

Brownfields & Phase I Environmental Site Assessment (ESA) Webinar



PRESENTED BY:

ITEC

SHEILA SEVENSTAR-HORN



Agenda

Phase I ESAs for Brownfields
Tuesday, February 21, 2023
10:00 am – 12:00 pm

- Brief Brownfields Introduction
- Brownfields Process
- What is a Phase I ESA
 - * ASTM E-1527-21/All Appropriate Inquiry (AAI)
- Who can conduct a Phase I ESA
- Phase I ESA
 - * Reasons to do a Phase I ESA
 - * Purpose of Phase I ESA
- ASTM 1527-21 Revision overview
- Components of a Phase I
- Questions/Answers
- Training announcement

*agenda is subject to change

Preview

- ▶ Brownfields Introduction
- ▶ **What** is a Phase I Environmental Site Assessment (ESA)
 - ✓ Brownfields
 - ✓ Definition of a Phase I ESA
 - ✓ All Appropriate Inquiries (AAI) – Title 40 CFR part 312
 - ✓ **Revision ATSM E1527-21**
 - ✓ **ASTM 2247-16** Site Assessment Process for Forestland or Rural Property
- ▶ **Who** can conduct a Phase I ESA
- ▶ **Phase I ESA + Brownfields**
- ▶ Components of a Phase I ESA (**How**)
- ▶ ASTM E1527-21 Standards Review
- ▶ Q & A
- ▶ Training Announcement

What is a Brownfield?

BROWNFIELD History

- ▶ Since the inception of the EPA Brownfields Program in 1995...
- ▶ It has changed the way contaminated property and/or potentially contaminated, is perceived, addressed and managed.
- ▶ It opened up an opportunity for tribes, states, communities, and other stakeholders in economic development to work together to cleanup and sustainable reuse brownfields properties.



Brownfields

Brownfields Law

- Gives a provision for liability of property only if a **Phase I ESA** is conducted on a property.
 - * Phase I ESA breaks the chain of liability
 - * Liability protection from past contamination

What is a Brownfields?

UPDATED Brownfields Law

2018 BUILD Act

The **Brownfields Utilization, Investment and Local Development (BUILD) Act** was enacted on March 23, 2018

- ▶ Reauthorized EPA's Brownfields Program
- ▶ Amendments to the 2002 Small Business Liability Relief and Brownfields Revitalization Act (Brownfield Law)
- ▶ Authorized changes affected brownfields grants, ownership and liability provisions, and state & tribal response programs.

Builds Act

Overview

In March 2018, Congress passed the BUILD Act, which amends the Brownfields provisions of CERCLA, as part of the FY 2018 Omnibus Bill. In this factsheet, we explain the major changes to the Brownfields Amendments. The BUILD Act reauthorized the Brownfields Provisions through 2022.



More Redevelopment Certainty for Governmental Entities

Local or state governments that take control of a contaminated site no longer has to be an “involuntary” acquisition.



Alaska Native Village and Native Corporation Liability Relief

Provides liability relief for Alaska Native Villages and Native Corporations for a facility received under the Alaska Native Claims Act, as long as the entity did not cause or contribute to the release of a hazardous substance from the facility.



Petroleum Brownfield Enhancement

Removed the language and requirement that petroleum brownfield sites be “of relative low risk” in order to be eligible for funding.



Prospective Purchasers and Lessees

Bona Fide Prospective Purchaser definition was amended to include language related to those who have tenancy or leasehold interests in the facility.



Expanded Eligibility for Non-Profit Organizations

Non-profits (including LLCs and community development entities that are non-profit) can now apply for assessment and RLF grants.



Certain Publicly Owned Brownfield Sites

Publicly owned sites acquired prior to January 11, 2002 can apply for assessment and remediation (RLF and cleanup) grants as long as the entity is not responsible for the contamination.



Increased Funding for Remediation Grants

Increased the cleanup grant funding amount to \$500,000 per site; eligible entities can also request a waiver to \$650,000 per site, based on the anticipated level on contamination, size, or ownership status of the site.



Multipurpose Brownfields Grants

Grant authority for multi-purpose grants (assessment and cleanup combination) was increased up to \$1,000,000. No more than 15% of the total appropriation can be awarded to multi-purpose grants.



Allowing Administrative Costs for Grant Recipients

Entities are now able to use up to 5% of grant awards on administrative costs.



Grant Applications

New ranking criteria focusing on renewable energy or energy efficiency projects and waterfront developments.



Small Community Technical Assistance Grants

Authorized a new grant program for states and tribes to provide training, technical assistance, or research for small communities (populations of 15,000 or less), Indian tribes, rural areas, and disadvantaged areas. Maximum of \$20,000 per community.

Build Act



Changes to Brownfields

- ▶ Ability to spend grant dollars in various way
- ▶ Allowed for non-profits to be eligible for funds
- ▶ Allows for administrative costs up to 5% of grant
- ▶ Increased the cleanup amount up to \$500,000
- ▶ Multipurpose Grants
 - * Combination of an Assessment and Cleanup in one grant

What is a Brownfields?



“...Real property, the expansion, or redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” *

*Public law 107-118 (h.R. 2869), the “Small Business Liability Relief and Brownfields Revitalization Act”, signed into law January 11, 2002.

WHY REDEVELOP BROWNFIELDS

- Desirable Location
- Increase revenue or local tax base
- Improve community image
- Mitigates blight
- Mitigates public health and safety concerns
- Reduce the need redevelop greenfields
- Uses existing infrastructure (can be cost savings)

Brownfield PROCESS



- **Identify the Brownfield**
- **Investigate** – Phase I and/or Phase II Site Assessment.
- **Cleanup** – If necessary
- **Redevelop**

What is a Brownfield?

