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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 1528E 1528,~~ practice 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 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) (42 U.S.C. §9601) 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, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the “landowner liability protections,” or “LLPs”): that is, the practice that constitutes “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” as defined at 42 U.S.C. §9601(35)(B). (See Appendix X1 for an outline of CERCLA’s liability and defense provisions.) for an outline of CERCLA’s liability and defense provisions.)~~ Controlled substances are not included within the scope of this standard. Persons conducting an *environmental site assessment* as part of an EPA Brownfields Assessment and Characterization Grant awarded under CERCLA 42 U.S.C. §9604(k)(2)(B) must include controlled substances as defined in the Controlled Substances Act (21 U.S.C. §802) within the scope of the assessment investigations to the extent directed in the terms and conditions of the specific grant or cooperative agreement. Additionally, an evaluation of *business environmental risk* associated with a parcel of *commercial real estate* may necessitate investigation beyond that identified in this practice (see Sections 1.3 and 13).

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, ground water, 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 threat to public~~ human 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 ~~Conditions determined to Practice E 1528E 1528. Both~~ *de minimis* are *environmental site assessments for commercial real estate*. See 4.3 ~~not recognized environmental conditions.~~

1.1.3

1.1.2 *Petroleum Products*—*Petroleum products* are included within the scope of ~~both practices~~ this practice 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 1528E 1528 is not based upon the applicability, if any, of CERCLA to *petroleum products*. (See Appendix X1.7 for discussion of *petroleum exclusion* to CERCLA liability.)

1.1.4

¹ This practice is under the jurisdiction of ASTM Committee E50-E50 on Environmental Assessment and is the direct responsibility of Subcommittee E50.02 on Commercial Real Estate Transactions.

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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*.

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

~~1.1.5, including the continuing obligation not to impede the integrity and effectiveness of activity and use limitations (AULs), or the duty to take reasonable steps to prevent releases, or the duty to comply with legally required release reporting obligations).~~

1.1.4 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 all appropriate inquiry provisions of CERCLA’s ~~innocent landowner defense~~ the LLPs. 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 the 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~~ 1.1.5 Documentation—The scope of this practice includes research and reporting requirements that support the user’s ability to qualify for the ~~innocent landowner defense~~ LLPs. As such, 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 ~~7.1.88.1.8~~ and ~~11.212.2~~).

1.2 Objectives—Objectives guiding the development of this practice and Practice E-1528E-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 all appropriate inquiry is practical and reasonable, and (4) to clarify an industry standard for all appropriate inquiry in an effort to guide legal interpretation of CERCLA’s ~~innocent landowner defense~~ the LLPs.

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*.—The use of this practice is strictly limited to the scope set forth in this section. Section 13 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*. The need to include an investigation of any such conditions in the *environmental professional’s* scope of services should be evaluated based upon, among other factors, the nature of the *property* and the reasons for performing the assessment (for example, a more comprehensive evaluation of *business environmental risk*) and should be agreed upon between the *user* and *environmental professional* as additional services beyond the scope of this practice prior to initiation of the *environmental site assessment* process.

1.4 Organization of This Practice—This practice has several parts and two appendixes. Section—This practice has thirteen sections and four appendixes. Section 1 is the Scope. Section 2 is Referenced Documents. Section 3, Terminology, has definitions of terms not unique to this practice and practice, 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 provides discussion regarding *activity and use limitations*). Section 6 describes User’s Responsibilities. Sections 7-12 are the main body of the *Phase I Environmental Site Assessment*, including evaluation and report preparation. Section 13 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-1528E-1528-practice. 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, the *Brownfields Amendments*, and this practice. Appendix X2 provides a recommended table of contents and report format for a Phase I Environmental Site Assessment Report. provides the definition of the *environmental professional* responsible for the *Phase I Environmental Site Assessment*, as required in the “*All Appropriate Inquiry*” Final Rule (40 C.F.R. Part 312). Appendix X3 provides an optional User Questionnaire to assist the *user* and the *environmental professional* in gathering information from the *user* that may be material to identifying *recognized environmental conditions*. Appendix X4 provides a recommended table of contents and report format for a *Phase I Environmental Site Assessment*.

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.

1.6 This practice offers a set of instructions for performing one or more specific operations. This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of a project’s many unique aspects. The word “Standard” in the title means only that the document has been approved through the ASTM consensus process.

