

## Performing a Site Investigation

The best way to identify whether a property has been affected by chemical contamination that requires cleanup is to have a qualified environmental professional conduct a “site investigation” of the property. Site investigations involve one or more visits to the property to collect samples of soil, groundwater, and other environmental media. Sample locations are selected based on the property’s use and history. Samples are then analyzed using laboratory equipment. The analytical results help determine which contaminants (if any) are present and their location, concentrations, and characteristics.

Massachusetts General Law Chapter 21E requires that property owners and other legally responsible parties notify MA DEP of chemical contamination that exceeds regulatory thresholds specified in the Massachusetts Contingency Plan, “MCP” (310 CMR 40.0000). If your site investigation identifies a level of contamination requiring notification of MA DEP, then any further assessment or cleanup actions must be overseen by a Licensed Site Professional (LSP). LSPs are environmental professionals licensed by the state to manage site work and render professional opinions.

An LSP is hired by a site owner, or other party with an interest in a property (including a potential buyer or developer), to oversee the site assessment and any required cleanup activities. The LSP is responsible for rendering formal, written opinions about the assessment and cleanup at specific points in the regulatory process, and ensuring that the work complies with the MCP requirements.

Except in the most serious cases, MA DEP is not directly involved in reviewing and approving site investigation and cleanup work. However, MA DEP does conduct audits of the reports prepared by LSPs to determine compliance with the regulatory requirements. If MA DEP finds the work does not meet MCP standards, it may require additional documentation, investigation, and/or cleanup. A MA DEP audit may occur several years after the report has been submitted, and the property owner is still responsible for addressing any additional work required by MA DEP as the result of an unfavorable audit.

**Bottom line:** Inadequate investigation can add thousands of dollars and months or years of delays to a project.

It’s just good business to hire a well-qualified LSP who will

- thoroughly research the property’s historical use;
- conduct a site investigation that is well planned and properly executed;
- perform the data collection and analysis correctly; and
- submit technically sound and complete site investigation and cleanup reports that meet regulatory requirements the first time around.

## What You Don’t Know *Can Hurt You* – A Case Study

As part of a pending property sale, the owner of a commercial property removed a fuel oil underground storage tank (UST) from behind a building where a dry cleaner had operated. The soil removed was found to contain perchloroethylene or PCE. The first consultant the owner hired assumed the PCE source was eliminated when the UST soils were removed and did no further evaluation specific of the PCE contamination.

But when monitoring wells were installed to verify cleanup, additional PCE was detected. The property owner then requested an aggressive short-term cleanup effort so that he could sell the property. The consultant used in situ chemical oxidation in the assumed PCE source area outside the building’s back door – an effort that failed because the investigation had not identified the correct source of the PCE.

As a result:

- Sale of the property was lost.
- The failed cleanup effort cost \$30,000 and the property owner was still required to pay for an additional, appropriate cleanup.
- A second consultant had to be hired to find the actual source of the contamination— a foundation drain that created a pathway for the PCE to spread into the soil.

## Online Resources

EPA has developed two handbooks to assist you in defining the scope of work for a site investigation and hiring an environmental consultant:

- [Assessing Contractor Capabilities for Streamlined Site Investigations \(www.clu-in.org/download/misc/contractorcap.pdf\)](http://www.clu-in.org/download/misc/contractorcap.pdf)
- [Brownfields Technology Primer: Requesting and Evaluating Proposals that Encourage Innovative Technologies for Investigation and Cleanup \(www.clu-in.org/download/misc/rfpfinal.pdf\)](http://www.clu-in.org/download/misc/rfpfinal.pdf)

## After You Hire a Consultant

Make every effort to provide the consultant access to the entire property being investigated. If some portion of the site is inaccessible for any reason, make sure the consultant is advised before submitting a proposal and that this inaccessibility, if relevant, is noted in reports submitted to MA DEP.

Execute a property access agreement with the consultant and all other parties that may need to enter the property during the course of investigation or cleanup work. This agreement should include appropriate certificates of insurance.

You should also supply all pertinent historical information, such as past site operation records, the locations of existing and former tanks or waste management structures, records of any chemical spills, building records, and construction drawings—particularly “as-builts.”

