



All Appropriate Inquiries Training



U.S. Environmental Protection Agency – Region 9

Los Angeles and Sacramento, California

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Introductions

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- EPA Office of Brownfields Cleanup and Redevelopment
- Designated Federal Official for Negotiated Rulemaking Committee
- Managed EPA's development of the proposed and final AAI rules

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- MS - Hydrogeology; BS - Geology/Biology
- Licensed Professional Geologist
- 12+ years Phase I and Phase II site assessment/remediation

Caren Trgovcich – DTSC

- Site Mitigation & Brownfields Reuse, Statewide Cleanup Operations
- Implementing State programs requiring AAI



Agenda – AAI Training

- **8:30 am** **Welcome and Introductions**
- **8:45 am** **Module 1: Background of the AAI Rule**
- **9:45 am** **Module 2: AAI Phase I ESA Requirements**
- **10:45 am** **Break**
- **11:00 am** **Module 3: Overview of ESA Practices**
- **12:00 am** **Lunch Break**
- **1:30 pm** **Module 4: Key AAI Activities**
 - 4.1 Interviews
 - 4.2 Records Review
 - 4.3 Visual Inspections
 - 4.4 Reporting
- **2:45 pm** **Break**
- **3:00 pm** **Group Exercise: Example Phase I ESA Report**
- **3:45 pm** **Module 5: Key Differences of AAI and ASTM**
- **4:15 pm** **State Requirements for 389 Rule**
- **4:30 pm** **Q&A and Course Evaluation**
- **5:00 pm** **Adjourn**



What is AAI?

- **All Appropriate Inquiries**, environmental site assessment (ESA) standards, or environmental due diligence, is the process of evaluating a property for potential environmental contamination and assessing potential liability for any contamination present at the property.



AAI in Perspective

- All Appropriate Inquiries often is the first step in a continuum of property investigations.
 - AAI
 - Phase II / Sampling and Analysis
 - Additional site characterization
- Investigate potential environmental conditions or problems at a property so that contamination can be properly addressed to protect public health and the environment.



How Does AAI Affect You?

- **Threshold Criteria for Brownfields Grant Applicants**
 - An entity may have to seek protection from CERCLA liability to be eligible for a grant.
- **Recipients of Brownfields Assessment Grants**
 - Must conduct assessment in compliance with AAI.
- **Liability Determinations**
 - Parties seeking protection from CERCLA liability as bona fide prospective purchasers, contiguous property owners, or innocent landowners must conduct AAI prior to purchasing property.
- **Targeted Brownfields Assessment (TBA)**
 - In most cases, TBAs should be performed in compliance with AAI (or American Society for Testing and Materials [ASTM] E1527-05) to ensure prospective property owner's liability protection and ensure eligibility for future cleanup grant.

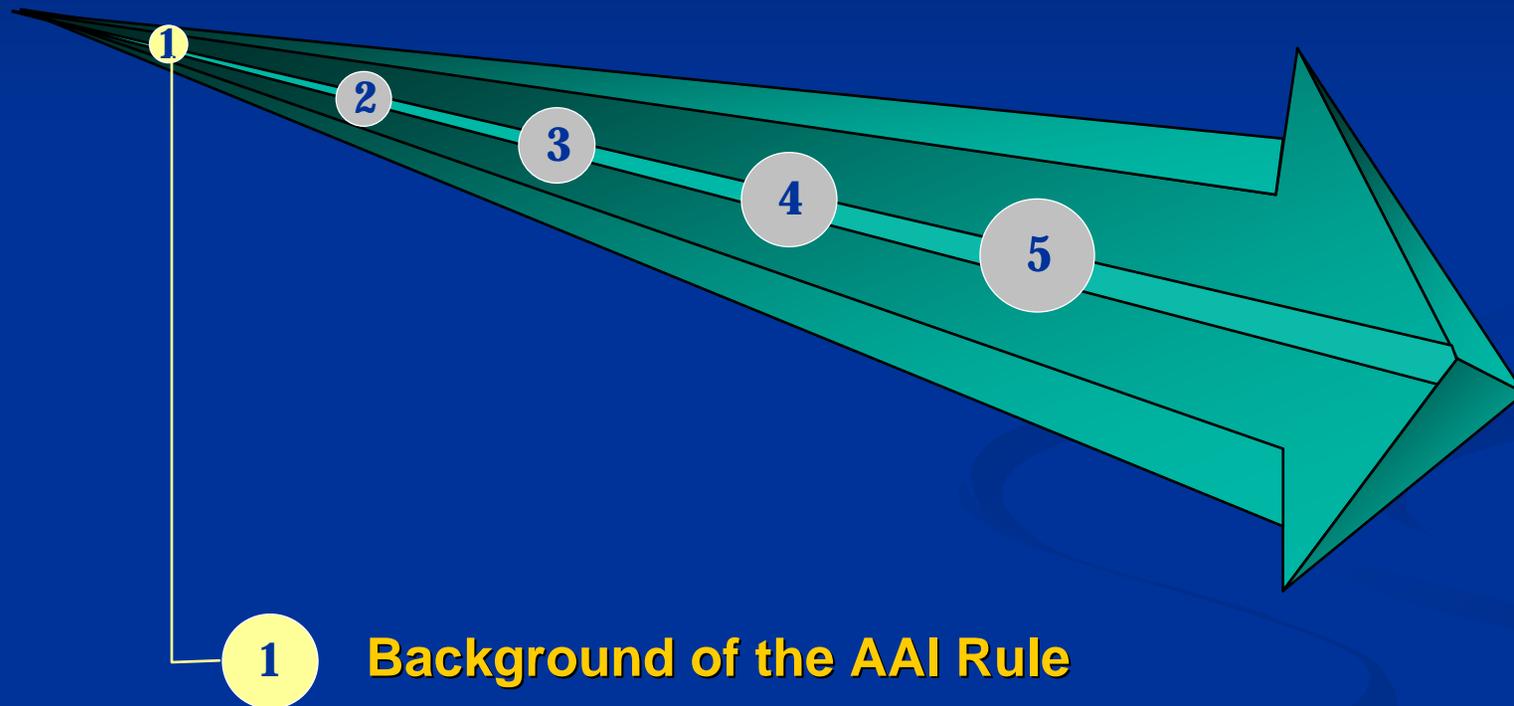


Objectives of Training

- Familiarize EPA, state, and local partners and grantees with AAI requirements
- Provide overview of the CERCLA liability defenses
- Provide overview of how AAI impacts Brownfield's grant process
- Provide overview of technical requirements of what constitutes an AAI-compliant ESA and what is good practice within the industry



Module 1: Background of the AAI Rule





Module 1: Background of the AAI Rule

- 2002 Small Business Liability Relief and Brownfields Revitalization Act (“Brownfields Amendments”)
- Continuing Obligations
- Brownfields Grants
- AAI Rulemaking Process
- Effective Date and Standards
- Why Comply with AAI Rule?





