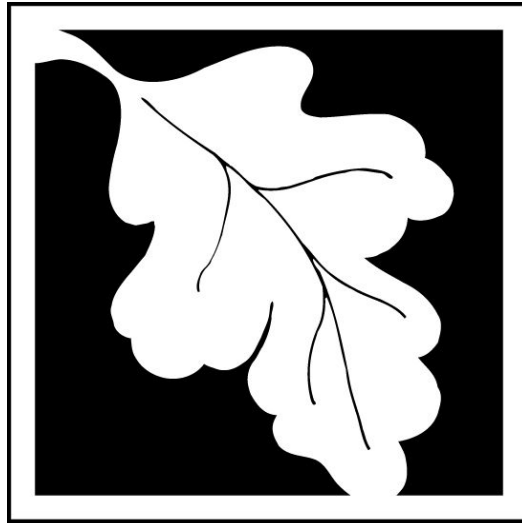


The Massachusetts Waste Site Cleanup Program

Appendices: Measures of Program Performance

1993-2001



M a s s a c h u s e t t s
D e p a r t m e n t
— *of* —
E N V I R O N M E N T A L
P R O T E C T I O N

Prepared by:

Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup

APPENDIX A

Program History

The effort to address contaminated sites in Massachusetts has gone through many stages. The current set of laws and regulations is the culmination of a series of reforms that took place in the 1970s, 1980s and 1990s, with significant changes occurring as recently as 1998. Understanding the basic elements of this history provides important context for the information presented in this report.

Early efforts to address historic contamination

From the industrial revolution through the start of the environmental movement in the 1960s, Massachusetts' industrial economy operated with virtually no environmental regulation. During that time, hundreds of properties became contaminated with oil and hazardous materials. In the 1960s and 1970s, the Massachusetts legislature took its first steps to address that legacy. Initial legislation was less than comprehensive, consisting of a limited program to address oil spills that threatened water bodies, and specific state budget line items to fund the cleanup of certain historic waste sites.

1983-1991: Evolution of a Comprehensive Cleanup Program

In 1983, recognizing the importance of a comprehensive approach to site cleanup, the legislature passed the law that serves as the foundation for the today's cleanup program: Massachusetts General Laws, Chapter 21E: the Massachusetts Oil and Hazardous Material Release Prevention and Response Act. The law established DEP's authority to conduct cleanups and recover costs from the parties responsible for the contamination, provided \$25 million to fund cleanups, and established fees on the transportation of hazardous waste in order to provide a continuous stream of revenue to pay for cleanups.

While the enactment of Chapter 21E was a big step forward, shortcomings of the law soon became apparent. Citizen groups were concerned that not enough sites were being cleaned up, that cleanups were happening at a slow pace, and that resources were not being prioritized to address the most difficult sites. To address these concerns, Referendum Question 4 was put on the ballot in 1986 and approved by nearly seventy-five percent of voters. The referendum made significant changes to Chapter 21E, including new requirements that sites be prioritized for cleanup and that immediate steps be taken to address any imminent hazards.

The process of re-thinking and refining the program continued through the 1980s, and in 1990, a study committee was formed to recommend comprehensive changes based on lessons learned to date. The committee identified a variety of concerns, including: too few cleanups occurring; unclear rules for parties performing cleanups; delays in obtaining DEP approvals needed for site cleanup activities; and insufficient resources for DEP to perform and oversee cleanups.

To address these concerns, the committee recommended changes to the cleanup program that would: create a larger role for the private sector in performing cleanups; focus DEP resources on the sites in greatest need of state involvement; allow voluntary cleanup actions to proceed with minimal DEP involvement at most sites; and provide greater clarity and predictability in the rules governing the reporting and cleanup of sites.

1992-2001: The “Privatized” Program

In 1992, Chapter 21E was amended to incorporate the recommendations of the study committee. On October 1, 1993, new cleanup regulations implementing the law took effect. The new program established clear thresholds for when releases must be reported and when sites are considered closed. It set clear, predictable rules for each stage of the cleanup process. And, most significantly, it created a new profession of “Licensed Site Professionals” (LSPs) to oversee the cleanup and closure of all but the most complex sites, subject to DEP audit. This “privatization” was designed to meet two goals: first, to eliminate the DEP “bottleneck” and allow parties to proceed with cleanup without waiting long periods for DEP approvals; and second, to allow DEP to focus its resources on the sites in greatest need of its attention.

The changes to the cleanup program yielded immediate results. Within the first two years of the new program, there were more than 3,200 permanent site cleanups – including 700 at sites that had languished under the old rules with no clear way out of the cleanup process.

In 1998, DEP performed a comprehensive evaluation of the new cleanup program. The evaluation, conducted with significant public input, found that the new program has significantly increased the number of cleanups and has enabled DEP to focus its resources more effectively on the most complex sites.

That same year, the Brownfields Act was enacted, amending Chapter 21E to create even greater incentives for the cleanup and redevelopment of sites. The Brownfields Act provides an end to future liability for parties who purchase and clean up contaminated properties, provided certain criteria are met. Lenders are protected from most liability in the event they obtain a property through foreclosure, as long as they work with DEP to ensure that any imminent hazards are addressed. Redevelopment authorities and municipalities are similarly protected. These liability incentives, together with a package of financial incentives implemented by the state’s economic development agencies, are designed to minimize the unforeseeable risks, such as third-party lawsuits and future changes to cleanup regulations, that discourage investment in the cleanup and redevelopment of sites.

Looking forward

DEP is committed to continuous improvement of the waste site cleanup program. Through targeted revisions of the cleanup regulations, development of policies and guidance, and training of Licensed Site Professionals, DEP has made significant improvements to the privatized cleanup program since 1993. Attachment F is a list of the policy and regulation changes and LSP training sessions that have occurred since 1993.

DEP continues to work on program improvements. As of the date of this report, DEP is preparing to issue further revisions to the cleanup regulations, conducting two professional training courses for LSPs, and working actively on many significant policy and guidance documents. DEP is also implementing improved audit and enforcement tools to ensure that cleanups meet existing standards.



APPENDIX B

fact sheet

The Massachusetts waste site cleanup program - the basics

Introduction

This brochure highlights the major components of the Massachusetts waste site cleanup program. The program, under the jurisdiction of the Department of Environmental Protection's (DEP) Bureau of Waste Site Cleanup (BWSC), administers oil and/or hazardous material cleanups, ranging from tanker truck spills, to contaminated groundwater, to sites with acres of polluted soil. DEP is located in Boston, with regional offices in Wilmington, Lakeville, Worcester, and Springfield.

