



Designation: E 1527 – 97

Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process¹

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1. Scope

1.1 *Purpose*—The purpose of this practice, as well as Practice E 1528, is to define good commercial and customary practice in the United States of America for conducting an *environmental site assessment*² of a parcel of *commercial real estate* with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and *petroleum products*. As such, this practice is intended to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner defense* to CERCLA liability: that is, the practices that constitute “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” as defined in 42 USC § 9601(35)(B). (See Appendix X1 for an outline of CERCLA’s liability and defense provisions.)

1.1.1 *Recognized Environmental Conditions*—In defining a standard of good commercial and customary practice for conducting an *environmental site assessment* of a parcel of *property*, the goal of the processes established by this practice is to identify *recognized environmental conditions*. The term *recognized environmental conditions* means the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, groundwater, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de*

minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

1.1.2 *Two Related Practices*—This practice is closely related to Practice E 1528. Both are *environmental site assessments* for *commercial real estate*. See 4.3.

1.1.3 *Petroleum Products*—*Petroleum products* are included within the scope of both practices because they are of concern with respect to many parcels of *commercial real estate* and current custom and usage is to include an inquiry into the presence of *petroleum products* when doing an *environmental site assessment* of *commercial real estate*. Inclusion of *petroleum products* within the scope of this practice and Practice E 1528 is not based upon the applicability, if any, of CERCLA to *petroleum products*. (See Appendix X1 for discussion of *petroleum exclusion* to CERCLA liability.)

1.1.4 *CERCLA Requirements Other Than Appropriate Inquiry*—This practice does not address whether requirements in addition to *appropriate inquiry* have been met in order to qualify for CERCLA’s *innocent landowner defense* (for example, the duties specified in 42 USC § 9607(b)(3)(a) and (b) and cited in Appendix X1).

1.1.5 *Other Federal, State, and Local Environmental Laws*—This practice does not address requirements of any state or local laws or of any federal laws other than the appropriate inquiry provisions of CERCLA’s *innocent landowner defense*. *Users* are cautioned that federal, state, and local laws may impose environmental assessment obligations that are beyond the scope of this practice. *Users* should also be aware that there are likely to be other legal obligations with regard to *hazardous substances* or *petroleum products* discovered on *property* that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance.

1.1.6 *Documentation*—The scope of this practice includes research and reporting requirements that support the user’s ability to qualify for the *innocent landowner defense*. As such,

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² All definitions, descriptions of terms, and acronyms are defined in Section 3. Whenever terms defined in 3.2 or described in 3.3 are used in this practice, they are in *italics*.

sufficient documentation of all sources, records, and resources utilized in conducting the inquiry required by this practice must be provided in the written report (refer to 7.1.8 and 11.2).

1.2 *Objectives*—Objectives guiding the development of this practice and Practice E 1528 are (1) to synthesize and put in writing good commercial and customary practice for *environmental site assessments* for *commercial real estate*, (2) to facilitate high quality, standardized *environmental site assessments*, (3) to ensure that the standard of *appropriate inquiry* is practical and reasonable, and (4) to clarify an industry standard for *appropriate inquiry* in an effort to guide legal interpretation of CERCLA's *innocent landowner defense*.

1.3 *Considerations Beyond Scope*—The use of this practice is strictly limited to the scope set forth in this section. Section 12 of this practice, identifies, for informational purposes, certain environmental conditions (not an all-inclusive list) that may exist on a *property* that are beyond the scope of this practice but may warrant consideration by parties to a *commercial real estate* transaction.

1.4 *Organization of This Practice*—This practice has several parts and two appendixes. Section 1 is the Scope. Section 2 is Referenced Documents. Section 3, Terminology, has definitions of terms not unique to this practice and descriptions of terms unique to this practice and acronyms. Section 4 is Significance and Use of this practice. Section 5 describes User's Responsibilities. Sections 6-11 are the main body of the Phase I Environmental Site Assessment, including evaluation and report preparation. Section 12 provides additional information regarding non-scope considerations (see 1.3). The appendixes are included for information and are not part of the procedures prescribed in either this practice or Practice E 1528. Appendix X1 explains the liability and defense provisions of CERCLA that will assist the user in understanding the user's responsibilities under CERCLA; it also contains other important information regarding CERCLA and this practice. Appendix X2 provides a recommended table of contents and report format for a Phase I Environmental Site Assessment Report.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

E 1528 Practice for Environmental Site Assessments: Transaction Screen Process³

3. Terminology

3.1 This section provides definitions, descriptions of terms, and a list of acronyms for many of the words used in this practice and Practice E 1528. The terms are an integral part of both practices and are critical to an understanding of the practices and their use.

3.2 Definitions:

3.2.1 *asbestos*—six naturally occurring fibrous minerals found in certain types of rock formations. Of the six, the minerals chrysotile, amosite, and crocidolite have been most commonly used in building products. When mined and processed, asbestos is typically separated into very thin fibers. Because asbestos is strong, incombustible, and corrosion-resistant, asbestos was used in many commercial products beginning early in this century and peaking in the period from World War II into the 1970s. When inhaled in sufficient quantities, asbestos fibers can cause serious health problems.^{4,5}

3.2.2 *asbestos containing material (ACM)*—any material or product that contains more than 1 % asbestos.⁴

3.2.3 *Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)*—the list of sites compiled by EPA that EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the National Priorities List.

3.2.4 *construction debris*—concrete, brick, asphalt, and other such building materials discarded in the construction of a building or other improvement to property.

3.2.5 *contaminated public wells*—public wells used for drinking water that have been designated by a government entity as contaminated by toxic substances (for example, chlorinated solvents), or as having water unsafe to drink without treatment.

