We recommend that the State consider keeping the lines of communication with all stakeholders open beyond the current date. In the long run, we will all get to the finish lines in less time if we continue to work together on the making the vision a reality.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Wayne W. Cobleigh, CPSM
Manager of Project Development

Thomas F. Stark, LEP
Senior Principal

Appendix H – Summary of Public Comments

The following is a summary of public comment received that have been grouped by DEEP into nine major categories. Major categories have been further categorized where appropriate.

Best efforts were taken to capture the nature of the comments. In some cases, multiple stakeholders provided the same or very similar comments, and in these cases, the summaries reflect the core similarities.

A completed listing of the public comments, as submitted, can be found in ***Appendix G***.

Public Comment Major Categories

Programmatic Structure

One Program

- The policy ought to be drafted as a single overarching applicable statute or act, constructed to encompass and control all contamination cleanup and remediation. Including a clear definition of "Brownfields" and policies tailored to combat the unique problems associated with them. Clearly defined "triggers" for both investigation and cleanup. Clearly defined endpoints for cleanups. A clear liability structure and clear oversight structure.

- Current programs do not require the same degree of investigation and remediation for all releases that are encountered, and many releases are not subject to any programmatic requirements (e.g., releases identified through private due diligence site investigations). Where program requirements do apply (e.g., for Property Transfer Act sites), too often such requirements are not met or are not met in a timely manner. The new regulatory scheme should ensure that all releases (including historical releases) are appropriately reported and addressed by cleanup statutes and/or regulations, and that closure can be attained for releases in a protective, timely, and cost-effective manner.

- Develop a Unified Environmental Remediation Statue that would enable the development of clear, risk-based, unambiguous, and practical regulations that would

detail required actions from discovery to closure that are protective of human health and the environment.

- Many of the work group reports recommended creation of a single program, or even a single statute, that would cover all situations requiring remediation, in some cases referring to a long list of Connecticut requirements as evidence of unacceptable complexity. In fact many of the "programs" cited are necessary statutes that simply provide critical authority to the Commissioner, or impose specific obligations on certain parties, and do not constitute separate remediation programs. Some support not only the remediation program but also other areas such as the point source discharge program. Even if changes were made, there still will need to retain many of these laws as they have served Connecticut's environmental programs well for over 40 years. Unify the various program elements and work toward addressing the gaps and weaknesses that exist.

- The point was made in the report from Work Group 3 that it would be difficult to move ahead with spill reporting regulations without eliminating some programs such as the Property Transfer Program. I don't see the connection, and I think that the Department should revive its effort to adopt spill regs for at least part of the universe of spills. Remediation of most new spills could be completely overseen by LEPs without the Department's involvement once the immediate emergency, if any, is abated.

- Problems with CT spill reporting are: All spills must be reported which leads to too many insignificant spills entering the system and taking up resources.; Spills are overseen by coordinators that are not required to and do not see that the situation is eventually addressed to RSRs criteria. This allows many significant situations to fall through the cracks and results in double standards.
    - Establish reportable quantities for spills such that a spill of a substance less than a certain quantity need not be reported.
    - Establish reportable quantities for spills such that a spill of a substance greater than a certain quantity must be addressed and verified by an LEP.
    - Establish different reportable quantities for indoor and outdoor spills.
    - Require that any spill that impacts groundwater be addressed and verified by an LEP.
    - Do not require post remedial groundwater monitoring for spills that do not impact groundwater and where the soil is cleaned to PMC criteria within a reasonable time period.
    - Create a specific form for verification of soil spills that are immediately excavated to RSRs criteria to make verification simple.

- State requirement to investigate all suspected historical contamination that falls under the definition of being a Brownfield. Based upon priority of risk to public health and the environment, state requirement to systematically cleanup and remediate every Brownfield or provide adequate incentive to private developers to remediate each Brownfield.

Entry Points

- All contaminated sites should be subject to affirmative cleanup obligations and deadlines. Priority attention should be based on risk assessments of the threat to human and environmental health, with economic considerations as secondary considerations. Threats to public and private drinking water supplies and threats to the public of direct exposure should be prime priorities. Contaminated sites which impact urban infill, revitalization of cities, and Transit Oriented Development should receive expedited attention and incentives for remediation.

- Existing statutes (of the various programs) did not include uniform, consistent triggers, did not create a level playing field for the various polluted sites, and created a strained regulatory system bogged down with low risk/low priority sites that could be affecting the remediation of larger high risk sites.

- Definitions of Events and Conditions. In the definition of Event, the occurrence is conflated with both the definition of "exceedance" and the requirement to report. This leads to the illogical conclusion that what is an event in one place might not be an event in another. The definition of Condition uses a parallel construction. Release or threat of a release to the environment of a hazardous substance in exceedance of a reportable quantity. Draw the appropriate distinctions between an event (say, a spill), whether the event poses a risk (probably an exceedance quantity), and the requirement (if any) to report.

- One Trigger or Multiple Triggers to Initiate Investigation/Remediation? Any report to a government official of known or suspected pollution should be investigated. The report should be a matter of public record at least for a period of time. There should be a way look at the possibility that a report of pollution is not an isolated incident but part of a pattern with cumulative impacts.

- Need a conclusion on whether the person who observes or is aware of pollution can make a determination as to whether it is sufficiently serious to report. The regulated community leans toward a system in which certain adverse events or conditions are "not reportable." An appropriate government official or designee shall make the judgment as to seriousness. That judgment should not be made by a lay person, nor a LEP (under our current system), nor a property owner, nor an official who has no authority relating to pollution.

- Given the sweeping changes being envisioned, including the elimination of the transfer program, the lack of detail in what would be included in this new system of triggers is a concern.

- In Workgroup 3, the 2nd Recommendation, the way it is written it is hard to tell whether the "action … commensurate with the severity of the event" is referring to flexibility in the nature of the investigation, in the clean standard, or in the nature of the follow-up monitoring It is important that it be clear that the clean standard should not be dependent on the type of release that occurred.

- In Workgroup 3, the example triggers in Appendix D will need quite a bit of work. Presently, it includes a requirement for notice within 2 hours for a calculation-based determination of NAPL being present in the soil, which is not practical. That should apply to visual/odor detections. (Especially since an elevated PID reading is listed as requiring a 7 day notification.)

- Cleanup programs that under the Transfer Act, there is "disconnect between the "trigger" and the risk posed by the site." It would be a benefit to the regulated community as a whole to reevaluate how an "establishment" is defined, as that clearly has a significant impact on the regulatory status of a site.

- Some problems with the Property Transfer Act with 1980s hazardous waste generation as the trigger for site action are:
    - Most of the significant environmental problems are the result of mismanagement of hazardous substances that occurred prior to 1980 when there were no significant regulations that addressed handling of hazardous substances.
    - Many problems sites are not sold, but are leased or sit idle because the owner or potential buyer does not want to enter the system. These sites can be causing significant exposures that are not addressed.
    - If a site is an establishment, it will always be an establishment. If it is not, it will likely never be an establishment. It does not seem appropriate to continually investigate sites that have been through the system when current regulations, spill reporting, etc. make it unlikely of ongoing contamination of sites.