Massachusetts General Law, Chapter 21E, the state Superfund law, was originally enacted in 1983 (and amended in 1992, 1995, and 1998), and created the waste site cleanup program. Contaminated properties regulated under this law are often called "21E sites". The regulations adopted to implement c. 21E are called the Massachusetts Contingency Plan (MCP).

Soon after the waste site cleanup program started, it became clear that DEP could not oversee cleanup of thousands of sites and do it at an expeditious pace. As a result, 1992 amendments to c. 21E added a privatized component to the program. Those responsible for cleaning up contamination (potentially responsible parties or PRPs) hire licensed site professionals (LSPs) to oversee most cleanups (with limited DEP oversight) to ensure compliance with the MCP. This allows DEP to focus its own resources on those sites that pose the greatest complexity or risk.

Major program components

Major program components include:

- **requiring that DEP be notified** about contamination that exceeds specific levels. Chapter 21E and the MCP require that PRPs notify DEP of contamination within specific deadlines. Failure to do so may result in significant penalties. To report a site or spill day or night, call 888-304-1133 (toll free) or 617-556-1133.
- **responding to emergencies** when oil and/or hazardous material is released and presents a risk to people and the environment. These situations trigger immediate response actions. If the person responsible for the contamination cannot or will not clean it up, then DEP brings in its own cleanup contractors to carry out rapid responses at the PRP's expense.

- **maintaining a searchable database** (<http://www.state.ma.us/dep/bwsc/sitelist.htm>) to track the cleanup progress of reported sites. Once a site is reported to DEP, regulatory deadlines are triggered for submitting site information and conducting the cleanup so that, within 5 years, the site no longer poses an unacceptable health or environmental risk. The graphic on page 4 depicts the cleanup process.
- **encouraging early risk reduction** cleanup actions. For serious problems, such as sudden releases, imminent hazards, and other time-critical conditions, early actions are required to reduce risks. When the situation poses a lesser threat, limited cleanup actions may be performed voluntarily to reduce risks or lower the cost of future comprehensive cleanups. Sites may not have to tier classify (see the next bullet and the graphic) or be subject to cleanup deadlines if early actions performed before the one-year tier classification deadline are sufficient to meet cleanup standards.
- **classifying sites** that are not cleaned up within one year of being reported. Sites are ranked by complexity, the number of sources, and how serious a potential threat the contamination poses: Tier I (complex, with Tier 1A the most complex) or Tier II (less complex.)
- **allowing varying levels of cleanup** based on land use. The MCP requires contamination to be cleaned up to a level that protects people and the environment based on how the site is being or will be used, such as for housing or commercial purposes. The regulations also allow land use controls, called activity and use limitations (AULs), to be used as cleanup strategy components.
- **assessing fees** for sites that have not completed and documented a cleanup within a year of being reported. Tier IA sites are charged DEP's actual oversight costs. All other sites are assessed a fixed annual compliance fee while work continues. These fees are assessed each year the site is being addressed until DEP receives documentation that the site has been cleaned up consistent with MCP standards.
- **facilitating redevelopment** and reuse of contaminated sites. State and federal "Superfund" laws place the burden of cleanups on owners and anyone else who caused or contributed to the contamination. To encourage these sites to be reused, the Brownfields Act, which amended c. 21E in 1998, created protections for people who did not own or operate the site at the time of the release and did not cause or contribute to the contamination and who complete the cleanup. This relief ends liability for third party costs, property damage claims, and state reimbursement actions. People not qualifying for this protection may apply to the Attorney General for a negotiated "covenant not to sue" for cleanup costs.

The Brownfields Act also created exemptions and defenses for other entities such as tenants, banks, community development agencies, and downgradient property owners.

- **ensuring compliance** through use of several mechanisms created so the program works correctly without direct DEP involvement. PRPs/LSPs send reports to DEP that they develop while working to clean up sites. They must also submit a wide range of information about cleanup process activities. DEP conducts site audits and has the authority to require additional work to comply with the MCP.
- **enforcing against noncompliers** who fail to notify DEP about sites or spills, fail to perform required cleanup actions, or fail to make required submittals and demonstrate acceptable progress at sites. Enforcement activities range from sending reminder letters, to issuing legal orders with escalating penalty levels, to referring non performing LSPs to the LSP Board for action against their licenses.
- **overseeing the most complex sites and releases** thereby limiting DEP staff involvement in most cleanups. Direct oversight is reserved for time-critical situations, sudden releases, Tier 1A sites, and when a PRP cannot or will not conform to the privatized cleanup process. In those cases, DEP hires its own contractor to conduct the cleanup and bills the PRP for the costs.
- **involving the public** throughout the site cleanup process. People responsible for cleaning up sites must publish notices in local newspapers at major milestones (see graphic), informing the public about their activities and providing an opportunity for public involvement. People with a high level of interest in a site can petition to make it a “public involvement plan” site. Plans are developed by conducting interviews to identify public concerns and include opportunities for the public to comment on the cleanup process. The person conducting the cleanup is responsible for providing these public involvement opportunities.

In addition, each year, DEP offers technical assistance grants of up to \$10,000 to groups to hire experts to help them better understand the technical information documenting cleanup milestones, so they can participate more fully in cleanup decisions.