2. Referenced Documents

2.1 ASTM Standards:³

E1528 ~~Practice for Environmental Site Assessments: Transaction Screen Process~~ Practice for Limited Environmental Due Diligence: Transaction Screen Process

E2091 [Guide for Use of Activity and Use Limitations, Including Institutional and Engineering Controls](#)

2.2 Federal Statutes:

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (“CERCLA” or “Superfund”), as amended by Superfund Amendments and Reauthorization Act of 1986 (“SARA”) and Small Business Liability Relief and Brownfields Revitalization Act of 2002 (“Brownfields Amendments”), 42 U.S.C. §§9601 *et seq.*

Emergency Planning and Community Right-To-Know Act of 1986 (“EPCRA”), 42 U.S.C. §§11001 *et seq.*

Freedom of Information Act, 5 U.S.C. §552, as amended by Public Law No. 104-231, 110 Stat. 3048

Resource Conservation and Recovery Act (sometimes also referred to as the Solid Waste Disposal Act), as amended (“RCRA”), 42 U.S.C §6901 *et seq.*

2.3 USEPA Documents:

“All Appropriate Inquiry” Final Rule, 40 C.F.R. Part 312

Chapter 1 EPA, Subchapter J-Superfund, Emergency Planning, and Community Right-To-Know Programs, 40 C.F.R Parts 300-399

National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300

2.4 Other Federal Agency Document:

OSHA Hazard Communication Regulation, 29 C.F.R. §1910.1200

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~~ ~~practice.~~ The terms are an integral part of ~~both practices~~ this practice and are critical to an understanding of the ~~practices~~ practice 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.~~ abandoned property—property that can be presumed to be deserted, or an intent to relinquish possession or control can be inferred from the general disrepair or lack of activity thereon such that a reasonable person could believe that there was an intent on the part of the current owner to surrender rights to the property.

3.2.2 ~~asbestos-containing material (ACM)—any material or product that contains more than 1% asbestos.~~ activity and use limitations—legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or ground water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil or ground water on the property.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.~~ 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.

3.2.4 ~~construction debris—concrete, brick, asphalt, and other such building materials discarded in the construction of a building or other improvement to property.~~ 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 For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards*, Vol. 11.04, volume information, refer to the standard’s Document Summary page on the ASTM website.

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.

⁴ The term AUL is taken from the ASTM Standard Guide E2091 to include both legal (that is, institutional) and physical (that is, engineering) controls within its scope. Other agencies, organizations, and jurisdictions may define or utilize these terms differently (for example, EPA and California do not include physical controls within their definitions of “institutional controls.” Department of Defense and International County/City Management Association use “Land Use Controls.” The term “land use restrictions” is used but not defined in the *Brownfields Amendments*).

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. aerial photographs—photographs taken from an aerial platform with sufficient resolution 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 8.3.4.1 of this practice.

3.2.6 all 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 U.S.C §9601(35)(B), that will qualify a party to a *commercial real estate transaction* for one of threshold criteria for satisfying the *LLPs* to CERCLA liability (42 U.S.C §9601(35)(A) & (B), §9607(b)(3), §9607(q); and §9607(r)), assuming compliance with other elements of the defense. See Appendix X1.

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. approximate minimum search distance—the area for which records must be obtained and reviewed pursuant to Section 8 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.

3.2.8 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*. bona fide prospective purchaser liability protection—(42 U.S.C. §9607(r))—a person may qualify as a bona fide prospective purchaser if, among other requirements, such person made “all appropriate inquiries into the previous ownership and uses of the facility in accordance with generally accepted good commercial and customary standards and practices.” Knowledge of contamination resulting from *all appropriate inquiry* would not generally preclude this liability protection. A person must make *all appropriate inquiry* on or before the date of purchase. The facility must have been purchased after January 11, 2002. See Appendix X1 for the other necessary requirements that are beyond the scope of this practice.

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). Brownfields Amendments—amendments to CERCLA pursuant to the Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118 (2002), 42 U.S.C. §§9601 *et seq.*

3.2.10 dwelling—structure or portion thereof used for residential habitation. 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 8.3.4.7.

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. business environmental risk—a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of *commercial real estate*, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of *business environmental risk* issues may involve addressing one or more non-scope considerations, some of which are identified in Section 13.

