

Environmental Site
Assessment for Lenders

April 2017



**EPA All Appropriate Inquiry and
ASTM Phase I Environmental Site Assessment**



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Liability under CERCLA

(Comprehensive Environmental Response, Compensation and Liability Act)

- Prior to the 2002 amendments to CERCLA, property owners could be held strictly liable for prior contamination at a property
 - **Strict liability:** without fault or culpability
 - **Joint and Several liability:** current and past owners can be held accountable individually or collectively
- Any owner within a property's chain of title could be held liable for contamination at a property, regardless of whether any particular owner caused the contamination

2002 Brownfields Amendments to CERCLA



- *Small Business Liability Relief and Brownfields Revitalization Act* – Establishes applicability of AAI
- Amended CERCLA and provided liability protections for certain property owners
 - Innocent landowners
 - Contiguous property owners
 - **Bona Fide Prospective Purchasers (BFPP)**
- Established EPA's Brownfields grant program

Statutory Requirements for CERCLA Liability Protections



- BFPP Threshold Criteria:
 - Purchaser is not a responsible party and not affiliated with a responsible party.
 - All disposal of hazardous substances at property occurred before acquisition
 - Conduct All Appropriate Inquiries prior to purchase.
 - **180-days** or 1-Year w/ Update after 180-days
 - Phase I Environmental Site Assessment (ASTM E1527-13)
 - Comply with **Continuing Obligations** – after purchase



Continuing Obligations

- Required following acquisition
 - Comply with land use restrictions
 - Do not impede effectiveness or integrity of institutional controls
 - Take “reasonable steps” to stop on-going releases
 - Prevent or limit human and environmental exposure to any previous releases
 - Provide cooperation, assistance, and access to property
 - Comply with CERCLA information requests and subpoenas

Some Typical Contaminants Encountered (not all contamination is created equal)



- Chlorinated Solvents (PCE and TCE)
- PCBs
- Petroleum Products (USTs, ASTs)
- Heavy Metals
- PAHs
- Asbestos/Lead Paint
- Pesticides/Herbicides

- Dry Cleaner
- Scrap Yards
- Machine Shops
- Manufacturing
- Auto Repair/Auto Body
- Gas Stations
- Wood Treatment

Contaminant Exposure Routes



Direct contact

Inhalation

Ingestion

Absorption



Objectives for a Phase I Investigation (Performance Factors)



- Identify conditions indicative of releases or threatened releases of hazardous substances & petroleum
 - Uses and occupancies of property
 - Uses of hazardous substances and petroleum
 - Waste management activities
 - Investigations, corrective actions and response activities
 - Institutional and engineering controls
 - Nearby and adjoining properties with environmental conditions
- Information that is publically available, and obtainable in reasonable time and cost



Key Phase I Regulatory Requirements

- Reviews of **historical sources of information**
- Reviews of federal, state, tribal, and local **government records**
- **Interviews** with past and present owners, operators, and occupants
- **Visual inspections** of the facility and of adjoining properties





Additional Key Phase I Requirements

Users and EP Responsibilities

- Reviews of environmental liens and activity and use limitations (**user responsibility**)
- Relationship between purchase price vs. value of property, if not contaminated (**user responsibility**)
- Specialized knowledge (**user responsibility**)
- Commonly known and reasonably ascertainable information (**user & EP responsibility**)
- Degree of obviousness of contamination and ability to detect by additional appropriate investigation (**user & EP responsibility**)



Recognized Environmental Conditions

- REC

- *the presence or likely presence of any hazardous substances or petroleum products **in, on, or at** a property due to:*
 - (1) any 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.”*
 - (4) De minimis conditions are not at REC*



Other Recognized Environmental Conditions

- Historic REC (HREC)

- A *past release* of hazardous substances or petroleum products in connection with the property that **has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria** (e.g., no property use restrictions, AULs, institutional controls, or engineering controls).
- Before calling the past release an HREC, the **EP must determine whether the past release is a REC at the time the Phase I ESA is conducted** (e.g., if there has been a change in the regulatory criteria).



Other Recognized Environmental Conditions

- **Controlled REC (CREC)**
 - A REC resulting from a past release of hazardous substances or petroleum products that **has been addressed to the satisfaction of the applicable regulatory authority** (e.g., as evidenced by the issuance of a NFA letter or equivalent, or meeting risk-based criteria established by regulatory authority)
 - **Hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls** (e.g., property use restrictions, AULs, institutional controls, or engineering controls)
 - **A CREC shall be listed** in the Findings Section of the Phase I ESA report, and **as a REC** in the Conclusions Section of the...report.”

“De Minimis” Conditions



- Condition does **not represent a threat to human health or the environment**; AND
- Condition would **not be subject to enforcement action** if brought to the attention of regulatory agency
- De minimis condition is NOT a REC or CREC





ASTM E1527-13 Report - Format

- Executive Summary
- Introduction
- Site Description
- User Provided Information
- Records Review
- Site Reconnaissance
- Interviews
- Findings
 - Identifies all known or suspected RECs, Controlled RECs, historical RECs and de minimis conditions





ASTM E1527-13 Report – Format

- Opinion
 - Whether inquiry has identified conditions indicative of releases or threatened releases
 - Data Gaps
 - Additional appropriate investigations
- Conclusions
 - Specific statement regarding evidence of recognized environmental conditions
- Deviations
- Additional Services
- References
- Signature of EP
- Qualifications of EP
- Appendices



Phase I ESA Non-Scope Considerations

- Asbestos
- Lead-based paints
- PCBs in building materials
- Mold
- Radon
- Lead in drinking water
- Endangered species
- Indoor Air Quality (not related to hazardous substances & petroleum)
- Regulatory Compliance (including health and safety)



REC or Not?