Brownfields Amendments

- Requires EPA to develop regulations establishing standards and practices for conducting AAI.
- Lists 10 criteria EPA must include in the AAI regulation.
- Establishes interim standard.
- Establishes who is subject to AAI.





Brownfields Amendments, cont.

- Applicability of the AAI Rule
 - Parties who potentially may claim protection from CERCLA as:
 - Innocent property owners;
 - Contiguous property owners; or
 - Bona fide prospective purchasers.
 - Parties who need to establish protection from CERCLA liability to be eligible for site-specific assessment grants and direct cleanup grants under EPA's Brownfields Program.
 - Parties receiving Brownfields assessment grants.



Brownfields Amendments, cont.

- **Innocent Landowner Defense**
 - Part of CERCLA since 1986 SARA Amendments
 - Property owner “did not know and had no reason to know” of contamination at time of acquisition.
 - Conditions:
 - Conduct AAI prior to acquiring the property
 - Comply with continuing obligations after purchase



Brownfields Amendments, cont.

- **Contiguous Property Owner**
 - Part of 2002 Brownfields Amendments
 - Owner of property that is or may be contaminated from property owned by someone else
 - Similar to EPA's previous contaminated aquifer enforcement discretion policy
 - Conditions:
 - Did not cause, contribute, or consent to the contamination
 - Not affiliated with any potentially liable party
 - Conduct AAI prior to acquiring the property
 - Comply with continuing obligations after purchase



Brownfields Amendments, cont.

- **Bona Fide Prospective Purchaser**

- For the first time since the enactment of CERCLA in 1980, a person may purchase property with the knowledge that the property is contaminated, without being held potentially liable for the cleanup of the contamination.
- Conditions:
 - Acquires ownership after January 11, 2002
 - No disposal or waste management activities on property after property is acquired
 - Not affiliated with responsible party
 - Conduct AAI prior to acquiring the property
 - Comply with continuing obligations after purchase

Statutory Requirements for CERCLA Liability Protections



- Threshold Criteria:
 - Purchaser is not a responsible party and not affiliated with a responsible party.
 - Conduct All Appropriate Inquiries prior to purchase.
- 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
 - Comply with CERCLA information requests and subpoenas



Brownfields Grants - Applicants

- Brownfields grant applicants are prohibited from using grant money to pay for a response cost for which the recipient of the grant is potentially liable under CERCLA section 107.
- Therefore, grant applicants must demonstrate they are not liable for contamination to be addressed by grant.
 - Acquired property involuntarily (CERCLA 101(29)(D))
 - Acquired property by eminent domain (CERCLA 101(35)(A)(ii))
 - Are a bona fide prospective purchaser
 - Meet requirements for BFPP, but purchased property prior to January 11, 2002



Brownfields Grants - Applicants

- Grant applicants (any other parties) who acquire property involuntarily or by eminent domain do NOT have to conduct AAI prior to acquisition.
- Grant applicants (and other prospective purchasers) asserting liability protection as BFPP must conduct AAI prior to acquiring the property.



Brownfields Grants - Recipients

- Brownfields Assessment Grants
 - Parties who receive grants under EPA's Brownfields program to perform site characterization and assessment of brownfields must conduct such activities in compliance with the standards and practices established by EPA for the conduct of all appropriate inquiries. (CERCLA section 104(k)(2)(B)(ii))