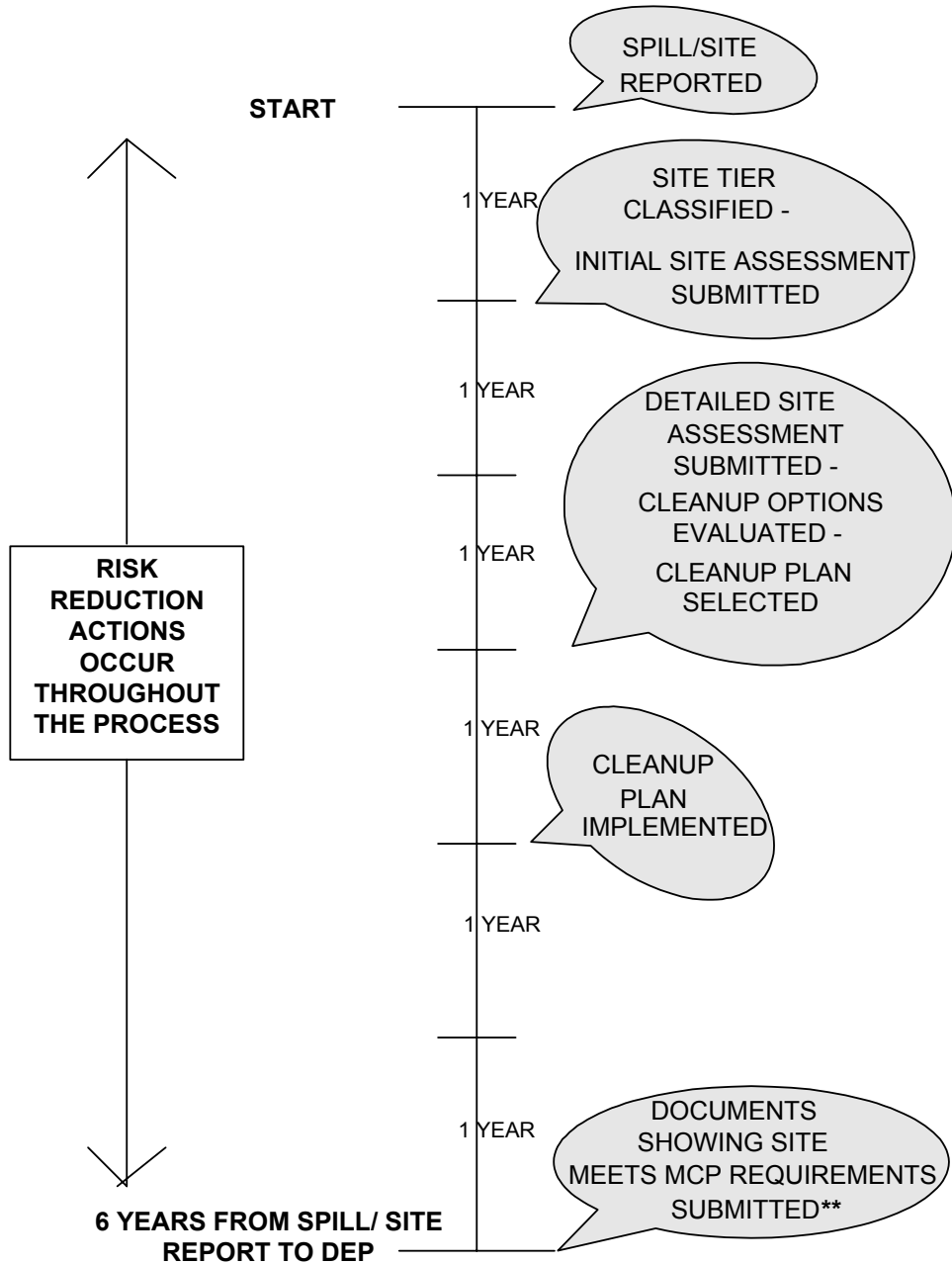
For more information

Report a site or spill 24/7: 888-304-1133 (toll free) or 617-556-1133

Our Website: <http://www.state.ma.us/dep/bwsc>

The DEP InfoLine: 617-338-2255 or, (outside area code 617), 800-462-0444 (press 2)

MCP CLEANUP PROCESS



** CAN OCCUR AT ANY TIME

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APPENDIX C

MASSACHUSETTS' APPROACH TO WASTE SITE CLEANUP: CHAPTER 21E AND THE MASSACHUSETTS CONTINGENCY PLAN

Assessing and cleaning up contamination are important components of Massachusetts' strategy to provide its citizens with a clean and safe environment. The Department of Environmental Protection's (DEP's) Waste Site Cleanup Program was established to ensure that contamination is dealt with appropriately and in a timely fashion.

Who regulates the cleanup of contaminated properties?

Massachusetts General Law Chapter 21E tasks DEP with ensuring the permanent cleanup of contamination. DEP implements this law through a set of regulations known as the Massachusetts Contingency Plan (MCP). The MCP lays out the state's rules for cleaning up contaminated properties.

Who is responsible for the cleanup?

Chapter 21E describes the legal obligations of property owners and other potentially responsible parties (PRPs) when contamination is found. These responsibilities include notifying DEP of the contamination and then ensuring that the contamination is assessed and cleaned up. In addition to current and past property owners, PRPs may include those who generate or transport contaminated materials, and anyone else who may have caused or contributed to the problem.

Recent changes in the law created an "end to liability" for eligible PRPs once a cleanup is complete. To be eligible, the PRP must be an "innocent owner or operator" (which means that he or she did not own or operate the property when the contamination came to be located there). Once the contamination on the property is cleaned up, an eligible person will not be subject to state claims for reimbursement for cleanup costs and natural resource damages, or to third party claims for costs and property damage. This liability protection extends to future property owners who maintain the property's clean status or any on-going cleanup remedy.

If the PRP does not qualify for the "end to liability" status, he or she may still qualify for liability relief under a "Brownfields Covenant Not To Sue." This is an agreement between the PRP and the state that the PRP will have liability relief from state and third party claims. To be eligible, the project

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must contribute to the economic or physical revitalization of the community in which the property is located.

Who performs the cleanup?

DEP relies on Licensed Site Professionals (LSPs) to oversee the cleanup of most contaminated properties. An LSP is an environmental scientist or engineer experienced in cleaning up oil and hazardous material contamination. LSPs are licensed by the state Board of Registration of Hazardous Waste Site Cleanup Professionals (usually referred to as the LSP Board), based on education, experience, and passing an examination on applicable regulations and technical issues. To remain licensed, LSPs must meet professional standards established by the LSP Board. The LSP Board disciplines LSPs whose work does not meet the appropriate standards of care.

LSPs are hired by property owners and other PRPs to oversee assessment and cleanup of contamination, and to ensure that these actions are performed in compliance with the MCP. An LSP gathers and evaluates information about the contamination. He or she then recommends a course of action for meeting state cleanup requirements. These recommendations are presented in the form of written Opinions, and are signed by both the PRP and the LSP before they are sent to DEP. Opinions usually do not require DEP approval, so work can begin promptly. Once the cleanup is complete, the LSP submits a final Opinion to DEP stating that the property has been cleaned up to DEP standards. Since LSPs oversee most of the State's contaminated properties, DEP can focus its limited resources where they are needed most: responding to emergencies, overseeing cleanups of the worst contamination, and ensuring compliance through audit activities.

What does the MCP require once contamination is found?

First, it must be determined whether DEP must be notified. The MCP clearly identifies specific thresholds and time frames for **notification** for sudden spills, historical releases, imminent hazards, and threats of release. If one of these thresholds is exceeded, then DEP must be informed of the contamination.