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. 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 *dwelling*s 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 *dwelling*s for profit.

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. 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.

3.2.14 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-1528E-1528 and 7.3.4.2 of this practice. 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*.

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

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

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. contiguous property owner liability protection—(42 U.S.C. §9607(q))—a person may qualify for the *contiguous property owner liability protection* if, among other requirements, such person owns real *property* that is contiguous to, and that is or may be contaminated by *hazardous substances* from other real *property* that is not owned by that person. Furthermore, such person conducted *all appropriate inquiry* at the time of acquisition of the *property* and did not know or have reason to know that the *property* was or could be contaminated by a release or threatened release from the contiguous *property*. The *all appropriate inquiry* must not result in knowledge of contamination. If it does, then such person did “know” or “had reason to know” of contamination and would not be eligible for the *contiguous property owner liability protection*. See Appendix X1 for the other necessary requirements that are beyond the scope of this practice.

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. CORRACTS list—a list maintained by EPA of *hazardous waste* treatment, storage, or disposal facilities and other RCRA-regulated facilities (due to past interim status or storage of *hazardous waste* beyond 90 days) that have been notified by the U.S. Environmental Protection Agency to undertake corrective action under RCRA. The *CORRACTS list* is a subset of the EPA database that manages RCRA data.

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. data failure—a failure to achieve the historical research objectives in 8.3.1 through 8.3.2.2 even after reviewing the *standard historical sources* in 8.3.4.1 through 8.3.4.8 that are *reasonably ascertainable* and likely to be useful. *Data failure* is one type of *data gap*. See 8.3.2.3.

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. data gap—a lack of or inability to obtain information required by this practice despite *good faith* efforts by the *environmental professional* to gather such information. *Data gaps* may result from incompleteness in any of the activities required by this practice, including, but not limited to *site reconnaissance* (for example, an inability to conduct the *site visit*), and *interviews* (for example, an inability to interview the *key site manager*, regulatory officials, etc.). See 12.7.

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

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

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

3.2.24 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*)
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.

3.2.25 dwelling—structure or portion thereof used for residential habitation.

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.
engineering controls (EC)—physical modifications to a site or facility (for example, capping, slurry walls, or point of use water treatment) to reduce or eliminate the potential for exposure to *hazardous substances* or *petroleum products* in the soil or ground water on the *property*. *Engineering controls* are a type of activity and use limitation (AUL).

3.2.27 environmental compliance 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 this practice, although an *environmental compliance audit* may include an *environmental site assessment* or, if prior audits are available, may be part of an *environmental site assessment*.

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.
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 U.S.C. §§9607(1) & 9607(r) and similar state or local laws.

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 environmental professional—a person meeting the education, training, and experience requirements as set forth in 40 CFR §312.10(b). See Appendix X2. The person may be an independent contractor or an employee of the *user*.

3.2.30 RCRA generators—those persons or entities that generate hazardous wastes, as defined and regulated by RCRA.
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 *all appropriate inquiry* or, if the *user* is not concerned about qualifying for the *LLPs*, less inquiry than that constituting *all appropriate inquiry*. An *environmental site assessment* is both different from and less rigorous than an *environmental compliance audit*.

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. **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.

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. **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*.

3.2.33 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.
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.

3.2.34 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. 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.

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). *good faith*—the absence of any intention to seek an unfair advantage or to defraud another party; an honest and sincere intention to fulfill one’s obligations in the conduct or transaction concerned.

3.2.36 *report*—the written record of a transaction screen process as required by Practice E-1528E-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. *hazardous substance*—a substance defined as a *hazardous substance* pursuant to CERCLA 42 U.S.C. §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 Resource Conservation and Recovery Act of 1976 (RCRA), as amended, (42 U.S.C. §6921) (but not including any waste the regulation of which under RCRA (42 U.S.C. §§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 U.S.C. §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 XI.)

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. *hazardous waste*—any *hazardous waste* having the characteristics identified under or listed pursuant to section 3001 of RCRA, as amended, (42 U.S.C. §6921) (but not including any waste the regulation of which under RCRA (42 U.S.C. §§6901-692k) has been suspended by Act of Congress). RCRA is sometimes also identified as the Solid Waste Disposal Act. RCRA defines a *hazardous waste*, at 42 U.S.C. §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.”