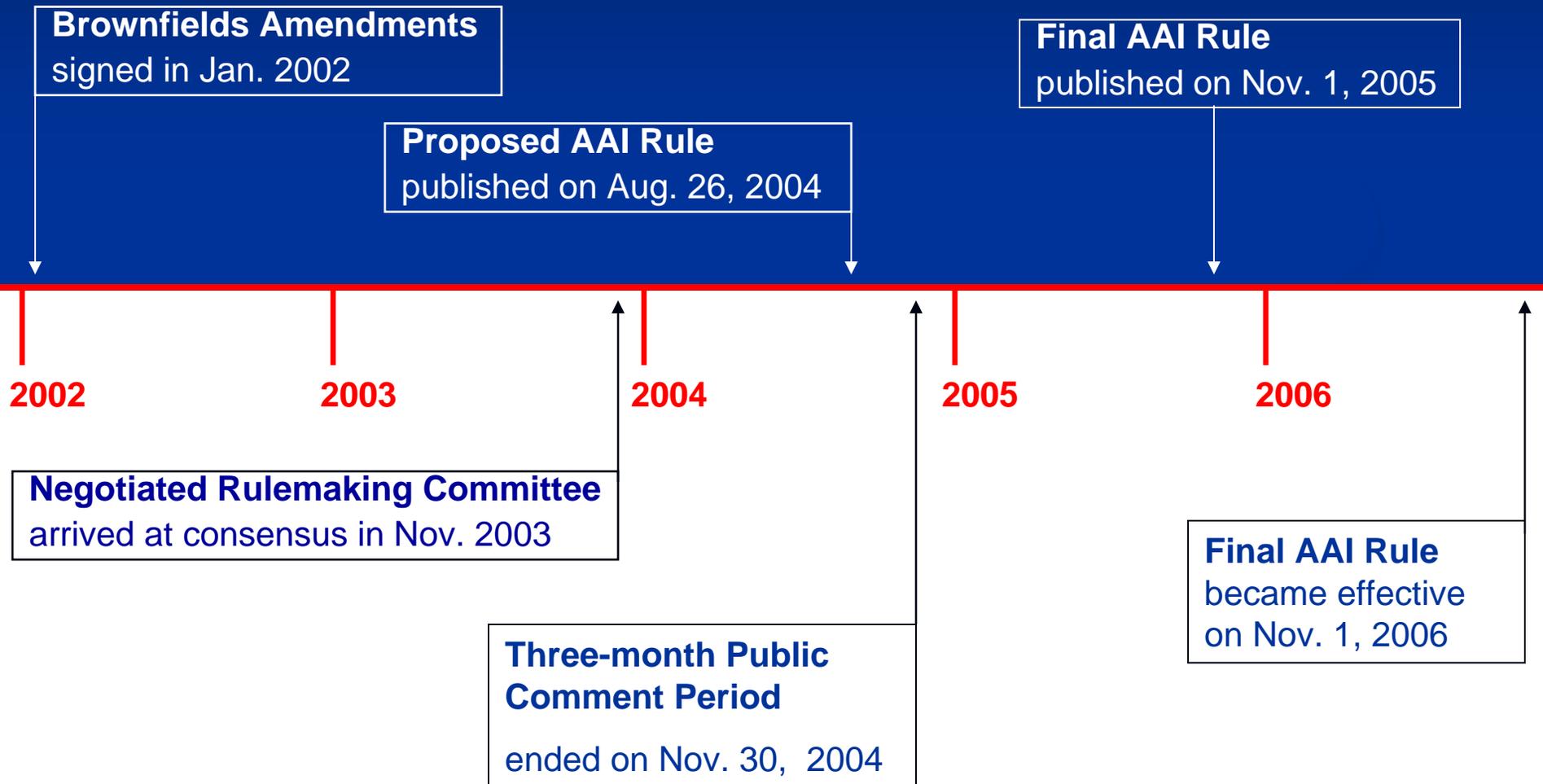


Grants to States and Tribes

- Grants provided to States and Tribes under the authority of CERCLA 128(a) are not subject to the prohibitions of CERCLA 104(k).
- Therefore, brownfields assessments conducted by states or tribes using 128(a) funding **DO NOT** have to be conducted in compliance with AAI.
- It may be prudent to conduct such assessments in compliance with AAI to ensure property owner's ability to assert protection from CERCLA liability and ensure property owner's eligibility for future brownfields cleanup grants.



AAI Rulemaking Process



Effective Date and Standards



- The effective date for the final rule is **November 1, 2006**, one year after publication in the Federal Register.
- Until November 1, 2006, either the final regulation (or ASTM E1527-05) or the interim standard (ASTM E1527-00 or E1527-97) could have been used to satisfy the statutory requirements for conducting all appropriate inquiries.
- After November 1, 2006, parties must follow the provisions of the final rule or the ASTM E1527-05 standard.



Effective Date and Standards, cont.

- ASTM E1527-05
 - Referenced in the AAI rule as consistent and compliant with the regulatory standard
 - Similar to ASTM E1527-00
 - Same type of activities performed
 - Scope for some activities expanded
- Parties cannot use ASTM Transaction Screen standard or ASTM Phase II ESA standard as a substitute for the Phase I ESA standard to comply with the AAI rule





AAI -- Final Regulation

- Published in Federal Register on November 1, 2005
 - 70 FR 66070
- 40 CFR Part 312

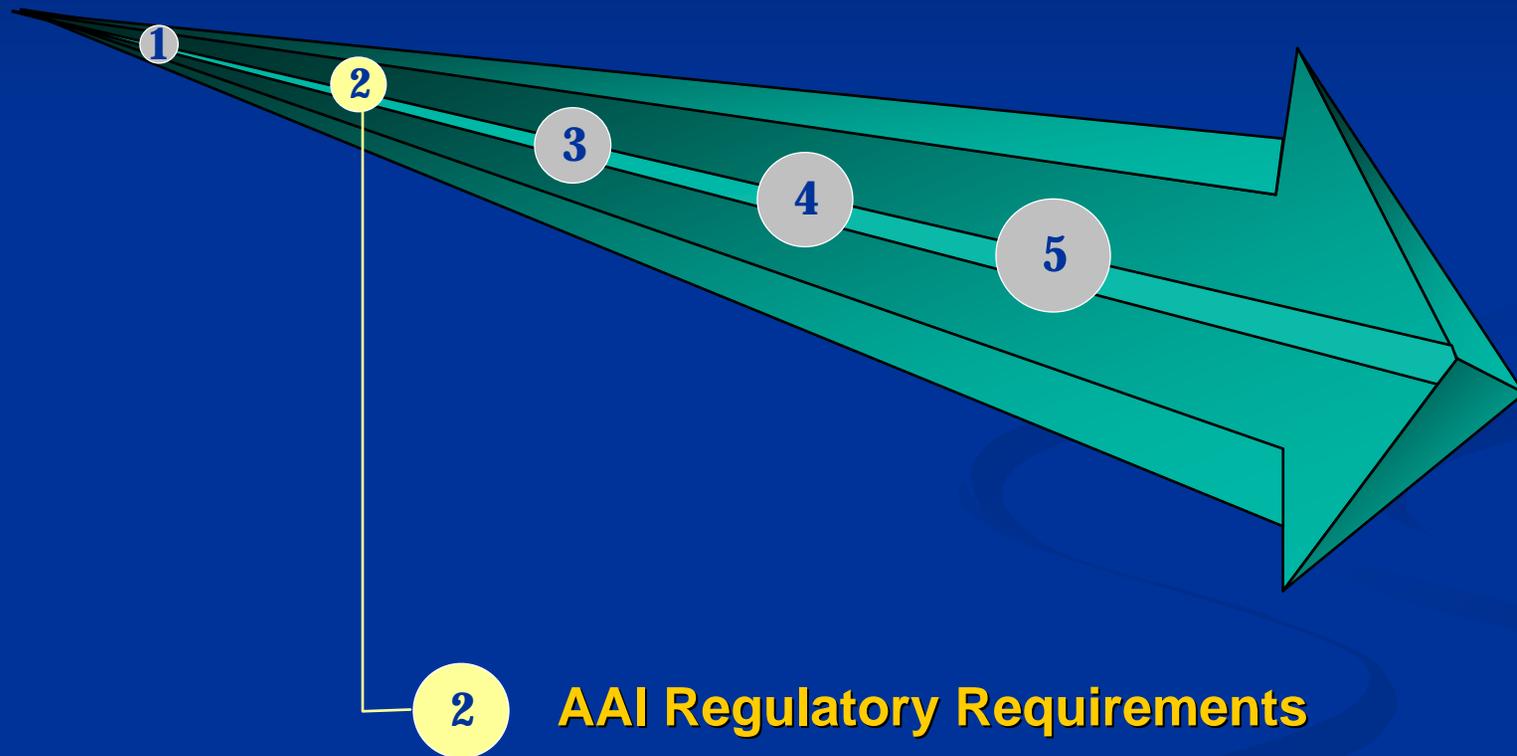


Why Comply with the AAI Rule?