BROWNFIELD

- Underutilized, idle, and/or abandoned property
- Properties that are or may be environmentally contaminated
- Properties with potential environmental issues that are limiting use of the site



**Brownfield
Properties are
Everywhere and
are of all kinds!**

What is a Brownfields

Often it is the **Perception** of contamination keeps properties from being redeveloped, not the actual presence of contamination

Once the **stigma** is gone, properties can be move forward to productive use.



What is a Brownfield?

Underutilized Property



- Redevelopment

What is a Brownfield?

Abandoned Property



- Abandoned properties are not a bad thing
- Demolition
- Redevelopment

What is a Brownfield?

Redevelopment



What is a Brownfield?



What is a Brownfield? Demolition



- Desirable Location



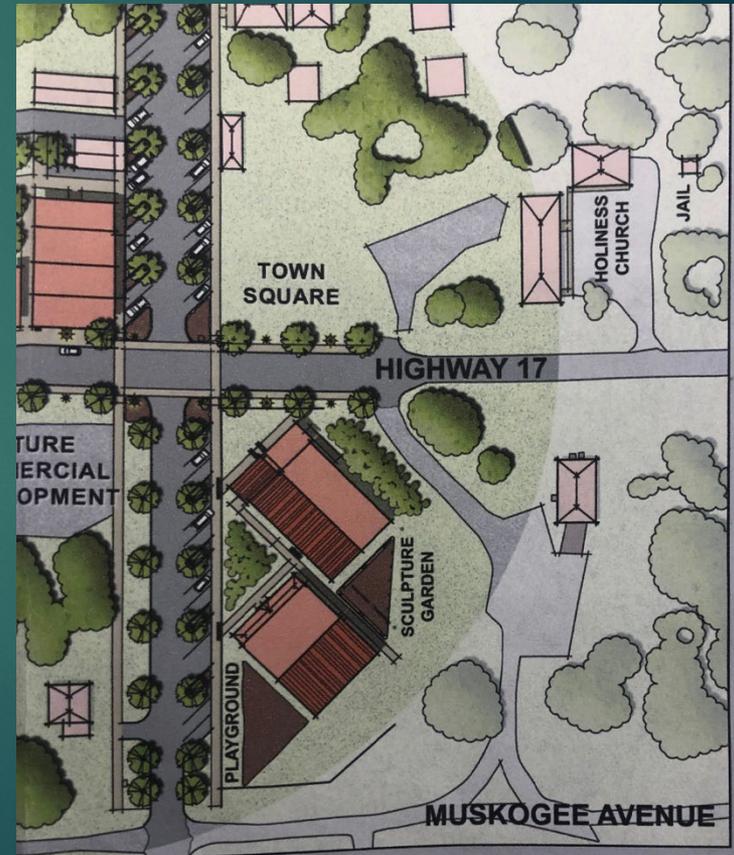
What is a Brownfield?

Demolition



What is a Brownfield?

Demolition



Brownfields Redevelopment Process



1. Identify Brownfields
 - Set redevelopment goals
 - Redevelopment plans in place
2. Assess and Investigate – Phase I/II ESA
 - Environmental due diligence to determine if there is a potential release prior to any development or redevelopment
 - Sampling, if necessary
3. Clean-up, if necessary
4. Redevelopment
 - Plan for sustainability

Identify A Brownfields

- Are environmental concerns a barrier to redevelopment?
- Is the current owner viable/liable for ongoing environmental actions?
- Is the property suitable for redevelopment?
 - ✓ Economic needs
 - ✓ Community needs
 - ✓ Environmental needs

Phase I ESA Definition

- ▶ Intent of the report is to assess if current or historical property uses have impacted the soil or groundwater beneath the property and may pose a threat to the environment and/or human health.
- ▶ If issues are found, it presents a potential liability for the lender and/or owner
- ▶ Affect the value of the property.

Phase I ESA Definition

- ▶ Process of evaluating a property's environmental conditions
- ▶ Assessing the potential liability for any contamination

GRANTEES

Every Phase I ESA conducted with USEPA Brownfields assessment grant must be conducted in compliance with the AAI final rule

All Appropriate Inquiries: Reporting Requirements Checklist for Assessment Grant Recipients Factsheet

What are “All Appropriate Inquiries”?

All appropriate inquiries (AAI) is the process of evaluating a property’s environmental conditions and assessing the potential liability for any contamination. Every Phase I environmental site assessment conducted with U.S. Environmental Protection Agency (EPA) Brownfields Program assessment grant funds must be conducted in compliance with the AAI final rule in the Code of Federal Regulations (CFR), 40 CFR Part 312. The AAI final rule provides that the ASTM International Standards ASTM E1527-13 “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” and E2247-16 “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property” are consistent with the requirements of the AAI final rule and can be used to satisfy the statutory requirements for conducting AAI. AAI may be conducted in compliance with either of these standards to obtain protection from potential liability under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as an innocent landowner, contiguous property owner or bona fide prospective purchaser.

- ASTM 1527 is a tool to achieve compliance with AAI
- ASTM 1527 is not mandated

Phase I ESA Definition

Phase I ESA can be completed on all types of properties

- ✓ Vacant land
 - ✓ Agricultural
 - ✓ Multi-family residential
 - ✓ Commercial
 - ✓ Industrial
-
- * ASTM E2247-16 is for properties comprised of large, rural and undeveloped land

Brownfields to Phase I ESA

What is a Phase I ESA?

- It is **NOT an ER...Environmental Review (ER)!**
 - Part of being compliant with the National Environmental Policy Act (NEPA)
 - Reviews a project and its environmental impacts to determine whether it meets federal, state, and local environmental standards.
 - Required for all HUD-assisted or federally funded projects to ensure a proposed project does not negatively impact the environment
 - And the property site will not have an adverse health effect on the end users

Phase I ESA Process



Brownfields to Phase I ESA

What is a Phase I ESA?

