

Environmental Site Assessment Standards Revised by the American Society for Testing and Materials (ASTM) International

With the passage of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in 1980, past and present owners of a property in the United States were held strictly, jointly, and severally liable for costs associated with cleaning up environmental contamination (American Society for Testing and Materials International [ASTM], 2013, Appendix XI). However, because of the difficulty in locating and holding prior owners or responsible parties liable for past environmental impacts, the majority of the costs involved in remediating environmental contamination typically fall to the current property owner.

One of the few protections a purchaser has against this liability is the establishment of an innocent landowner defense. This defense essen-

Efforts to identify environmental conditions, limit liability in commercial property transfers, continue to evolve

tially asserts that the purchaser has made “all appropriate inquiries” prior to the transaction and did not know or have reason to know that contamination existed on the property (ASTM, 2013, 3.2.44).

To provide protections to would-be purchasers of commercial real estate and their lenders from undisclosed environmental liabilities, the ASTM first published standards for evaluating and establishing the past and present environmental conditions of a property in 1993. A Phase I Environmental Site Assessment (ESA) is typically required in advance of a real estate transfer or as a condition for refinancing or obtaining a loan from a lending institution. An ESA is performed

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by an environmental professional and comprises four components: (1) records review, (2) site reconnaissance, (3) interviews, and (4) report preparation (ASTM, 2013, 7.2).

On November 6, 2013, ASTM International published the latest revision of the Phase I Environmental Site Assessment Protocol, E 1527-13, “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.” In this article, I shall walk readers through the updates to the Phase I ESA process. (Note: in-text references to this and earlier ASTM standards for the Phase I process [Standard 1527] will henceforth provide notations regarding the

sections of the standard pertaining to the information in the text. Also note that the two-digit number following 1527 denotes the year of the revision referenced. Thus, 1527-13 refers

to the 2013 revision, and 1527-05 refers to the 2005 revision.)

Background

As already mentioned, the first ASTM E 1527 standard was published in 1993 with revisions issued in 1997, 2000, and 2005. The ASTM E 1527 standard is intended to define “good commercial and customary practices in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the CERCLA (42 United States Code [USC] 9601) and petroleum products” (ASTM, 2013, 1.1. Purpose).

In 2005, the U.S. Environmental Protection Agency (EPA) promulgated 42 USC Part 312 Innocent Landowners, Standards for Conducting All Appropriate Inquiries (AAI), which stated that the procedures set forth in the ASTM E 1527-05 standard (ASTM, 2005) could be used in the performance of AAI. AAI establishes the requirements for the user of a Phase I ESA report to qualify for one or more of the landowner liability protections (LLPs) under CERCLA (EPA, 2005). These liability protections are defined as:

1. Innocent landowner defense,
2. Bona fide prospective purchaser liability protections, and
3. Contiguous property owner liability protection.

Essentially, this means that by performing a Phase I ESA in conformance with the ASTM and AAI standards, a person may qualify as an innocent landowner who “did not know and had no reason to know” that contamination existed on the property at the time the purchaser acquired the property (ASTM, 2013, 3.2.44).

On August 15, 2013, the EPA issued a Direct Final Rule that approved the use of the ASTM E 1527-13 standard to satisfy the AAI requirements (EPA, 2013a). Furthermore, the EPA noted that it intended to allow any party wanting to claim protection from liability under one of CERCLA’s LLPs to use either the new standard, ASTM E 1527-13, or the previous standard, ASTM E 1527-05. No other changes to the AAI rule were intended. According to the August 15 announcement, the rule was intended to become effective on November 13, 2013, without further notice, unless the EPA were to receive adverse comments by September 16, 2013.

Subsequently, the EPA received adverse comments and withdrew the direct final rule on October 29, 2013 (EPA, 2013b). Generally,

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opposition to the direct final rule was based on the approval of the use of either ASTM standard to satisfy the AAI requirements.

On December 30, 2013, the EPA published a Final Rule in the *Federal Register* amending the standards and practices for conducting AAI under CERCLA by offering parties the option of using the ASTM 1527-13 Standard (EPA, 2013c). The EPA states that:

[T]he ASTM 1527–13 standard includes improvements to the previous standard and its use will result in greater clarity for prospective purchasers with regard to potential contamination at a property. Therefore, EPA recommends that environmental professionals and prospective purchasers use the ASTM 1527–13 standard. (EPA, 2013c, p. 79321)

While the final rule does not require the use of the new standard for AAI, it makes clear that the EPA approves of the changes made by the ASTM and recommends that parties seeking CERCLA liability protection are best served by the new standard. The EPA also indicates that it intends to publish a proposed rule to remove references to 1527-05 from the AAI rule in the near future.

