



## 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 (MassDEP's) Waste Site Cleanup Program was established to ensure that contamination is dealt with appropriately and quickly.

### ***Who regulates the cleanup of contaminated properties?***

Massachusetts General Law Chapter 21E tasks MassDEP with ensuring the permanent cleanup of contamination. MassDEP 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 MassDEP 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.

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

### ***Who performs the cleanup?***

MassDEP 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 MassDEP. Opinions usually do not require MassDEP approval, so work can begin promptly. Once the cleanup is complete, the LSP submits a final Opinion to MassDEP stating that the property has been cleaned up to MassDEP standards. Since LSPs oversee most of the state's contaminated properties, MassDEP can focus its limited resources where they are needed most: responding to emergencies; overseeing key stages of assessment and cleanup at specific sites, as conditions warrant; and ensuring compliance through audit activities.

### ***What does the MCP require once contamination is found?***

First, it must be determined whether MassDEP 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 MassDEP 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. Release Abatement Measures may be performed at any time during the 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* MassDEP is notified in cases where the contaminated area is limited and confined to soil. Further, if the Limited Removal Action eliminates all of the contamination, MassDEP 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 MassDEP 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. Cleanups at *Tier II* sites may proceed without a permit.

Cleanups follow a phased process. Reports are submitted to MassDEP at each phase to document the cleanup activities. During *Phase I*, a determination is made on 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 site-specific conditions; and **Method 3** defines the cleanup standards based on a site-specific risk assessment. If the results of 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 MassDEP. The Response Action Outcome Statement must be submitted to MassDEP within five years of the date of the tier classification. The MCP provides several options for meeting this standard.

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 limits on the uses of and activities at the property are needed to maintain a level of No Significant Risk. 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 precautions or 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.

Finally, if a Permanent Solution has not yet been achieved, but a treatment system has been installed and is being operated to reach a Permanent Solution, **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 MassDEP is required to audit cleanup actions at a statistically significant number of all sites that pay fees. MassDEP may perform either random or targeted audits.

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

**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.

The MCP also requires that local officials be notified and notices be published in local newspapers 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, MassDEP 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**

<http://www.mass.gov/dep/cleanup>

### **Information on the LSP Program**

LSP Board - (617) 574-6870

<http://www.mass.gov/lsp>