Written document (report) in a standardized format

- ✓ Site visit (site recon) to observe current and past conditions and uses of the property and adjacent properties.
- ✓ Review of federal, state, tribal and local regulatory records
 - USTs, ASTs
 - Known or suspected release
 - Storage and/or disposal of hazardous wastes, including petroleum, institutional and engineering controls
- ✓ Review of historical records
 - Aerial photos, Sanborn maps (fire insurance maps), building departments, fire departments and health departments.
- ▶ Interviews with current and past property owners, occupants, neighbors, government officials, or anyone familiar with the property
- ▶ Research history of property and adjoining properties
 - * Current and past site and surrounding property uses that could have adverse effects on property

Big 4 Resources

1. Historical aerial photos
2. Historical topographic maps
3. Fire Insurance maps/Sanborn maps
4. City Directory

Update E1527-21

The Big 4 may not have been used to the same extent to research adjoining properties as the subject property.

Brownfields to Phase I ESA

- ▶ Performed by an Environmental Professional (EP) in accordance to ASTM **E1527-21**
 - ✓ Identify potential environmental risks to the property
 - ✓ Review current and historic operations that are known or suspected to use or produce hazardous substances or petroleum products.

Brownfields to Phase I ESA

ASTM E1527-21 – AAI

- ▶ **ASTM Standard E1527-21** used as a guide to conduct and write Phase I ESAs
- ▶ **All Appropriate Inquiries (AAI)**
 - * Developed by EPA.....Process of evaluating a property's environmental conditions and assessing potential liability for contamination
 - * Final rule was published in the federal register on November 1, 2005; Title 40 CFR Part 312
 - * **§312.1 – 312.31 – Standards for Conducting AAI**
 - * **§312.20 - Subpart C Standards and Practices**
- ▶ ASTM E1527 is a tool used for knowing what to look for at a site recon and in the report writing of a Phase I ESA.

Brownfields to Phase I ESA

ASTM E1527-21 – AAI

- ▶ ASTM E1527 is a tool used for knowing what to look for at a site recon and in the report writing of a Phase I ESA.
- EPA adopted the ASTM E1527-13 standards for Phase I ESA
- Adoption for ASTM 1527-21 pending
- If a Phase I is conducted according to ASTM standards, it will be accepted by EPA.

Brownfields to Phase I ESA

ASTM E1527-21

- A new appendix provides guidance on how to distinguish between and among RECs/CRECs/HRECs and provides a flow chart and examples

Brownfields to Phase I ESA

Simplified REC Logic ASTM E1527-21 Phase I Environmental Site Assessment

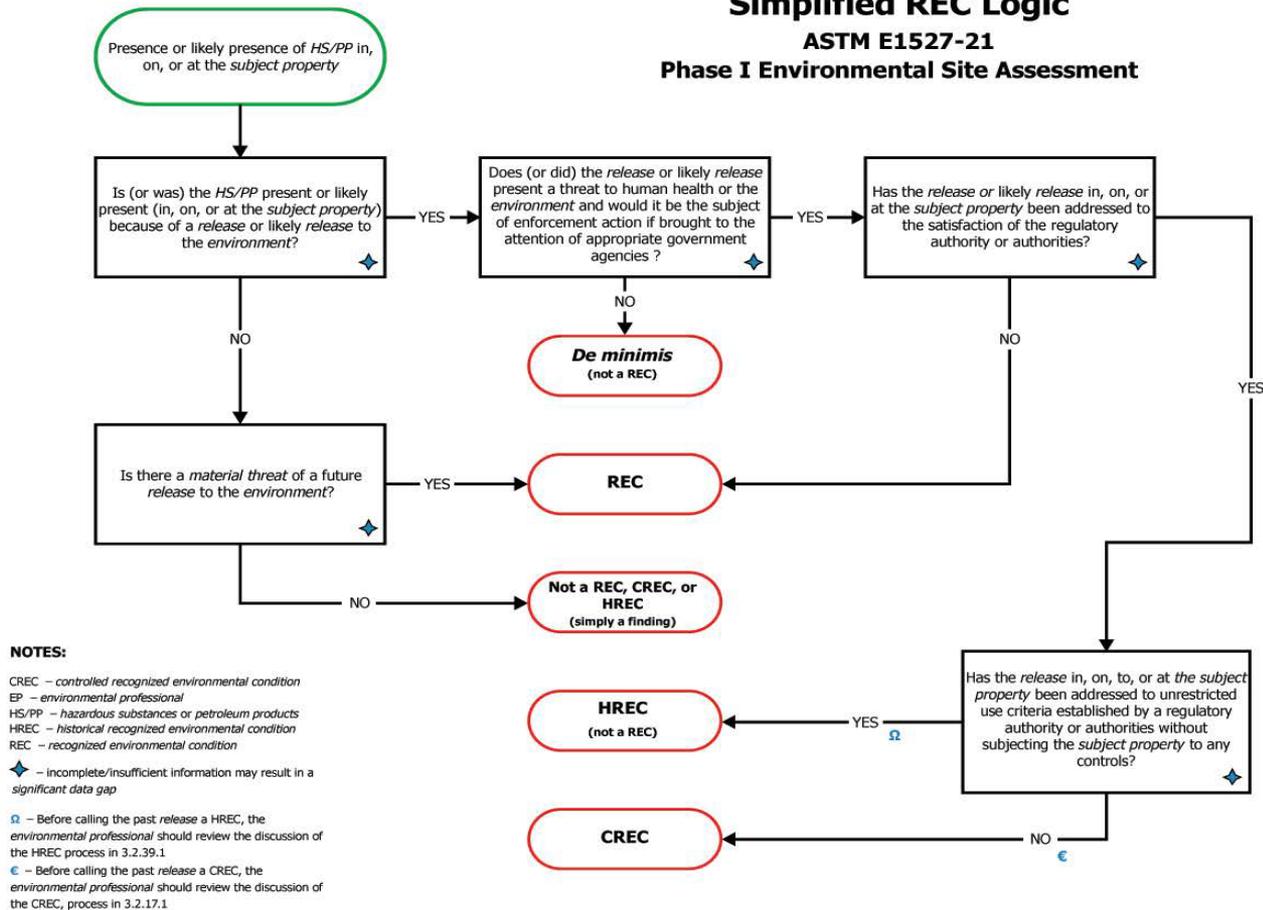


FIG. X4.1 Simplified REC Logic

Phase I ESA - ASTM E2247-16

► Phase I Environmental Site Assessment Process for Forest land or Rural Property