Revisions to the ASTM E 1527 Standard

The following sections discuss the revisions to the Phase I ESA standard, highlighting areas where the new standard diverges from the 2005 version.

Recognized Environmental Conditions

The primary goal of conducting a Phase I ESA to ASTM and AAI standards is to establish whether there is evidence of recognized environmental conditions (RECs) associated with a property. The definitions and interpretation of the terms used

to consider whether or not RECs exist have been amended with the 2013 ASTM standard.

The 2005 standard defines a REC as:

[T]he 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 and petroleum products even under conditions in compliance with the 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. (ASTM, 2005, 3.2.74)

The primary goal of conducting a Phase I ESA to ASTM and AAI standards is to establish whether there is evidence of recognized environmental conditions (RECs) associated with a property.

The 2013 standard now more concisely defines a REC as:

The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to a release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions. (ASTM, 2013, 3.2.78)

Definitions Borrowed From CERCLA

The new definition of a REC dropped the language specifying the potential for a release into structures, ground, ground water, or surface water of the property and instead uses terminology of a “release to the environment” (ASTM, 2013, 3.2.78). The 2013 standard for the first time specifically defines the terms “environment” (“shall have the same meaning as the definition of environment” in CERCLA USC 9601[8]) (ASTM, 2013, 3.2.29) and “release” (“a release of a hazardous substance or petroleum product shall have the same meaning as the definition of ‘release’ in CERCLA 42 USC 9601[22]”) (ASTM, 2013, 3.2.82).

Under the 2005 standard, the presence of hazardous substances and/or petroleum products at a property could, in and of themselves, be indicative of the presence of a REC, particularly because of the qualifier that a REC could exist even under conditions in compliance with the law.

CERCLA defines a “release” as:

[A]ny spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandon-

ment or discharging of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant). (EPA, 2010, p. 6719)

The term “environment” as defined under CERCLA includes “(A) the navigable waters, the waters of the contiguous zone, and the ocean waters ... and (B) any other surface water, groundwater, drinking water supply, land surface or subsurface strata, or ambient air of the United States ...” (42 USC 9601 101 (8)).

The clarification that these definitions correspond directly with CERCLA aligns the 2013 standard with AAI’s CERCLA terminology.

■ **An Important Distinction Regarding RECs in the 2013 Revision**

Under the 2005 standard, the presence of hazardous substances and/or petroleum products at a property could, in and of themselves, be indicative of the presence of a REC, particularly because of the qualifier that a REC could exist even under conditions in compliance with the law. The revised definition clarifies that there must be a release, conditions indicative of a release, or a material threat of a release to the environment in order for a REC to exist.

For example, under the 2005 standard, the presence of two 250 gallon above-ground storage tanks containing new and used oil in an automotive repair facility may legitimately have been identified as a REC—even if they were in compliance with the law—if an impact to the structure or environment would be expected in the event that a release were to occur. Under the new definition, however, in the absence of a release or material threat of a release to the environment, no REC would exist.

Historical Recognized Environmental Conditions

The 2005 standard defines a historical recognized environmental condition (HREC) as:

[A]n 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. (ASTM, 2005, 3.2.39)

The 2005 definition goes on to explain that if a past release was remediated to the satisfaction of a regulatory agency (typically through issuance of a No Further Remediation [NFR] letter or equivalent), then it would qualify as a HREC.

The 2013 standard defines a HREC as a:

[P]ast release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any environmental controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). (ASTM, 2013, 3.2.42)

Under the revised definition, receiving regulatory closure does not necessarily qualify the release to be classified as a HREC. In order to be classified as a HREC, the closure must have no restrictions or controls associated with it. Additionally, the 2013 definition notes that the environmental professional is required to determine whether or not the past release would be considered a REC at the time the current Phase I ESA is being performed.

How This Works

Although environmental programs vary from state to state, in Illinois, for example, if a facility had a leaking underground storage tank incident that was cleaned up to current-day residential property soil and groundwater remediation objectives, and the owner had received an unrestricted NFR letter from the Illinois Environmental Protection Agency (IEPA), the prior release would be considered a HREC under both the 2005 and 2013 standards.

However, if this same release had been remediated to standards that were applicable at the time, but that had since been amended to reflect more restrictive objectives, which the initial cleanup did not meet, then under the 2013 revision,

the past release would be considered a REC rather than a HREC.