- Required for many EPA Brownfields Grant recipients
- Required if seeking to assert certain liability protections under CERCLA
- To understand potential environmental risks/liabilities associated with a property prior to: purchase, sale, lease, joint venture, purchase of insurance, financing
- Gain information that will help property owner comply with “continuing obligations” after purchase



Module 2: AAI Regulatory Requirements





When Must AAI be Performed ?

- Any party seeking liability protection as a bona fide prospective purchaser (including eligible Brownfields grantees), contiguous property owner, or innocent landowner must perform all appropriate inquiries before acquiring the property (title transfer).
- All appropriate inquiries must be conducted or updated within one year prior to date of acquisition.
- Interviews, records review, site inspection, and lien search must be conducted or updated within 180 days prior to the date of acquisition.



Who Can Perform AAI?

- Person who supervises or oversees the conduct of AAI must meet the definition of Environmental Professional (EP)
- Person who does not qualify as an EP may assist in the conduct of a AAI if he or she is under the supervision or responsible charge of an EP



Definition of Environmental Professional

- Person who has:
 - (1) sufficient specific education, training, and experience to exercise professional judgment to develop opinions and conclusions regarding the presence of releases or threatened releases of hazardous substances; **AND**



Definition of Environmental Professional, cont.

(2a) Holds a professional engineer or professional geologist license, or other state, federal, or tribal certification or environmental professional license and has 3 years of relevant full-time experience;

OR

(2b) Has a degree in science or engineering and 5 years of relevant full-time experience; **OR**

(2c) Has 10 years of relevant full-time experience.



Definition of Environmental Professional, cont.

- Relevant Experience:
 - Participation in the performance of all appropriate inquiries investigations, environmental site assessments, or other site investigations that may include environmental analyses, investigations, and remediation which involve the understanding of surface and subsurface environmental conditions and the processes used to evaluate these conditions



Definition of Environmental Professional, cont.

- What is new under the AAI standard (and ASTM E1527-05)?
 - Specific certification, licensing, education, and relevant full-time experience is required to qualify as an EP



Objectives and Performance Factors

- Identify conditions indicative of releases or threatened releases of hazardous substances
- Identify particular information:
 - Uses and occupancies of property
 - Uses of hazardous substances
 - Waste management activities
 - Corrective actions and response activities
 - Institutional and engineering controls
 - Nearby and adjoining properties with environmental conditions

Objectives and Performance Factors, cont.



- Gather information required to meet standards that is:
 - Publicly available,
 - Obtainable within reasonable time and cost constraints, and
 - Can be practically reviewed.
- Review and evaluate thoroughness and reliability of information gathered



Contaminants of Concern

- Parties seeking CERCLA defense:
 - Releases and threatened releases of CERCLA hazardous substances
- EPA Brownfields Grant recipients - potential additional contaminants (if included in scope of cooperative agreement):
 - Releases and threatened releases of:
 - CERCLA hazardous substances, pollutants or contaminants,
 - Petroleum and petroleum products,
 - Controlled substances (e.g., meth lab wastes), and
 - Mine-scarred land wastes



Contaminants of Concern, cont.

- What is new under the AAI standard (and ASTM E1527-05)?
 - Petroleum and petroleum products do not need to be included in the scope of every ESA



Key AAI Activities

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



Retention of Previous AAI Requirements (SARA)

- AAI rule retains four requirements from previous innocent landowner provisions (1986 SARA amendments):
 - 1) Relationship between purchase price vs. value of property, if not contaminated (312.29);
 - 2) Specialized knowledge (312.28);
 - 3) Commonly known and reasonably ascertainable information (312.30);
 - 4) Degree of obviousness and ability to detect
- AAI regulation does not require that any information collected or held by the user be provided to the EP



User Responsibilities

- User responsible for:
 - Relationship between purchase price vs. value of property, if not contaminated;
 - Specialized knowledge;
 - Collection of commonly known and reasonably ascertainable information (shared with EP)
- AAI rule does not provide definition of “user”
- ASTM defines “user” as: *“party seeking to use Practice E 1527 to complete an environmental site assessment of the property. A user may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager.”*
- ASTM provides a user questionnaire



1. Relationship of the Purchase Price to the Value of the Property

- User/prospective property owner must consider:
 - Does purchase price reasonably reflect the fair market value, if the property were not contaminated?
- If price does not reflect fair market value:
 - Is the price differential due to presence of releases or threatened releases?
- Formal real estate appraisal is not required under AAI



2. Specialized Knowledge or Experience

- Purchasers and persons conducting AAI must take into account their specialized knowledge of:
 - Subject property
 - Area surrounding property
 - Conditions of adjoining properties; **and**
 - Any other experience relevant to the inquiry



3. Commonly Known or Reasonably Ascertainable Information about the Property

- User/prospective property owner must consider information that is commonly known or reasonably ascertainable within the local community
 - Information about releases or threatened releases that are incidental to the info obtained during the EP's inquiry
 - Current owners/occupants of neighboring/adjacent properties
 - Local or state government officials
 - Others with knowledge of the property
 - Other sources (newspapers, Web sites, libraries, etc.)