- Lower the Significant Environmental Hazard reporting trigger concentrations to close to or at the RSRs criteria, then if a problem becomes known at any site it will be addressed within the system. This could be made retroactive to a certain date. Realize that most any commercial or industrial site that is sold has some amount of environmental investigation performed if a problem may exist because the mortgage lender or buyer will require the investigation.

- More inclusive investigation triggers for all contaminated properties that do not fall under the definition of Brownfields. Cleanup and remediation triggers based upon; health risks; immediately upon the discovery of contamination in excess of specified healthy levels of specified substances; an objective expert determination that the site poses a health risk to neighboring residents or to the community as a whole; an objective expert determination that the site poses a risk of contaminating drinking water or publically accessible ground water; upon the migration or significant risk of migration of contamination off of the property; or inclusion of a community petition provision to trigger site investigation.

- The best time to conduct remediation of historical contamination is when a site is redeveloped or otherwise transferred. This is the best time to bring financial resources to bear on contamination. It is also the best time to incorporate remediation strategies that are the most cost effective into the redevelopment process.

- Knowledge of activities that could have resulted in contamination should trigger an automatic obligation to investigate (a base-line targeted environmental assessment) to determine whether any short term actions to protect public health are necessary. Then when the public complains that a property is just sitting there with no final remedial actions in sight, the agency can assure them that any short term risks have been addressed and that rest of the remediation will be accomplished when the site is redeveloped

- The obligation to investigate (at least in a targeted fashion) up front; to remediate significant hazards and to complete remediation at the time of transfer or redevelopment should apply to any property that is or was used for industrial purposes, and to commercial properties where petroleum products or hazardous substances were used or stored. Properties that are only residential should be carved out unless there is a reportable spill.
    - This approach would also work for the LUST program. For a gas station, any indication of a leak from an UST would have to be investigated, and any risk to offsite drinking water wells, any volatilization risks and any floating product would have to be addressed immediately. That short term remediation could be considered sufficient closure for the purposes of reporting to EPA. Then upon transfer any residual soil or groundwater contamination would have to be addressed whether from a leaking tank or from a former drywell in the service bay.
    - This approach also works for PCB contamination. The initial investigation would identify whether there is a remediation obligation under TSCA or remediation to address a significant risk, and then the rest could be addressed at the time of redevelopment.

- As due diligence site investigations are done in the normal course of business (e.g., Phase II/III), the LEP judges whether releases are identified or not. Where they are, the LEP reports to DEEP (i.e., spills reporting, with presence/absence of release as simple trigger). The LEP also judges whether the release was recent or old.
    - The property owner must investigate and remediate the recent releases in accordance with the RSRs and a defined schedule.
    - For old releases, the report remains on file at DEEP and there is no immediate action required for further investigation and cleanup. But when the site gets transferred, the site must be investigated in accordance with prevailing standards and guidelines, and remediated in accordance with the RSRs.

Milestones

- Milestones are needed for certifying parties of LEP lead sites who need assurance/certainty at some point in their investigation/remediation process prior to the verification. The idea is to allow LEP-lead sites to submit reports and plans (whatever they need) to DEEP for review. Submittals would be accompanied by a transmittal form and a fee to cover the cost of DEEP staff to review. This would be purely optional. It would maintain the flexibility of the LEP program, but would allow certainty when needed.

- The reason to allow for flexibility for a responsible party to have the opportunity for CTDEEP review is time delay is often costly to a project and responsible parties do not want to necessary take the risk by moving ahead without consultation with CTDEEP, even under LEP oversight, for the fear of completing a project and moving forward with an initiative (e.g. marketing property for sale, commercial development) to only have the investigation, risk assessment (including eco-assessment), and cleanup scrutinized many years later by a CTDEEP audit and the case reopened.

- Some Connecticut programs have no deadlines for certain requirements; it is difficult to determine how many sites have been fully remediated. While this would be useful information to have, as the saying goes, "Be careful what you ask for." More deadlines mean more enforcement obligations and expectations by the Department, the public, local officials and the legislature. If additional deadlines are imposed, automatic and meaningful penalties need to be included as they are in some states, thereby creating self-implementing incentives to meet the deadlines and limiting the amount of follow up work for the Department.

Exit Points

- The ability to provide a final sign-off for a site would be enhanced if a permit could be issued for the long-term obligations under a Technical Impracticability variance. A statutory change is needed to allow the creation of a “Stewardship Permit” similar to what is being used under RCRA. This would create a framework for long-term obligations for the operation and maintenance of containment systems and treatment systems, inspection of especially sensitive engineered controls and other requirements that are presently being handled only under Orders.

- Any new triggers that require entry into the environmental program must have exits commensurate with the degree and extent of risk to human health and the environment associated with an event or condition, otherwise the program could be overburdened with low-priority sites and will be ineffective in identifying priorities.

- Several groups recommended that more "exit pathways" be identified. In some cases that apparently means having a program that allows a responsible party to be considered in compliance if it cleans up an individual release as opposed to an entire property, or providing a sign-off when only the significant risks have been addressed, as opposed to fully remediating the site.
    - The Department and LEPs should have the authority to issue release based verifications, as long as the referenced clean-up is consistent with the RSRs, and as long as those verifications are not misconstrued or misused for something inappropriate.
    - There is fear that creating a process whereby parties are given some kind of sign off after only a partial clean-up will in effect amount to a slashing of the RSRs, because in many of those cases the full remediation will never happen. Perhaps this is an argument for significant penalties for failure to follow through and fully remediate. What banks will lend money, and what buyers will buy property, based on the clean-up of only part of the property. How critical is this

kind of change to the overall improvement of the state's program that people are demanding?

- Focus the cleanup law transformation effort to allow a tiered approach to reaching what you have referred to as the “finish line”. One size does not fit all.
    - High, moderate and low risk properties are not equal and should not be allocated equal resources. First and foremost the program must direct the staff resources of the DEEP and the financial resources of the regulated community to the elimination of real risk at the top tier sites. The Significant Environmental Reporting program could play a significant role in determining which sites would fall into the top tier category.
    - In the next tier, where risk to the public is not driving the process, a focus on closure endpoints will enable white knight developers who enter the regulatory system to know they will get the technical support they need to accomplish their development goals and create opportunities for others.

- There is little room for professional judgment in the verification process. Every item in a very long RSRs checklist must be addressed and checked off even if it is apparent that significant exposures do not, and will not exist. This leads to long verification time frames and inefficient and inappropriate expenditure of resources. DEEP is increasing flexibility in the system by starting to issue guidance that will address certain situations such as urban fill, but guidance cannot address every situation. Professional judgment should be exercised. Also, Many sites are in limbo because there is no easy or ideal solution and no one will make a judgment call for fear of repercussions.
    - An owner or LEP feels that it is inappropriate to continue through the entire checklist process.
    - Where a solution is difficult.
    - Where site circumstances dictate a non-standard remedy that does not fully conform to the technical requirements of the RSRs.