3.2.6 *CORRACTS list*—environmental protection agencies (EPA's) list of treatment, storage, or disposal facilities subject to corrective action under RCRA.

3.2.7 *demolition debris*—concrete, brick, asphalt, and other such building materials discarded in the demolition of a building or other improvement to property.

3.2.8 *drum*—a container (typically, but not necessarily, holding 55 gal (208 L) of liquid) that may be used to store *hazardous substances* or *petroleum products*.

3.2.9 *dry wells*—underground areas where soil has been removed and replaced with pea gravel, coarse sand, or large rocks. Dry wells are used for drainage, to control storm runoff, for the collection of spilled liquids (intentional and non-intentional) and wastewater disposal (often illegal).

3.2.10 *dwelling*—structure or portion thereof used for residential habitation.

3.2.11 *environmental lien*—a charge, security, or encumbrance upon title to a *property* to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of *hazardous substances* or *petroleum products* upon a *property*, including (but not limited to) liens imposed pursuant to CERCLA 42 USC § 9607(1) and similar state or local laws.

3.2.12 *ERNS list*—EPA's emergency response notification system list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity, as maintained at the National Response Center. Notification requirements for such releases or spills are codified in 40 CFR Parts 302 and 355.

⁴ See EPA, *Managing Asbestos in Place, A Building Owner's Guide to Operations and Maintenance Programs for Asbestos-Containing Materials*, July 1990, p. 2.

⁵ See also, for an additional definition of asbestos, ASTM STP 834, ASTM.

³ *Annual Book of ASTM Standards*, Vol 11.04.

3.2.13 *Federal Register, (FR)*—publication of the United States government published daily (except for federal holidays and weekends) containing all proposed and final regulations and some other activities of the federal government. When regulations become final, they are included in the Code of Federal Regulations (CFR), as well as published in the Federal Register.

3.2.14 *fire insurance maps*—maps produced for private fire insurance map companies that indicate uses of properties at specified dates and that encompass the property. These maps are often available at local libraries, historical societies, private resellers, or from the map companies who produced them. See Question 23 of the transaction screen process in Practice E 1528 and 7.3.4.2 of this practice.

3.2.15 *hazardous substance*—A substance defined as a hazardous substance pursuant to CERCLA 42 USC § 9601(14), as interpreted by EPA regulations and the courts: "(A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 USC § 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act (42 USC § 6901 *et seq.*) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 USC § 7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)." (See Appendix X1.)

3.2.16 *hazardous waste*—any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 USC § 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act (42 USC § 6901 *et seq.*) has been suspended by Act of Congress). The Solid Waste Disposal Act of 1980 amended RCRA. RCRA defines a hazardous waste, in 42 USC § 6903, as: "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may—(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

3.2.17 *landfill*—a place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term *solid waste disposal site* and is also known as a garbage dump, trash dump, or similar term.

3.2.18 *local street directories*—directories published by private (or sometimes government) sources that show ownership, occupancy, and/or use of sites by reference to street addresses. Often local street directories are available at libraries of local governments, colleges or universities, or historical societies. See 7.3.4.6 of this practice.

3.2.19 *material safety data sheet (MSDS)*—written or printed material concerning a hazardous substance which is prepared by chemical manufacturers, importers, and employers for hazardous chemicals pursuant to OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

3.2.20 *National Contingency Plan (NCP)*—the National Oil and Hazardous Substances Pollution Contingency Plan, found at 40 CFR § 300, that is the EPA's blueprint on how hazardous substances are to be cleaned up pursuant to CERCLA.

3.2.21 *National Priorities List (NPL)*—list compiled by EPA pursuant to CERCLA 42 USC § 9605(a)(8)(B) of properties with the highest priority for cleanup pursuant to EPA's Hazard Ranking System. See 40 CFR Part 300.

3.2.22 *occupants*—those tenants, subtenants, or other persons or entities using the *property* or a portion of the *property*.

3.2.23 *owner*—generally the fee owner of record of the *property*.

3.2.24 *petroleum exclusion*—The exclusion from CERCLA liability provided in 42 USC § 9601(14), as interpreted by the courts and EPA: "The term (hazardous substance) does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)."

3.2.25 *petroleum products*—those substances included within the meaning of the *petroleum exclusion* to CERCLA, 42 USC § 9601(14), as interpreted by the courts and EPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of 42 USC § 9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). (The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil, pursuant to *Standard Definitions of Petroleum Statistics*.⁶)

3.2.26 *Phase I Environmental Site Assessment*—the process described in this practice.

3.2.27 *pits, ponds, or lagoons*—man-made or natural depressions in a ground surface that are likely to hold liquids or sludge containing *hazardous substances* or *petroleum products*. The likelihood of such liquids or sludge being present is determined by evidence of factors associated with the pit, pond, or lagoon, including, but not limited to, discolored water, distressed vegetation, or the presence of an obvious wastewater discharge.

⁶ *Standard Definitions of Petroleum Statistics*, American Petroleum Institute, Fourth Edition, 1988.

3.2.28 *property*—the real property that is the subject of the *environmental site assessment* described in this practice. Real property includes buildings and other fixtures and improvements located on the property and affixed to the land.

3.2.29 *property tax files*—the files kept for property tax purposes by the local jurisdiction where the property is located and includes records of past ownership, appraisals, maps, sketches, photos, or other information that is reasonably ascertainable and pertaining to the property. See 7.3.4.3.

3.2.30 *RCRA generators*—those persons or entities that generate hazardous wastes, as defined and regulated by RCRA.