3.2.38 *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. *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.

3.2.39 *state registered USTs*—state lists of underground storage tanks required to be registered under Subtitle I, Section 9002 of RCRA. *historical recognized environmental condition*—an environmental condition which in the past would have been considered a *recognized environmental condition*, but which may or may not be considered a *recognized environmental condition* currently. The final decision rests with the *environmental professional* and will be influenced by the current impact of the *historical recognized environmental condition* on the *property*. If a past release of any *hazardous substances* or *petroleum products* has occurred in connection with the *property* and has been remediated, with such remediation accepted by the responsible regulatory agency (for example, as evidenced by the issuance of a no further action letter or equivalent), this condition shall be considered an *historical recognized environmental condition* and included in the findings section of the *Phase I Environmental Site Assessment* report. The *environmental professional* shall provide an opinion of the current impact on the *property* of this *historical recognized environmental condition* in the opinion section of the *report*. If this *historical recognized environmental condition* is determined to be a *recognized environmental condition* at the time the *Phase I Environmental Site Assessment* is conducted, the condition shall be identified as such and listed in the conclusions section of the *report*.

3.2.40 *sump*—a pit, cistern, cesspool, or similar receptacle where liquids drain, collect, or are stored. *IC/EC registries*—databases of *institutional controls* or *engineering controls* that may be maintained by a federal, state or local environmental agency for purposes of tracking sites that may contain residual contamination and AULs. The names for these may vary from program

to program and state to state, and include terms such as Declaration of Environmental Use Restriction database (Arizona), list of “deed restrictions” (California), environmental real covenants list (Colorado), brownfields site list (Indiana, Missouri, Pennsylvania).

3.2.41 *TSD facility*—treatment, storage, or disposal facility (see *RCRA TSD facilities*); innocent landowner defense—(42 U.S.C. §§9601(35) & 9607(b)(3))—a person may qualify as one of three types of innocent landowners: (i) a person who “did not know and had no reason to know” that contamination existed on the *property* at the time the purchaser acquired the *property*; (ii) a government entity which acquired the *property* by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation; and (iii) a person who “acquired the facility by inheritance or bequest.” To qualify for the first type of innocent landowner LLP, such person must have made *all appropriate inquiry* on or before the date of purchase. Furthermore, the *all appropriate inquiry* must not have resulted in knowledge of the contamination. If it does, then such person did “know” or “had reason to know” of contamination and would not be eligible for the *innocent landowner defense*. See Appendix X1 for the other necessary requirements that are beyond the scope of this practice.

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. *institutional controls (IC)*—a legal or administrative restriction (for example, “deed restrictions,” restrictive covenants, easements, or zoning) on the use of, or access to, a site or facility to (1) reduce or eliminate potential exposure to *hazardous substances* or *petroleum products* in the soil or ground water on the *property*, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment.. An institutional control is a type of Activity and Use Limitation (AUL).

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: interviews—those portions of this practice that are contained in Section 10 and 11 thereof and address questions to be asked of past and present *owners, operators, and occupants* of the *property* and questions to be asked of local government officials.

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. *key site manager*—the person identified by the *owner* or *operator* of a *property* as having good knowledge of the uses and physical characteristics of the *property*. See 10.5.1.

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 *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.

3.2.46 *Landowner Liability Protections (LLPs)*—*landowner liability protections* under CERCLA; these protections include the *bona fide prospective purchaser liability protection, contiguous property owner liability protection, and innocent landowner defense* from CERCLA liability. See 42 U.S.C. §§9601(35)(A), 9601(40), 9607(b), 9607(q), 9607(r).

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

3.2.47 *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.

3.2.48 *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, or historical societies, and/or local municipal offices. See 8.3.4.6 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 1528E 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 connection 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*.

3.2.49 LUST sites—state lists of leaking *underground storage tank* sites. 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. (42 U.S.C. §6991b).

3.2.50 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.

3.2.51 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 C.F.R. §1910.1200. ~~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

3.2.52 material threat—a physically observable or *obvious* threat which is reasonably likely to lead to a release that, in the opinion of the *environmental professional*, is threatening and might result in impact to public health or the environment. An example might include an aboveground storage tank system that contains a *hazardous substance* and which shows evidence of damage. The damage would represent a *material threat* if it is deemed serious enough that it may cause or contribute to tank integrity failure with a release of contents to the environment.