Example: Tannery Site RECs

- 1. Asphalt shingles and other miscellaneous items have been improperly dumped and partially buried along a vegetated slope on the north side of the tannery building.
- 2. Electrical transformers were located in the vicinity of the tannery building and the hydro easement. The transformers were probably located on a concrete pad enclosed within a chain-link fence in the southwestern section of the tannery building. Based on their age, the transformers would have contained PCB oils. Although the transformers are no longer present, there is a possibility that oil may have been released to the concrete pad or adjacent soils.
- 3. As of the most recent sampling results, collected in 2004, petroleum concentrations in groundwater around the former UST area exceed corresponding regulatory guidelines. Since no known remediation was conducted, the extent of the petroleum has yet to be defined.
- 4. Compounds persistently exceeding regulatory guidelines in soil and sediment associated with the lagoons included: bis(2-ethylhexyl)phthalate, acetone, chromium, manganese, mercury, and thallium. The report recommended further investigation be conducted based on past and present detection of contamination and lack of documentation concerning the lagoon liners and the use of groundwater as a source for drinking water.



Hancock Tannery Example

- 5. The former municipal landfill is located north northeast of the Subject Property, up-gradient topographically and hydraulically from the Subject Property. An investigation concluded a leachate plume had impacted some fracture zones and existing and future water supply wells could potentially be impacted.
- 6. Two long shallow floor drains are located in the western portion of the tannery building where the wooden process drums were located. It is suspected this drain was for collecting process liquids that had come in contact with process chemicals. The final discharge location for this structure, however, is unknown.
- 7. Currently, many fluorescent light ballasts are hanging precariously from the damaged roof. Older ballasts frequently contained PCB oils. Therefore, PCBs may be released as a result of past and any future damage to those ballasts.
- 8. The western portion of the building contains several circular cut window openings that may have contained ventilation fans. It is assumed that these fans may have been used to ventilate the air discharge from the solvent tannery processes to the exterior of the building. This may cause solvents or other airborne wastes to condense and collect on the soils below the ventilation exhaust.



Hancock Tannery Example

- 9. Although a majority of the tanning equipment and supplies are no longer at the facility, some debris remains within the tannery building including several unlabeled containers. Two 55-gallon drums are also located outside of the tannery building along the western wall. It was not determined if the containers were full. In addition, there is one area that contains several large piles of leather scraps. It is not known if the leather was treated.
- 10. A solvent recovery system and still, formerly located in the western part of the building would be an area where solvent use and potential spills could have taken place. It is not known exactly where the system was located, but it may be in the area where an interior sump is labeled on several figures.



Potential Off-site sources: REC or Not?

- **REC: Property is potentially downgradient of the former Steam Laundry.** Dry cleaning operations at this former facility during the early 20th Century, and prior to 1925, likely involved the storage and use of petroleum such as white gasoline. The facility operated prior to the use of Stoddard Solvent and chlorinated solvents in the dry cleaning process. Contaminants potentially released on this upgradient facility may have migrated to and impacted the quality of environmental media at the Property.
- *REC – Historical uses of the upgradient 31 to 33 Memorial Street property.* Historical sources indicate 31 to 33 Memorial Street property was occupied by a laundry facility from 1897 through at least 1967 and by Kar Z Karma Motors from at least 2003 to 2008. Laundry facilities typically use bleaches, detergents, acids, and, chlorinated solvents; and motor companies typically use solvents, oils, paints, and other hazardous materials. The conditions of use, material storage, and disposal at the facility are unknown.



Buyer's (Lender's) Perspective to Phase I



- **No Phase I**
 - Buyer becomes PRP and assumes all risk
- **Phase I Only**
 - Qualifies as BFPP, assumes all continuing obligations and potential risk due to uncertainty
- **Phase I + Phase II**
 - Reduces risk with greater understanding of continuing obligations
- **Phase I + Phase II + Cleanup Planning**
 - Minimizes risk and begins to approach cost certainty



Seller Perspective to Phase I



- **No Phase I**
 - Desirable, but unknown risk for potential liability from 3rd party lawsuit
- **Phase I Only**
 - Helps establish baseline risk for marketing property, and lowers potential risk from 3rd party lawsuit
- **Phase I + Phase II**
 - Further reduces risk to seller and buyer, but may result in reportable concentrations which may require further seller responsibilities
- **Phase I + Phase II + Cleanup Planning**
 - Minimizes risk, property value understood, improves decision making and bargaining position

Eliminating Uncertainty



← Phase I Photo



Phase II Photo →



Technical Assistance

On-call Environmental Professionals

State and EPA Brownfields Staff

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