- Cleanup timelines need to be specified and enforced. Timelines should be categorized by the health risks posed by the contamination, and expedited for immediate threats to public health and the environment. Timelines should be based on the minimum necessary time to complete each step of the cleanup. There should be economic incentives for speedy cleanups. There must be penalties for missed deadlines, or for every year that the site remains in the system. Cleanup timelines and finish lines may vary by type of contamination and severity.

- A certificate of completion should be provided for all sites or releases which are reach certain interim steps, or are closed. Such a certificate needs to be in plain language. An example of this is the Certificate of Completion for the RCRA Stewardship issued by MMCA.

- The Fixation on Exits. Triggers that require entry into the environmental program must have exits commensurate with the degree and extent of risk to human health and the environment associated with an event or condition, otherwise the program will be overburdened with low-priority sites and will be ineffective in identifying priorities.

Other State Programs

- New Jersey: site entry is triggered by cessation of activity. This does not automatically compel cleanup upon discovery at an active facility but does capture all sites where jobs have left, and would avoid the long vacancy periods of CT where factories are idled but transfer has not occurred. This could be a real incentive to avoidance of brownfields.

- New Jersey: permitting and annual fees for engineered controls and land use restrictions supports the needed long term care for sites that may become orphaned, with attendant cessation of fee payment and need for state to assume oversight. It also provides incentive to conduct a cleanup that is not dependant on these remedies.

- Massachusetts: No top state was identified. If the state of Connecticut were to adopt the Massachusetts system (or a system with many of its attributes), they would be one of four states in the region using a similar risk-based tiered approach to groundwater and soil classification. Likewise the privatized system would be similar to that already in place in Connecticut, as well as those of Massachusetts and New Jersey. Thus, this inherent regional experience of local professionals would make transition into the program more streamlined. Likewise by choosing to emulate the Massachusetts program, DEEP could be taking advantage of 17 years of improvements/adjustments that have been made to the privatized MCP since 1993.

- Massachusetts: Socioeconomic and Hydro-geologic Environment of the New England states - In addition, the Massachusetts program incorporates specific socioeconomic and hydro-geologic elements that are unique to the New England states. Examples of such elements include:
    - A system that considers groundwater and surface water characteristics (depths, geology, etc.) and resource uses typical of the region.
    - Exemptions associated with, a) historic industrial use of coal, and b) use of demolition fill in urban areas.
    - Agricultural pesticide uses typical in tobacco farming – once a mainstay of CT.
    - Riparian water rights system typical in eastern states.
    - Property values and income typical of the region.
    - The importance of public opinion in densely populated eastern states.

- Massachusetts: The problems with the Connecticut remediation programs have largely been overcome in Massachusetts. Connecticut should use the Massachusetts Contingency Plan as a template and guide with which to overhaul Connecticut's remediation programs. The MCP (and its related laws and guidance) come closest to achieving the goals of a "good" remediation program. Using the MCP offers the best means to reach these goals for our state.

- Massachusetts: DEEP could attempt to modify CT's existing programs to achieve these goals, or we could "start from scratch." However, I believe that these alternatives would take far too long, cost far too much money, and will ultimately fail to accomplish the objectives. Instead, using the MCP to the extent practicable will be the most efficient and cost effective means to the desired end.

- Massachusetts: The MCP has most of the attributes that the DEEP's Working Groups and Visioning Sessions have identified as desirable in a state remediation program; it is a unified program, it relies on risk-based cleanup standards, it encompasses nearly all releases, and it provides a clear and efficient means to achieve compliance.
    - Massachusetts and Connecticut share common industrial histories, cultural resources, geology, hydrology, soils and climate.
    - The efficiency and comprehensive nature of the MCP is also a measure of its effectiveness in protecting human health, welfare and the environment; in contrast.
    - The MCP can be adapted to supersede many existing CT remediation programs, including the Transfer Act (a failure by most measures), Significant Environmental Hazard, RCRA, USTs, etc.
    - The replacement of these programs with an MCP-like unified program will allow CT to retain (and improve) many of CT's valued programmatic tools, including the LEP, RCP, SCGD, Quality Assurance Guidance, Brownfields Programs, etc.

- Pennsylvanian: There are a high number of sites that opted for site specific risk determinations. The nature of their other criteria classes, and the type of site specific determinations conducted should be examined to better understand why this occurred, and what the departmental workload for oversight is.

- Pennsylvanian: The provision that exit reports are deemed approved if no commented within 90 days, coupled with a high percentage of site specific risk determinations, seems risky for having marginal work be approved by default.

- Pennsylvania: Seems to have allocated significant resources to providing guidance to consultants and educating the regulated community. Their model should be further examined to determine if a small state like CT could develop a similar program or if the resources needed exceed our capacity.

- Wisconsin: In so far as remediation deals with sites that are already in the process pipeline, there needs somewhere to be a similar discussion of the incentives and procedural changes that will inspire more owners and potential owners to get into the process, such as reasonable expectations of finding the end of liability and help for innocent buyers. We need to emulate the cooperative spirit between regulators and the regulated community that exists in Wisconsin. The State of Wisconsin Remediation and Redevelopment Program is a One. Plan Program managed by the Department of Natural Resources (DNR) which covers all state cleanup regulations. Some oversight is shared with other state agencies for agricultural releases and Leaking Underground Storage Tanks (LUSTs). All spills and historic releases are addressed by cleanup standards and procedures through DNR regulations." DNR refers to the program as a single program, though the triggers, entry points, technical and financial support, and liability differ for different types of releases and applicable statutes.

LEP Program

- LEP qualifications and regulation should be stringent with strict rules and enforcement. Requirement for LEP to document each stage of cleanup and report to the DEEP. Publically available record of all LEP malpractice or incidents.

- Liability protection for LEPs should be considered if the LEP presents his work and verification to a group of LEPs and environmental professionals for a detailed audit, his liability is limited in some manner.

- The LEP program in CT does not have a set of regulations that specifically establish the "standard of care" for an LEP.

- Create an ongoing workgroup that will continue to examine the effectiveness of the LEP program and will allow for input from all affected parties.

- Further define the roles of the LEP and DEEP via regulations to allow for legitimate differences in professional judgment and opinion while protecting human health and the environment.

- If the Audit format of the Massachusetts LSP program is adopted the LSP's need to be heard from to prevent creating a program with already known problems.

- There are current proposals to significantly expand LEP authority presents a tangible conflict of interest for LEPs, which can lead to inadequate remediation and loss of public confidence in the program. The DEEP must providing adequate agency managerial supervision and monitoring of decisions and progress ensuring effective agency management oversight of LEP activities.