Furthermore, the 2013 revision introduces a new category of REC to accommodate another common scenario. Under the 2005 standard, if a release had been remediated and contamination had been allowed to remain in the subsurface soils at concentrations above the current-day residential property soil remediation objectives, and the IEPA had issued the NFR letter requiring the maintenance of an engineered barrier in the form of an asphalt parking lot, the past release would be considered a HREC. Under the 2013 standard, the release is now classified as a controlled recognized environmental condition (CREC).

Under the 2005 standard, if a release had been remediated and contamination had been allowed to remain in the subsurface soils at concentrations above the current-day residential property soil remediation objectives, and the IEPA had issued the NFR letter requiring the maintenance of an engineered barrier in the form of an asphalt parking lot, the past release would be considered a HREC.

Controlled Recognized Environmental Condition

The 2013 standard defines a CREC as:

[A] recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). (ASTM, 2013, 3.2.18)

For an example of how this new classification is used, consider the following scenario, also from Illinois:

An industrial manufacturing facility was enrolled in the IEPA's State Voluntary Remediation Program and remediated a release to industrial/commercial property soil and groundwater remediation objectives. The IEPA issues a NFR letter restricting the property to commercial/industrial usage. Under the 2005 ASTM standard, since the property is zoned industrial and the intention is for the facility to remain industrial, the release could have

been classified as a HREC. Under the 2013 ASTM revision, however, because the release was not remediated to residential property remediation objectives, regardless of the intended use of the property, the release would be classified as a CREC.

Phase I ESA reports typically identify de minimis conditions associated with minor oil staining found on the ground or floor surface of parking lots and vehicle repair facilities, and in locations such as along a warehouse loading dock, in a utility room, or an equipment staging/storage area found at a commercial or industrial property.

Readers also need to be aware that, according to Note 3 of the CREC definition, the ASTM clarifies that the identification of a CREC does not imply that the environmental professional performing the Phase I ESA has evaluated whether or not the control has been implemented and/or is currently in place and effective.

Because of this, Bill Tryon, technical director of GRS Group and ASTM 1527-13 committee member, expressed reservations regarding the use of the term "controlled" in the standard, stating, in an interview, "Even though the ASTM notes

that no evaluation has taken place or is required as part of the Phase I assessment process, the implication to clients may well be that the situation has been evaluated and is under control." Thus, he suggests that "When CRECs are identified, the Phase I report should include a recommendation to assess the status of the control and potentially include the preparation of a plan to ensure that the control remains implemented and effective in the future."

De Minimis Conditions

The ASTM E 1527-13 standard updates the term "de minimis condition" from the 2005 definition of one that would not be the subject of an enforcement action if brought to the attention of appropriate regulatory agencies by clarifying that such a condition is one that does not present a threat to human health or the environment (ASTM, 2013, 3.2.22). Specifically, a de minimis condition is one that is not a REC or CREC.

Phase I ESA reports typically identify de minimis conditions associated with minor oil staining found on the ground or floor surface of parking lots and vehicle repair facilities, and in locations such as along a warehouse loading dock, in a utility room, or an equipment staging/storage area found at a commercial or industrial property.

Vapor Migration

The ASTM E 1527-13 standard for the first time defines "migrate/migration" as referring to the movement of hazardous substances or petroleum products in any form, including solid and liquid at the surface or subsurface, and vapor in the subsurface (ASTM, 2013, 3.2.56). This definition ensures the inclusion of the potential for vapor migration in the subsurface as part of the Phase I assessment process.

The earlier, ASTM E 1527-05 standard did not specifically address the potential for vapor migration, and it was usually left to the discretion of

the environmental professional or the report user to decide whether to include such an evaluation.

The process for identification and assessment of vapor encroachment conditions (VECs) is provided in the ASTM (2010) standard, “Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions, E 2600-10.” However, in Note 4 to the definition of migrate/migration, the ASTM specifies that the application of the E 2600-10 standard is not required in order to achieve compliance with AAI. The ASTM E 2600-10 standard provides a comprehensive set of procedures intended to evaluate vapor migration and intrusion at a target property, and the protocols involved are more intensive than is generally warranted by a typical Phase I ESA.

A VEC is defined as the presence or likely presence of contaminants of concern vapors in the subsurface of the property caused by the release of vapors from contaminated soil or groundwater either on or near the property as identified by Tier 1 or Tier 2 procedures (ASTM, 2010, 1.1.1). The Tier 1 procedure is considered generally comparable to the Phase I ESA process and involves the evaluation of the same or similar information as is required to satisfy the ASTM E 1527-13 standard for the evaluation of potential soil or groundwater contamination impacts.

Generally, the Tier 1 procedure involves the evaluation of the type of structure at, and usage of, the property as well as an assessment of historical and geological sources, and environmental database records for the property and nearby properties to ascertain whether conditions exist that could potentially impact the subsurface (ASTM, 2010, Section 8).

