

ASTM E-1527-05 Standard Practices

Overview

Since 1990, Clearwater Group has performed Phase I Environmental Assessments. The following is a summary of the new ASTM standards that reflect the U.S. Environmental Protection Agency (US EPA) rules governing the environmental due diligence process. The US EPA rules were promulgated on November 1, 2005 in the Code of Federal Regulations (Federal Reference: 40 CFR Part 312). These rules became effective November 1, 2006.

Environmental Site Assessment Process

American Society of Testing and Materials (ASTM) established the following two standards or practices for environmental site assessments (ESA) in commercial real estate transactions to standardize "Environmental Due Diligence":

- ◆ ASTM E 1528-00 Standard Practice for Environmental Site Assessments: Transaction Screen Process (Transaction Screen), and
- ◆ ASTM E 1527-00 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Phase I ESA).

ASTM standards were established to define the extent and limit of "appropriate inquiry" as indicated in the phrase "good commercial or customary practice in the marketplace" as defined in 42 U.S.C. §9601(35)(B) for CERCLA liability and defense provisions. The purpose of the ASTM standards is to identify, to the extent feasible pursuant to ASTM E 1527, recognized environmental conditions in connection with property. ASTM defines the term "recognized environmental condition" as the presence or likely presence of hazardous substances as defined by CERCLA, and petroleum products on a property under conditions that indicate an existing release, a past release or a material threat of a release into the ground, groundwater or surface water.

Additionally, ASTM standard practices for environmental site assessments do not address every environmental concern that could be encountered. Additional services outside the scope of the ASTM standards would need to be specified in the terms of the contract or proposal for the environmental site assessment.

Outside Scope of Work

Clearwater Group has performed all of the following types of projects, however, many of these services are not included in the standard scope of work defined by the ASTM Phase I standard. Example of services outside the scope of work for ASTM standards include a broader scope of assessment, more detailed conclusions, liability/risk evaluations, recommendations for the following:

- Phase II - Subsurface Investigation and further testing;

- Phase III - Remedial Action;
- Phase IV – Site Closure Activities;
- Asbestos Surveys;
- Lead-based paint testing;
- Radon testing;
- PCB testing;
- An evaluation of vapor intrusion potential and indoor air issues!;
- Mold and moisture inspections;
- A declaration of natural hazard assessment potential;
- An evaluation of geologic hazards (flood zones, fault zones, fire zones, etc.); and
- And other site-specific requirements.

ASTM has developed the following guide for further testing:

- ◆ ASTM E 1903-97 Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment.

ASTM E 1528 Transaction Screen Process

ASTM E 1528 Transaction Screen Process (Transaction Screen) standard practice consists of a questionnaire and a corresponding guide. The questionnaire consists of three areas of inquiry: 1) interviews with the owner and/or operator of the property, 2) site visit and 3) review of government records and historical sources. The Transaction Screen may be conducted either by the user, including an agent or employee of the user, or wholly or partially by an environmental professional. ASTM defines the term "environmental professional" as one who has sufficient training and experience to investigate a site in accordance with the standard practice and the ability to develop conclusions regarding the site's environmental condition.

According to ASTM, if a transaction screen is conducted on a pristine property, the user should be able to answer all questions in the negative and reasonably conclude that no further inquiry is necessary. The user must exercise "business judgment" to determine whether the environmental condition of the property has been adequately assessed. When no response, unknown, or affirmative response occurs, the user must decide whether further inquiry is warranted. The reason for this conclusion must be documented. If further inquiry is needed, then the user should proceed with the advice and guidance of an "environmental professional."

Incorporating state regulatory database information, an ASTM 1528 transaction screen includes the following:

- ◆ Limited Records Review:
 - National Priority List (NPL)
 - Comprehensive Environmental Response Compensation Liability Information System (CERCLIS)
 - Resource Compensation Recovery Act Treatment Storage and Disposal Facility (RCRA TSDF)
 - State Superfund Database
 - leaking petroleum storage tanks (LPST)
 - registered petroleum storage tanks (RPST)
 - municipal solid waste landfills (MSWLF)
- ◆ Limited Historical Land Use Research:
 - fire insurance maps or local fire department interview
- ◆ Site Inspection (reconnaissance)
- ◆ Interview with property owner and occupants (if applicable)
 - standardized questions and checklist
- ◆ Documentation (questionnaire)
- ◆ Obtaining previous Phase I Environmental Assessments, Hazardous Materials Business Plans or other environmental permits or documents, as available.