- ✓ Similar to the E1527-21(Phase I for Commercial Property)
- ✓ Since Phase I ESAs originated in 1986, review of large rural and forestland properties were difficult and time consuming due the reconnaissance requirements.
- ✓ July 2017, E2247-16 is AAI compliant
- ✓ “Provides an alternative method to ASTM E1527- 21 for good commercial and customary practice in conducting a Phase I ESA of forestland or rural properties.
- ✓ 2016 Standards adds updated terminology consistent with E1527-21
- ✓ Definition of rural is much broader
- ✓ EPA recognizes ASTM Phase I Forestland Standard (E2247-16) as AAI-compliant as of June 2017.

Introduction

ASTM E2247-16

▶ Phase I Environmental Site Assessment Process for Forest land or Rural Property

- ✓ Previous version (2008) defined a minimum property size of 120 acres.
- ✓ E2247-16 removed the minimum property size restriction and requires the property to be “rural” or “forestland” property of any size
- ✓ Some alternative sourcing for agency records is allowed.
- ✓ Specific time limit of 20 calendar days for receipt of materials by the consultant for review in completing a Phase I.
 - It provides an outside time limit
 - Assures that a Phase I will take *at least 20 days* to complete, if requested documentation is not received earlier

Introduction - ASTM E2247-16

- ✓ Allows for use of satellite, drone and aerial photography as an approach to inspect the property when necessary.
 - Identify structures and potential areas of concern
- ✓ When property cannot be accessed, you can view the property from nearby viewpoints.

▶ Historical Records

- ✓ Additional environmental records
 - Standard historical sources – aerial and historical maps
 - Non-standard sources - mineral, oil, gas development maps and livestock dipping vat records.
- ✓ Search distances must be from property boundaries

▶ Non-Scope Considerations

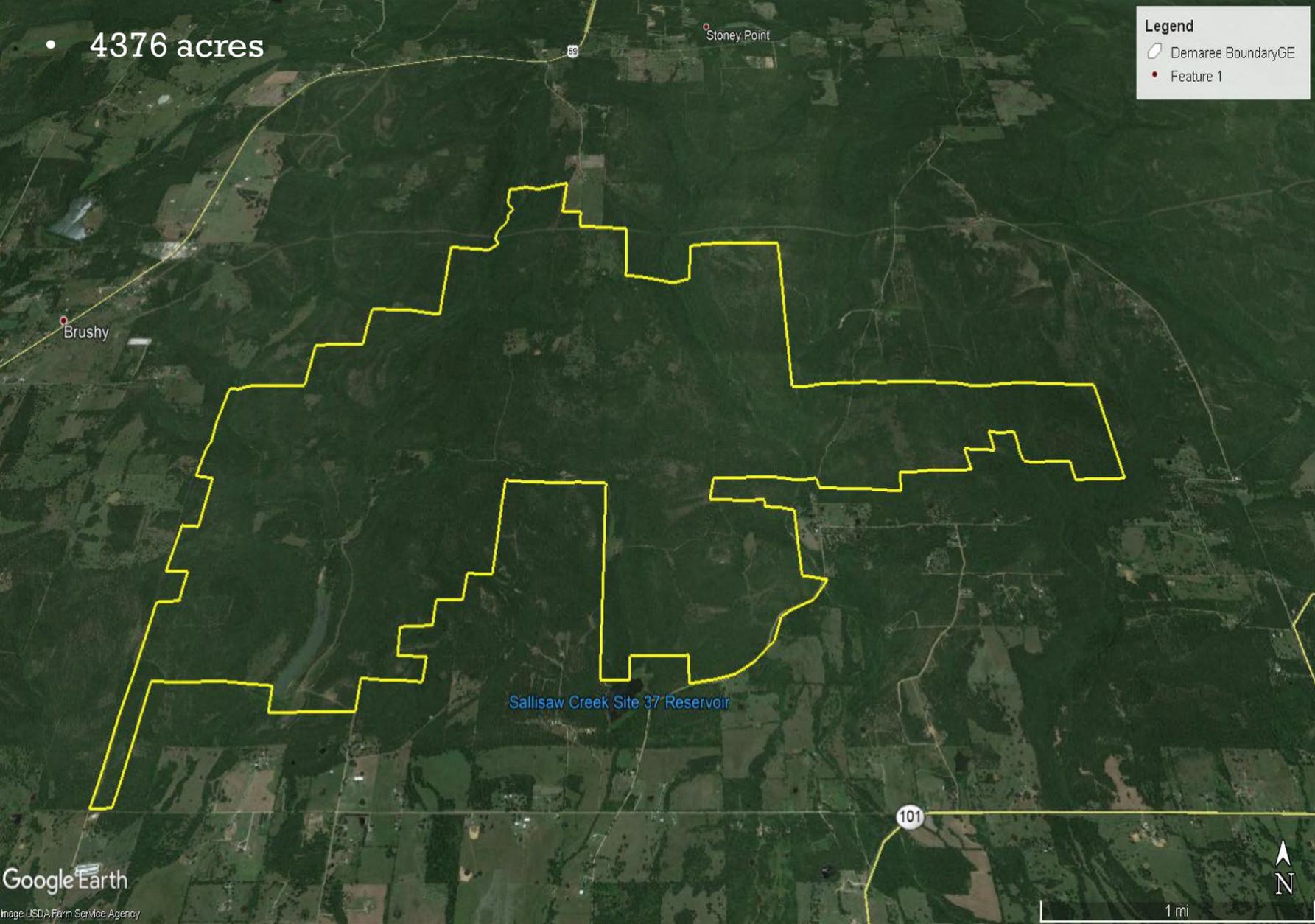
- ✓ Cultural and historic resources
- ✓ Ecological resources
- ✓ Endangered species

ASTM E2247-16

Legend

- Demaree BoundaryGE
- Feature 1

• 4376 acres



ASTM E2247-16



ASTM E2247-16



Introduction

Who can conduct a Phase I ESA?