- Instituting a robust auditing program, where an LEP has an expectation of periodic audits in addition to independent unannounced inspections and audits. Instituting robust sanctions for malfeasance and instituting both disincentives and sanctions for substandard LEP performance which requires excessive agency oversight.

- LEPs should retain the freedom to select the most efficient means for satisfying cleanup criteria. It is the LEP's obligation, under his/her license, to be aware of the environmental issues surrounding the remediation and therefore, the LEP has the knowledge and skill set to perform this role.

- Because government resources are so limited, the idea of self-implementation and outsourcing investigation, oversight, and enforcement is very appealing. The state has partly done so with the LEP program. Unfortunately the conflicts of interest are so severe that even the most expert and honorable consultants are subject not just to temptation but to coercion to do other than what is right. Even when the LEP has done a perfect job, he or she has limited credibility in a public forum when people learn that the LEP is paid by the person responsible for cleaning up the mess. If some of these changes are made, the resulting role for the Department would be akin to the Board of Professional Engineers, one limited to administrative oversight and licensing. That

would be a mistake, and we need to make sure that the Department retains a more active, relevant role in the overall remediation process in Connecticut.

- On many occasions, the LEP has developed a remediation strategy which has been presented to the DEEP for approval prior to incorporation into a Remedial Action Plan. Although discussing these strategies with DEEP provides NRG with a measure of confidence in advance of any remedial action implementation, the requirement to meet with DEEP and have their review of the remediation strategy adds months to an already years long remediation process.

- With more self-implementation outsourcing duties and the honor system going to be used to achieve remediation, there needs to be a new class of quasi-adjudicatory professionals who are not dependent on income from clients. These independent overseers should be funded by the regulated community. But even if the regulated community supports a more disinterested process for review than now exists, the responsible government agency (whether DEEP, or DPH, or the Sitting Council) would nevertheless have to conduct fair frequent unannounced audits. We need more field work and less paperwork. Trust but verify.

- The program(s) should be self-implementing in nearly every way by LEPs, and ministered and overseen in an executive capacity by the DEEP through development of guidance, periodic auditing, record keeping and benchmarking. By following DEEP guidance and without additional DEEP approvals, LEPs should be able to develop criteria for additional polluting substances, perform site-specific human health and ecological risk assessments, implement ELURs and implement some engineering controls.

- LEP committee can be formulated to rule on complicated sites. The committee can meet for two full days and review all available material. The outcome will be a "committee" verification or short, succinct, written, situation-specific guidance. A certifying party can request a committee review upon a payment of $10,000. Each LEP will be compensated $2,000 for time and $2,000 will go to the DEEP for resources. The committee LEPs will remain anonymous to all but a confidential file kept by DEEP, so there is no undue influence on the committee members, and the LEP committee members will not fear repercussions from certifying parties or other LEPs. This can be accomplished within the legislative process because the LEP are authorized to "act for the commissioner". It may require legislation language that will allow the committee to wave certain technical requirements of the RSRs. Any verification by the committee must be by at least a 3 of 4 vote. The committee members must certify that the actions to date at a particular site are protective of human health and the environment and the members will be subject to disciplinary action if their decision is negligent. Verifications of the committee will not be subject to audit as it is to be assumed that if three of four LEPs in their judgment determine and certify that the actions to date are protective of human health and the environment, the decision is appropriate. Situation specific guidance by the committee should be given significant weight in determining further actions for a site. This process will reduce the backlog of sites in the system, allow for site- and situation-specific remedies, and provide professional guidance for resolving difficult site problems.

Transparency / Access to Information / Public Participation

- Public access to data is necessary because the public has a right to know of pollution conditions that pose a health risk, environmental risk, or economic risk. The public can serve as the eyes and ears of an understaffed agency. No person likes to be publicly identified as a wrongdoer.

- State needs to adopt a uniform database for polluted sites, permitting, reports by the permittee, generation of notices of violation, progress of enforcement actions. Reports and agency decisions should be available on-line. DEEP should move toward a system of electronic deliverables and electronic data storage.

- Set up and management of a single database with a list of all contaminated sites. This database ought to include information general site information and detail recharging investigation and remediation. The database would be able to track number of properties that successfully completed a remediation program, Reduction/elimination of risk to human health or the environment, prioritize of severely contaminated properties properly, amount of economic development gained by remediation.

- Consider implementing a GIS data collection program similar to that implemented by NYSDEC.

- Adequate time and funding must be provided for planning, development and implementation. Support is needed by experts including private e-commerce consultants and private data information management professionals to plan, develop and implement such a platform in coordination with DEEP, DOIT, and with input from the regulated community and public.

DEEP Outreach, Program Support and Guidance

Outreach

- Ample mechanisms for concerned citizens to engage the appropriate regulatory bodies regarding real or potential pollution issues exist within the current regulatory framework. These mechanisms should remain in place, as is.

- Creation of a permanent Community Advisory Board to facilitate the communication of information to communities. The Community Advisory Board could work with LEPs directly to communicate the required notice out to the communities. This system could help establish through a working relationship, a greater trust in the LEPs by the communities. The Community Advisory Board could work directly with the LEP Oversight Board to report instances of non-compliance among the LEPs.

- Affirmative requirement to notify neighboring property-owners of potential contamination, investigation results, health risks, and remediation plans, including all transportation routes for contaminated material. Must maintain adequate barriers to

keep humans and animals from accidently encountering contamination. There must be clearly visible signage on and around the contaminated property, on all sides, and at all entrances. The signage must explicitly state the specific health risks.

- Increased state outreach to communities for input, and inclusion of communities in decision-making processes. The state should ensure that there is a robust opportunity for community input, while also being sensitive to the trade-offs associated with community input.

- Care will need to be taken in how increased public involvement is implemented to take into account the fact that remedial actions could be delayed by parties who would use private law suits to oppose a specific remedial approach allowed under the law or who might use it as a means to oppose a specific development project. Adopt appropriate deadlines for comments such that extended windows for comment do not serve to unnecessarily delay remediation.

Program Support

- Transformation cannot succeed without adequate resources at DEEP to see them though.

- No matter what reforms are undertaken, they will fail if the oversight agency lacks the resources to initiate independent audits, unannounced field inspections, verification of records, enforcement of reporting requirements, and so forth.

- If the legislature and governor wish to see the state seriously and significantly address remediation of the thousands of state brownfields and other contaminated properties so that the environment is protected and the land put back in to productive use, then DEEP must have the remediation staff and resources such as computing and communication capabilities to do their job.

- If work is outsourced, those contractors must be checked. Many projects need a clerk of the works responsible to see that permits conditions and remediation plans are actually being implemented. Penalties should be set for noncompliance.

- As various agencies will "own" a piece of the remediation program, the transformation of the state's contaminated site cleanup program must ensure that agencies communicate at the commissioner and staff levels. This would include at least DEEP, DECD, DPH, DOT, OPM, and the Attorney General's office. It will be important to structure the programs so that divided responsibilities do not act to hinder remediation efforts.