Next, the MCP encourages, and in some situations requires, that **early risk reduction measures** be performed. These actions may involve a complete, accelerated cleanup of a small release, or a cleanup of a portion of a larger contaminated area where a longer-term cleanup is required. Risk reduction measures are intended to reduce risks, and to lower clean up costs.

There are three types of early risk reduction measures. **Immediate Response Actions** are *required* when certain time-critical conditions are present, such as a sudden spill or an imminent hazard. **Release Abatement Measures** are optional and may be performed only if the contamination is not time-critical. **Releases Abatement Measures** may be performed at any time during the

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cleanup. **Limited Removal Actions** are similar to Release Abatement Measures in that they are optional, and may not be performed if a release is time critical. However, Limited Removal Actions are performed *before* DEP is notified. Further, if the Limited Removal Action eliminates all of the contamination, DEP may not need to be notified at all.

If early risk reduction measures do not result in a complete cleanup of the contamination within one year of the date of notification, the contaminated property must be ranked and classified. An evaluation is performed using the **Numerical Ranking System (NRS)**. A score will be assigned to the site based on the risks that it poses to public health and environmental resources. The NRS score determines whether the contaminated property is classified as Tier I or Tier II. If classified as Tier I, a permit must be obtained from DEP before proceeding with a cleanup. *Tier I* sites are further classified as Tier IA, Tier IB, or Tier IC, depending on the complexity of the site conditions and the compliance history of the PRP. The most complicated and serious sites - Tier IA sites - are subject to direct DEP oversight. Cleanups at *Tier II* sites may proceed without a permit or direct oversight by DEP.

Cleanups follow a phased process. Reports are submitted to DEP at each phase to document the cleanup activities. During *Phase I*, a determination is made as to whether notification and early risk reduction measures are required based on preliminary assessment data. A more comprehensive assessment is performed during *Phase II*, which defines the source, nature, extent, and potential impacts of the contamination, and characterizes the potential harm to health, safety, public welfare, and the environment. There are three options for characterizing risk. **Method 1** uses predetermined numeric standards for more than 100 common chemicals in soil and groundwater; **Method 2** allows for some adjustments in these standards to reflect some kinds of site-specific conditions; and **Method 3** defines the cleanup standards based on a site-specific risk assessment. If the results of the Phase II indicate that cleanup is required, *Phase III* evaluates and selects the cleanup process. The determinations made during the Phase III result in a Remedial Action Plan (the site cleanup plan), which is implemented during *Phase IV*. Finally, *Phase V* is implemented when there is on-going operation of a treatment system, and maintenance or monitoring of the remedy.

How do I know when my property is cleaned up?

The standard used for deciding when a cleanup is complete is when a condition of **No Significant Risk** of harm to health, safety, public welfare, or the environment is achieved or demonstrated. When possible, the property should be restored to the conditions that would have existed if the property had never been contaminated. When a cleanup is complete, a **Response Action Outcome** Statement must be prepared and signed by both the LSP and PRP, and submitted to DEP. The Response Action Outcome Statement must be submitted to DEP within five years of the date of the tier classification. The MCP provides several options for meeting this standard.

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First, a **Permanent Solution** is achieved when a condition of No Significant Risk exists for all pollutants and for any foreseeable time and for all foreseeable activities.

Second, **Activity and Use Limitations** take into account current and future uses of the property. Activity and Use Limitations are deed restrictions or deed notices that may be implemented where a level of No Significant Risk may be maintained only if the property is limited to certain uses and activities. Activity and Use Limitations inform current and future owners (and other interest holders) which activities and uses are allowed, and which activities and uses will pose a risk unless additional cleanup actions are conducted.

Third, the MCP allows for **Temporary Solutions** when risks have been reduced, but financial or technical limitations prevent reaching a condition of No Significant Risk. For all Temporary Solutions, the possibility of reaching a Permanent Solution must be re-evaluated every five years.

Finally, if a Permanent Solution is not possible, but a treatment system has been installed, a **Remedy Operation Status** may be obtained. This status can be maintained for as long as the treatment system is working to cleanup the site.

What else do I need to know about the 21E program?

Additional features of the 21E program are described below:

RAPS - In addition to specific performance standards for each element of the program, the MCP sets forth a general performance standard for conducting cleanups, which allows room for the LSP's professional judgment. This general performance standard is the Response Action Performance Standard (RAPS). It is the level of diligence necessary to ensure all cleanup actions are adequate to protect public health and the environment, apply current commonly accepted professional engineering and scientific standards and practices, and comply with the MCP.

Downgradient Property Status – In situations where a property is affected by contamination migrating from another property, meeting the requirements of the MCP may not be possible. Downgradient Property Status may be asserted by the PRP of the affected property in these circumstances. While a Downgradient Property Status is in effect, certain MCP deadlines and the assessment of annual compliance fees are suspended for the downgradient property owner.

Ensuring Compliance - To ensure that the state cleanup standards are being met, each year DEP audits cleanup actions at a minimum of 20% of all sites. DEP also conducts audits of all sites where Activity and Use Limitations have been implemented. DEP may perform either random or targeted audits. In general, a random audit may be conducted by DEP at any time until two years after a Response Action Outcome is submitted, and a targeted audit until five years after an Response Action Outcome is submitted. However,

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DEP may perform an audit at any time of sites with Activity and Use Limitations or of sites that DEP believes significant problems may be present.

If the audit goes beyond a document review, such as requesting information or conducting an inspection, DEP will provide reasonable **Notice of Audit**. In these cases, DEP will also issue a **Notice of Audit Findings** at the conclusion of the audit. DEP may take enforcement actions for violations discovered during the audit process or at any other time.

Public Information and Involvement – To be successful, cleanups must address the concerns of the communities in which they are located. Local officials, residents, businesses, environmental groups, and others need to be satisfied with a cleanup, since they will live and work with the results. The MCP encourages citizens to participate in the process of investigating and cleaning up contaminated properties, and requires the person performing the cleanup to provide specific opportunities to participate. One way that this goal is accomplished is through **Technical Assistance Grants**, which are awarded to community groups and municipalities who are interested in a particular contaminated property.

The MCP also requires that local officials be notified and legal notices be published to provide information about the status of the cleanup and opportunities for additional public involvement.

Fees - To ensure that the 21E program works as intended, DEP must have sufficient resources to review permit applications, to make timely determinations, and to perform audits. The MCP provides for specific permit and annual compliance fees to generate the funds for these activities.

