

ASTM E1527-21

A Summary of Key Revisions

Agenda

- Introduction
- Key Revisions*
- Next Steps

** In this presentation, we feature potentially important revisions. Not every revision is or can be included. EPs are strongly encouraged to review the entire revised standard practice and form your own opinions about potential impacts, if any, to your project scopes, workflow and deliverables.*

Introduction

- E1527-21 published November 2021
- EPA adoption likely as soon as late spring
- EP transition from E1527-13 to -21 underway

Key Revisions

- About those revisions...
 - In general
 - But the redline will save us! Right? The “Revision Guide”
 - Reviewing and applying E1527-21, how much higher do you need to “raise the bar”?
- Let’s take a quick look at how the revisions might impact...
 - Project Scoping
 - Records Research
 - Site Reconnaissance
 - Reporting

Project Scoping

- EP Role as planner, supervisor and interpreter (7.5.1)
 - Planner: interviews, site reconnaissance
 - Supervisor: team has sufficient education, training, and experience
 - Interpreter: forms the basis of the findings, opinions, and conclusions in the report

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7.5 *Who May Conduct a Phase I Environmental Site Assessment*

7.5.1 *Environmental Professional’s Duties*—The *environmental site assessment* must be conducted by ~~the~~ an *environmental professional* or conducted under the supervision or responsible charge of an *environmental professional*. The *environmental professional* shall be involved in planning the interviews and the site reconnaissance if not conducted by the *environmental professional*. The person performing the *interviews* and *site reconnaissance* ~~shall be performed by a person possessing~~ shall possess sufficient education, training, and experience ~~necessary to conduct the site reconnaissance and interviews in accordance with this practice, and having~~ to assess the nature, history, and setting of the *subject property*, and have the ability to identify issues relevant to *recognized environmental conditions* in connection with the *subject property*. ~~At a minimum,~~The *environmental professional* ~~must be involved in planning the site reconnaissance and interviews~~ shall review and ~~interpretation of information upon which the report is based shall be performed by the environmental professional~~ interpret the information used to form the basis of the findings, opinions, and conclusions in the *report*.

Project Scoping

- Revisions or additions to ASTM Non-scope Considerations (13.1.5, X6)
 - Asbestos, PCBs
 - Emerging Contaminants, PFAS

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- 13.1.5.1 Asbestos-containing building materials unrelated to releases into the environment,
- 13.1.5.2 Biological agents,
- 13.1.5.3 Cultural and historical resources,
- 13.1.5.4 Ecological resources,
- 13.1.5.5 Endangered species,
- 13.1.5.6 Health and safety,
- 13.1.5.7 Indoor air quality unrelated to *releases of hazardous substances or petroleum products* into the environment,
- 13.1.5.8 Industrial hygiene,
- 13.1.5.9 Lead-based paint unrelated to releases into the environment,
- 13.1.5.10 Lead in drinking water,
- 13.1.5.11 Mold or microbial growth conditions,
- New 13.1.5.12 PCB-containing building materials (for example, interior fluorescent light ballasts, paint, and caulk),
- 13.1.5.13 Naturally-occurring radon,
- 13.1.5.14 Regulatory compliance, ~~and~~
- New 13.1.5.15 Substances not defined as hazardous substances (including some substances sometimes generally referred to as emerging contaminants) unless or until such substances are classified as a CERCLA hazardous substance (see 1.1.4 and X6.10), and
- 13.1.5.16 Wetlands.