Guidance

- There are additional excellent resources available to the DEEP that could quickly be integrated into the program. For example the Interstate Technology & Regulatory Council (ITRC) has a multitude of technical regulatory (guidance) and other documents

that have been developed by a wide range of stakeholders including a large number of State program specialists. These documents could be used by easily and quickly just be reference and the DEEP can have confidence in their technical soundness due to the rigid process used to develop them.

- The creation of checklists to accompany guidance may not be appropriate. I have seen many instances where completion of checklists, and addressing all items included, became the definition of the task, rather than common sense use of the checklist as a guide for the thought processes that they attempted to capture. A comprehensive checklist, blindly followed, will not simplify effort or reduce cost.

Liability

- A voluntary program would also provide the opportunity for responsible parties that triggered an action for one condition or event and chose to investigate and remediate the entire property to do so without having to then report each and every condition discovered during those investigation/remediation efforts. This is confusing, in part because it is not clear if "responsible parties" refers to property owners, LEPs, or both. If they are "responsible," then their discovery of pollution should trigger a report.

- Workgroup 5 page 10: it is clear that we are aiming at a voluntary program that would lift liability. For those sites where Events or Conditions requiring action do not exist, the voluntary option would allow establishing and documenting baseline conditions as a means of future liability relief/protection. Clarify responsibilities under the Voluntary Program, and provide an additional layer of protection for the buyer or public with higher review or verification standards for a representation that a property has no pollution problems.

- Who is responsible for what becomes especially important if the property owner is going to represent that the entire property has been remediated to some kind of standard. With no complete record of the methods and scope of the investigation, the findings, and the remediation efforts, how can the representation that all is well be checked, or verified? And if it cannot be verified, what legal force can it have?

- Many releases are currently dealt with outside the Transfer Act system. As such homeowners in CT are not currently affected financially the way they are in other states. Yes, there are cleanups and they are seemingly expensive from the homeowners perspective, but not nearly as expensive as a cleanup under a program such as the Massachusetts MCP Program. This report did not give credit to the current program in dealing with homeowner problems in a very cost-efficient manner, nor did it note that perhaps these cleanups were occasionally ineffective or marginally effective.

- In an effort to create a "good" cleanup program, state agencies, consultants and other stakeholders tend to forget the homeowners, who after all are a significant group of taxpayers and voters. I did not see the homeowners' participation in this workgroup, nor have I seen their interests represented. This is particularly disconcerting. As a consultant who spent a few years of my career dealing with homeowner release

insurance claims, I have seen the financial ruin that can ensue from a simple undetected No.2 fuel oil release. These programs, which appear simple and straightforward to consultants and regulators, are foreign and full of mystery and pitfalls to a 70-year old homeowner on a fixed income. This new program should create some relief for homeowners. Massachusetts has eliminated some fees, but this is not enough. The costs associated with the comprehensive cleanup and documentation of a homeowner release are often less than $20,000, but they can run as a high as $50,000 to even $200,000. As much as it may be at odds with risk-based thinking, the State of Connecticut should consider exempting homeowners from certain requirements to ease the financial burden associated with homeowner releases under a new so called unified program which would presumably bring homeowner releases under the same program umbrella.

- A new or improved regulatory scheme should clarify who is responsible to report, investigate, assess, and manage the pollution. There should be no polluted sites or pollution generators for which no responsibility has been assigned. Even if resources do not allow for timely, fully effective action, the problem should be recorded on a public data base and subject to a review at regular intervals. Incentives for cleanup should be provided.

- Traditionally, in many States, UST programs often have more streamlined rules due to their high site count and somewhat similar situations. For example, CT has a reimbursement program primarily for UST cases and UST cases have been exempt from Transfer Act which provide for incentive to remediate and efficient property transfers respectively. These UST specific policies remain in effect under a unified system.

- Tier responsibility system sets out the principle that the Polluter Pay, but there are some items that are overlooked.
    - The Fund should be required to preserve the money paid into the Petroleum Clean-Up Fund in order to provide reimbursement to owners/operators of underground storage tanks ("USTs") who take on the responsibility of clean up.
    - The Regulations and Milestones that UST owners/operators must follow and meet should be simplified and the funds should be dispersed in an expedient manner.
    - Finally, there should be some modifications to the regulations that take into account Responsible Parties who are performing cleanup on Sites they no longer own or operate so that the requirements to qualify for reimbursement of the clean-up costs are simplified and reimbursement is more easily obtainable.

- In Workgroup 3 Recommendation 2: a footnote associated with "Responsibility to Report or Act" indicates that consensus was not reached on having anyone other than the one funding the investigation being required to report on releases being identified. If the new approach would include the eliminating of the certifications that come with the current property transfer program, disclosure laws will needs to be strong. The idea that an owner/operator could site on an unfavorable report during the transfer of liability through some loop-hole needs to be addressed.

- Work Group 2 suggested that the relief provided in PA 11-141 from the obligation to remediate off-site contamination be broadened to all sites, not just a few Brownfields sites. The suggestion was made by Work Group 3 to allow liability relief to owners if a baseline investigation were performed, as long as certain specified conditions, or knowledge of such conditions, did not exist. The Work Group 5 report recommended that "non-polluting parties" (presumable property owners that did not actually cause the contamination) be relieved of liability to clean up their sites "to the extent possible."

- I would recommend that the Department not agree to such changes, with the possible exception of limited situations in the first scenario where a qualified buyer pays into a fund or has truly eliminated any further contribution of contamination to the off-site property. In many situations this kind of relief will only shift the burden of clean-up to the state's taxpayers.

- Need to level the playing field when it comes to spill reporting. Clear and unambiguous set of events or conditions that define when a Responsible Party must take action should be developed.

- Should the owner of property that was the source of pollution should be liable if that owner had neither caused nor contributed to the pollution. While I favor a legislative program that does not link liability to one's status as a property owner, I believe that there is a way to reconcile those two positions: if any liability is to attach, make the property liable, not the owner. Making the liability non-recourse, i.e. requiring that the creditor look only to the value of the land to recoup the debt, is admittedly not a perfect solution but it might be a reasonable and fair balance of interests and of public policy objectives.

- The current and predecessor legislation does not provide adequate “third party” protection from litigation to “for-profit re-developers” of a property. The standards for any property to meet the “brownfields definitions” are amorphous and highly subjective, leading to tremendous uncertainty.

- Long term obligations should be defined in a transferrable stewardship permit that allows monetization, identification of subsequent responsible party, and a clear mechanism for a party to shed future obligation by permit transference.

- In the liability relief for innocent land owners discussion, nothing appears to be said about government recouping the cost of clean-up for sites where landowners would reap a windfall benefit as a result of the expenditure of state funds. This would be for site which are not Brownfield projects where in infusion of state money was a factor in the funding of the redevelopment of the site.