- ▶ ASTM E1527-21 and E2247-16 Standards
 - The ESA must be performed by the Environmental Professional or conducted under the supervision or responsible charge of the environmental professional.

ASTM Definition

A person who possesses sufficient **specific education, training,** and **experience** necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases on, at, in , or to a property, sufficient to meet the objectives and performance factors.

ENVIRONMENTAL PROFESSIONAL

- Professional Engineer's or Professional Geologist's license or registration from a State, Tribe, or U.S. Territory and have the equivalent of three years of full time relevant experience
- Licensed or certified by the Federal Government, a State, Tribe, or U.S. Territory to perform environmental inquiries and have the equivalent of three years of full-time relevant experience
- Bachelor's or higher degree from an accredited institution of higher education discipline of engineering or science and the equivalent of five years of full-time relevant experience
- Or have the equivalent of ten years of full-time relevant experience

Introduction

Shelf Life

 REPORT TYPE	 EXPIRATION	 MORE INFORMATION
Phase I Environmental Site Assessment (ESA)	180 Days	For a new purchase, a Phase I ESA report must have been completed within the last 180 days (or 6 months). It can be updated between 6-12 months. If the transaction does not involve a new owner taking title to the property (foreclosure or purchase) the age of the report doesn't matter.
Phase II Environmental Site Assessment (ESA)	No standard-based expiration	Phase II ESAs assess RECs identified in a Phase I ESA. They are reflective of conditions at the time of assessment and rely upon current property use and cleanup criteria to determine whether "contamination" and associated exposure or cleanup risk exists, as well as how that risk relates to the current or planned use of the site.

* Phase I shelf life refers to financial institutions or government entity for purchase or foreclosure.

Introduction

Shelf Life - UPDATES

- ▶ Phase I ESA valid if it was completed no more than 180 days prior to the date of acquisition, or up to one year,
- ▶ 5 specific components of the report are updated
 1. Interviews
 2. Environmental records searches
 3. Review of environmental records
 4. Site reconnaissance of the subject property
 5. Environmental Professional [EP] Declaration).

In addition, the new E1527-21 Standard requires that the dates in which each of the components were completed be identified in the Phase I Report, and that the 180 day or 1-year time period begins with the date upon which the first of these components was completed.

Introduction

EXCEPTION to UPDATES

- ▶ If part of a grant, is the grant specific to a current Phase I ESA?

Introduction

When must a Phase I ESA be performed:

- Applicable to tribes
 - ▶ Property Acquisition
 - ▶ Fee to Trust Acquisition
 - Tribes acquiring land for future fee-to-trust application
 - ▶ Dept. of Interior must establish liability protection before accepting title to property.
 - ▶ Tribes receiving EPA Brownfields 128a Assessment Grants
 - ▶ Tribes applying for EPA cleanup grants

Introduction



Purpose of a Phase I ESA (why)

- To serve as a tool to determine whether a property may be contaminated prior to the purchase or occupancy of a property that will be redeveloped.
- Gather sufficient information to develop a professional decision about the environmental condition of the property.
- To identify historical, current or potential contamination and sources.
- The purchaser or future tenant has the option to complete a Phase I ESA to investigate the current and historical use of that property.

Site Identification



Legal Description

S/2 NW/4 NW/4, NE/4 NW/4 NW/4
(less a tract of land containing 6.416
acres more or less) Section 27-T14N-
R6EIM, Lincoln County

Components – Phase I ESA

1. Site Identification
2. Records Reviews, Previous Reports, Historical Research
3. Site Reconnaissance
4. Interviews
- ** Under ASTM E1527-21, Interviews are now classified and grouped into the ASTM Standard Historical Sources
5. Phase I ESA

Records Review (Historical and Agency)

- **Records Review** - (past and present) of the subject property and adjoining properties to determine if further investigation required from an environmental stand point.
 - ✓ EP – examine records that show previous transfers of ownership or liens of the property
 - ✓ Previous use of property
 - ✓ Industrial activities may raise a red flag and warrant further investigation
 - ✓ Aerial Photos – show any historical changes or developments on property, adjoining properties and surrounding area

Site Recon



- Objective is to obtain information indicating the likelihood of identifying a recognized environmental condition in connection with the property
- Site visit that consist of a walk through of the property, adjoining properties and interior buildings or structures.
- Take pictures
- Take notes
- Ask questions

Site Recon



- ▶ There are specific things to search for during a site specifically outlined within the standards.
- ▶ After the assessment and site recon, a Phase I ESA is written to inform readers of any **Recognized Environmental Conditions (REC)** or **Environmental Concerns** at the subject property (if any) and other aspects about the subject property

Recognized Environmental Condition (REC)

Revised Definition

The presence hazardous substances or petroleum products in, on, or at the property

- ▶ Due to any release to the environment; or
- ▶ The likely presence or hazardous substances or petroleum products in, on or at he subject property due to a release or likely release to the to the environment; or
- ▶ The presence or hazardous substances or petroleum products in, on or at he subject property under the conditions that pose a material threat of a future release to the environment.