Project Scoping

- Liens/AULs (7.1, 5.1, 5.4, 5.5, 6.2, 3.2.2, 3.2.67)
 - Still a user responsibility
 - AULs vs. PULs
 - 3.2.2 *activity and use limitations*, n—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, soil vapor, groundwater, and/or surface water on a *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...may include *institutional* and/or *engineering controls*...
 - 3.2.67 *property use limitation*, n—limitation or restriction on current or future use of a *property* in connection with a response to a *release*, in accordance with the applicable regulatory authority or authorities that allows *hazardous substances* or *petroleum products* to remain in place at concentrations exceeding unrestricted use criteria.
 - Method 2, title search information reports “back to 1980”

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New 6.2 *Review Land Title Records and Judicial Records for Environmental Liens and Activity and Use Limitations (AULs)*

- Significantly expanded and reorganized into two sub-sections with research methodology for *users* who may rely on the following methods:

New 6.2.1 *Method 1 Transaction-Related Title Insurance Documentation Such as Preliminary Title Reports and Title Commitments*

New 6.2.2 *Method 2 Title Search Information Reports Such as Condition of Title, Title Abstracts, and AUL/Environmental Lien Reports*

New 6.2.2.1 *Scope of Title Search Information Reports*

...Title search information reports shall review *land title records* for documents recorded between 1980 and the present...

Records Research

- Physical Setting (8.2.1, Table 1)
 - Current topo or USGS 7.5 Minute Series (or equivalent)
 - Agency file review info, document in report if reviewed
 - Other discretionary sources

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Moved 8.2.1 *Physical Setting Resources*— A ~~current~~ USGS ~~7.5 Minute~~ topographic map (~~or equivalent~~) (current USGS Topo or historical 7.5-Minute Topographic Series) showing ~~the area on which~~ the *subject property* ~~is located~~ shall be reviewed. ~~It is the only standard physical setting source and the only physical setting source that is required to be obtained (and only if it is reasonably ascertainable).~~ The map shall be displayed at an appropriate scale, such that the contour labels are visible and the topography can be visualized. Site-specific physical setting information obtained pursuant to agency file reviews set forth in 8.2.3 shall also be reviewed. One or more additional physical setting resources may be obtained at the discretion of the *environmental professional*. Because such sources provide information about the geologic, hydrogeologic, hydrologic, or topographic characteristics of a site, discretionary *physical setting resources* shall be sought when (1) conditions have been identified in which *hazardous substances* or *petroleum products* are likely to *migrate* to the *subject property* or from or within the *subject property* into the groundwater or soil and (2) more information than is provided in the ~~current~~ most recent *USGS 7.5 Minute Topographic Map* (or equivalent) is generally obtained, pursuant to local good commercial and customary practice in initial *environmental site assessments* for the type of *commercial real estate transaction* involved, ~~in order~~ to assess the impact of such *migration* on *recognized environmental conditions* in connection with the *subject property* (Table 1).

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- Physical Setting Resources Table

Moved TABLE 1 Mandatory *Standard Physical Setting Resources*

USGS ~~Current~~ Most recent 7.5 Minute Topographic Map (or equivalent) showing contour lines

New Site-specific physical setting information obtained pursuant to agency file review

Discretionary and Non-Standard Physical Setting Resources

USGS and/or State Geological Survey—Groundwater Maps

USGS and/or State Geological Survey—Bedrock Geology Maps

USGS and/or State Geological Survey—Surficial Geology Maps

~~Soil Conservation Service—Soil Maps~~

National Cooperative Soil Survey - Soil Survey Maps

Other *Physical Setting Resources* that are reasonably credible

(as well as *reasonably ascertainable*)

Records Research

- Government Agency Databases (8.2.2, Table 2)
 - Deletion/renaming of obsolete records/lists for Federal/State
 - New Footnotes – LUSTs current and formerly active

Excerpt from the “Revision Guide”

New TABLE 2 Types of Government Records to be Reviewed

- Added column of Common Sources
- Standard Environmental Record Sources
 - Federal, State/Tribal
 - Mostly minor clarifications
 - SEE CHART
 - Local – no changes

New Footnotes

State and Tribal Leaking Storage Tanks

4. Records should be researched for both currently active and formerly active sites.

State and Tribal Voluntary Cleanup Sites

5. Sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action. This should not be interpreted as there being no contamination at the site or that other regulatory agencies, such as at the State level, have not required further action. Such sites may be listed in other environmental record resources.