FOR MORE INFORMATION

General information on 21E and the MCP

MCP Helpline

1-800-462-0444 or (617) 338-2255

(press "2")

World Wide Web

www.state.ma.us/dep/bwsc

Information on LSP Program

LSP Board (617) 574-6870

World Wide Web

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Appendix D

Board of Registration of
**Hazardous Waste Site
Cleanup Professionals**

**GUIDE TO LICENSED SITE PROFESSIONALS
AND
THE LSP BOARD**



prepared by:

The Massachusetts Board of Registration
of
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<p>PURPOSE OF THIS PAMPHLET</p>	<p>This pamphlet has been prepared to help you better understand the role that Licensed Site Professionals (LSPs) and the LSP Board play in the state's waste site cleanup program (the "21E program"). You may find this pamphlet useful if:</p> <ul style="list-style-type: none"> • you need to hire an LSP to oversee an assessment or cleanup at your property; • your property abuts or is near a contaminated site where cleanup activities are being overseen by an LSP; or • you are a local official in a city or town in which waste sites are located. <p>If you have additional questions that this pamphlet does not answer, please contact the LSP Board or the Massachusetts Department of Environmental Protection (DEP). Phone numbers, as well as E-mail and Web site addresses, are listed on the back of this pamphlet.</p>
<p>GENERAL INFORMATION</p>	<p>The Commonwealth of Massachusetts takes the dangers posed by spills and other releases of oil, gasoline, and other hazardous materials to the soil and groundwater very seriously.</p> <p>Chapter 21E of the Massachusetts General Laws sets out the legal obligations of property owners and others responsible for the contamination to:</p> <ul style="list-style-type: none"> • report a chemical spill or release; • assess the nature and extent of contamination; • take speedy action to address hazards which pose a significant risk of harm; and • clean up the contamination. <p>Those who may be legally responsible for a spill or release under Chapter 21E may obtain general information about their obligations from DEP. They also may also obtain advice about their specific legal obligations from an attorney who is knowledgeable about the 21E program.</p>

<p style="text-align: center;">HOW SITES GET CLEANED UP</p>	<p>The Massachusetts Department of Environmental Protection has implemented the 21E program through a set of regulations known as the Massachusetts Contingency Plan or "MCP." The MCP lays out the state's rules for conducting cleanups of contaminated sites. The MCP requires people who are responsible for cleanups to hire a Licensed Site Professional to manage and/or oversee the required assessment and cleanup work. Licensed Site Professionals are often referred to as "LSPs."</p>
<p style="text-align: center;">WHAT ARE LSPs AND WHAT DO THEY DO?</p>	<p>LSPs are scientists or engineers experienced in the assessment and cleanup of oil, gasoline, and hazardous material contamination. They are licensed by an independent state board to manage cleanups and provide formal, written opinions that cleanup work meets the requirements of the MCP.</p> <p>Before the start of the LSP licensing program in 1993, those who conducted work at hazardous waste sites had to receive DEP's approval of each phase of the work or a waiver of the approval requirement. DEP was unable to handle all of these requests, and backlogs developed. By licensing LSPs and allowing them to oversee work at sites, many government-related obstacles to prompt voluntary cleanups have been eliminated.</p> <p>An LSP is hired by a site owner or other potentially responsible party to oversee the assessment and cleanup activities required to address the contamination. The LSP collects data on conditions at the site, interprets this data, assesses the risks posed by the site to health, safety, public welfare, and the environment, and recommends and oversees necessary cleanup activities. In providing these services, the LSP is responsible for making sure that the formal, written opinions that he or she provides about response actions at a disposal site, and the activities that lead up to these opinions, are consistent with the requirements of the MCP.</p> <p>At key stages in the cleanup process, these formal, written opinions describing the work that has been completed must be sent to DEP. When a cleanup has been completed, the LSP provides a final opinion stating that the response actions have achieved an</p>

	<p>outcome that complies with the MCP and protects health, safety, public welfare, and the environment. Only an LSP can sign and stamp these formal opinions.</p>
<p>HOW TO FIND & HIRE AN LSP</p>	<p>Many environmental services firms have LSPs on staff. Other LSPs work independently and assist their clients in hiring all the needed environmental contractors. A complete list of all LSPs, their addresses and telephone numbers can be obtained on the World Wide Web at http://www.state.ma.us/lsp or by calling the LSP Board at (617) 556-1091. DEP's Regional Service Centers also have lists of all licensed LSPs.</p> <p>Anyone seeking to hire an LSP should do the following:</p> <ul style="list-style-type: none"> • Obtain written proposals from several LSPs. • Ask for and check references. • Contact the LSP Board and ask if any complaints have been filed against the LSPs who are being considered; if so, ask if any discipline was imposed. • Compare experience as well as cost. Do not base your selection on rates alone. A more experienced LSP may cost you less in the long run. • Obtain a written contract describing the work to be done and specifying all costs.
<p>WHO LICENSSES LSPs?</p>	<p>LSPs are licensed by the Board of Registration of Hazardous Waste Site Cleanup Professionals, commonly called the "LSP Board." Applicants must meet stringent education and experience standards set by the Board, and they must pass an examination that tests their technical and regulatory knowledge. The LSP Board also requires that LSPs take continuing education courses in order to maintain their licenses. These licensing and continuing education requirements, along with the LSP Board's ongoing disciplinary program, were designed to ensure that LSPs have the knowledge and experience to guide their clients properly through the assessment and cleanup process mandated by the state regulations.</p>

	<p>The LSP Board also regulates the professional services provided by LSPs. It has adopted Rules of Professional Conduct that all LSPs must meet. The LSP Board investigates complaints that LSPs have failed to follow these rules.</p>
<p>WHAT ARE SOME OF THE IMPORTANT RULES OF PROFESSIONAL CONDUCT THAT LSPs MUST MEET?</p>	<p>The Massachusetts Waste Site Cleanup Program has been designed to safeguard public health and the environment. DEP's standards for cleanups provide flexibility to tailor response actions to the needs of a particular site. The LSP Board requires LSPs to follow DEP's requirements for assessing and cleaning up a site and to exercise independent professional judgment in doing so. In addition, the LSP Board requires that LSPs provide services with reasonable care and diligence, applying the knowledge and skill expected of LSPs.</p>
<p>WHAT HAPPENS WHEN LSPs VIOLATE THE BOARD'S PROFESSIONAL CONDUCT RULES?</p>	<p>If the LSP Board receives a complaint about an LSP and determines that the LSP has violated one or more of its Rules of Professional Conduct, the Board can discipline the LSP. The forms of discipline include censure, suspension of license, and, in cases of serious violations, revocation of license.</p>
<p>WHO CAN FILE COMPLAINTS AGAINST LSPs?</p>	<p>Anyone can file a complaint, including property owners and tenants who retain LSPs, abutters, citizen groups, public officials, DEP staff, even other LSPs. To file a complaint, all one needs to do is to fill out a short Complaint Form obtained from the LSP Board by calling (617) 556-1145.</p> <p>The Board considers all complaints that LSPs have performed in a manner that violates the standard of care or any of the other Rules of Professional Conduct. However, the LSP Board does not have jurisdiction to resolve disputes between LSPs and their clients about fees.</p>

**FOR MORE
INFORMATION**

...