Pay for a quality investigation and good report preparation upfront and avoid project delays, cost increases and regulatory non-compliance issues later.

*For further information, please contact*

**Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup, Division of Response and Remediation  
(617) 292-5500  
[www.mass.gov/dep/bwsc](http://www.mass.gov/dep/bwsc)**

Developed by the Northeast Waste Management Officials’ Association (NEWMOA, [www.newmoa.org](http://www.newmoa.org)) under a project sponsored by the US EPA Technology Innovation Program, ([www.epa.gov/tio](http://www.epa.gov/tio))

Printed on recycled paper with soy-based ink.

Finally, be sure to stipulate that no digging underground can occur without first contacting Dig-Safe and checking with you about other utility lines on the property. Ask whether any permits might be necessary, such as from the municipality (particularly for cleanup work). Be very clear that no additional work outside the original scope of work and cost estimate/contract can be performed without the consultant first obtaining your written authorization.

## Avoid Problems with Site Investigation and Cleanup Work

When information is missing or not presented and explained clearly, MA DEP may require further work or documentation, potentially resulting in project delays and additional expenses. Make sure each submittal required by the regulations:

1. addresses the applicable MCP requirements
2. is submitted by the applicable MCP deadline
3. includes a clear explanation of the area of contamination that was addressed, what investigation activities were performed and why
4. presents the technical information clearly – the effective use of maps and tables can improve communication.

# Site Investigation Matters

## Taking the mystery out of dealing with contaminated property in Massachusetts

**W**hether you are buying, selling, or just have ownership in a piece of property, it is in your best interest to know what to do about possible chemical contamination at the property.

Lending institutions often require environmental assessments of a property where there is potential for contamination before they will consider financing its purchase or redevelopment. In addition, contamination issues can trigger requirements on the part of the property owner to notify the Massachusetts Department of Environmental Protection (MA DEP) and to assess and cleanup the contamination.

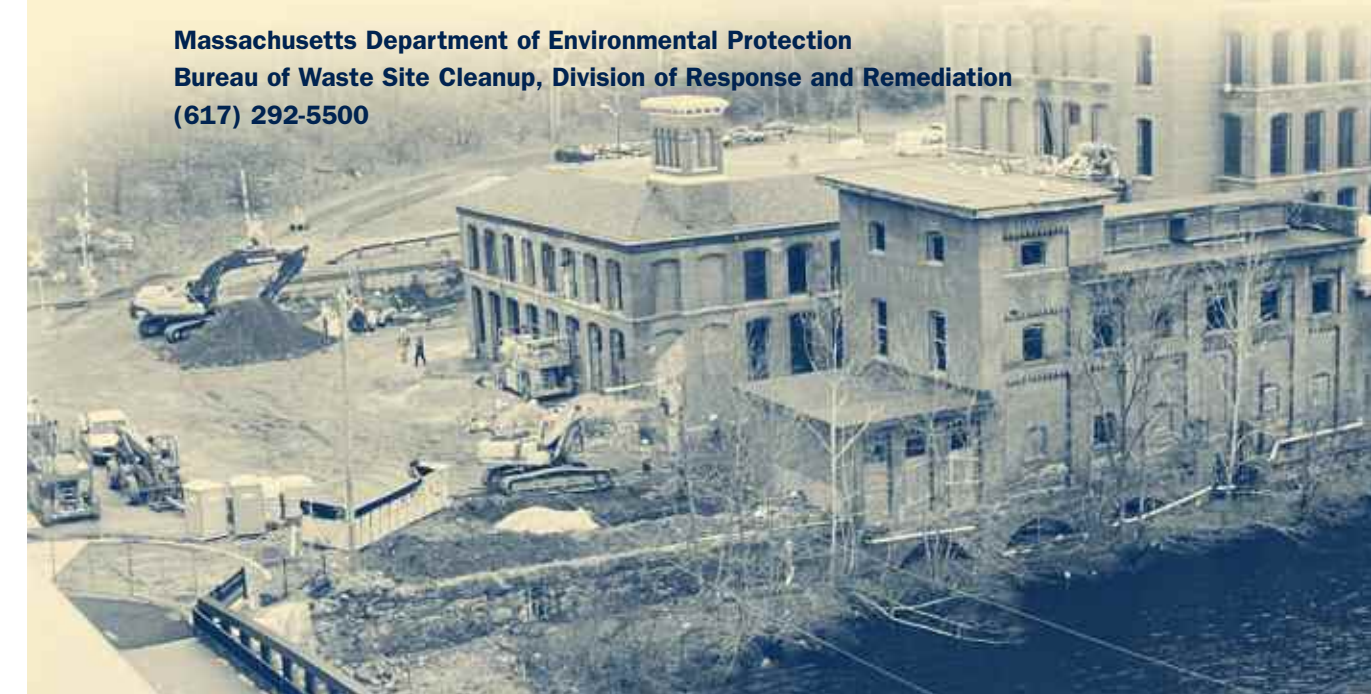
A site investigation should provide answers to key questions, including