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

3.2.54 National Priorities List (NPL)—list compiled by EPA pursuant to CERCLA 42 U.S.C. §9605(a)(8)(B) of properties with

the highest priority for cleanup pursuant to EPA's Hazard Ranking System. See 40 C.F.R. Part 300.

3.2.55 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*.

3.3.16 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

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

3.3.18 local government agencies—those agencies of municipal or county government having jurisdiction over the *property*

3.2.57 operator—the person responsible for the overall operation of a facility.

3.2.58 other historical sources—any source or sources other than those designated in 8.3.4.1 through 8.3.4.8 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, internet sites, community organizations, local libraries, historical societies, current *owners* or *occupants* of neighboring properties, and records in the files and/or personal knowledge of the *property owner* and/or *occupants*. See 8.3.4.9. 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

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

3.2.60 petroleum exclusion—the exclusion from CERCLA liability provided in 42 U.S.C. §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).”

3.2.61 petroleum products—those substances included within the meaning of the *petroleum exclusion* to CERCLA, 42 U.S.C. §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 U.S.C. § 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, kerosine, diesel oil, jet fuels, and fuel oil, pursuant to Standard Definitions of Petroleum Statistics.⁵)

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

3.2.63 physical setting sources—sources that provide information about the geologic, hydrogeologic, hydrologic, or topographic characteristics of a *property*. See 7.2.38.2.3.

3.3.24

3.2.64 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*.

3.2.65 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

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

⁵ *Standard Definitions of Petroleum Statistics*, American Petroleum Institute, Fourth Edition, 1988.

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-1528E-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-1528E-1528, information that is (1) *publicly available*, (2) obtainable from its source within reasonable time and cost constraints, and (3) *practically reviewable*~~

3.2.66 *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.

3.2.67 *property tax files*—the files kept for *property tax* purposes by the local jurisdiction where the *property* is located and may include records of past ownership, appraisals, maps, sketches, photos, or other information that is *reasonably ascertainable* and pertaining to the *property*. See 8.3.4.3.

~~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~~

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

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

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

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

3.2.72 *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.

3.2.73 *reasonably ascertainable*—information that is (1) *publicly available*, (2) obtainable from its source within reasonable time and cost constraints, and (3) *practically reviewable*

3.2.74 *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, ground water, 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 threat to human 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. Conditions determined to be *de minimis* are not *recognized environmental conditions*.

3.2.75 *recorded land title records*—records of historical fee ownership, which may include leases, land contracts, and AULs 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 8.3.4.4.

3.2.76 *records of emergency release notifications EPCRA*—(42 U.S.C. §11004)—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” (42 U.S.C. 11004).

3.2.77 *records review*—that part that is contained in Section 78 of this practice addresses which records shall or may be reviewed.

~~3.3.30~~

3.2.78 *report*—the written *report* prepared by the *environmental professional* and constituting part of a “Phase I Environmental

Site Assessment,” as required by this practice.

3.2.79 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 1528E 1528—that part that is contained in Section 9 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*.

3.3.32

3.2.80 site visit—the visit to the *property* during which observations are made constituting the *site reconnaissance* section of this practice.

3.2.81 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.

3.2.82 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.

3.2.83 standard environmental record sources—those records specified in 7.2.1.1—those records specified in 8.2.1.

3.3.33

3.2.84 standard historical sources—those sources of information about the history of uses of *property* specified in 7.3.48.3.4.

3.3.34

3.2.85 standard physical setting source—a current *USGS 7.5 minute topographic map* *Minute Topographic Map* (if any) showing the area on which the *property* is located. See 7.2.38.2.3.

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

3.3.36

3.2.86 standard practice—the activities set forth in this practice.

3.2.87 standard sources—sources of environmental, physical setting, or historical records specified in Section 78 of this practice.

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

3.3.38 transaction screen questionnaire—the questionnaire provided in Section

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

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

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

3.2.91 underground injection—the emplacement or discharge of fluids into the subsurface by means of a well, improved sinkhole, sewage drain hole, subsurface fluid distribution system or other system, or groundwater point source.

3.2.92 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.