3.2.31 *RCRA generators list*—list kept by EPA of those persons or entities that generate hazardous wastes as defined and regulated by RCRA.

3.2.32 *RCRA TSD facilities*—those facilities on which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA.

3.2.33 *RCRA TSD facilities list*—list kept by EPA of those facilities on which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA.

3.2.34 *recorded land title records*—records of fee ownership, leases, land contracts, easements, liens, and other encumbrances on or of the property recorded in the place where land title records are, by law or custom, recorded for the local jurisdiction in which the *property* is located. (Often such records are kept by a municipal or county recorder or clerk.) Such records may be obtained from title companies or directly from the local government agency. Information about the title to the property that is recorded in a U.S. district court or any place other than where land title records are, by law or custom, recorded for the local jurisdiction in which the property is located, are not considered part of recorded land title records. See 7.3.4.4.

3.2.35 *records of emergency release notifications (SARA § 304)*—Section 304 of EPCRA or Title III of SARA requires operators of facilities to notify their local emergency planning committee (as defined in EPCRA) and state emergency response commission (as defined in EPCRA) of any release beyond the facility's boundary of any reportable quantity of any extremely hazardous substance. Often the local fire department is the local emergency planning committee. Records of such notifications are "Records of Emergency Release Notifications" (SARA § 304).

3.2.36 *report*—the written record of a transaction screen process as required by Practice E 1528 or the written report prepared by the environmental professional and constituting part of a "Phase I Environmental Site Assessment," as required by this practice.

3.2.37 *solid waste disposal site*—a place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term *landfill* and is also known as a garbage dump, trash dump, or similar term.

3.2.38 *solvent*—a chemical compound that is capable of dissolving another substance and may itself be a *hazardous substance*, used in a number of manufacturing/industrial processes including but not limited to the manufacture of paints

and coatings for industrial and household purposes, equipment clean-up, and surface degreasing in metal fabricating industries.

3.2.39 *state registered USTs*—state lists of underground storage tanks required to be registered under Subtitle I, Section 9002 of RCRA.

3.2.40 *sump*—a pit, cistern, cesspool, or similar receptacle where liquids drain, collect, or are stored.

3.2.41 *TSD facility*—treatment, storage, or disposal facility (see *RCRA TSD facilities*).

3.2.42 *underground storage tank (UST)*—any tank, including underground piping connected to the tank, that is or has been used to contain *hazardous substances* or *petroleum products* and the volume of which is 10 % or more beneath the surface of the ground.

3.2.43 *USGS 7.5 Minute Topographic Map*—the map (if any) available from or produced by the United States Geological Survey, entitled "USGS 7.5 Minute Topographic Map," and showing the property. See 7.3.4.5.

3.2.44 *wastewater*—water that (1) is or has been used in an industrial or manufacturing process, (2) conveys or has conveyed sewage, or (3) is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. Wastewater does not include water originating on or passing through or adjacent to a site, such as stormwater flows, that has not been used in industrial or manufacturing processes, has not been combined with sewage, or is not directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

3.2.45 *zoning/land use records*—those records of the local government in which the *property* is located indicating the uses permitted by the local government in particular zones within its jurisdiction. The records may consist of maps and/or written records. They are often located in the planning department of a municipality or county. See 7.3.4.8.

3.3 Definitions of Terms Specific to This Standard:

3.3.1 *actual knowledge*—the knowledge actually possessed by an individual who is a real person, rather than an entity. Actual knowledge is to be distinguished from constructive knowledge that is knowledge imputed to an individual or entity.

3.3.2 *adjoining properties*—any real property or properties the border of which is contiguous or partially contiguous with that of the property, or that would be contiguous or partially contiguous with that of the property but for a street, road, or other public thoroughfare separating them.

3.3.3 *aerial photographs*—photographs taken from an airplane or helicopter (from a low enough altitude to allow identification of development and activities) of areas encompassing the property. Aerial photographs are often available from government agencies or private collections unique to a local area. See 7.3.4.1 of this practice.

3.3.4 *appropriate inquiry*—that inquiry constituting "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in CERCLA, 42 USC § 9601(35)(B), that will give a party to a *commercial real estate* transaction the *innocent landowner defense* to CERCLA liability (42 USC

§ 9601(A) and (B) and § 9607(b)(3)), assuming compliance with other elements of the defense. See [Appendix X1](#).

3.3.5 *approximate minimum search distance*—the area for which records must be obtained and reviewed pursuant to Section 7 subject to the limitations provided in that section. This may include areas outside the *property* and shall be measured from the nearest *property* boundary. This term is used in lieu of radius to include irregularly shaped properties.

3.3.6 *building department records*—those records of the local government in which the property is located indicating permission of the local government to construct, alter, or demolish improvements on the property. Often building department records are located in the building department of a municipality or county. See [7.3.4.7](#).

3.3.7 *commercial real estate*—any real property except a dwelling or property with no more than four dwelling units exclusively for residential use (except that a dwelling or property with no more than four dwelling units exclusively for residential use is included in this term when it has a commercial function, as in the building of such dwellings for profit). This term includes but is not limited to undeveloped real property and real property used for industrial, retail, office, agricultural, other commercial, medical, or educational purposes; property used for residential purposes that has more than four residential dwelling units; and property with no more than four dwelling units for residential use when it has a commercial function, as in the building of such dwellings for profit.

3.3.8 *commercial real estate transaction*—a transfer of title to or possession of real property or receipt of a security interest in real property, except that it does not include transfer of title to or possession of real property or the receipt of a security interest in real property with respect to an individual dwelling or building containing fewer than five dwelling units, nor does it include the purchase of a lot or lots to construct a dwelling for occupancy by a purchaser, but a commercial real estate transaction does include real property purchased or leased by persons or entities in the business of building or developing dwelling units.