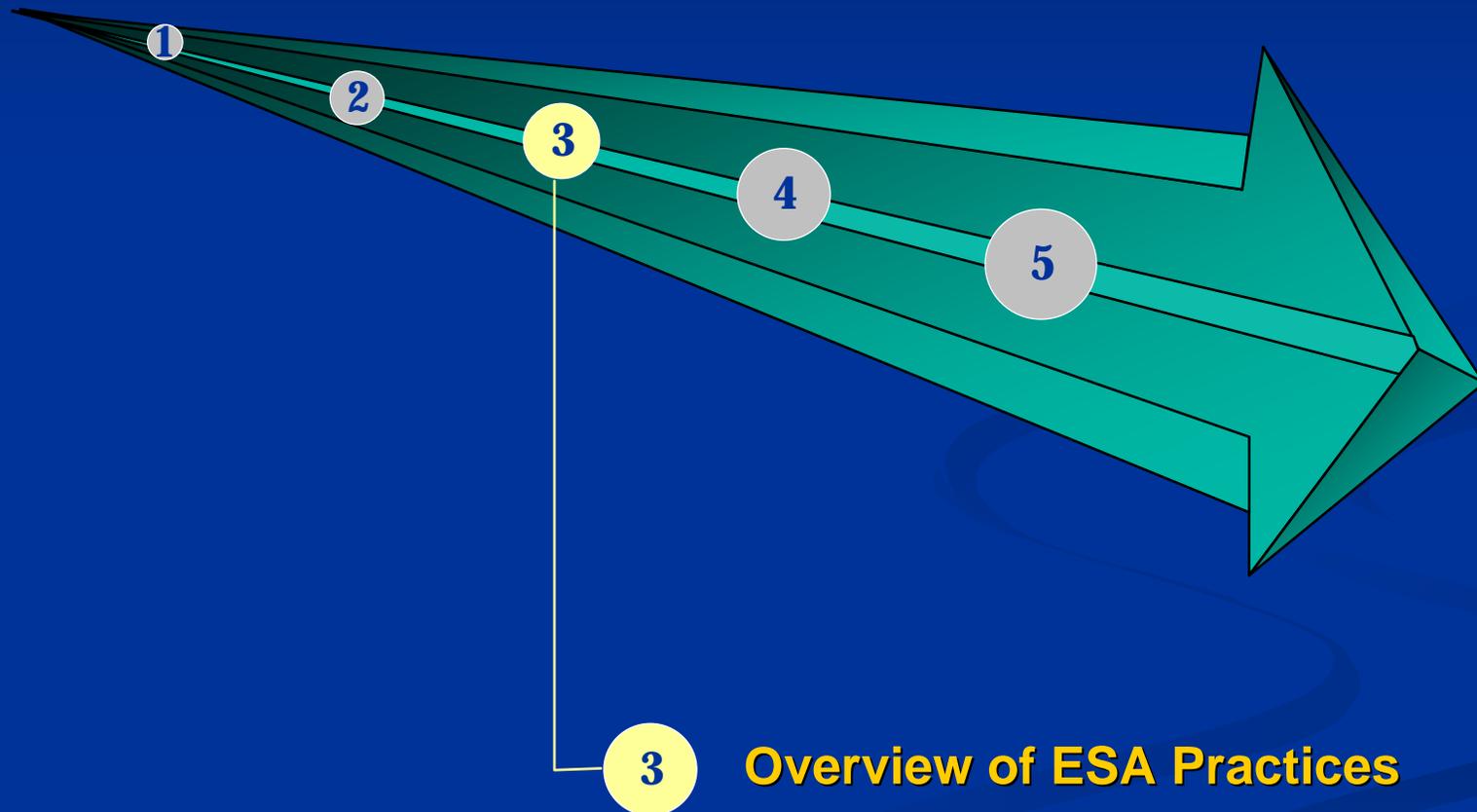


4. Degree of Obviousness of the Presence or Likely Presence of Contamination

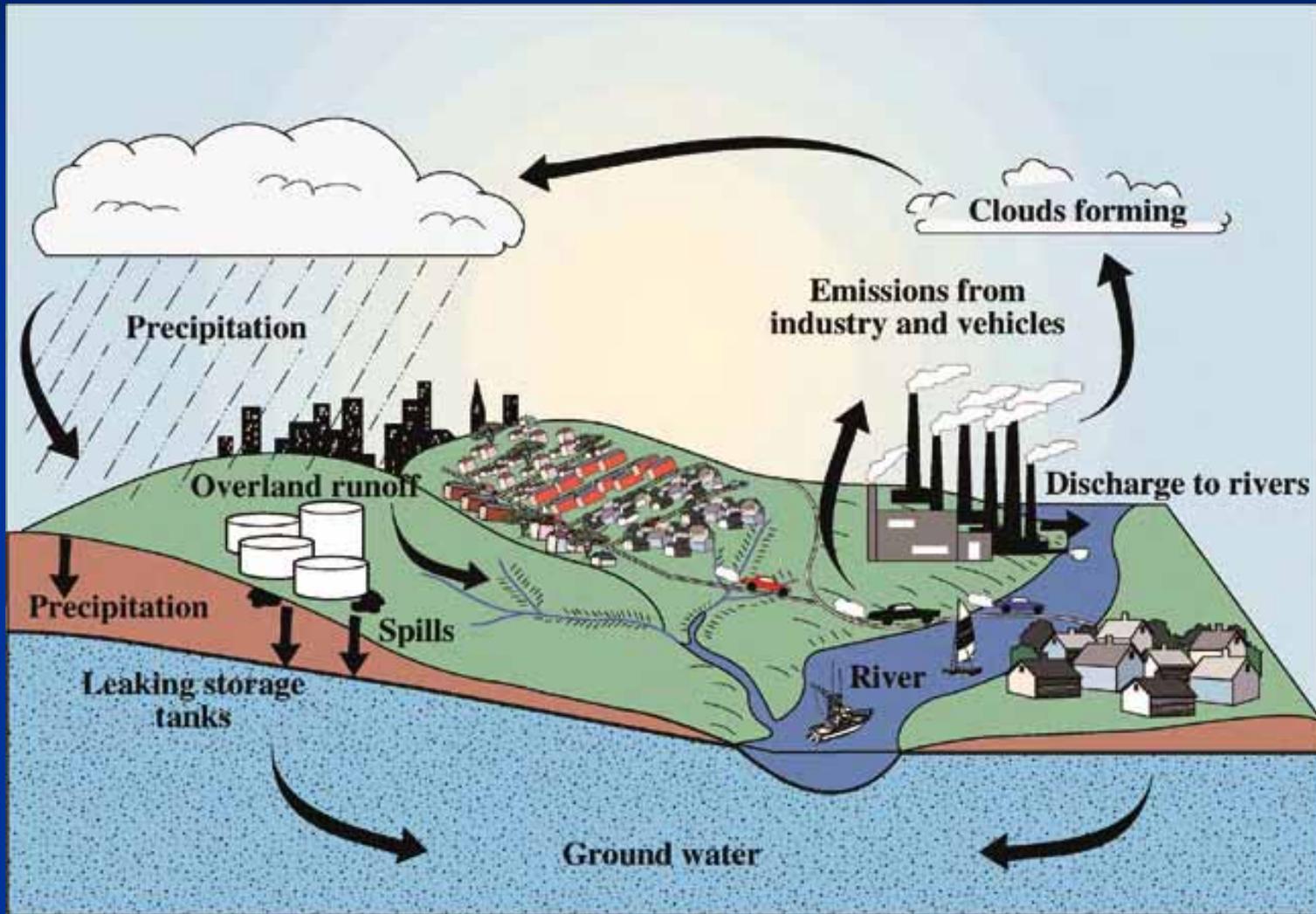
- Persons conducting AAI must take into account all information collected and consider:
 - the degree of obviousness of the presence or potential presence of releases or threatened releases at subject property, and
 - whether or not an obvious conclusion can be drawn about a release or threatened release
- Inquiry of the environmental professional should include an **opinion** regarding additional appropriate investigation, if any
- AAI does not require sampling and analysis to document likelihood of the presence of contamination