- We also believe that the reporting responsibility needs to be carefully considered as it would not be beneficial for the burden of reporting to fall on parties that are working on the site with historic problems but have no control over the current day to day operations of the site, which may be the cause of a newly reportable condition.

Financial Considerations

- Special focus on balancing cost against the overall risk and long term environmental benefits, demonstrating the intention of including sustainability principles in the decision-making process.

- Appropriate balance of technical achievability and cost with the actual health and environmental benefits.

- The program ought to establish funds, which communities can access for purposes such as: community education on environmental policy, technical assistance to communities on options for specific properties, need-based grants for LEP training to community members, and compliance enforcement.

- The state ought to conduct or fund training opportunities for local contractors to become licensed to perform these cleanups.

- The state should also develop economic tools to facilitate site remediation where the risk assessment is significant but the expense a major deterrence. Threats to public and private drinking water supplies and threats to the public of direct exposure should still be priorities as well.

- Business owners and developers should not be excluded from legislation aid.

- The state should develop economic incentive programs to facilitate site remediation where the risks are significant but the expense a major deterrence. If funds are spent the state should acquire an interest and private parties cannot be allowed to benefit.

- Connecticut has no provision for assessing “natural resource damages” under a TI. New Jersey has a program which has the potential to serve as an example of a system that could deal with cases where either a site has caused pollution for which the technology does not exist to remediate the problem, or the release was to a resource which has been impacted by multiple parties and those other parties are not being required to address the problem at this time. Such sites become stalled in the remediation sign-off system because there is an unresolved impact. Damages collected could be used to create a pool of funds for priority clean-ups. This would be consistent with the recommendation from Group 5 to create innovative approaches for state-funded cleanups.

Risk

- Standards should be science-based and up-to-date. They should be protective of human health and the environment. However, the qualifying words and phrases that are common in the various stakeholder documents weaken the concept of science-based standards. References to “reasonable” standards; standards that are protective “in balance with risk and economic factors;” and “timely revision of standards and ability to

change outside the regulatory process" sound a little like code terms for weaker standards.

- Consider a combination of positive incentives for more comprehensive cleanups with negative incentives for less. When the highest use of land is not achieved there has been an impairment of the state's resources, even if the cleanup is to a risk standard, and natural resource damages should be assessed for the impairment. In some cases a natural attenuation process would continue to reduce pollution levels and this could be taken into account in damage assessment but for other pollutants there is always some impairment with an attendant need to monitor the land use to ensure it is consistent with the cleanup level.

- The question of whether economic factors should be used to "balance" standards that are protective of health and the environment arises often, and more often every day.
    - Economic factors do not change the science, and the standards should be based on science. The science may yields a statistical result, a risk calculation. A person who smokes 20 cigarettes a day is X times more likely to develop lung cancer than a non-smoker. Meanwhile, the tobacco business employs Y million people. That doesn't change the risk. The risk isn't X minus Y (or any quantity related to economic benefits). It is X.
    - Risk is a factor to be considered in making certain decisions, such as work plans for implementation of cleanups. But any persons who will be put at risk by such decisions should be informed of the risk to which they will be exposed. This is truth in labeling applied to remediation.

- Additional consideration needs to be taken into account to transform the current CT scheme to a sustainable risk-based program
    - Adoption of the EPA guidelines represents the most practical approach. This guidance has been widely recognized in different states in the US as well as best practice for the international community.
    - Development of comprehensive conceptual site model. Focus on source-pathway-receptor is essential to effective risk management strategies.
    - A well recognized point of discussion is the presence of NAPL in wells and its misconceptions about realistic recoverability and associated risk. The risk-based framework needs to recognize the latest scientific developments about NAPL migration and composition and allow site closure when NAPL plumes are stable and its presence does not represent risk.
    - A clear definition of the need for remediation should be included; this involves the development of a tiered approach and acceptable levels of risk. For instance, acceptable risk limit is generally adopted as 1X10-6. However, some states (i.e., Kansas and Michigan) adopted different values (i.e., 1X10-5). Misconceptions about risk acceptability are discussed in reference material.
    - For the specific case of hydrocarbons, the use of TPH is not helpful in risk evaluation. The TPH indicator was envisioned as a screening tool to assist selection of compounds of concern, and not to be used as a compound of concern by itself. Cost-effective risk-based approach should incorporate those compounds potentially representing health and ecological hazards (e.g., benzene, toluene, ethylbenzene, xylenes, naphthalene, etc).

- Inclusion of multiple alternative risk-based endpoints is considered an important tool to be protective and expedite sites closures. Demonstration of technical impracticability , plume stability, mass flux, mass discharge, low treat sites, overall sustainability, are some examples of potential alternatives to be considered in the Connecticut risk-based scheme.
- Sustainable remediation is a developing concept that is evolutionary to Risk Based remediation and should be allowed to develop in CT. The Sustainable Remediation Forum (SURF), Interstate Regulatory Council (ITRC), and American Society for Testing and Materials (ASTM) have either published or are developing frameworks and guidance on how to do Sustainable Remediation and CT should incorporate these into its program.

- Key elements supportive of sustainable risk-based remediation from international sources. Risk-based approach is protective of human health and the environment. Researchers have reported that after product releases, a minimal percentage of those releases may impact sensitive receptors (Daines, et. all).
  - The most sustainable approach to managing potential risk to water quality from industrial facilities is to take a site-specific, risk-based approach to prevention and remediation.
  - Given the variability of hydrogeological factors, site specific is a more suitable approach for risk management, instead of generic approach.
  - Understanding of site specific conditions and process acting on compounds of concern is considered the basis for risk management.
  - Balancing cost and environmental, social and economical benefits it is a priority for the current economical environment.

- Ignoring offsite migration is not dealing with technical complexity. Some party(ies) should have an obligation to evaluate the potential risk of the offsite migration and implement a remedy, as appropriate, before the offsite migration can be dismissed as inconsequential.

- Use of risk-based alternatives to State's numeric cleanup criteria should be encouraged. DEEP should utilize and take advantage of EPA research and source documents such as the EPA risk assessment guidance to aid in risk-based decision-making and enhanced self-implementation of site cleanup by LEPs.

- Risk evaluations must be science based, and must address both human and environmental health. While economic considerations are important in determining site remediation efforts, they must not compromise or eclipse health assessments. We suggest devising a method to conduct risk assessments and select remediation strategies using a model similar the EPA's TMDL program, where a "site" is defined by physical considerations, such as an aquifer, rather than strictly by property boundaries. This should particularly apply where multiple contamination sources exist.

- If a site has been an electric generating plants for at least 50 years. The site is unlikely to be anything other than industrial sites for the foreseeable future. Having risk protection endpoints that align with site use will provide a cost and time effective

process to having the remediation projects completed. To balance these goals, DEEP should incorporate risk-based standards into its programs.