LSP Board:

List of LSPs (617) 556-1091

To file a Complaint (617) 556-1145

LSPs' disciplinary records (617)292-5814

E-mail address: LSP.Board@state.ma.us

Web site: www.state.ma.us/lsp

- General information about the LSP Board
- List of LSPs
- Disciplinary actions taken
- LSP Board's Rules of Professional Conduct

Department of Environmental Protection:

MCP Helpline (21E program info)

- (617) 338-2255 (from area code 617 and outside Massachusetts)
- (800) 462-0444 (from area codes 781, 508, 978, and 413)

Web site: www.state.ma.us/dep/bwsc

- Massachusetts Contingency Plan
- Other waste site cleanup publications
- Sites List
- Brownfields information

This information is available in alternate format upon request by contacting the LSP Board's ADA Coordinator, 10th floor, One Winter Street, Boston 02108.

A trifold version of this pamphlet is also available to download, print and distribute.

File to download: [lspguide.pdf](#) (99 KB)

[Contact: LSP.Board@state.ma.us]
[[LSP Board Home Page](#)]

Updated: May 24, 1999

[Privacy Policy](#)

APPENDIX E

Data Explanation

Except where noted, all data in this report are derived from BWSC's Waste Site Cleanup database, which was created to track the progress of sites reported to DEP on or after October 1, 1993. Until recently, progress at sites reported before that date was tracked in a separate "Sites" database. BWSC is merging the two databases, but until that task is finished, the data used to develop this report is subject to change. We expect changes to be minor; none should significantly affect the overall report trends. The merge should be completed by June 30, 2002.

The information that follows explains the data used to create each table and graphic in this report. For readers who are not familiar with DEP's waste site cleanup program, these explanations may be difficult to follow; the program is highly complex and often takes technically trained individuals a long time to understand. Appendices A-C are fact sheets that describe the program and may provide insight to this data explanation.

1. Number of Releases Reported (p. 7)

The numbers presented on this page are derived from DEP's Sites database (total number of sites reported prior to 10/1/1993), Spills database (total number of spills reported prior to 10/1/1993) and Waste Site Cleanup database (2-hour, 72-hour, and 120-day releases reported on or after 10/1/1993). The number of old sites that transitioned into the system was calculated using the Waste Site Cleanup database and verified using the Sites database. Sites that were closed prior to 10/1/1993 are not counted in the approximately 24,000 sites requiring action under the current regulations.

2. Types of Property Affected (p. 8)

Media and Structures Impacted (p. 9)

Types of Contamination (p. 10)

These charts summarize data recorded by DEP at various stages of the site notification, investigation, and cleanup process and are limited to 2-hour, 72-hour, and 120-day notifications made on or after 10/1/1993. Data were gathered from transmittal forms associated with the following submittals: Immediate Response Action (IRA) plans, status reports, and completion statements; and Release Abatement Measure (RAM) plans, status reports, and completion statements. Data regarding soil and groundwater impacts are also reported on transmittal forms for Response Action Outcome (RAO) statements.

3. Time Critical vs. Non-Time Critical Releases (p. 11)

This chart divides new, post-10/1/1993 releases into two categories: time-critical (2- and 72-hour notifications) and non-time critical (120-day notifications). Information is not available to make this distinction for transition sites.

4. Location of Releases (regional maps, pp. 12-15)

The regional maps show all sites within the scope of this report (approximately 24,000; see 1, above), by town, according to whether they are open or closed, and whether cleanup activity has been reported (see 5 and 6, below). They include 2-hour, 72-hour, and 120-day notifications, as well as transition sites that were not closed as of 10/1/1993.

5. Running Total of Site Closures (p. 16)

This chart shows the number of sites closed each fiscal year since the waste site cleanup program was revised in 1993. It includes 2-hour, 72-hour, and 120-day notifications, as well as transition sites that were closed after 10/1/1993. Closed sites are sites where an RAO or transition closure document has been filed, and those that DEP has listed in its database as "Release Tracking Number (RTN) Closed."

6. Cleanup Activities Conducted (p. 17)

This chart divides the sites within the scope of this report (see 1, above) into three categories: those that are closed (see 5, above); those where cleanup has started; and those in the pre-cleanup stage. For purposes of this chart, "cleanup started" means there has been RAM, IRA (not including assessment-only), Phase IV or Phase V activity recorded at the site. Sites in the "pre-cleanup" category include many sites at which significant assessment has occurred. Although transition sites are included in this chart, cleanup activities conducted under the pre-10/1/1993 regulations (such as Interim Measures) are not counted because these are not recorded in the Waste Site Cleanup database that was used to generate this report.

7. Site Investigation (p. 18)

This chart shows the progress of sites within the scope of this report (see 1, above) through the MCP's phased site investigation process. Phase I is the preliminary investigation. Phase II is the comprehensive investigation. Although transition sites are included in this chart, site investigation activities conducted under the pre-10/1/1993 regulations are not counted because these are not recorded in the Waste Site Cleanup database that was used to generate this report.

8. Classification of Potential Risk and/or Complexity (p. 19)

This chart divides the sites within the scope of this report (see 1, above) into three categories: those that are closed; those that are open and present a higher degree of potential risk and/or complexity than other sites; those that are open and present a lower degree of potential risk and/or complexity; and those that are open, at which potential risk and/or complexity have not been classified. "Higher potential" indicates that a site has been designated as Tier 1. "Lower potential" indicates a Tier 2 designation. "Not yet classified" indicates that a site has not been tier classified.

9. Use of DEP Numerical Cleanup Standards (p. 23)

This chart summarizes the risk characterization methods used in the RAOs received by DEP. Eighty-three percent of RAOs have used Method 1 (“DEP Numerical Standards”), and the remainder used Methods 2 or 3 (“Site-specific risk characterization”).

10. Number of Audits per Fiscal Year (p. 25)

This chart, derived from a database maintained by the audit program, indicates the number of audits conducted each fiscal year. The chart indicates a significant increase in audits beginning in Fiscal Year 1999. This jump is attributable to two factors: an influx of resources from the 1998 Brownfields Act, and the introduction of new “Technical Screening” and “Site Investigation” audits, which are considered audits under the MCP but require much less time than a traditional comprehensive audit.