Module 3: Overview of ESA Practices



Graphic Showing Hydrologic Cycle, Contaminant Sources, Receptors



Types and Uses of Environmental Assessments



- Transaction Screen
- Phase I ESA
- Phase II ESA
- Feasibility Studies
- Remedy Documents



Transaction Screen

- Less comprehensive in scope than Phase I ESA
- Used on properties where a prospective buyer has reason to believe that no adverse environmental conditions exist at the site



Phase I ESA

- Initial assessment of a site
- Identify potential presence of environmental contamination
- *AKA: Environmental due diligence and “all appropriate inquiries”*
- Real estate transactions, site discovery, CERCLA liability protection, and Brownfields grants
- Does not delineate contamination or quantify risk



Phase I ESA

- Not exclusively driven by a need to qualify for CERCLA liability protections
- Approximately 45 percent of ESAs are conducted to assess business environmental risk concerns
- The most commonly used process - ASTM standard entitled "*Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process*" (E1527-97, 00, 05)
- Approximately 0.25 million Phase I ESAs are performed every year



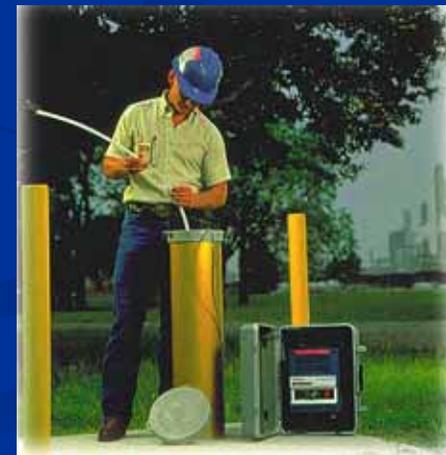
Phase I ESA - Non-Scope Considerations

- Asbestos
- Radon
- Lead-based paints
- Wetlands
- Regulatory compliance
- Cultural and historic resources
- Air emissions
- Industrial hygiene
- Health and safety
- Ecological resources
- Endangered species
- Indoor air quality
- Biological agents
- Mold
- Noise



Phase II ESA

- Sampling of various media – soil, ground water, sediment, surface water
- Chemical analysis to quantify types and magnitude of contaminants
- Define the nature and extent of contamination
- Quantify risk to receptors
- Comparison to relevant criteria to determine need for cleanup or risk management





Other Types of ESAs

- Feasibility Studies: Develop RAOs, ARARs, remedial alternatives evaluation. Additional sampling and analysis to support remedy alternatives development or treatability study
- Remedy Documents: Corrective Actions, Interim Removal Actions, Record of Decision - present approach to implementing remedies and results of remedial actions