Recognized Environmental Condition (REC)

Scope Items

- **Range of contaminants within the scope** of the CERCLA and petroleum products
- IF contaminants are suspected, these will be the “Recognized Environmental Condition” (RECs)

Recognized Environmental Condition (REC)

Non-Scope Items

- ▶ Environmental issues or conditions at a property, that parties may wish to access in connection with the property that are outside the scope of practice.
- ▶ Some substances may be present in quantities and under conditions that may lead to contamination of the property or of near by properties but not included in CERCLA's definition of hazardous substances
- ▶ Or do not present potential CERCLA liability.
- ▶ In any case, they are beyond the scope of a Phase I ESA.
- ▶ Non-Scope Items ARE NOT required by ASTM E1527-21

Recognized Environmental Condition (REC)

Emerging Contaminants

- ▶ Contaminants of concern, such as per- and polyfluoroalkyl substances (PFAS), have been under scrutiny for possible regulation as hazardous substances by the federal EPA and some state agencies for the past several
- ▶ Some states have adopted regulatory standards for PFAS, the EPA has not yet listed PFAS as a federally regulated hazardous substance under CERCLA .

Recognized Environmental Condition (REC)

Emerging Contaminants

- ▶ One of the primary purposes of an Phase I ESA is to identify potential presence of CERCLA regulated hazardous substances
- ▶ Because PFAS are not currently regulated under CERCLA, EPs are not required to include identification of PFAS as a scope item.
- ▶ E1527-21 Standard indicates that inclusion of such substances can be added to the Phase I ESA as a “Non-Scope Consideration” and be addressed if the EP chooses.

Vapor Encroachment



- ▶ Vapor is recognized as a migration pathway for contamination.
- ▶ Migration of vapors.
- ▶ All Phase I ESAs should include an assessment of real or potential occurrence of vapor migration and vapor releases on, at, or to the subject property.
- ▶ Vapor encroachment screening per **ASTM E2600-22** is not required as part of ASTM E1527-21, however, a migration pathway is now recognized

Changes to Standards

Definition of migrate/migration: (Section 3.2.53)

For the purposes of this practice, “migrate” and “migration” refers to the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface.”

AAI – “Potential migration pathway”

Section 13.1.5.7 (and X5.8)

Clarifies that “indoor air quality” is a non-scope consideration only if it is unrelated to releases of hazardous substances or petroleum products.

Records Review



- ▶ Purpose
- ▶ Standard Environmental Record Sources
- ▶ Historical Documents
- ▶ Other Environmental Reports
- ▶ Any other documents important to the subject properties, past or present.

Records Review



- ▶ Purpose – To obtain and review records that will help identify recognized environmental conditions and environmental concerns in connection with the property.
- ▶ **Records Review before Site Recon is Professional Preference**

Recorded Information from Government Agencies

- ▶ Federal ERNS List – Property only
- ▶ State and Tribal Lists of Hazardous Waste Sites Identified for Investigation or Remediation – Property only
- ▶ State and Tribal Equivalent NPL – 1.0 miles
- ▶ State and Tribal Equivalent CERCLIS – 0.50 miles
- ▶ State and Tribal Landfill and/or Solid Waste Disposal Site Lists – 0.50 miles
- ▶ State and Tribal Leaking Storage Tank List – 0.50 miles

Recorded Information from Government Agencies

- ▶ State and Tribal Registered Storage Tank Lists – Property and adjoining properties
- ▶ State and Tribal Institutional Control/Engineering Control Registries – Property Only
- ▶ State and Tribal Voluntary Clean-up Sites – 0.50 miles
- ▶ State and Tribal Brownfields Sites – 0.50 miles

Local Lists



- ▶ Building Department Records from the City the subject property is located
- ▶ City/Community Fire Department
- ▶ Planning Division
- ▶ Enforcement Division

Standard Historical Sources



- ▶ Aerial Photographs
- ▶ Fire Insurance Maps
- ▶ Property Tax Files
- ▶ Recorded Land Title Records
- ▶ USGS Topographic Maps
- ▶ Local Street Directories
- ▶ Building Department Records
- ▶ Zoning/Land Use Records
- ▶ Other Historical Sources (newspapers, maps, internet sites, etc.)
- ▶ Prior Assessments

Other Sources of Information

- ▶ EPA Envirofacts Database
- ▶ Enviromapper
- ▶ Terrain Navigator
- ▶ Google Earth
- ▶ Oklahoma Corporation Commission (OCC)
- ▶ Oklahoma Department of Environmental Quality (ODEQ)
- ▶ Federal Emergency Management Agency (FEMA)
- ▶ National Wetlands Inventory
- ▶ USDA-Natural Resources Conservation Service - Web Soil Survey

Historical Information

▶ Past Owners

- ✓ Title History Search of ownership
- ✓ County Clerks
- ✓ Interviews with past owners or adjacent property owners