E1527-13	E1527-21
Federal NPL site list	Lists of Federal NPL (Superfund) sites
Federal Delisted NPL site list	Lists of Federal Delisted NPL sites
Federal CERCLIS list	Lists of Federal sites subject to CERCLA removals and CERCLA orders
Federal CERCLIS NFRAP site list	Lists of Federal CERCLA sites with NFRAP
Federal RCRA CORRACTS facilities list	Lists of Federal RCRA facilities undergoing Corrective Action
Federal RCRA non-CORRACTS TSD facilities list	Lists of Federal RCRA TSD facilities
Federal RCRA generators list	Lists of Federal RCRA generators
Federal institutional controls/engineering controls registries	Federal institutional control/engineering control registries
Federal ERNS list	Federal ERNS list
State- and tribal - equivalent NPL	Lists of state- and tribal “Superfund” equivalent sites
State- and tribal - equivalent CERCLIS	Lists of state- and tribal hazardous waste facilities
State and tribal landfill and/or solid waste disposal site lists	Lists of state and tribal landfills and solid waste disposal facilities
State and tribal leaking storage tank lists	Lists of state and tribal leaking storage tanks
State and tribal registered storage tank lists	Lists of state and tribal registered storage tanks
State and tribal institutional control/engineering control registries	State and tribal institutional control/engineering control registries
State and tribal voluntary cleanup sites	Lists of state and tribal voluntary cleanup sites
State and tribal Brownfields sites	Lists of state and tribal brownfield sites

Records Research

- Historical Research (8.3)
 - Property Boundaries apply back through timeline
 - No change to the method for determining approximate minimum search distance... it shall be measured from the nearest subject property boundary
 - Subject Property, Adjoining Properties
 - Uses of subject property: eight standard historical resources that “...are necessary and both reasonably ascertainable and likely to be useful.”
 - Uses of Adjoining Properties
 - “Big Four” Standard Resources: (1) aerial photographs (2) fire insurance maps, (3) local street directories, and (4) historical topographic maps, if reviewed for the subject property or “...indicate in the report why such a review was not conducted.”

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New 8.3.9 *Uses of the Adjoining Properties*—During research of the *subject property*, as described in 8.3.8, uses of the *adjoining properties* that are *obvious* shall be identified to evaluate the likelihood that past uses of the *adjoining properties* have led to *recognized environmental conditions* in connection with the *subject property*. The report shall describe identified *obvious* uses of *adjoining properties*, and indicate the earliest dates identified. This task requires reviewing the following *standard historical resources* if they have been researched for the *subject property* (see 8.3.8), provide coverage of one or more *adjoining properties*, and are likely to be useful in satisfying the objective in 8.3.1: (1) *aerial photographs* (see 8.3.4.1), (2) *fire insurance maps* (see 8.3.4.2), (3) *local street directories* (see 8.3.4.3), and (4) *historical topographic maps* (see 8.3.4.4). In cases in which any of the preceding four *standard historical resources* are not reviewed for the *adjoining properties* but they were reviewed for the *subject property*, the *environmental professional* shall indicate in the *report* why such a review was not conducted. Additional *standard historical resources* should be reviewed if, in the opinion of the *environmental professional*, such additional review is warranted to achieve the objective in 8.3.1. Factors to consider in making this determination include, but are not limited to: known hydrogeologic/geologic conditions that may indicate a high probability of *hazardous substances* or *petroleum products migrating* to the *subject property*; the extent to which information is *reasonably ascertainable*; likely to be useful; the time and cost involved in reviewing such resources (for example, reviewing *building department records* or *property tax files* for *adjoining properties* may be too time-consuming); and local good commercial and customary practice. *Other historical resources* may be used to satisfy the objective of 8.3.1 but checking *other historical resources* is not required to comply with this practice.