3.3.9 *due diligence*—the process of inquiring into the environmental characteristics of a parcel of *commercial real estate* or other conditions, usually in connection with a commercial real estate transaction. The degree and kind of due diligence vary for different properties and differing purposes. See [Appendix X1](#).

3.3.10 *environmental audit*—the investigative process to determine if the operations of an existing facility are in compliance with applicable environmental laws and regulations. This term should not be used to describe Practice [E 1528](#) or this practice, although an environmental audit may include an *environmental site assessment* or, if prior audits are available, may be part of an environmental site assessment. See [Appendix X1](#).

3.3.11 *environmental professional*—a person possessing sufficient training and experience necessary to conduct a *site reconnaissance*, *interviews*, and other activities in accordance with this practice, and from the information generated by such activities, having the ability to develop opinions and conclusions regarding *recognized environmental conditions* in con-

nection with the *property* in question. An individual's status as an environmental professional may be limited to the type of assessment to be performed or to specific segments of the assessment for which the professional is responsible. The person may be an independent contractor or an employee of the *user*.

3.3.12 *environmental site assessment (ESA)*—the process by which a person or entity seeks to determine if a particular parcel of real *property* (including improvements) is subject to *recognized environmental conditions*. At the option of the user, an environmental site assessment may include more inquiry than that constituting *appropriate inquiry* or, if the user is not concerned about qualifying for the *innocent landowner defense*, less inquiry than that constituting *appropriate inquiry*. See [Appendix X1](#). An environmental site assessment is both different from and less rigorous than an *environmental audit*.

3.3.13 *fill dirt*—dirt, soil, sand, or other earth, that is obtained off-site, that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or elevation of real property. It does not include material that is used in limited quantities for normal landscaping activities.

3.3.14 *hazardous waste/contaminated sites*—sites on which a release has occurred, or is suspected to have occurred, of any *hazardous substance*, *hazardous waste*, or *petroleum products*, and that release or suspected release has been reported to a government entity.

3.3.15 *innocent landowner defense*—that defense to CERCLA liability provided in 42 USC § 9601(35) and § 9607(b)(3). One of the requirements to qualify for this defense is that the party make “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice.” There are additional requirements to qualify for this defense. See [Appendix X1](#).

3.3.16 *interviews*—those portions of this practice that are contained in Section 9 and 10 thereof and address questions to be asked of *owners* and *occupants* of the *property* and questions to be asked of local government officials.

3.3.17 *key site manager*—the person identified by the *owner* of a *property* as having good knowledge of the uses and physical characteristics of the property. See [9.5.1](#).

3.3.18 *local government agencies*—those agencies of municipal or county government having jurisdiction over the *property*. Municipal and county government agencies include but are not limited to cities, parishes, townships, and similar entities.

3.3.19 *LUST sites*—state lists of leaking underground storage tank sites. Section 9003 (h) of Subtitle I of RCRA gives EPA and states, under cooperative agreements with EPA, authority to clean up releases from UST systems or require owners and operators to do so.

3.3.20 *major occupants*—those tenants, subtenants, or other persons or entities each of which uses at least 40 % of the leasable area of the *property* or any anchor tenant when the *property* is a shopping center.

3.3.21 *obvious*—that which is plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer while *visually or physically observing the property*.

3.3.22 *other historical sources*—any source or sources other than those designated in 7.3.4.1-7.3.4.8 that are credible to a reasonable person and that identify past uses of the property. The term includes, but is not limited to: miscellaneous maps, newspaper archives, and records in the files and/or personal knowledge of the *property owner* and/or *occupants*. See 7.3.4.9.

3.3.23 *physical setting sources*—sources that provide information about the geologic, hydrogeologic, hydrologic, or topographic characteristics of a *property*. See 7.2.3.

3.3.24 *practically reviewable*—information that is practically reviewable means that the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the *property* without the need for extraordinary analysis of irrelevant data. The form of the information shall be such that the user can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the *property* or a geographic area in which the *property* is located are not generally *practically reviewable*. Most databases of public records are *practically reviewable* if they can be obtained from the source agency by the county, city, zip code, or other geographic area of the facilities listed in the record system. Records that are sorted, filed, organized, or maintained by the source agency only chronologically are not generally *practically reviewable*. Listings in publicly available records which do not have adequate address information to be located geographically are not generally considered *practically reviewable*. For large databases with numerous facility records (such as RCRA hazardous waste generators and registered underground storage tanks), the records are not *practically reviewable* unless they can be obtained from the source agency in the smaller geographic area of zip codes. Even when information is provided by zip code for some large databases, it is common for an unmanageable number of sites to be identified within a given zip code. In these cases, it is not necessary to review the impact of all of the sites that are likely to be listed in any given zip code because that information would not be *practically reviewable*. In other words, when so much data is generated that it cannot be feasibly reviewed for its impact on the *property*, it is not *practically reviewable*.

3.3.25 *preparer*—the person preparing the *transaction screen questionnaire* pursuant to Practice E 1528, who may be either the user or the person to whom the user has delegated the preparation of the *transaction screen questionnaire*.

3.3.26 *publicly available*—information that is publicly available means that the source of the information allows access to the information by anyone upon request.

3.3.27 *reasonably ascertainable*—for purposes of both this practice and Practice E 1528, information that is (1) *publicly available*, (2) obtainable from its source within reasonable time and cost constraints, and (3) *practically reviewable*.