▶ Past Uses or Developments

Vapor Intrusion vs Vapor Encroachment

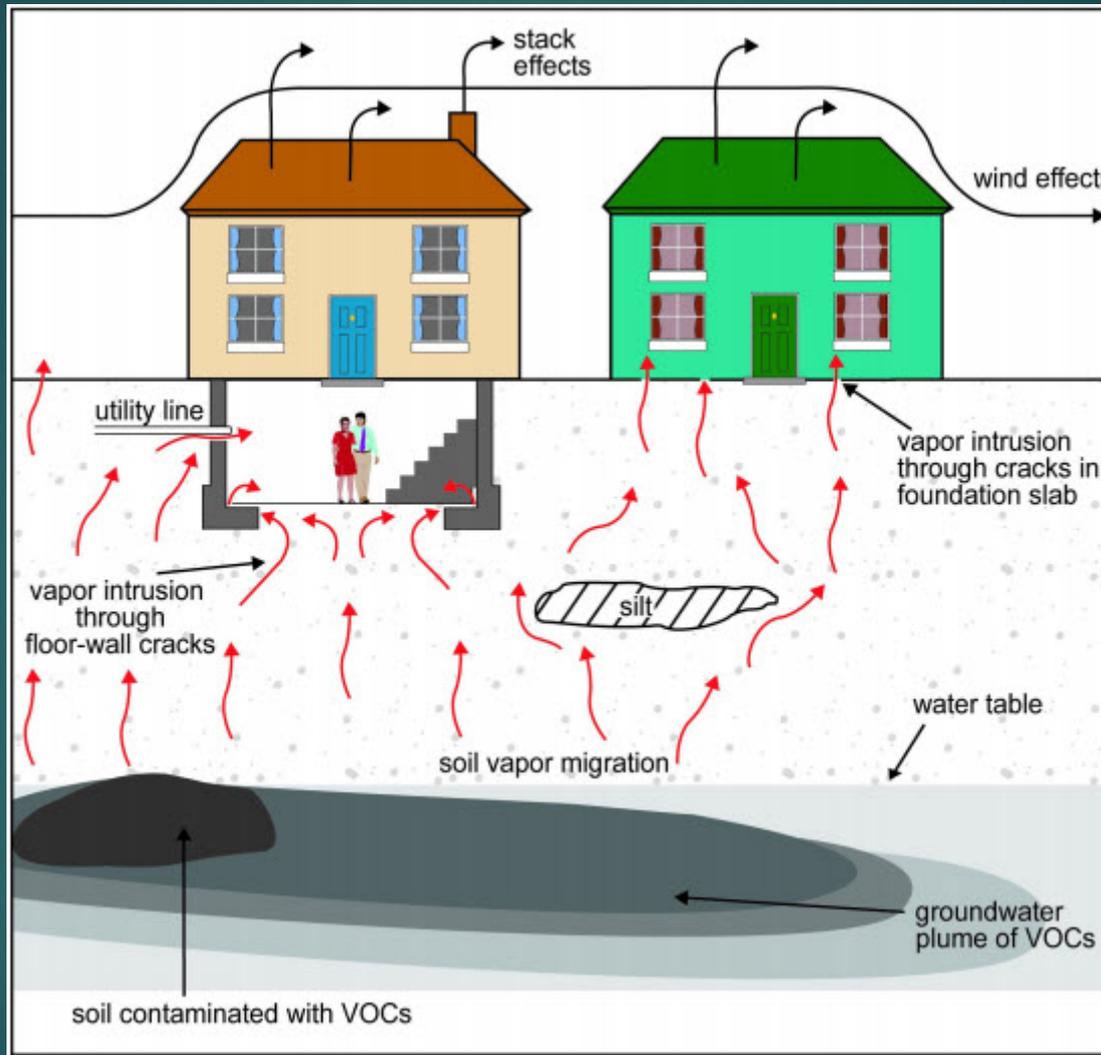
Vapor Intrusion

- ▶ The migration of volatile chemicals vapors from contaminated groundwater or soil (subsurface) “intrude” or migrate into an overlying building into a buildings interior space

Vapor Encroachment

- ▶ The migration of volatile chemicals vapors onto a property or near a property
- ▶ Not necessarily underneath or into a structure on the property
 - ▶ Also considers off-site contamination sources

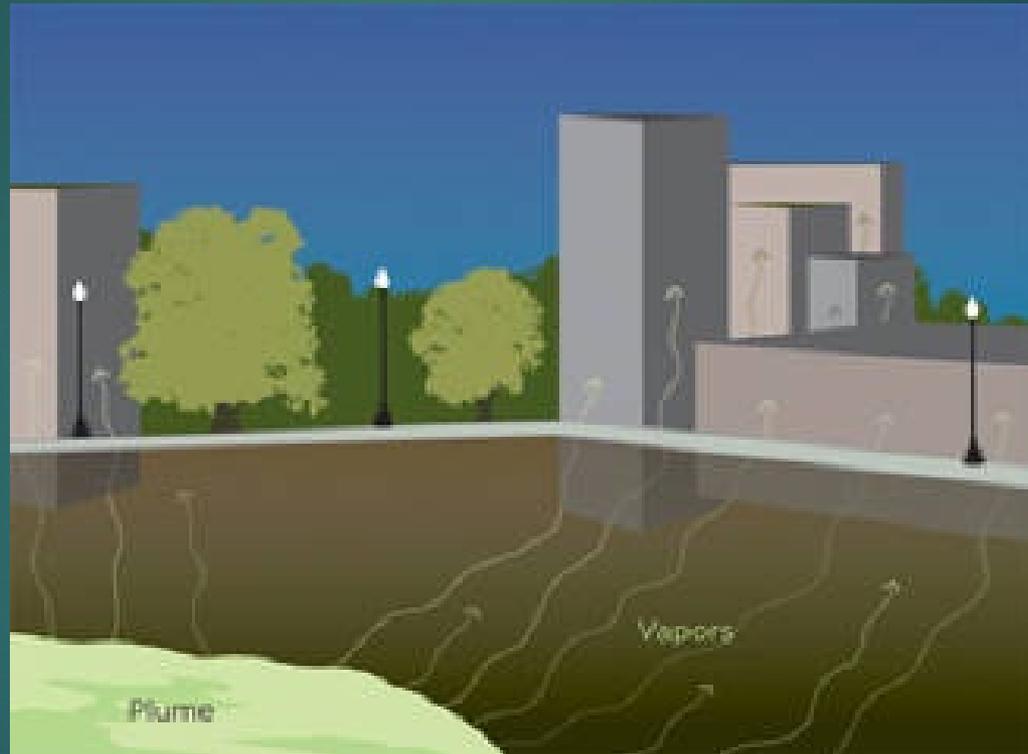
Vapor Intrusion



Migration of Soil Vapors to Indoor Air

Vapor Intrusion vs Vapor Encroachment

Vapor Encroachment



The migration of volatile chemicals vapors onto a property or near a property

Vapor Intrusion vs Vapor Migration

“Vapor Intrusion” and “Vapor Migration”

- ✓ It is not within the scope of a Phase I ESA to evaluate the potential for vapor to be present inside a building as the result of a release (vapor intrusion)
- ✓ It is within the scope to identify the presence or likely presence of hazardous substances or petroleum products on the property due to a release, based on an understanding of the various pathways and how contamination is likely to migrate on to the property.