Site Reconnaissance

- Added “Features and Activities” to "Uses and Conditions" as subjects of the Site Recon (9.4)

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9.4 Features, Activities, Uses, and Conditions - During the *site visit*, the *environmental professional* (or the person under the supervision or responsible charge of the *environmental professional*) shall look for and identify the features, activities, uses, and conditions specified in 9.4.1 through 9.4.28 ~~9.4.4.7 should be noted to the extent visually and/or physically observed during the site visit.~~ The specified features, activities, uses, and conditions ~~specified in 9.4.4 through 9.4.4.7~~ should also be the subject of questions asked as part of the interviews of *owners, operators, and occupants* (see Section 10). Any of the specified features, activities, uses, and conditions identified in, on, or at the *subject property* shall be described in the *report*. ~~to the extent specified in 9.4.1 through 9.4.4.7.~~ ~~The environmental professional(s) performing the Phase I Environmental Site Assessment are obligated to identify uses and conditions only to the extent that they may be visually and/or physically observed on a site visit, as described in this practice, or to the extent that they are identified by the interviews (see Sections 10 and 11) or record review (see Section 8) processes described in this practice.~~ If any of the specified features, activities, uses, or conditions are not found to be present in, on, or at the *subject property*, the *environmental professional* shall document as such in the *report*.

Site Reconnaissance

- Deleted 5-gallon “threshold” for miscellaneous hazardous substance containers (9.4.15)

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Moved 9.4.15 *Drums* *Drums, Totes, and Intermediate Bulk Containers* — The approximate number of containers and a general description of the contents, capacity, types of containers, and the storage conditions shall be included in the *report*; however, a detailed inventory is not required. ~~To the extent visually and/or physically observed or identified from the interviews or records review, drums shall be described in the report, whether or not they are leaking, unless it is known that their contents are not hazardous substances or petroleum products (in that case the contents should be described in the report). Drums often hold 55 gal (208 L) of liquid, but containers as small as 5 gal (19 L) should also be described.~~

Site Reconnaissance

- PCB ballasts, caulk, paint and other items that are PCB-containing and inside or part of a structure are beyond scope (9.4.18)

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Moved 9.4.18 *PCBs-Containing Items* — Electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs. ~~shall be described in the report to the extent visually and/or physically observed or identified from the interviews or records review. Fluorescent light ballasts likely to contain PCBs do not need to be noted.~~ Fluorescent light ballasts, caulk, paint, or other materials that may contain PCBs, and are located inside and are part of the building or structure, are outside the scope of this practice.

New Note 4 - Materials potentially containing PCBs (for example, fluorescent light ballasts, paint, caulk) that are not part of the structure and that are not solely within the structure may require identification [see X1.1.4.3(2)].

Reporting

- Presumed Viability of Report 180 days - include dates for interviews, government records, site reconnaissance, EP declaration, liens (if included) (4.6.2)
 - Expiration is based on the earliest of these dates

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New 4.6.2 *Updating of certain components*—Subject to 4.8 and the *user’s* responsibilities set forth in Section 6, an *environmental site assessment* meeting or exceeding this practice and for which the information was collected or updated within one year prior to the date of acquisition of the *subject property* (or, for transactions not involving an acquisition, such as a lease or refinance, the date of the intended transaction) may be used provided that the following components of the inquiries were updated within 180 days prior to the date of purchase or the date of the intended transaction. All of the following components must be conducted or updated within 180 days prior to the date of acquisition or prior to the date of the transaction:

- (i) *interviews with owners, operators, and occupants;*
- (ii) searches for recorded environmental cleanup liens (a *user* responsibility, see Section 6);
- (iii) reviews of federal, tribal, state, and local government records;
- (iv) visual inspections of the *subject property* and of *adjoining properties*; and
- (v) the declaration by the *environmental professional* responsible for the assessment or update.

Reporting

- Site Plan (figures) and Photos added (12.3)

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12.3 *Contents of Report*—The *report* shall include those matters required to be included in the report pursuant to various ~~provisions~~ sections of this practice. The *report* shall also identify the *environmental professional* and the person(s) who conducted the *site reconnaissance* and *interviews*, and the date(s) the *site reconnaissance* and *interviews* were conducted. In addition, the *report* shall state whether the *user* reported to the *environmental professional* any information pursuant to the *user’s* responsibilities described in Section 6 of this practice (for example, an *environmental lien* or *AUL* encumbering the *subject property* or any relevant specialized knowledge or experience of the *user* regarding the *subject property*). A site plan showing the approximate location of features, activities, uses, and conditions of the *subject property*, as deemed relevant by the *environmental professional*, shall also be included. Photographs of features, activities, uses, and conditions indicative of *recognized environmental conditions* and *de minimis conditions* shall be included. At the discretion of the *environmental professional*, other relevant and representative photographs of features, activities, uses, and conditions at the *subject property* may also be included.