3.3.28 *recognized environmental conditions*—the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, groundwater, or

surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

3.3.29 *records review*—that part that is contained in Section 7 of this practice addresses which records shall or may be reviewed.

3.3.30 *site reconnaissance*—that part that is contained in Section 8 of this practice and addresses what should be done in connection with the *site visit*. The site reconnaissance includes, but is not limited to, the *site visit* done in connection with such a Phase I Environmental Site Assessment.

3.3.31 *site visit*—the visit to the property during which observations are made constituting the *site reconnaissance* section of this practice and the *site visit* requirement of Practice E 1528.

3.3.32 *standard environmental record sources*—those records specified in 7.2.1.1.

3.3.33 *standard historical sources*—those sources of information about the history of uses of property specified in 7.3.4.

3.3.34 *standard physical setting source*—a current USGS 7.5 minute topographic map (if any) showing the area on which the property is located. See 7.2.3.

3.3.35 *standard practice(s)*—the activities set forth in either and both this practice and Practice E 1528.

3.3.36 *standard sources*—sources of environmental, physical setting, or historical records specified in Section 7 of this practice.

3.3.37 *transaction screen process*—the process described in Practice E 1528.

3.3.38 *transaction screen questionnaire*—the questionnaire provided in Section 6 of Practice E 1528.

3.3.39 *user*—the party seeking to use Practice E 1528 to perform an *environmental site assessment* of the *property*. A user may include, without limitation, a purchaser of *property*, a potential tenant of property, an *owner* of *property*, a lender, or a property manager.

3.3.40 *visually and/or physically observed*—during a *site visit* pursuant to Practice E 1528, or pursuant to this practice, this term means observations made by vision while walking through a *property* and the structures located on it and observations made by the sense of smell, particularly observations of noxious or foul odors. The term “walking through” is not meant to imply that disabled persons who cannot physically walk may not conduct a *site visit*; they may do so by the means at their disposal for moving through the *property* and the structures located on it.

3.4 Acronyms: Acronyms:

3.4.1 *CERCLA*—Comprehensive Environmental Response, Compensation and Liability Act of 1980 (as amended, 42 USC § 9601 *et seq.*).

3.4.2 *CERCLIS*—Comprehensive Environmental Response, Compensation and Liability Information System (maintained by EPA).

3.4.3 *CFR*—Code of Federal Regulations.

3.4.4 *CORRACTS*—TSD facilities subject to Corrective Action under RCRA.

3.4.5 *EPA*—United States Environmental Protection Agency.

3.4.6 *EPCRA*—Emergency Planning and Community Right to Know Act ((also known as SARA Title III), 42 USC § 11001 *et seq.*).

3.4.7 *ERNS*—emergency response notification system.

3.4.8 *ESA*—environmental site assessment (different than an *environmental audit*; see 3.3.12).

3.4.9 *FOIA*—U.S. Freedom of Information Act (5 USC 552 *et seq.*).

3.4.10 *FR*—Federal Register.

3.4.11 *LUST*—leaking underground storage tank.

3.4.12 *MSDS*—material safety data sheet.

3.4.13 *NCP*—National Contingency Plan.

3.4.14 *NPDES*—national pollutant discharge elimination system.

3.4.15 *NPL*—national priorities list.

3.4.16 *PCBs*—polychlorinated biphenyls.

3.4.17 *PRP*—potentially responsible party (pursuant to CERCLA 42 USC § 9607(a)).

3.4.18 *RCRA*—Resource Conservation and Recovery Act (as amended, 42 USC § 6901 *et seq.*).

3.4.19 *SARA*—Superfund Amendments and Reauthorization Act of 1986 (amendment to CERCLA).

3.4.20 *USC*—United States Code.

3.4.21 *USGS*—United States Geological Survey.

3.4.22 *UST*—underground storage tank.

4. Significance and Use

4.1 *Uses*—This practice is intended for use on a voluntary basis by parties who wish to assess the environmental condition of *commercial real estate*. While use of this practice is intended to constitute *appropriate inquiry* for purposes of CERCLA’s *innocent landowner defense*, it is not intended that its use be limited to that purpose. This practice is intended primarily as an approach to conducting an inquiry designed to identify *recognized environmental conditions* in connection with a *property*, and *environmental site assessments* that are both more and less comprehensive than this practice (including, in some instances, no *environmental site assessment*) may be appropriate in some circumstances. Further, no implication is intended that a person must use this practice in order to be deemed to have conducted inquiry in a commercially prudent or reasonable manner in any particular transaction. Nevertheless, this practice is intended to reflect a commercially prudent and reasonable inquiry.

4.2 Clarifications on Use:

4.2.1 *Use Not Limited to CERCLA*—This practice and Practice E 1528 are designed to assist the *user* in developing information about the environmental condition of a *property* and as such has utility for a wide range of persons, including those who may have no actual or potential CERCLA liability and/or may not be seeking the *innocent landowner defense*.

4.2.2 *Residential Tenants/Purchasers and Others*—No implication is intended that it is currently customary practice for residential tenants of multifamily residential buildings, tenants of single-family homes or other residential real estate, or

purchasers of dwellings for one’s own residential use, to conduct an *environmental site assessment* in connection with these transactions. Thus, these transactions are not included in the term commercial real estate transactions, and it is not intended to imply that such persons are obligated to conduct an *environmental site assessment* in connection with these transactions for purposes of *appropriate inquiry* or for any other purpose. In addition, no implication is intended that it is currently customary practice for *environmental site assessments* to be conducted in other unenumerated instances (including but not limited to many commercial leasing transactions, many acquisitions of easements, and many loan transactions in which the lender has multiple remedies). On the other hand, anyone who elects to do an *environmental site assessment* of any *property* or portion of a *property* may, in such person’s judgment, use either this practice or Practice E 1528.