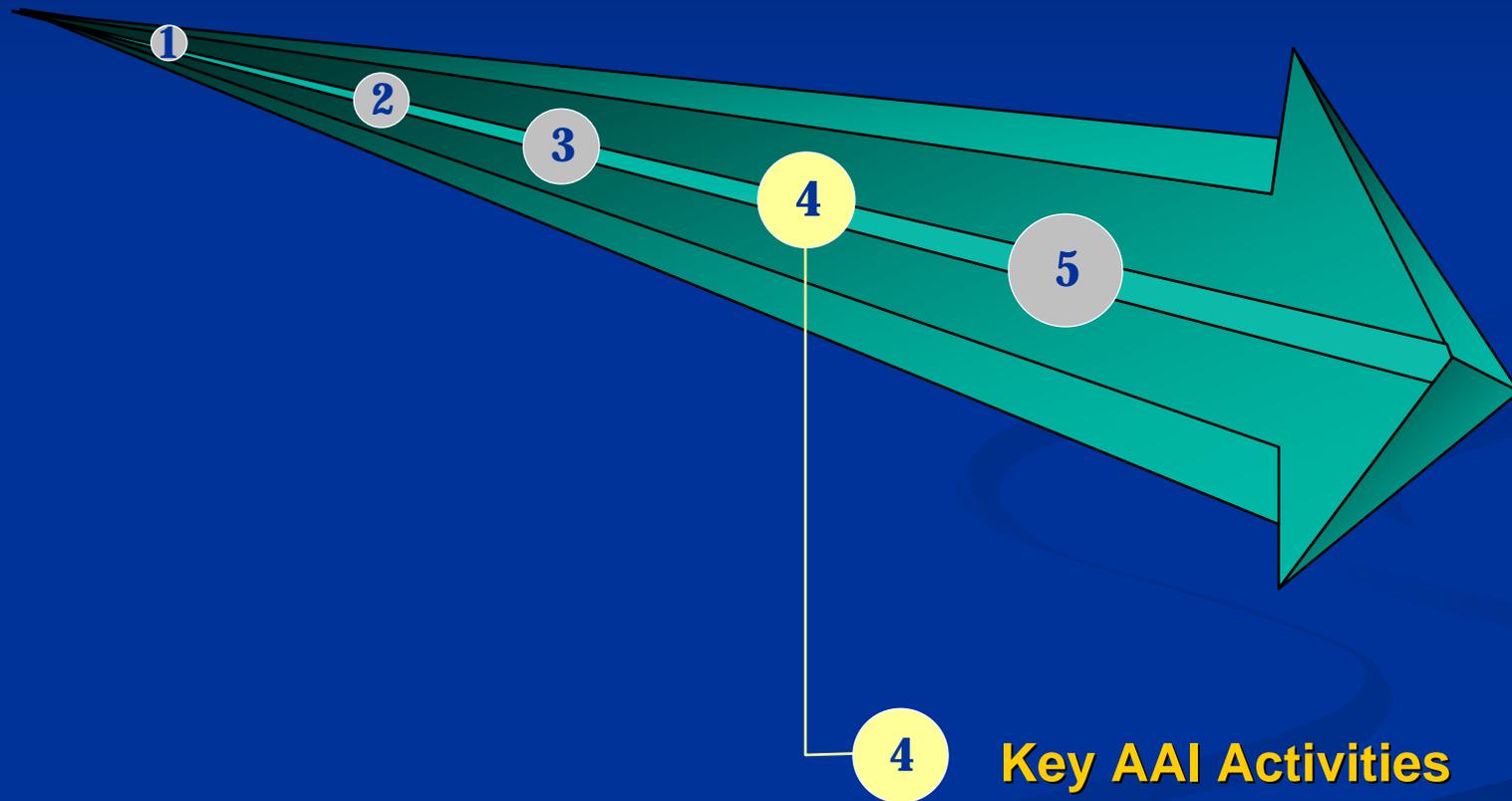
Common Contaminants/Sources



Contaminants	Common Sources
Benzene; Ethylbenzene; Toluene; Xylene; MTBE; PAHs	Petroleum/Fuels
Trichloroethane, Trichloroethene, Tetrachloroethene	Dry Cleaning
Benzene; Ethylbenzene; Toluene; Xylene	Commercial Solvents
Acetone; Carbon Tetrachloride; Chloroform; Bromoethane; Ethylene Dibromide; Methylene Chloride; Tetrachloroethane; Tetrachloroethene; Trichloroethene; Vinyl Chloride	
PAHs; PCDDs/PCDFs; Particulates, Metals	Combustion
Chlorinated Ethanes; DDT; Lindane	Pesticides
Cyclodienes (Aldrin; Chlordane; Dieldrin; Endrin); Chlorocyclohexanes	
Organophosphate: Diazanon; Dichlorovos; Malathion; Parathion; Carbamate: Aldicarb	
Polychlorinated Biphenyls (PCBs)	Electrical Transformers
Chlorophenoxy Compounds; 2;4- Dichlorophenoxyacetic Acid	Herbicides



Module 4: Key AAI Activities



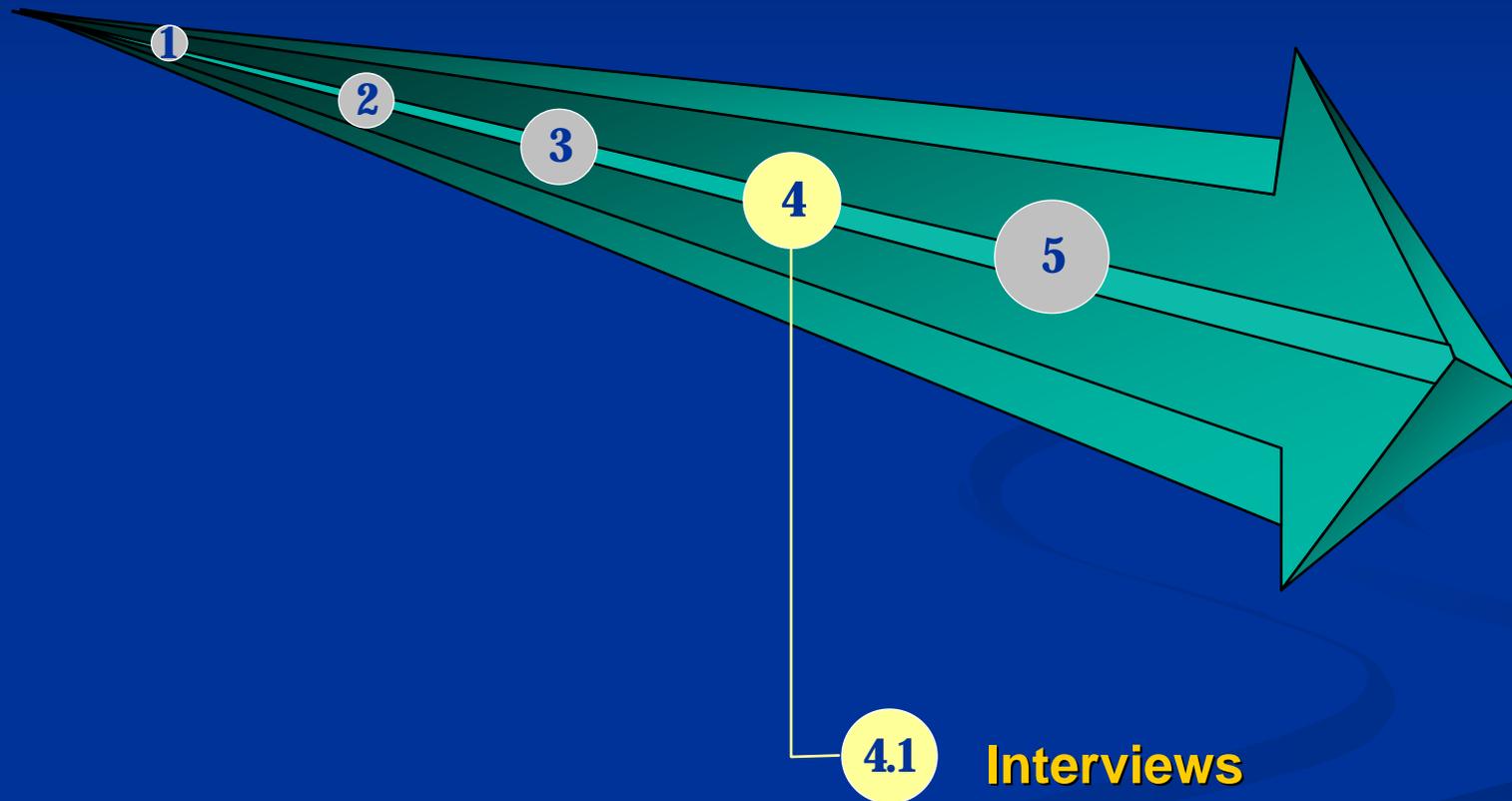


Key AAI Activities

- 1.) **Interviews** with past and present owners, operators, and occupants
- 2.) Reviews of **historical sources** of information and federal, state, tribal, and local **government records**
- 3.) **Visual inspections** of the facility and of adjoining properties
- 4.) **Written report**



Module 4: Key AAI Activities





Interviews – Subject Property

- AAI regulation requires interviews of:
 - Current owner(s)/occupant(s) (312.23(a),(b))
 - Major occupants
 - Occupants likely to use, store, treat, handle, or dispose of hazardous substances
 - Additional parties, as necessary to achieve objectives and performance factors, including one or more of following (312.23(c)):
 - Current and past facility managers, owners, operators or occupants of the subject property
 - Employees of past and current occupants of the subject property



Interviews - Abandoned Properties

- AAI regulation requires:
 - Interviewing owners or occupants of neighboring or nearby properties, if the subject property is abandoned (312.23(d))
 - Abandoned property = *“Property that can be presumed to be deserted, or an intent to relinquish possession or control can be inferred from the general disrepair or lack of activity there on such that a reasonable person could believe that there was an intent on the part of the current owner to surrender rights to the property.”* (312.10(b))