If vapor migration conditions are determined to exist that could potentially impact the property, then a REC would be identified in the Phase I ESA report and a Tier 2 evaluation would be recommended. This is comparable to the standard Phase I evaluation of potential on-site or off-site

contaminated soil or groundwater conditions that could impact the property—and the subsequent decision-making process of whether those conditions constitute a REC.

Tryon of GRS suggests that, “[E]valuation of the potential for vapor migration should be undertaken in a manner similar to that which has been used for groundwater and soil. Typical Phase I reports do not specifically address each potential exposure pathway unless a REC is identified, and devoting a section in a report specifically to the subject of vapor migration in effect would elevate its importance to a level above that of other migration pathways.”

Similar to the earlier example of the evaluation of HRECs at a property where a leaking underground storage tank release had in the past been remediated to objectives that have since been updated, thus making the former HREC a REC, if the remedial action did not include the evaluation of vapor migration as a potential pathway, a REC would now be included in the Phase I ESA report.

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User Responsibilities

The ASTM E 1527-13 standard more clearly defines the responsibilities of the Phase I ESA report user in the assessment process and provides revised wording aligned with that found in AAI, which *requires* that these tasks be performed by or on behalf of any party seeking to qualify for one of the LLPs to CERCLA liability (ASTM, 2013, Section 6). For example, in Section 6.2, of the standard, Review Title and Judicial Records for Environmental Liens and Activity and Use Limitations (AULs), the 2013 standard now

explicitly states that in order to meet the AAI requirements, a search for environmental liens and AULs filed or recorded against the property must be conducted by the user (ASTM, 2013, Section 6.2).

The 2013 standard again includes an optional *User Questionnaire* (Appendix X-3), which can be, and often is, included in the final Phase I ESA report. The 2005 and 2013 questionnaires both contain six questions/tasks derived from AAI¹ for the user to qualify for one of the LLPs.

In the 2013 standard, the following changes have been made to questions/tasks 1 and 2:

1. Environmental liens that are filed or recorded against the property (40 CFR 312.25)

Question as it appears in ASTM E 1527-05—Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?

Question as it appears in ASTM E 1527-13—Did a search of recorded land title records (or judicial records...) identify any environmental liens filed or recorded against the property under federal, tribal, state, or local law?

2. Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26)—2005 Version

Question as it appears in ASTM E 1527-05—Are you aware of any AULs, such as engineering controls, land use restrictions, or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

2. Activity and land use limitations that are in place on the property or that have been filed or recorded against the

property (40 CFR 312.25(a)(1)(v) and (vi))— 2013 Version

Question as it appears in ASTM E 1527-13—Did a search for recorded land title records (or judicial records...) identify any AULs, such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state, or local law?

The revised, 2013 Section 6.1, Scope, indicates that while the user is not required to provide the information to the environmental professional, the environmental professional *shall* request that the user provide the results of the six tasks. Additionally, if the user does not provide the requisite information, the environmental professional is directed to consider whether or not this absence is a potential data gap that could affect the ability to identify RECs associated with the property.

GRS's Tryon notes, "While the absence of the questionnaire and requisite user information is considered a data gap, it is typically not a significant gap that would impede the ability of the environmental professional to identify RECs associated with a property."

Regulatory Agency File and Records Review

The 2013 ASTM standard has partially reformatted Section 8, Records Review. In addition, information has been added in a new Section 8.2.2, Regulatory Agency File and Records Review, which focuses directly on the environmental professional's obligation to review information identified as a result of the regulatory records source research. If the subject property, or any adjoining property, is identified on any of the "standard environmental record sources" (typically identified from the listings on the environmental

database purchased for the Phase I assessment), the pertinent regulatory files “should be reviewed” (ASTM, 2013, 8.2.2). Furthermore, if the environmental professional determines that such a review is not warranted, this must be explained in the report along with a “justification for not conducting the regulatory file review” (ASTM, 2013, 8.2.2).

Along with other background and historical information, the environmental records must be reasonably ascertainable and practically reviewable within a reasonable time and cost. The language in both the 2005 and 2013 standards remains the same as far as the terms “reasonably ascertainable,” “practically reviewable,” and “reasonable time and cost” are concerned (ASTM, 2013, 8.1.4 and 8.1.5).

“Reasonably ascertainable” means:

1. Information that is publicly available,
2. Information that is available from its source within reasonable time and cost constraints, and
3. Information that is practically reviewable.