4.2.3 *Site-Specific*—This practice is site-specific in that it relates to assessment of environmental conditions on a specific parcel of *commercial real estate*. Consequently, this practice does not address many additional issues raised in transactions such as purchases of business entities, or interests therein, or of their assets, that may well involve environmental liabilities pertaining to properties previously owned or operated or other off-site environmental liabilities.

4.3 *Two Related Practices*—This practice sets forth one procedure for an *environmental site assessment* known as a “Phase I Environmental Site Assessment” or a “Phase I ESA” or simply a “Phase I.” This practice is a companion to Practice E 1528. These practices are each intended to meet the standard of *appropriate inquiry* necessary to qualify for the *innocent landowner defense*. It is essential to consider that these practices, taken together, provide for two alternative practices of *appropriate inquiry*.

4.3.1 *Election to Commence with Either Practice*—The *user* may commence inquiry to identify *recognized environmental conditions* in connection with a *property* by performing either the *transaction screen process*, or the Phase I Environmental Site Assessment given in this practice.

4.3.2 *Who May Conduct*—The *transaction screen process* may be conducted either by the *user* (including an agent or employee of the user) or wholly or partially by an *environmental professional*. The *transaction screen process* does not require the judgment of an *environmental professional*. Whenever a Phase I Environmental Site Assessment is conducted, it must be performed by an *environmental professional* to the extent specified in 6.5.1. Further, at the Phase I Environmental Site Assessment level, no practical standard can be designed to eliminate the role of judgment and the value and need for experience in the party performing the inquiry. The professional judgment of an *environmental professional* is, consequently, vital to the performance of *appropriate inquiry* at the Phase I Environmental Site Assessment level.

4.4 *Additional Services*—As set forth in 11.9, additional services may be contracted for between the *user* and the *environmental professional*.

4.5 *Principles*—The following principles are an integral part of both practices and are intended to be referred to in

resolving any ambiguity or exercising such discretion as is accorded the *user* or *environmental professional* in performing an *environmental site assessment* or in judging whether a *user* or *environmental professional* has conducted *appropriate inquiry* or has otherwise conducted an adequate *environmental site assessment*.

4.5.1 *Uncertainty Not Eliminated*—No *environmental site assessment* can wholly eliminate uncertainty regarding the potential for *recognized environmental conditions* in connection with a *property*. Performance of this practice or E1528 is intended to reduce, but not eliminate, uncertainty regarding the potential for *recognized environmental conditions* in connection with a *property*, and both practices recognize reasonable limits of time and cost.

4.5.2 *Not Exhaustive*—*Appropriate inquiry* does not mean an exhaustive assessment of a clean *property*. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of this practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an *environmental site assessment* and the reduction of uncertainty about unknown conditions resulting from additional information.

4.5.3 *Level of Inquiry Is Variable*—Not every *property* will warrant the same level of assessment. Consistent with good commercial or customary practice, the appropriate level of *environmental site assessment* will be guided by the type of *property* subject to assessment, the expertise and risk tolerance of the *user*, and the information developed in the course of the inquiry.

4.5.4 *Comparison With Subsequent Inquiry*—It should not be concluded or assumed that an inquiry was not *appropriate inquiry* merely because the inquiry did not identify *recognized environmental conditions* in connection with a *property*. *Environmental site assessments* must be evaluated based on the reasonableness of judgments made at the time and under the circumstances in which they were made. Subsequent *environmental site assessments* should not be considered valid standards to judge the appropriateness of any prior assessment based on hindsight, new information, use of developing technology or analytical techniques, or other factors.

4.6 *Continued Viability of Environmental Site Assessment*—An *environmental site assessment* meeting or exceeding either Practice E 1528 or this practice and completed less than 180 days previously is presumed to be valid. An *environmental site assessment* meeting or exceeding either practice and completed more than 180 days previously may be used to the extent allowed by 4.7-4.7.5.

4.7 *Prior Assessment Usage*—Both Practice E 1528 and this practice recognize that *environmental site assessments* performed in accordance with these practices will include information that subsequent *users* may want to use to avoid undertaking duplicative assessment procedures. Therefore, the practices describe procedures to be followed to assist users in determining the appropriateness of using information in *environmental site assessments* performed previously. The system of prior assessment usage is based on the following principles

that should be adhered to in addition to the specific procedures set forth elsewhere in these practices:

4.7.1 *Use of Prior Information*—Subject to 4.7.4, *users* and *environmental professionals* may use information in prior *environmental site assessments* provided such information was generated as a result of procedures that meet or exceed the requirements of this practice or Practice E 1528 and then only provided that the specific procedures set forth in the appropriate practice are met.

4.7.2 *Prior Assessment Meets or Exceeds*—Subject to 4.7.4, a prior *environmental site assessment* may be used in its entirety, without regard to the specific procedures set forth in these practices, if, in the reasonable judgment of the *user*: the prior *environmental site assessment* meets or exceeds the requirements of Practice E 1528 or this practice and the conditions at the *property* likely to affect *recognized environmental conditions* in connection with the *property* are not likely to have changed materially since the prior *environmental site assessment* was conducted. In making this judgment, the *user* should consider the type of *property* assessed and the conditions in the area surrounding the *property*.