Reporting

- Updated EP Declaration (12.7)

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Moved 12.7 *Conclusions* — The *report* shall include a Conclusions section that lists ~~summarizes~~ all *recognized environmental conditions* (including *controlled recognized environmental conditions*) and *significant data gaps* connected with the *subject property*. The report shall include a statement substantially similar to one of the following statements:

12.7.1 “We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E1527-21 of [insert address or legal description], the *subject property*. Any exceptions to, or deletions from, this practice are described in Section [] of this *report*. This assessment has revealed no ~~evidence of~~ *recognized environmental conditions*, *controlled recognized environmental conditions*, or *significant data gaps* in connection with the *subject property*,” or

12.7.2 “We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E1527-21 of [insert address or legal description], the *subject property*. Any exceptions to, or deletions from, this practice are described in Section [] of this *report*. This assessment has revealed the following ~~no evidence of~~ *recognized environmental conditions*, *controlled recognized environmental conditions*, and/or *significant data gaps* in connection with the *subject property*: (list).”

Reporting

- General updates to format (X5)

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Moved X5 SUGGESTED TABLE OF CONTENTS AND REPORT FORMAT

X5.1 Executive Summary: significant revisions

New *X5.2 Introduction*

X5.3 User-Provided Information: no changes

X5.4 Site Reconnaissance: minor revisions

X5.5 Records Review: significant revisions

X5.7 Non-Scope Services: minor revisions

New *X5.8 Findings and Opinions*

New *X5.9 Conclusions*

New *X5.10 Environmental Professional Statement*

New *X5.11 References*

X5.12 Appendices: significant revisions, plus new subsections

New 5.12.1 Figures

New 5.12.2 Photographs

Next Steps

- For more information see the LightBox/EDR ASTM Resource Webpage
 - <https://edrnet.com/astm-resource-center/astm-e1527>
- Read E1527-21, then read it again
 - Checkout the revised X1 “Legal Background on CERCLA...”
- Training
 - ASTM updated training
 - Many excellent resources in E1527-21 (REC Flowchart, REC/CREC/HREC examples)
- The “Revision Guide”
- Ongoing Webinar series...stay tuned!



E1527-21 Appendix

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X1 LEGAL BACKGROUND ON CERCLA AND THE APPLICATION OF “ALL APPROPRIATE INQUIRIES” TO THE PRACTICE ON ENVIRONMENTAL ASSESSMENTS IN COMMERCIAL REAL ESTATE TRANSACTIONS

- Significant revisions, recommended that all EPs review

X2 DEFINITION OF ENVIRONMENTAL PROFESSIONAL AND RELEVANT EXPERIENCE THERETO, PURSUANT TO 40 CFR §312.10

- No changes

Moved X3 USER QUESTIONNAIRE

- X3.1 Re-numbered, otherwise no changes

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New X4 ADDITIONAL EXAMINATION OF THE RECOGNIZED ENVIRONMENTAL CONDITION DEFINITION AND LOGIC

New X4.1 *Recognized Environmental Condition* — Definition Broken down, with detailed explanation of the wording and intent of the definition