APPENDIX F

Summary of Major Regulation Revisions, Policy Development and Licensed Site Professional Training Programs, October 1, 1993 – June 30, 2001

November, 1993

- Policy / Guidance
- MCP Questions and Answers, Vol. 1, Number 1
 - Tier 1 Response Action Permits

January, 1994

- Policy / Guidance
- MCP Questions and Answers, Vol. 1, Number 2

February, 1994

- Policy / Guidance
- MCP Questions and Answers, Vol. 1, Number 3
 - The New MCP: Transition Fact Sheets #1-9 (summary of rules for addressing sites that were reported but not cleaned up under the previous set of cleanup regulations)

April, 1994

- Policy / Guidance
- MCP Questions and Answers, Vol. 1, Number 4
 - Background Documentation for the Development of the MCP Numerical Standards
 - Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, #WSC-94-400 (supercedes WSC 400-89)
 - Construction Activities in Contaminated Areas - draft
 - MCP Fact Sheet: Risk Characterization and Evaluation
 - The Massachusetts Site Discovery Program

- LSP Training
- Understanding Subparts C & D (Notification and Risk Reduction) of the MCP

May, 1994

- Policy / Guidance
- MCP Questions and Answers, Special Edition #1: AULs
 - Off-Gas Treatment of Point-Source Remedial Air Emissions, Policy #WSC-94-150
 - Policy 88-04a Procedures for Determining Whether a Potential Productive Aquifer Constitutes a Potential Public Groundwater Source

June, 1994

- Policy / Guidance
- Abating Lead Contaminated Soils in Residential Settings - Draft Scope of Work
 - MCP Questions and Answers, Special Edition #2
 - MCP Questions and Answers, Vol. 1, Number 5
 - Policy and Guidelines for Secured Lender Liability Under Chapter 21E, Policy #WSC-94-602

July, 1994

- Policy / Guidance
- Standard References for Geophysical Investigations
 - The New MCP: Adequately Regulated Fact Sheets:
 - 1: Overview (Subpart A)
 - 2: Requirements for Adequately Regulated Federal Superfund Sites
 - 3: Requirements for Adequately Regulated Federal HSWA Corrective Actions
 - 4: Requirements for Adequately Regulated 21C Facilities
 - 5: Requirements for Adequately Regulated Solid Waste Management Facilities

August, 1994

- Policy / Guidance
- Interim Final Petroleum Report: Development of Health-Based Alternative to the Total Petroleum Hydrocarbon (TPH) Parameter

September, 1994

- Policy / Guidance
- Feasibility and Phase 3 Evaluation Guidance - Draft Scope of Work
 - MCP Questions and Answers, MassGIS Maps and Mapping
 - MCP Questions and Answers, Special Edition #3

October, 1994

- Policy / Guidance
- Innovative Technology Pilot Soil Bioremediation
- LSP Training
- Understanding Subparts I & J (Risk Characterization and Response Action Outcome) of the MCP

December, 1994

- Policy / Guidance
- Massachusetts Closure Requirements for Shallow Injection Wells

January, 1995

Policy / Guidance • Compilation of all 1994 Audit & Enforcement Updates

MCP Revisions • Revisions to the MCP (effective February, 1995)

February, 1995

Policy / Guidance • Covenants to Ensure Cleanups, Prevent Future State Lawsuits at Hazardous Waste Sites
• MCP Questions and Answers, Special Edition #4

March, 1995

Policy / Guidance • The 1995 MCP: Overview of Downgradient Property Status

April, 1995

Policy / Guidance • MCP Timelines and Fees
• The MCP: 1995 Revisions Fact Sheet - Summary of the Major Revisions to the Massachusetts Contingency Plan (310 CMR 40.0000)

May, 1995

LSP Training • Learning from Experience (overview of 1995 MCP revisions)

July, 1995

Policy / Guidance • Guidance for Disposal Site Risk Characterization - Sections 1 - 7 and 10
• Guidance for Disposal Site Risk Characterization, Interim Final Policy BWSC/ORS-95-141
• MCP Questions and Answers, Vol. 2, Number 1
• Public Involvement - Scope of Work
• The 1993 Massachusetts Contingency Plan: Risk Characterization and Evaluation - How Clean is Clean Enough

November, 1995

Policy / Guidance • A Weight-of-Evidence Approach for Evaluating Ecological Risks - draft
• The 1993 Massachusetts Contingency Plan - A New Approach to Cleaning Up Disposal Sites

December, 1995

- Policy / Guidance
- Ambient Air Exposure Limits for Chemicals in Massachusetts: AALs and TELs

January, 1996

- Policy / Guidance
- Compilation of all 1995 Audit & Enforcement Updates
 - On-Site Screening or Qualitative Assessment Technologies Guidance Scope of Work
 - Pilot Innovative Technology Scoping (PITS) Program Fact Sheet - draft
 - Two Years Later: How the New 21E Program is Measuring Up

March, 1996

- LSP Training
- Innovative Field Assessment Technologies Forum

April, 1996

- Policy / Guidance
- Commonwealth of Massachusetts Underground Storage Tank Closure Assessment Manual – WSC 402-96
 - Guidance for Disposal Site Risk Characterization - Chapter 9
 - The Business of Brownfields Reclamation

June, 1996

- Policy / Guidance
- A Homeowners Guide to Avoiding Costly Heating Oil System Leaks
 - MCP Questions and Answers, Vol. 3, Number 1

October, 1996

- Policy / Guidance
- An Evaluation of Vapor Intrusion Into Buildings Through a Study of Field Data
 - Removing your Underground Heating Oil Tank: A Homeowner's Guide

November, 1996

- LSP Training
- Environmental Risk Characterization

December, 1996

- Policy / Guidance
- MCP Questions and Answers, Vol. 3, Number 2
 - Top Ten Most Common MCP Risk Characterization Problems

LSP Training • Remediation Waste & Remedial Wastewater Management

January, 1997

Policy / Guidance • Compilation of all 1996 Audit & Enforcement Updates
• Massachusetts Brownfields Strategy: Defining the Challenge (Revised November, 1997)

March, 1997

Policy / Guidance • Potentially Productive Aquifer Fact Sheet

April, 1997

Policy / Guidance • Determining Non-Potential Drinking Water Source Areas, Policy: WSC-97-701
• Lead Contamination in Your Yard: A Homeowners Guide