4.7.3 *Current Investigation*—Except as provided in 4.7.2 and 4.7.2 of Practice E 1528 prior *environmental site assessments* should not be used without current investigation of conditions likely to affect *recognized environmental conditions* in connection with the *property* that may have changed materially since the prior *environmental site assessment* was conducted. At a minimum, for a Phase I Environmental Site Assessment consistent with this practice, a new *site reconnaissance*, interviews, and an update of the *records review* should be performed.

4.7.4 *Actual Knowledge Exception*—If the *user* or *environmental professional(s)* conducting an *environmental site assessment* has *actual knowledge* that the information being used from a prior *environmental site assessment* is not accurate or if it is *obvious*, based on other information obtained by means of the *environmental site assessment* or known to the person conducting the *environmental site assessment*, that the information being used is not accurate, such information from a prior *environmental site assessment* may not be used.

4.7.5 *Contractual Issues Regarding Prior Assessment Usage*—The contractual and legal obligations between prior and subsequent *users* of *environmental site assessments* or between *environmental professionals* who conducted prior *environmental site assessments* and those who would like to use such prior *environmental site assessments* are beyond the scope of this practice.

4.8 *Rules of Engagement*—The contractual and legal obligations between an *environmental professional* and a *user* (and other parties, if any) are outside the scope of this practice. No specific legal relationship between the *environmental professional* and the *user* is necessary for the *user* to meet the requirements of this practice.

5. User's Responsibilities

5.1 *Scope*—The purpose of this section is to describe tasks that will help identify the possibility of *recognized environmental conditions* in connection with the *property*. These tasks do not require the technical expertise of an *environmental*

professional and are generally not performed by *environmental professionals* performing a Phase I Environmental Site Assessment. They may be performed by the *user*.

5.2 *Checking Title Records for Environmental Liens*—Reasonably ascertainable recorded land title records (see 7.3.4.4) should be checked to identify *environmental liens*, if any, that are currently recorded against the *property*. Any *environmental liens* so identified shall be reported to the *environmental professional* conducting a Phase I Environmental Site Assessment. This practice does not impose on the *environmental professional* the responsibility to check for recorded *environmental liens*. Rather the *user* should check or engage a title company or title professional to check *reasonably ascertainable recorded land title records* for *environmental liens* currently recorded against the *property*.

5.2.1 *Reasonably Ascertainable*—Environmental liens that are unrecorded or are recorded any place other than *recorded land title records* are not considered to be in *recorded land title records* that are *reasonably ascertainable*. *Recorded land title records* need not be checked if they otherwise do not meet the definition of the term *reasonably ascertainable*.

5.3 *Specialized Knowledge or Experience of the User*—If the *user* is aware of any specialized knowledge or experience that is material to *recognized environmental conditions* in connection with the *property*, it is the *user's* responsibility to communicate any information based on such specialized knowledge or experience to the *environmental professional*. The *user* should do so before the *environmental professional* does the *site reconnaissance*.

5.4 *Reason for Significantly Lower Purchase Price*—In a transaction involving the purchase of a parcel of *commercial real estate*, if a *user* has *actual knowledge* that the purchase price of the *property* is significantly less than the purchase price of comparable properties, the *user* should try to identify an explanation for the lower price and to make a written record of such explanation. Among the factors to consider will be the information that becomes known to the *user* pursuant to the Phase I Environmental Site Assessment.

6. Phase I Environmental Site Assessment

6.1 *Objective*—The purpose of this Phase I Environmental Site Assessment is to identify, to the extent feasible pursuant to the processes prescribed herein, recognized environmental conditions in connection with the *property*. (See 1.1.1.)

6.2 *Four Components*—A Phase I Environmental Site Assessment shall have four components, as described as follows:

6.2.1 *Records Review*—Review of records; see Section 7,

6.2.2 *Site Reconnaissance*, A visit to the *property*; see Section 8,

6.2.3 *Interviews*:

6.2.3.1 Interviews with current *owners* and *occupants* of the *property*; see Section 9, and

6.2.3.2 Interviews with local government officials; see Section 10, and

6.2.4 *Report*—Evaluation and report; see Section 11.

6.3 *Coordination of Parts*:

6.3.1 *Parts Used in Concert*—The *records review*, *site reconnaissance*, and *interviews* are intended to be used in concert with each other. If information from one source

indicates the need for more information, other sources may be available to provide information. For example, if a previous use of the *property* as a gasoline station is identified through the *records review*, but the present *owner* and *occupants* interviewed report no knowledge of an underground storage tank, the person conducting the *site reconnaissance* should be alert for signs of the presence of an underground storage tank.

6.3.2 *User Obligations*—The *environmental professional* shall note in the report whether or not the *user* has reported to the *environmental professional* any *environmental liens* encumbering the *property* or any specialized knowledge or experience of the *user* that would provide important information about previous ownership or uses of the *property* that may be material to identifying *recognized environmental conditions*.

6.4 *No Sampling*—This practice does not include any testing or sampling of materials (for example, soil, water, air, building materials).

6.5 *Who May Conduct a Phase I*:

6.5.1 *Environmental Professional's Duties*—The *interviews* and *site reconnaissance*, as well as review and interpretation of information upon which the report is based and overseeing the writing of the report, are all portions of a Phase I Environmental Site Assessment that shall be performed by an *environmental professional* or *environmental professionals*. If more than one environmental professional is involved in these tasks, they shall coordinate their efforts.