ASTM E 1527 Phase I Environmental Site Assessment

According to ASTM, the phase I environmental site assessment (ESA) is a more comprehensive assessment than the transaction screen and is to be performed by an environmental professional as defined earlier. The duties of the environmental professional include three tasks: interviews and site reconnaissance, review and interpretation of information and oversight of writing the report. The Phase I ESA consists of the following four components:

- 1) a more thorough review of records,
- 2) site visit,
- 3) interviews with the owner and/or operator of the property and
- 4) report documentation which includes photographs.

Incorporating state regulatory database information into an ASTM 1527 Phase I environmental site assessment includes the following:

- ◆ Records Review and Database Search:
 - National Priority List (NPL)
 - Comprehensive Environmental Response Compensation Liability Information System (CERCLIS)
 - CERCLIS no further remedial action is planned (NFRAP) facilities
 - Resource Compensation Recovery Act Treatment Storage and Disposal Facility (RCRA TSD)
 - Resource Compensation Recovery Act Corrective Action Facilities (RCRA CORRACTS)
 - RCRA non-CORRACTS TSD
 - Appropriate State Superfund
 - leaking petroleum storage tanks (LPST)
 - municipal solid waste landfills (MSWLF)
 - resource compensation recovery act generators
 - registered petroleum storage tanks (RPST)
 - voluntary cleanup program (VCP)
 - Emergency Response Notification System (ERNS)

- ◆ Additional Environmental Record Sources (discretionary):
 - physical setting review
 - USGS 7.5 minute topographic map (mandatory)
 - other geologic, hydrogeologic and soil surveys or maps (discretionary)

- ◆ Historical land use research (reasonably ascertainable):
 - aerial photographs
 - USGS 7.5 minute topographic maps
 - fire insurance maps
 - local street directories
 - property tax files
 - building department records
 - recorded land title records
 - zoning/land use records

- ◆ Site visit (reconnaissance)
 - documented with photographs

- performed by the responsible environmental professional
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- ◆ Interviews:
 - owners and occupants
 - local government officials
- ◆ Evaluation of Data
- ◆ Documentation (written report)

ASTM Phase II Environmental Site Assessment

Similar to AASHTO's preliminary site investigation or an environmental site investigation, a Phase II Environmental Site Assessment is a more detailed investigation requiring sampling and analysis. The purpose of the Phase II investigations is to estimate the nature and extent of contamination and to provide the basis for a preliminary assessment of the cost for corrective or preventive action.

ASTM has developed a Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment (ASTM E1903-97). The guide covers a framework for employing good commercial and customary practices in conducting a Phase II environmental site assessment of a parcel of commercial property.

Recent Case Study

In the summer of 2006, Clearwater Group was contacted about environmental due diligence for a public laundry facility in the Mission Section of San Francisco, California. The owner wanted to close the real estate transaction rapidly and obtain bank financing. After initial inspection and a Phase I Environmental Assessment, it was determined that the building was used as a Volkswagen showroom thirty years before. An underground gasoline storage tank was located in the parking lot. The Phase I portion of the project lasted about 2 weeks. With the underground tank in the ground, bank financing was not an option.

After using geophysical methods (ground penetrating radar and magnetics), the tank was located, and the depth, volume and orientation of the tank were determined. Within about a week, a backhoe was used to sample the soils on both sides of the tank. From this Phase II Subsurface Investigation activity, it was determined that the gasoline did not leak from the bottom of the tank. The permits were filed for the tank removal, and the tank was removed within about 2 weeks. It was determined that the soil overburden above the former underground gasoline storage tank had elevated levels of lead. This material had been stored in bins, pending analytical results, and the material was sent to the appropriate landfill. A Phase III Remedial Action was performed by documenting the removal of this lead impacted soil and verifying proper disposal. This information was contained in the final Underground Storage Tank report.

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Phase IV Site Closure was started as soon as the final Underground Storage Tank report was submitted to the San Francisco Environmental Health Department. Site closure was granted one week later.

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For More Information

For more information or to purchase copyrighted practices contact ASTM International at 100 Barr Harbor Drive, West Conshohocken, Pennsylvania, USA 19428-2959. ASTM's web page is <http://www.astm.org/>.

For more information about Phase I Environmental Site Assessments or other environmental questions, please contact:

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