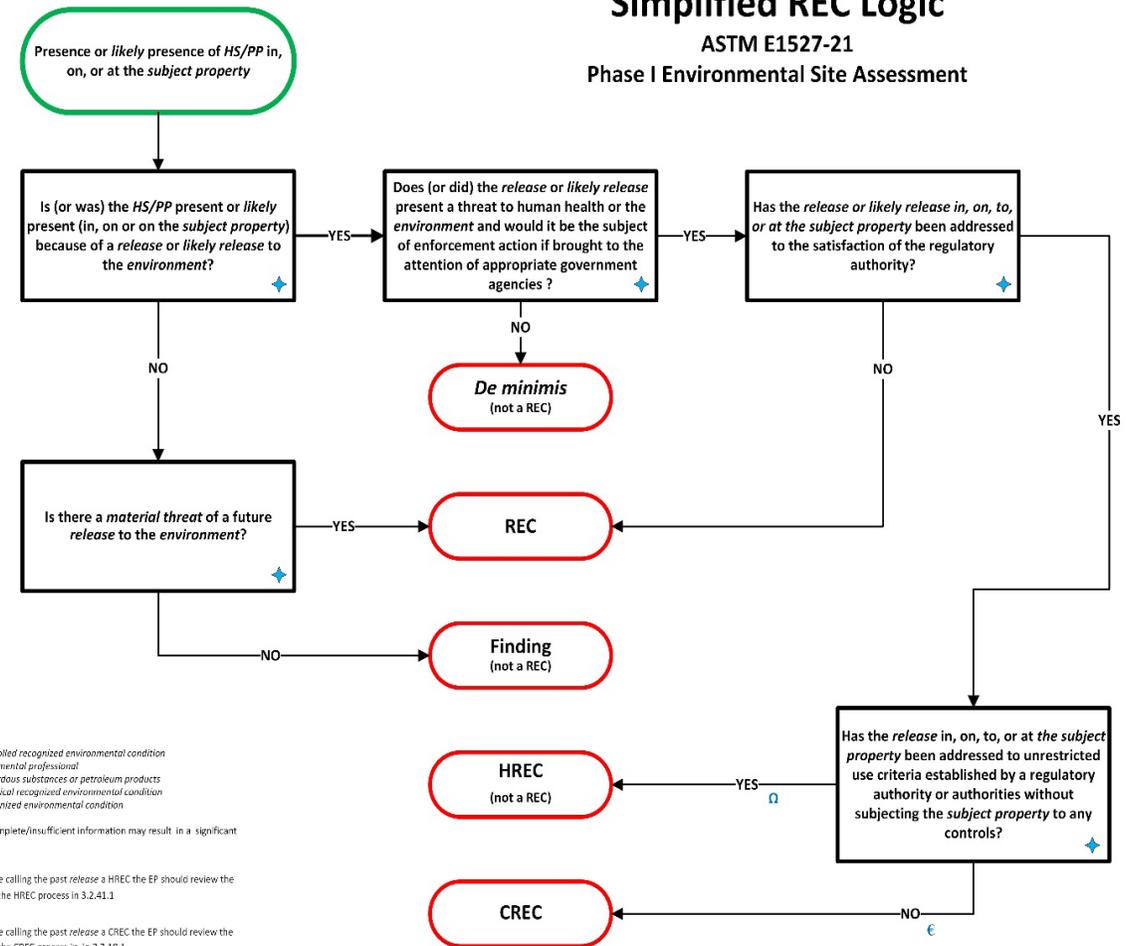
New X4.1 Simplified REC Logic — graphic portrayal of ESA Conclusions

New X4.3 Examples to Accompany Simplified REC Logic Diagram

Simplified REC Logic

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Phase I Environmental Site Assessment



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Moved X6 SUMMARY OF COMMON NON-SCOPE ISSUES (COMMON NON-SCOPE CONSIDERATIONS)

- *X6.1 Asbestos-Containing Building Materials* [significant revisions]
- *X6.2 Radon* [no changes]
- *X6.3 Lead-Based Paint (LBP)* [no changes]
- *X6.4 Lead-in-Drinking-Water (LIW)* [minor revisions]
- *X6.5 Wetlands* [no changes]
- *X6.6 Regulatory Compliance (Includes Health and Safety)* [no changes]
- *X6.7 Endangered Species Act: [no changes]*
- *X6.8 Indoor Air Quality: [no changes]*
- *X6.9 Mold: [no changes]*
- **New** *X6.10 Substances not defined as hazardous substances* [includes “PFAS” and others]
- **New** *X6.11 Petroleum Products*