May, 1997

Policy / Guidance • Petitioning for a Case-Specific Designation of a Non-Potential Drinking Water Source Area - draft
• Guidance on Evaluating the Feasibility of Approaching or Achieving Background – pre-final draft
• MCP Questions and Answers, Vol. 4, Number 1

LSP Training • Beyond TPH – Understanding and Using the New VPH/EPH Approach

June, 1997

Policy / Guidance • A Massachusetts Property Owner's Guide to Hiring a Licensed Site Professional
• Waste Site Cleanup Program Evaluation - Scope of Work

July, 1997

- Policy / Guidance
- Guidance on Evaluating the Feasibility of Approaching or Achieving Background - draft

August, 1997

- Policy / Guidance
- Cleaning up Contaminated Property
 - MCP 1997 Revision Fact Sheet - draft
 - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, DEP Policy # COMM-97-001 (supercedes #BWP 94-037)

September, 1997

- Policy / Guidance
- Numerical Ranking System Guidance Manual: 310 CMR 40.1500 - Interim Final Policy
 - Scope of Work for Massachusetts Brownfields Handbook - draft

October, 1997

- Policy / Guidance
- Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of MA DEP VPH/EPH Approach - draft

January, 1998

- Policy / Guidance
- Compilation of all 1997 Audit & Enforcement Updates
 - Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
 - Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
 - Report on the Results of the Fall 1997 VPH/EPH Round Robin Testing Program

May, 1998

- Policy / Guidance
- MCP regulations package (corrections to Tables 6 and 1 and 2)
 - The Massachusetts Oil and Hazardous Materials List, 310 CMR 40.1600

June, 1998

- Policy / Guidance
- Technical Assistance Grant (TAG) Program Fact Sheet
- LSP Training
- Understanding and Using Activity and Use Limitations

July, 1998

- Policy / Guidance
- Financing Brownfields Redevelopment: Currently Available Programs
 - Draft Generic Environmental Impact Report

August, 1998

- Policy / Guidance
- Assessing Contamination at Residential Underground Heating Oil Tank Closures, DEP Policy #WSC- -98 - draft
 - BWSC Audit Program Fact Sheet

September, 1998

- Policy / Guidance
- BWSC Financial Inability Program Fact Sheet
 - Summary of the Brownfields Act: Chapter 206 of the Acts of 1998

October, 1998

- Policy / Guidance
- Public Involvement Activities at TIER IA Public Involvement Plan (PIP) Sites

November, 1998

- Policy / Guidance
- MCP Fact Sheet: Public Involvement in Site Cleanup - 310 CMR 40.1400
- LSP Training
- Understanding and Using the Massachusetts Contingency Plan

December, 1998

- Policy / Guidance
- List of Economic Target Areas

January, 1999

- Policy / Guidance
- A Guide for Oil Companies: Preventing Costly Spills During Heating Oil Deliveries
 - Compilation of all 1998 Audit & Enforcement Updates
 - Standard References for Monitoring Wells - Small Diameter Driven Wells Supplement

February, 1999

- Policy / Guidance
- Federal Brownfields Tax Incentive Program
 - Final Generic Environmental Impact Report

March, 1999

- Policy / Guidance
- Financing Brownfields Redevelopment: State and Federal Programs
 - Heating Oil Delivery Lines: A Homeowner's Guide to Preventing Leaks
 - Master Q&A
 - Preservation Techniques for Volatile Organic Compound (VOC) Soil Sample Analyses - WSC 99-415

May, 1999

- Policy / Guidance
- Guidance on Implementing Activity and Use Limitations, Interim Final Policy #WSC 99-300
 - Preservation Techniques for Volatile Organic Compound Soil Sample Analyses #WSC 99-415
 - Spreadsheet Detailing VPH/EPH Standards Derivation

June, 1999

- Policy / Guidance
- Chapter 21E and the Massachusetts Contingency Plan
 - Liability Relief Under Chapter 21E
 - Massachusetts' Approach to Waste Site Cleanup
 - Laboratory Method Validation Study for the Determination of Volatile Petroleum Hydrocarbons in Indoor Air
 - Opportunities for Public Involvement in Preliminary Response Actions: Immediate Response Actions and Release Abatement Measures, Volume 1, Number 1
 - Public Involvement Q&A, Volume 5, Number 1

August, 1999

- Policy / Guidance
- Impact of the Source Water Assessment Program (SWAP) on the Waste Site Cleanup Program

- MCP Revisions
- Revisions to the MCP (effective October, 1999)

October, 1999

- LSP Training
- 1999 Massachusetts Contingency Plan Revisions and Case

Studies

November, 1999

- Policy / Guidance
- Changes to 310 CMR 5.00, Civil Administrative Penalty Regulations - draft

January, 2000

- Policy / Guidance
- Construction of Buildings in Contaminated Areas WSC-00-425

February, 2000

- Policy / Guidance
- Method for the Determination of Air-Phase Petroleum Hydrocarbons (APH) - draft
 - Where to Find Information about Contaminated Sites in Massachusetts

May, 2000

- LSP Training
- Demonstrating Compliance with the MCP through the Conceptual Site Model Approach

June, 2000

- Policy / Guidance
- Brownfields 2000 Report

July, 2000

- LSP Training
- Demonstrating Compliance with the MCP through the Conceptual Site Model Approach

September, 2000

- LSP Training
- Demonstrating Compliance with the MCP through the Conceptual Site Model Approach

January, 2001

- Policy / Guidance
- Heating Oil Delivery Lines: A Homeowner's Guide to Preventing Leaks
 - MCP Questions and Answers - Volume 7, Number 1

February, 2001

- Policy / Guidance
- Managing Spills of Oil and Hazardous Materials: Information for Municipalities

March, 2001

- Policy / Guidance
- Technical Assistance Grant (TAG) Program Fact Sheet
 - Managing Lead Shot at Your Range

April, 2001

- Policy / Guidance
- Massachusetts' Approach to Waste Site Cleanup: Chapter 21E and the MCP
 - The Massachusetts Waste Site Cleanup Program - The Basics

May, 2001

- Policy / Guidance
- Proposed Sediment Screening Benchmarks - draft
- LSP Training
- MA DEP Petroleum Analytical Methods: VPH, EPH and APH

June, 2001

- Policy / Guidance
- Assignment and Permitting in Support of 310 CMR 16 and 19.000 - Interim risk evaluation guidance document
 - Characterizing Risks Posed by Petroleum Contaminated Sites: Implementation of MA DEP VPH/EPH Approach - final draft