“Practically reviewable” essentially means information that is provided in a manner and form that yields relevant information without the need for extraordinary efforts and analysis of irrelevant data (e.g., having to sort through a state’s leaking underground storage tank records chronologically would not be considered practically reviewable, while sorting through the records by address or zip code would be).

“Reasonable time and cost” is defined as information that is available from a source within 20 calendar days of request (typically through a Freedom of Information Act [FOIA] request) at no more than a nominal cost. Information that can be reviewed by a visit to the source is considered reasonably ascertainable if the visit is permitted within the 20 days.

The 2013 ASTM standard provides that these environmental files and records can be reviewed from alternative sources, including records available at the facility, provided by the user, local government agencies, and through interviews with persons and/or regulatory officials who are knowledgeable about the circumstances of the record source listing (ASTM, 2013, 8.2.2.2). The environmental professional is then tasked with determining whether or not this alternative source information is sufficient to evaluate whether or not a REC, HREC, or CREC exists.

In practical terms, FOIA requests submitted to a state or federal regulatory agency often take longer than 20 days for a response and can require that, because of the volume of material, the review takes place on site at the agency. Justification for not reviewing regulatory agency information is typically because the information is not available within a reasonable time period and/or the information that is available must be reviewed at the agency, which is located a prohibitive distance away and would require excessive costs to access. In these instances, when the regulatory agency information is deemed necessary to review in order to determine whether a REC exists—for example, in cases where there has been a reported release and remediation at the subject property or adjoining property—review of the information is often recommended as part of a limited Phase II effort.

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Report Conclusions

Every Phase I ESA report must include a conclusions section incorporating one of two statements essentially stating either that the “assessment revealed no evidence of recognized

environmental conditions in connection with the property” or that the “assessment revealed no evidence of recognized environmental conditions in connection with the property except for the following:” (the RECs are then listed).

In Section 12.8, Conclusions, the 2005 standard states that the Phase I report “shall include one of the following statements ...” (ASTM, 2005, 12.8), whereas the 2013 standard states that the report “shall include a statement substantially similar to one of the following statements...” (ASTM, 2013, 12.8). This change provides the environmental professional with some additional latitude in describing the conclusions based on the particular findings associated with the assessment.

barriers, and/or institutional controls associated with the property.

Additional time and/or costs may be associated with the identification of new RECs as a result of the evaluation of the vapor migration pathway. In many instances, however, those groundwater and/or associated soil impacts that have been reported as RECs in the past will now simply be partnered with a potential vapor migration impact and reported as RECs.

Regulatory file reviews are another possible cost impact of the 2013 standard. In practical terms, the typical time frame for conducting a Phase I assessment is around 2 weeks, meaning that the receipt of state agency files in particular prior to report completion is often unlikely. Although the standard defines 20 days as a reasonably ascertainable time period, if a file review is deemed necessary by the environmental professional, most often a recommendation is made in the Phase I report to conduct the review upon receipt of the information and report the findings. Therefore, the cost of the Phase I ESA is not affected, and the decision is left to the user or client as to whether to incur the additional cost for a file review.

Conclusions

Although the EPA has indicated its continued acceptance of either the 2005 or 2013 ASTM standard as satisfying AAI requirements, it appears clear that the 2013 standard is the preferred choice for those users who wish to assert the CERCLA LLPs in the future. Although it may take some time before all aspects of Phase I ESA reporting converts completely to the new standard, conformance with ASTM E 1527-13 is expected by most parties in the near future.

From an environmental risk perspective, the new standard and terms categorizing the different types of RECs should not significantly affect the ability of lending institutions to identify potential environmental and business risks

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Impacts of the 2013 Revision to the Assessment Process

The 2013 updates to the ASTM standard are primarily associated with clarifying and defining terms and conditions that have been, and are currently, part of the assessment process. Although this may result in some

additional evaluation and consideration as to what specifically constitutes a REC, HREC, or CREC with respect to an individual property, the impact on the reporting process should be negligible.

Although the terminology may be altered, the identification of a REC and the potential impact to a property remains essentially unchanged. One positive impact is that the new category of a CREC should more effectively alert the client or report user to the potential for future costs and issues associated with monitoring and maintaining any activity or use limitations, engineered

associated with a property. Lenders and environmental risk managers will continue to rely on the experience of environmental professionals and their ability to provide a thorough and diligent evaluation of the property and adjoining/ neighboring property conditions and to assess the potential liability associated with them. Their focus will remain on retaining the services of experienced environmental professionals with the depth of knowledge and expertise for making those determinations, no matter which terms or report formats are used.

Note

1. Questions/tasks are taken from 40 Code of Federal Regulations (CFR) 312.25, 312.26, 312.28, 312.29, 312.30, and 312.31.

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