

## The Environmental Corner

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### Phase I, Phase II, What Is It?

Most drycleaners have heard the dreaded phrase, "They did a Phase I." From this point you are waiting on pins and needles to hear what the results would be. But what is a Phase I and why are they conducted?

A Phase I Environmental Site Assessment or Phase I ESA, is short for a study conducted on real property to evaluate the likelihood of environmental contamination. There is a standard that must be followed under the American Standard for Testing and Materials or ASTM, which now includes determining whether indoor vapor intrusion is likely. The thing about conducting a Phase I ESA on real estate that has a dry cleaner is that invariably, because of the history of dry cleaning operations, a Phase II investigation is nearly always a required follow-up. In other words, one can be certain that if the real estate that has an active or historical dry cleaner on the site is being considered for refinancing or purchasing, follow-up soil, soil gas or groundwater samples will be required.

In layman terms this follow-up sampling is called a Phase II. While this common terminology is not accurate, it does convey a step further in the process of determining whether or not a drycleaner has affected a piece of property. The Phase II, also referred to as a "subsurface investigation" or more commonly "site investigation," typically consists of collecting a series of soil and groundwater samples, and sending the samples to a laboratory to determine if drycleaning operations have impacted the property negatively.

Phase II initial soil and groundwater samples are collected at a few locations where the highest likelihood of releases has occurred. These samples can be collected by hand us-

ing hand-held equipment, or by small to large drilling rigs. The type of equipment used depends on the types of soil and depth of groundwater at the site, and whether the samples are collected from underneath the building or outside. These areas are typically current and former dry cleaner machine locations and/or dry cleaner solvent transfer locations. Once collected, the samples are then sent to a laboratory to determine how much, if any, dry cleaner solvents are present in the soil and groundwater. If impacts are present, additional soil and groundwater samples are collected at more locations until the entire area of

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soil and groundwater contamination has been determined. This process may take several months. Once the extent of soil and groundwater contamination has been determined with Phase II activities, remediation activities (which will be discussed in future articles) can begin.

While a Phase I costs are generally low and predictable, Phase II costs vary by many factors. Some of these factors are “site specific.” For example, the types of soil and depth to groundwater at the site, the length of drycleaner operations, and even prior operations will influence the cost of a Phase II. Other factors include the reason for conducting a Phase II. For example, if the drycleaner is thinking about refinancing, the Phase II may consist of the fairly simple question, “Is my site affecting the environment?” If the desire is to know the costs to reach site closure, the cost of a Phase II will be higher than the first question.

The biggest cost factor associated with a Phase II relates to the experience of the consultant chosen and their attention to the needs for the Phase II. One of the first needs is to

consult with the drycleaner on what the goals are, what the needs could be, and the costs associated with the range of possibilities for an initial Phase II. The drycleaner needs to

understand what will be completed and for what cost, what the potential downsides are, and what makes the most sense for his/her particular situation. In order to do that well, your consultant needs to have experience with your business, business and technical savvy to understand the situation, and finally, the sense to know if there are other sources of funding that can eliminate or, at least, ease the cost burden.

Phase I costs generally range from \$1,000 to \$2,500. Phase II costs vary as summarized above. Typically, a Phase II can cost anywhere from \$5,000 to well over \$100,000. Phase II initial sampling activities (to determine if there is a problem) usually cost around \$5,000.

The success of the experience is tied to communication of needs and matching effort to the needs. The most important variable under the control of the owner is to pick a qualified, responsive consultant.



*“Typical small (top) and large scale impacts of Phase II work at a typical dry cleaner. The impact of the field effort can vary and is another issue to be discussed with the consultant. Your consultants should work with you to minimize any potential impact to your business, including work on off-hours or weekends.”*