- Is there chemical contamination at the property?
- What kinds of chemicals are present and at what concentrations?
- Do the contaminant types and concentrations require notification of the MA DEP?
- What areas and environmental media at the property are affected?
- Has the source(s) of the contamination been identified?
- What are the cleanup options, and how much time and money will it take to do the cleanup?

Knowing these facts is key to facilitating property transactions, estimating redevelopment costs, identifying legal responsibilities, and conducting any necessary cleanup actions in the most cost-effective way.

Not knowing the facts can cost you in terms of unforeseen costs and months, or even years, of delays.

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## Playing It Smart

Property with a commercial or industrial past can be a great investment, as long as you know what you are getting into beforehand. Both buyers and sellers need to know that state and federal laws hold property owners responsible for cleaning up chemical contamination—regardless of whether the owner created or contributed to the problem. **If you are buying a property** and are conducting a site investigation (also known as completing due diligence), it is important to be thorough. If contamination is found later, after you take ownership of the property, you will be among the parties liable for the cleanup.

**If you want to sell a property**, providing potential buyers with the results of a thorough site investigation can actually make them more comfortable. The discovery of contamination problems after the sale can lead the new owners to take legal action against you as the seller to force you to pay for the cleanup. Legally, you can still be liable for cleanup even after you no longer own or operate at the site. A site investigation prior to a property transfer is the best way to ensure a successful transaction and avoid legal issues related to environmental conditions.

**Ignorance at the time of sale is no excuse for either the buyer or seller.**

### Find the Expertise You Need

*There are five basic steps to identifying an environmental consultant who is likely to complete the site investigation in an efficient and professional manner.*

#### 1. Clarify why a site investigation is necessary and what the regulations require.

Are you a buyer concerned with liability, or an owner preparing to sell the property? Maybe your firm needs to clear up uncertainties about the contamination detected during previous site investigation work. Or do you have to address specific regulatory requirements? In any case, the place to start is by understanding the reasons why you are undertaking a site investigation and your legal obligations.

You also need to define the scope of work the consultant is to perform. Some companies specialize in investigating specific types of contamination, such as petroleum releases from underground storage tanks or from industrial operations. If you are unsure whether contamination is present, you may want to limit the scope of work to a preliminary characterization of the site. After you learn more about the site, you can then obtain competitive bids for additional investigation and, if necessary, cleanup, potentially lowering your overall costs.

If you already know that cleanup is required, however, you might look for a consultant who can assist you in the entire process from investigation through cleanup. Having a relationship with just one company may be more cost efficient overall by saving you the time and effort of hiring a second firm.

#### 2. Request proposals from several companies.

Ask for referrals from your trade organization or professional association, other companies in your industry, your legal counsel, insurance firm, or mortgage lender. Once you have identified several recommended companies, request a written proposal from at least three.