- The policy's key concern must always be public health and must never sacrifice health standards in pursuit of other ends. Economic development goals must be pursued only in accordance with the principle goal for a high standard of public health and the environment.

- We can try to make it equally disagreeable to everyone (the "shared pain" concept) and perhaps should prioritize having it do no harm. Because these regulations do have consequences, even extreme consequences. People work all their lives to accumulate a small real estate investment, or a business, and then find that everything is lost to cleanup costs, and they end up owing money. Which is hard luck, if the costs are warranted? But so much of today's environmental compliance is spending inordinate amounts of money to get some negligible improvement in human health and the environment.

- Default risk-based standards are available for more end use exposure scenarios (not just residential and commercial/industrial). Lower intensity land uses such as passive and active recreational and restricted residential (e.g. condominium complexes) are mentioned.
    - DPH agrees that default cleanup standards for exposure scenarios beyond the existing residential and industrial/commercial scenarios will provide the regulated community with added flexibility that could speed the cleanup process for some sites. However, the advantages of residential and industrial/commercial scenarios should be kept in mind. Cleanup to these criteria allow maximal use of the resource without going back to do more cleanup if stakeholders decide to change land use in 20 or 50 years. We obviously cannot foresee the possibility for more intensive uses when a site is designated as, for example, passive recreational, but the potential may exist to shift to active recreational (e.g., camping, sports fields) or even residential in the future. If sites are remediated to the maximal scenario, then everyone can be assured that any future use will be acceptable and there would be no need for ongoing DEEP monitoring of the land use.

- The draft reports state in several places that CT's cleanup standards should be risk-based. We feel that our risk methods are fully transparent and in agreement with practices in other states. DPH does not necessarily agree that its risk assessment methodologies should be better aligned with federal standards. Specifically, values on USEPA's IRIS system can be quite dated and surpassed by more recent science and risk assessment work in other states (e.g., California) or other federal agencies (e.g., ATSDR). Therefore, DPH routinely checks multiple sources of toxicity information in the process of developing potency information. This has led to cases in which DPH has developed standards that are less stringent than federal guidelines and in some cases, our numbers are more stringent. However, we maintain that our existing methodologies are protective of public health, are scientifically defensible, and are based on current scientific data.

- DEEP needs to focus on revising the RSRs, which were promulgated in 1996 as required by Section 22a-133k. We recognize and, subject to seeing a draft, support DEEP's recently proposed "consensus" amendments to the RSRs. But these amendments are not enough to provide the necessary and critical foundation of the type of program DEEP's draft reports seem ultimately to be urging.

- We must clean up contaminated aquifers and protect those still holding high-quality water. High-quality water is money in the bank for our future. This state has way too many polluted waters. Water cleansing, water protection, and water-centered development offer interesting opportunities for fair, mutually beneficial public-private partnerships.

- Recommend that there be more self-implementing options for the development of alternative and additional cleanup criteria. Having this be a self-implementing option may tend to increase the number of lesser use scenario cleanups and involve less guarantee of compliance with the cleanup scenario (e.g., passive use is still passive use in 10 years), and potentially create a larger burden of reopened sites down the road.
    - In fact, the 2008 proposed RSRs would have brought many additional polluting substances into the regulation. The development of additional standards should be conducted by or at least reviewed by DPH in conjunction with DEEP so there is a uniform and even-handed approach to criteria statewide. It should be noted that development of default standards for additional exposure scenarios and criteria for additional polluting substances is resource-intensive and may be difficult for DPH without additional resources, depending upon the rate at which these requests are made.

- The current RSR language only allows ELURs to prohibit use of groundwater for potable or other domestic purposes. There are situations where it is in the DEEP's interest to prevent any use of groundwater which might deflect a contaminant plume. There should be changes made which would allow the prohibition of any groundwater use, other than environmental monitoring, assuming that the landowners affected are in agreement by placing the ELUR on their land records.

- ELUR streamlining the adoption of the Uniform Environmental Covenant Act (UECA), will not simplify the ELUR process because UECA imposes additional requirements which are not included in the applicable CT ELUR Regulations and Statutes and some of these additional requirements provide slight benefits. The most useful portions of UECA should be incorporated into the existing ELUR statutes and regulations.

- Endpoints such as ELURs, which provide for less than complete remediation, must be appropriately chosen, and must not unnecessarily lock in contamination permanently in exchange for the economic savings they offer. There should be substantial community input in the selection of ELURs as a remediation option.

- Provisions for self implementing ELURs should only be considered if regulations and guidance are drafted which provide sufficient direction for the parties drafting and recording the ELURs. This level of care is needed because the State will be acquiring an

interest in a property without any direct involvement. Provisions must be included to allow the State to unilaterally revoke any ELUR prepared in a self implementing program that is not protective or prepared incorrectly.

- Many Engineered Controls, especially those for mildly contaminated materials such as urban Fill, are simple and straight-forward. Considerable staff time and processing review delays could be address by a statutory change which would allow these ECs to be approved under a General Permit. This recommendation was also made on page 28 and 41 of the Group 2 Finish Line report.

- A new High School in Fairchild Park, which has been a woodlands park for well over 100 years, is being constructed and land moving has begun. The top soil is sought to be used in another new park, but the soil (beautiful, native New England humus and sub soil) has failed the test for Arsenic. Instead of making a new park with soil which has been used for at least 100 years for a park, we are now having to store the soil off site, at added costs, and purchase other fill from another site. This is just nuts! If it was good for the previous park and users, why is it not good at a slightly different location. Let's look at ubiquitous substances like this and revise our standards. Otherwise we should remove all soil from all Connecticut parks that will fail if tested.

- Make the urban fill definition parallel the coal-ash PMC exception and expand the PMC exception to encompass urban fill, include metal, glass, etc. Change groundwater monitoring requirements for urban fill situations. Consider modifying Significant Environmental Hazard reporting thresholds for urban fill. Averaging versus 95% UCL for PMC compliance.

- For urban fill contaminated primarily with PAHs and perhaps some metals like arsenic and lead, and for soil that contains ground-up asphalt fragments, I would recommend an approach that limits exposure to these soils but with a less stringent and fewer long term regulatory obligations. First, as the RSRs already does for typical urban fill, exempt them from compliance with the pollutant mobility criteria, provided no existing drinking water wells are contaminated by the fill or the pesticide contaminated soil. This is a big leap for pesticides, but if any drinking water wells that are affected by the pesticide contamination are provided an alternative source of water, then defaulting to natural attenuation in both the soil and groundwater would not involve a risk to human health.

- Soil Reuse Conspicuous absence of an in-depth discussion regarding the subject of soil reuse Particular attention needs to be placed on the significant issue of soil reuse in order to develop appropriate regulations, guidance and suitable DEEP philosophy which will facilitate the cost-effective reuse of construction soil where possible.

- Creation of additional remediation standards other than residential and commercial should be considered with great caution, and only where manifestly appropriate. Any new standards should not shortchange critical sites, such as schools.