3.2.93 user—the party seeking to use Practice E1527 to complete an *environmental site assessment* of the *property*. A *user* may include, without limitation, a potential purchaser of *property*, a potential tenant of *property*, an *owner* of *property*, a lender, or a *property manager*. The *user* has specific obligations for completing a successful application of this practice as outlined in Section 6 of Practice E 1528E 1528.

3.3.39 user—the party seeking to use Practice E 1528E 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

3.2.94 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*.

3.2.95 visually and/or physically observed—during a *site visit* pursuant to Practice E 1528E 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

3.2.96 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.

3.2.97 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 8.3.4.8.

3.3 Acronyms:

3.3.1 AULs—Activity and Use Limitations.

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

3.4.2

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

3.4.3

3.3.4 CFR—Code of Federal Regulations.

3.4.4

3.3.5 CORRACTS—TSD facilities subject to Corrective Action under RCRA.

3.4.5—facilities subject to Corrective Action under RCRA.

3.3.6 EPA—United States Environmental Protection Agency.

3.4.6

3.3.7 EPCRA—Emergency Planning and Community Right to Know Act ((also known as SARA Title III), 42 USC §11001-U.S.C. §§11001-11050 *et seq.*).

3.4.7

3.3.8 ERNS—emergency response notification system.

3.4.8

3.3.9 ESA—environmental site assessment (different than an *environmental audit*; see 3.3.12—Environmental Site Assessment (different than an *environmental compliance audit*, 3.2.27).

3.4.9

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

3.4.10—U.S. Freedom of Information Act (5 U.S.C. §552 as amended by Public Law No. 104-231, 110 Stat.).

3.3.11 FR—Federal Register.

3.4.11

3.3.12 ICs—Institutional Controls.

3.3.13 LLP—Landowner Liability Protections under the *Brownfields Amendments*

3.3.14 LUST—leaking underground storage tank.

3.4.12—Leaking Underground Storage Tank.

3.3.15 MSDS—material safety data sheet.

3.4.13—Material Safety Data Sheet.

3.3.16 NCP—National Contingency Plan.

3.4.14

3.3.17 NFRAP—former CERCLIS sites where no further remedial action is planned under CERCLA.

3.3.18 NPDES—national pollutant discharge elimination system.

3.4.15—National Pollutant Discharge Elimination System.

3.3.19 NPL—national priorities list.

3.4.16—National Priorities List.

3.3.20 PCBs—polychlorinated biphenyls.

3.4.17

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

3.4.18—Potentially Responsible Party (pursuant to CERCLA 42 U.S.C. §9607(a)).

3.3.22 RCRA—Resource Conservation and Recovery Act (as amended, 42 USC §6901-U.S.C. §§6901 *et seq.*).

3.4.19

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

3.4.20—Superfund Amendments and Reauthorization Act of 1986 (amendment to CERCLA).

3.3.24 TSDF—hazardous waste treatment, storage or disposal facility.

3.3.25 USC—United States Code.

3.4.21

3.3.26 USGS—United States Geological Survey.

3.4.22

3.3.27 UST—underground storage tank.—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*—taking into account commonly known and reasonably ascertainable information. While use of this practice is intended to constitute *all appropriate inquiry* for purposes of CERCLA’s *innocent landowner defense* the LLPs, 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. 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. (See Section 1.6.)

4.2 Clarifications on Use:

4.2.1 *Use Not Limited to CERCLA*—This practice and Practice E-1528E-1528 ~~are~~ is 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* LLPs.

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 *dwelling*s 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 *all 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-1528E-1528 ~~practice~~.

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-1528E-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

4.3 *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. —A *Phase I Environmental Site Assessment* must be performed by an *environmental professional* as specified in Section 7.5.1. 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 *all appropriate inquiry*.

4.4 *Additional Services*—As set forth in 11.9, additional services may be contracted for between the *user* and the *environmental professional*. —As set forth in 12.9, additional services may be contracted for between the *user* and the *environmental professional*. Such additional services may include *business environmental risk* issues not included within the scope of this practice, examples of which are identified in Section 13 under Non-Scope Considerations.

4.5 *Principles*—The following principles are an integral part of both practices this practice 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 E-1528 is intended to reduce, but not eliminate, uncertainty regarding the potential for *recognized environmental conditions* in connection with a