Residential Redevelopment - Before and After

No matter how small your job, every consultant who submits a proposal should provide the following information:

- Recent experience (last 3 to 5 years) with similar projects in Massachusetts
- Qualifications of key personnel and subcontractors, including professional licensing (e.g., Massachusetts Licensed Site Professional, Professional Engineer, Certified Professional Geologist)
- Organizational chart showing the responsibilities and lines of authority for project staff and subcontractors
- Description of each task to be performed (including objective, methods to be used, and description of the deliverable)
- Project schedule indicating the timeframe for each task and any applicable MA DEP regulatory deadline or review
- Clear explanation of what the cost estimates cover and how additional expenses would be billed, including the firm's fee schedule, costs for subcontractors and subcontractor management, and applicable MA DEP fees
- Quality assurance/quality control (QA/QC) procedures for collecting and analyzing soil, groundwater, and other samples
- References from recent clients

Also check the company's insurance coverage. You or someone whose experience you trust should review the policy in detail. This is critical because the consultant could overlook something, worsen the existing contamination, or damage a third party's property. If the consultant lacks sufficient coverage for these types of incidents, you may be liable.

*Beware of an estimate that is much lower than the others you receive. Consultants who low-ball their prices in order to get a project may end up costing more in the end.*

#### 3. Interview at least two companies.

The firms to interview should have submitted clearly written, competitively priced proposals that indicate a good understanding of your project and of your requirements. Require that the site manager who would work on your project be at the interview. During your meeting, find out

### Innovative Technologies Can Save You Time and Money

Ask the consultants about their firm's experience with innovative technologies. Can they explain the pros and cons of each in relation to use at your site? Innovative technologies previously accepted include:

- direct push technologies, such as Geoprobe
- microwells,
- low flow groundwater sample collection,
- x-ray fluorescence,
- field-portable gas chromatograph (GC) and/or mass spectrometer (MS),
- immunoassay and/or other portable field test kits, and
- soil gas surveys.

- What the company proposes to do and why
- What their cost estimate includes and how fees for additional work would be handled
- The project manager's experience working on sites in Massachusetts, and on sites with similar issues to yours
- How the company ensures the work and written reports are well-organized, thorough, technically correct, and complies with state and federal regulatory requirements and guidance
- If the firm can provide letters that demonstrate good working relationships with all their proposed subcontractors
- Whether the company actively participates in any professional association
- How the firm trains junior staff
- What services they offer that make them different or better than other consultants

#### 4. Determine who will work on your project.

The skills and experience of the individuals assigned to your project directly affect its success. Before you hire an environmental consulting company, make sure that the key people assigned to your project are available to complete it in a timely manner. And before hiring a Massachusetts Licensed Site Professional, contact the Board of Registration of MA Hazardous Waste Site Cleanup

Professionals (a.k.a. LSP Board) to find out whether any disciplinary actions or complaints have been filed against your particular LSP. General Information and contacts at the LSP Board are available at <http://www.mass.gov/lsp/>

You should also check out the training and experience of each non-LSP consultant to be assigned to your project. Ask for resumes and professional license information for everyone assigned to your project, including non-LSP staff. Make sure they have worked on similar sites and have a thorough knowledge of Massachusetts' regulatory requirements.

MA DEP also offers some helpful information online:

- Answers to Frequently Asked Questions Regarding Cleanup Regulations ([www.state.ma.us/dep/bwsc/files/masterqa.pdf](http://www.state.ma.us/dep/bwsc/files/masterqa.pdf))
- Massachusetts Contingency Plan (MCP) and other regulations at ([www.state.ma.us/dep/bwsc/regs.htm](http://www.state.ma.us/dep/bwsc/regs.htm))
- Quality Control Guidelines for the Acquisition and Reporting of Analytical Data ([www.mass.gov/dep/bwsc/files/data/qaqcdocs.htm](http://www.mass.gov/dep/bwsc/files/data/qaqcdocs.htm))

#### 5. ALWAYS check references.

Contact at least two former clients and ask about the scope and nature of the services provided and their satisfaction with the work performed. Keep in mind, however, that even the best consultant cannot predict all of the site circumstances and project outcomes.

Good questions to ask the past client:

- Was the consultant timely in completing all elements of the work?
- Were the final project costs in line with the original estimate?
- Did the scope of work change significantly during the project? If so, why?
- Did the consultant work effectively with the client?
- Did the work comply with the regulatory requirements?
- Was additional work required by MA DEP (e.g., as the result of an audit)?
- Did the people who worked on the project change over time? If so, was the transition handled satisfactorily?