6.5.2 *Environmental Professional Supervision*—Information for the *records review* needed for completion of a Phase I Environmental Site Assessment may be provided by a number of parties including government agencies, third-party vendors, the *user*, and present and past *owners* and *occupants* of the *property*, provided that the information is obtained by or under the supervision of an *environmental professional* or is obtained by a third-party vendor specializing in retrieval of the information specified in Section 7. Prior assessments may also contain information that will be appropriate for usage in a current *environmental site assessment* provided the prior usage procedures set forth in Sections 7, 8, and 9 are followed. The *environmental professional(s)* participating in the *site reconnaissance* and responsible for the report shall review all of the information provided.

6.5.2.1 *Reliance*—An environmental professional is not required to verify independently the information provided but may rely on information provided unless he or she has *actual knowledge* that certain information is incorrect or unless it is *obvious* that certain information is incorrect based on other information obtained in the Phase I Environmental Site Assessment or otherwise actually known to the *environmental professional*.

7. Records Review

7.1 *Introduction*:

7.1.1 *Objective*—The purpose of the *records review* is to obtain and review records that will help identify *recognized environmental conditions* in connection with the *property*.

7.1.2 *Approximate Minimum Search Distance*—Some records to be reviewed pertain not just to the *property* but also

pertain to properties within an additional *approximate minimum search distance* in order to help assess the likelihood of problems from migrating *hazardous substances* or *petroleum products*. When the term *approximate minimum search distance* includes areas outside the *property*, it shall be measured from the nearest *property* boundary. The term *approximate minimum search distance* is used in lieu of radius in order to include irregularly shaped properties.

7.1.2.1 Reduction of Approximate Minimum Search Distance—When allowed by **7.2.1.1**, the *approximate minimum search distance* for a particular record may be reduced in the discretion of the environmental professional. Factors to consider in reducing the *approximate minimum search distance* include: (1) the density (for example, urban, rural, or suburban) of the setting in which the *property* is located; (2) the distance that the *hazardous substances* or *petroleum products* are likely to migrate based on local geologic or hydrogeologic conditions; and (3) other reasonable factors. The justification for each reduction and the *approximate minimum search distance* actually used for any particular record shall be explained in the report. If the *approximate minimum search distance* is specified as “property only,” then the search shall be limited to the *property* and may not be reduced unless the particular record is not *reasonably ascertainable*.

7.1.3 Accuracy and Completeness—Accuracy and completeness of record information varies among information sources, including governmental sources. Record information is often inaccurate or incomplete. The *user* or *environmental professional* is not obligated to identify mistakes or insufficiencies in information provided. However, the *environmental professional* reviewing records shall make a reasonable effort to compensate for mistakes or insufficiencies in the information reviewed that are *obvious* in light of other information of which the *environmental professional* has *actual knowledge*.

7.1.4 Reasonably Ascertainable/Standard Sources—Availability of record information varies from information source to information source, including governmental jurisdictions. The *user* or *environmental professional* is not obligated to identify, obtain, or review every possible record that might exist with respect to a *property*. Instead, this practice identifies record information that shall be reviewed from standard sources, and the *user* or *environmental professional* is required to review only record information that is reasonably ascertainable from those standard sources. Record information that is *reasonably ascertainable* means (1) information that is publicly available, (2) information that is obtainable from its source within reasonable time and cost constraints, and (3) information that is *practically reviewable*.

7.1.4.1 Publicly Available—Information that is *publicly available* means that the source of the information allows access to the information by anyone upon request.

7.1.4.2 Reasonable Time and Cost—Information that is obtainable within reasonable time and cost constraints means that the information will be provided by the source within 20 calendar days of receiving a written, telephone, or in-person request at no more than a nominal cost intended to cover the source’s cost of retrieving and duplicating the information. Information that can only be reviewed by a visit to the source

is *reasonably ascertainable* if the visit is permitted by the source within 20 days of request.

7.1.4.3 Practically Reviewable—Information that is *practically reviewable* means that the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the *property* without the need for extraordinary analysis of irrelevant data. The form of the information shall be such that the *user* can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the *property* or a geographic area in which the *property* is located are not generally *practically reviewable*. Most databases of public records are *practically reviewable* if they can be obtained from the source agency by the county, city, zip code, or other geographic area of the facilities listed in the record system. Records that are sorted, filed, organized, or maintained by the source agency only chronologically are not generally *practically reviewable*. Listings in publicly available records which do not have adequate address information to be located geographically are not generally considered *practically reviewable*. For large databases with numerous facility records (such as RCRA generators and registered USTs), the records are not *practically reviewable* unless they can be obtained from the source agency in the smaller geographic area of zip codes. Even when information is provided by zip code for some large databases, it is common for an unmanageable number of sites to be identified within a given zip code. In these cases, it is not necessary to review the impact of all of the sites that are likely to be listed in any given zip code because that information would not be *practically reviewable*. In other words, when so much data is generated that it cannot be feasibly reviewed for its impact on the *property*, it is not required to be reviewed.

7.1.5 Alternatives to Standard Sources—Alternative sources may be used instead of standard sources if they are of similar or better reliability and detail, or if a *standard source* is not *reasonably ascertainable*.

7.1.6 Coordination—If records are not *reasonably ascertainable* from *standard sources* or alternative sources, the *environmental professional* shall attempt to obtain the requested information by other means specified in this practice such as questions posed to the current *owner* or *occupant(s)* of the *property* or appropriate persons available at the source at the time of the request.

7.1.7 Sources of Standard Source Information—*Standard source* information or other record information from government agencies may be obtained directly from appropriate government agencies or from commercial services. Government information obtained from nongovernmental sources may be considered current if the source updates the information at least every 90 days or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public.

7.1.8 Documentation of Sources Checked—The report shall document each source that was used, even if a source revealed no findings. Sources shall be sufficiently documented, including name, date request for information was filled, date information provided was last updated by source, date information