Vapor Encroachment Screen

- ▶ ASTM E 2600-22 (\$78)
- ▶ Strongly recommended for Phase I ESAs,
- ▶ Guide may be used independently or in conjunction with the ASTM E 1527-21
- ▶ As in ASTM E 1527-21 Standards, a Vapor Encroachment Screen should be conducted or be supervised by an Environmental Professional.

Site Reconnaissance

Objective

- ▶ To obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the subject property.
- ▶ Obtain information to identify “findings” and REC for the Phase I ESA

Review records review prior to the site recon

- ✓ It can help in locating areas of concern that can be Recognized Environmental Conditions
- ✓ Conduct research on prior assessments before the site visit.

Site Reconnaissance

Items needed for Site Recon:

- ▶ Camera or phone
- ▶ Notebook/Pen or Pencil
- ▶ Measuring wheel
- ▶ Property boundary map

Helpful Items

- ✓ Tick repellent spray
- ✓ Dog repellent spray
- ✓ Flashlight

Site Reconnaissance



Observations

More specific information is more helpful in identifying current uses of property

- ✓ Visually and physically observe any structures, adjacent buildings, or any obstacles
- ✓ Woods
- ✓ Gas station
- ✓ Commercial (dry cleaner, retail, office, etc)
- ✓ Industrial or manufacturer
- ✓ Roads or paths with no apparent outlet

Site Reconnaissance



- ▶ Underground Storage Tanks (UST)
 - ▶ Aboveground Storage Tanks (AST)
 - ▶ Buildings
 - ▶ Water wells
 - ▶ Suspicious containers
 - ▶ Stained/Stressed Vegetation
 - ▶ Solid Waste Dumps
 - ▶ Chemical Waste
- Petroleum Products
 - Hazardous Substances
 - Sewage disposal
 - Odors
 - Pools of liquid
 - Drums
 - PCBs

Site Recon – General Site Setting

During site recon, make sure to note:

- ▶ Current uses of the property, including unoccupied spaces.
- ▶ Any current uses that may involve the use, treatment, storage, disposal, or generation hazardous substances or petroleum products
- ▶ Past uses of the property which can be found by conducting interviews.
- ▶ Current and past uses of adjoining properties.
- ▶ Current and past uses of the surrounding area.

Site Recon – General Site Setting

Identify

- ▶ Source of potable water for the property
- ▶ Utilities used on property
- ▶ Sewage disposal system for the property and the year installed
- ▶ Note topographic conditions of the property and the surrounding property.
 - * Helps determine migration paths if any REC's are found.
- ▶ Describe structures and other improvements on the property.
- ▶ Number of buildings and number of stories
- ▶ Approximate age of building(s)
- ▶ Square footage of building(s)
- ▶ Any ancillary structures, if any

Interviews (10)

Objective

- ▶ To obtain information indicating any recognized environmental conditions in connection with the subject property.

Content

- ▶ Interviews should be questions asked in the attempt to obtain information about uses, conditions, and any current or historical information about the property.

Interviews

Who should be interviewed:

- ▶ Key Site Managers – Often key site managers are people with good knowledge of the site.
 - ✓ Chief Plant Supervisor
 - ✓ Head Maintenance Person
 - ✓ Property Manager.
- ▶ Former employees
- ▶ Occupants, except for multi-family properties (apartment complexes, etc.)
- ▶ Any reliable source!
- ▶ The report shall identify the occupants and duration of occupancy.
- ▶ The EP should make at least one reasonable attempt to contact the Key Site Manager
- ▶ Interviews with past owners, operators, and occupants who are likely to have material information about the property shall be conducted

Interviews - State and Local Government

Who should be interviewed:

- ▶ State and/or Local Agency Officials
- ▶ Local Fire Department
- ▶ State and/or Local Health Agency
- ▶ State and/or local agency having jurisdiction over hazardous waste disposal or other environmental matters.
- ▶ Entity responsible for issuing building permits or groundwater use permits.

Evaluation and Report

- ▶ Describe all services performed in sufficient detail to permit another party to reconstruct the work performed.
- ▶ Findings section which identifies known or suspect recognized environmental conditions, and historical recognized environmental conditions, and de minimis conditions.
- ▶ Include the EP's opinion of the impact on the property of conditions identified in the findings section.
- ▶ The logic and reasoning in evaluating the information collected during the investigation shall be discussed.
- ▶ The opinion shall specifically include the EPs rationale for concluding that a condition is or is not currently a recognized environmental condition.
- ▶ Conditions identified by the EP as RECs currently shall be listed in the conclusions section of the report.



Q & A

Comments

Announcement

Save the Date!

ASTM PHASE I TRAINING & BROWNFIELDS ROUNDTABLE



TULSA

APRIL 11-13, 2023
ASTM Training April 11 -12

Brownfields Roundtable
April 13

Roundtable is open to
everyone!

LIMITED AVAILABILITY

- * 1 person per tribe
- * Your name will be put on a waiting list if there is more than 1 per tribe

- Send registration to sheila-sevenstar@cherokee.org
- Limited availability
- First come first serve
- Hotel information will be sent once you have registered.

Contact Information

- Sheila Sevenstar-Horn
E-mail: sheila-sevenstar@cherokee.org
Phone: 918-453-5108
- Chelsea Jones
E-mail: chelsea-jones@cherokee.org
Phone: 918-453-5768
- Jason White
E-mail: jason-white@cherokee.org
Phone: 918-453-5110
- Karen Dye
E-mail: Karen-dye@cherokee.org
Phone: 918-453-5109