- Remediation of sediment poses significant challenges for a program that addresses contamination site by site or release by release. Determining what the appropriate

remediation standard is incredibly time consuming unless you default to the most stringent threshold criteria. This is particularly problematic when a Brownfields developer is trying to estimate the costs of remediation early on in the planning process.

- Sediment cleanup may be inappropriate until upstream sources are controlled to limit re-pollution. Once cleanup can occur there is often uncertainty as to what remedy will finally be approved as feasible, and the perceived timeline for approval is long. Remedies are not simple for larger problems; there is significant environmental impact and restoration cost associated with a dredging cleanup. Need to develop a set of drainage basin based sediment TMDLs to formulate an overall sediment restoration and management strategy.

- Any person who has created or is responsible for a source of pollution that has affected sediment should be responsible to pay an amount determined by the extent and degree of contaminated sediment into a "Sediment Remediation Fund" controlled by DEEP. Concept has analogous models in other fee-in-lieu-of programs. Could be apply to aquatic impact offsets. The Sediment Remediation Fund could then be used by DEEP to establish the site specific sediment standard for that reach and perform the remediation projects that make the most environmental sense. At the same time, the party undertaking cleanup could have certainty as to the costs of remediation fairly early in the process. Allows quick timeline for exit from site by paying for and "transferring" clean-up obligation to state or other party.

- Workgroup 2: The Historic Pesticide section on page 35 does not mention the fact that in Massachusetts no protection is provided to the public in relation to the presence of pesticides which, though properly applied, still exceed health-based standards. That state has made a public policy decision that because of the manner in which the pesticides were applied, the health risk is acceptable regardless of changes in the land use. Presently, Connecticut law does not endorse that concept.

- First, as the RSRs already does for typical urban fill, exempt them from compliance with the pollutant mobility criteria, provided no existing drinking water wells are contaminated by the fill or the pesticide contaminated soil. This is a big leap for pesticides, but if any drinking water wells that are affected by the pesticide contamination are provided an alternative source of water, then defaulting to natural attenuation in both the soil and groundwater would not involve a risk to human health.

General

Edits

- All Workgroups: Recommend the phrase "contaminated site" be used, rather than the more restrictive term "brownfield". It encompasses far more sites in need of remediation, whereas the "brownfield" appellation specifically refers only to sites considering their reuse potential.

- Workgroup 1: Please consider the following edit on page 7, "…have reached a "controlled" status, which means that there is no longer an active exposure pathway and risk, although there is a continued potential risk that requires monitoring. In either case lesser levels of contamination above remedial standards …"

- Workgroup 3 Page 11: The Significant Environmental Hazard (SEH) program should be distinguished from remedial programs. It addresses short term risk, which is not necessarily the same as high risk, especially in the case of the requirement to report wells that are polluted but meet established portability criteria. The SEH program implementation also incorporates long-term periodic revalidation that any hazards controlled by limiting receptor pathways, but not meeting the statutory performance standard, remain controlled.

- Workgroup 3: The statement in the executive summary of workgroup report 3, that a strained regulatory system clogged with low-risk, low-priority sites while at the same time allowing high risk sites to fall through the cracks needs to be quantified with data. Does "fall through the cracks" mean never discovered or never cleaned up? Need to verify the facts concerning the clogging of the system, and state them clearly.

- Workgroup 3: "The Triggers Workgroup has evaluated the current triggers that require a potentially responsible party to enter into one of Connecticut's 16 Environmental Programs." The terms "responsible party" and "responsible parties and agencies" appear at critical points in the report but without definition. Write definition of "responsible party" or substitute specific terms, such as a "property owner" or "consultant."

- Workgroup 3: Confusion between Triggers and Entry Points. During our evaluation of Triggers, or Entry Points, the workgroup has put forth a vision for a single environmental statute. Risk assessment should come post-trigger, otherwise one may have the parties responsible for paying for a cleanup assessing whether a cleanup is warranted. Incidentally, I do not get the reasoning that a small-risk event should be given a longer time for reporting than a large-risk event. In the case of the former, would not the report be shorter and easier to file? Recommend: Define "entry point," especially in relation to "trigger."

- Workgroup 3: The inclusion of economic development as a material concern associated with environmental protection and remediation programs. I welcome economic development as a driving motive for environmental clean-up. My dissent would be better phrased as: "The inclusion of economic criteria in determining risks to health and the environment. Such risks should be assessed using scientific and medical data." The statement should read, "The inclusion of economic criteria in determining risks to health and the environment. "

- Workgroup 3: Appendix D – third bullet this recommendation needs to consider analytical methods for which no RCP is published. For information regarding this topic see Section 6 of the Reasonable Confidence Protocol Guidance document found at: http://www.ct.gov/dep/lib/dep/site_clean_up/guidance/rcp/qaqc_rcps_guidance_docu

ment.pdf Also, see the preamble of the Data Quality Assessment and Data Usability Guidance document at:
http://www.ct.gov/dep/lib/dep/site_clean_up/guidance/qaqc/final_dqa_due.pdf

Transformation Timing

- Concern exist that there may be a rush to create the framework of a dramatically new, comprehensive and inventory-driven system. Without proper foundation, legislating such a framework could have the effect of increasing exponentially the universe of sites and incidents pulled into the state program and thereby put before the exiting DEEP staff for action and without a clear path out. This direction without more, carries a corresponding potential for crushing impacts on both the economy and DEEP;s ability to discharge its responsibilities consistently, predictably, fairly, and in a timely and cost effective manner that is protective of the environment.

- We urge DEEP to resist the urge to craft, in a few short months, and entirely new cleanup program for Connecticut. Rather, we recommend that DEEP focus on the foundational elements essential to building a program that will be risk-based, self-implementing, priority driven, and effective in driving economic and job growth which protecting our environment.

- The time frame imposed by the legislature for an effort of this scope was clearly inadequate, offered little opportunity to engage the general public, and compromised the ability of the working groups to do much more than document the existing system. We are concerned that comprehensive legislative proposals to re-invent Connecticut's Contaminated Site laws and programs based on this process are premature. We recommend that the agency and legislature take the time necessary to get adequate public, local government, and other stakeholder input before conducting a major overhaul of the contaminated site remediation process.

- A periodic report to the public detailing remediation progress, written as both a narrative and statistical overview, should be required, with input from all agencies with remediation responsibilities.

- Recommend that the state invest in retaining an expert consulting firm. It is understood the state has little discretionary money available. However, we believe the small cost of commissioning such a study will result in a far stronger remediation program.
    - The firm should receive a vision statement explaining where we would like to be after a comprehensive re-tooling of our remediation programs.
    - Review the visioning documents created last summer.
    - Review the six workgroup reports.
    - Conduct a detailed survey of successful remediation programs in other states.
    - Provide an opportunity for comment from the general public.
    - Focus on where we are going, rather than where we have been.
    - Ensure that human and environmental consequences are always considered as important as economic considerations.