Interviews

- What is new under the AAI standard (and ASTM E1527-05)?
 - Interviews with past owner and occupants
 - Interviews with neighboring property owners, **if property is abandoned**



Interview Methods

- How?
 - In person, telephone, or in writing
 - Checklist, questionnaire, protocol
- When?
 - Before, during, or after site visit
 - Usually done in conjunction with site visit



Common Interview Sources

- Facility owner
- Facility occupants
- Facility/property manager
- EHS manager
- Facility employees familiar with operations/processes
- Human resources employees
- Financial manager
- Attorneys



Common Interview Questions

- Have investigations/remedial actions occurred?
- What permits do you have and have there been violations?
- Have any known spills/releases occurred?
- Has site been subject to any EH&S regulatory action?
- Has site been subject to any EH&S complaints or lawsuits?
- Are there any active/abandoned septic systems?
- Are there any wells at the site? Use?
- Does the property have any ASTs or USTs? How many? Ages?
- Where does stormwater discharge to?
- Does facility discharge air pollutants? Have air pollution controls?

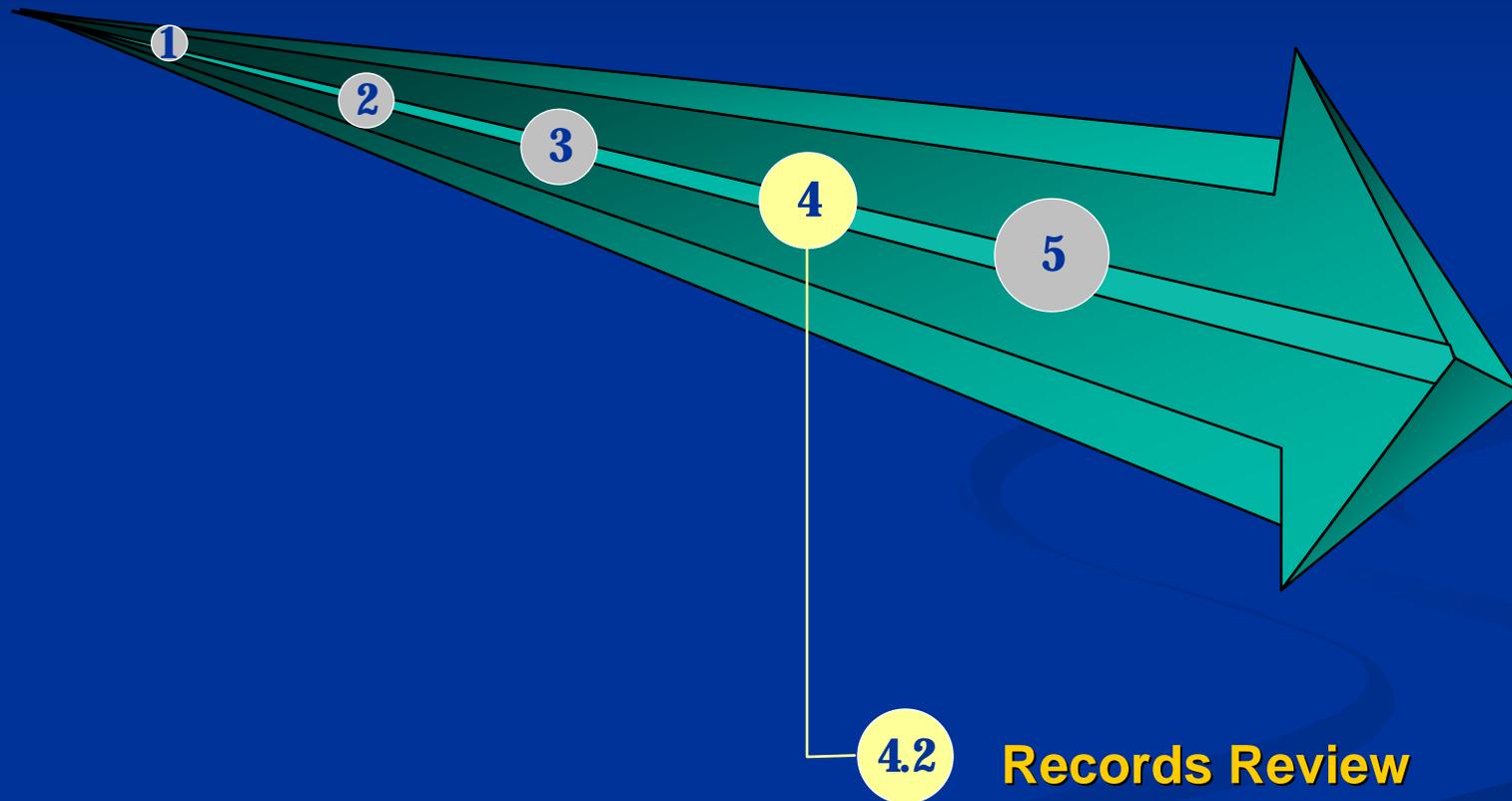


Interviews – State/Local Government

- Gather information of environmental conditions on the site and surrounding property
- Interview sources
 - Fire department
 - Health agency/Boards of Health
 - Agencies with jurisdiction over hazardous waste disposal and other environmental conditions
 - Agencies responsible for issuing building permits, water use permits, well permits (Building Departments, Water Department, Engineering Department)



Module 4: Key AAI Activities





Records Review

- AAI regulation requires review of:
 - **Historical documents and records** (312.24(a))
 - Federal, state, tribal, and local **government records** or data bases of government records for the subject and nearby or adjoining properties (312.26(b),(c))

Review of Historical Sources of Information



- Review must cover a period of time as far back as:
 - When property first contained structures
 - First used for residential, agricultural, commercial, industrial, and governmental purposes (312.24(b))

Review of Historical Sources of Information, cont.



- What is new under the AAI standard?
 - It is no longer necessary to review historical sources as far back as 1940, unless the property's first obvious developed use preceded that date
 - ASTM, however, specifies that search must be back to properties first developed use, or back to 1940, *whichever is earlier.*



Common Historical Sources

- Sources may include, but are not limited to:
 - Aerial photographs
 - Fire insurance maps
 - USGS topographic maps
 - Local street directories
 - Building department records
 - Chain of title documents
 - Property tax records
 - Zoning/land use records

Aerial Photographs



January 2007

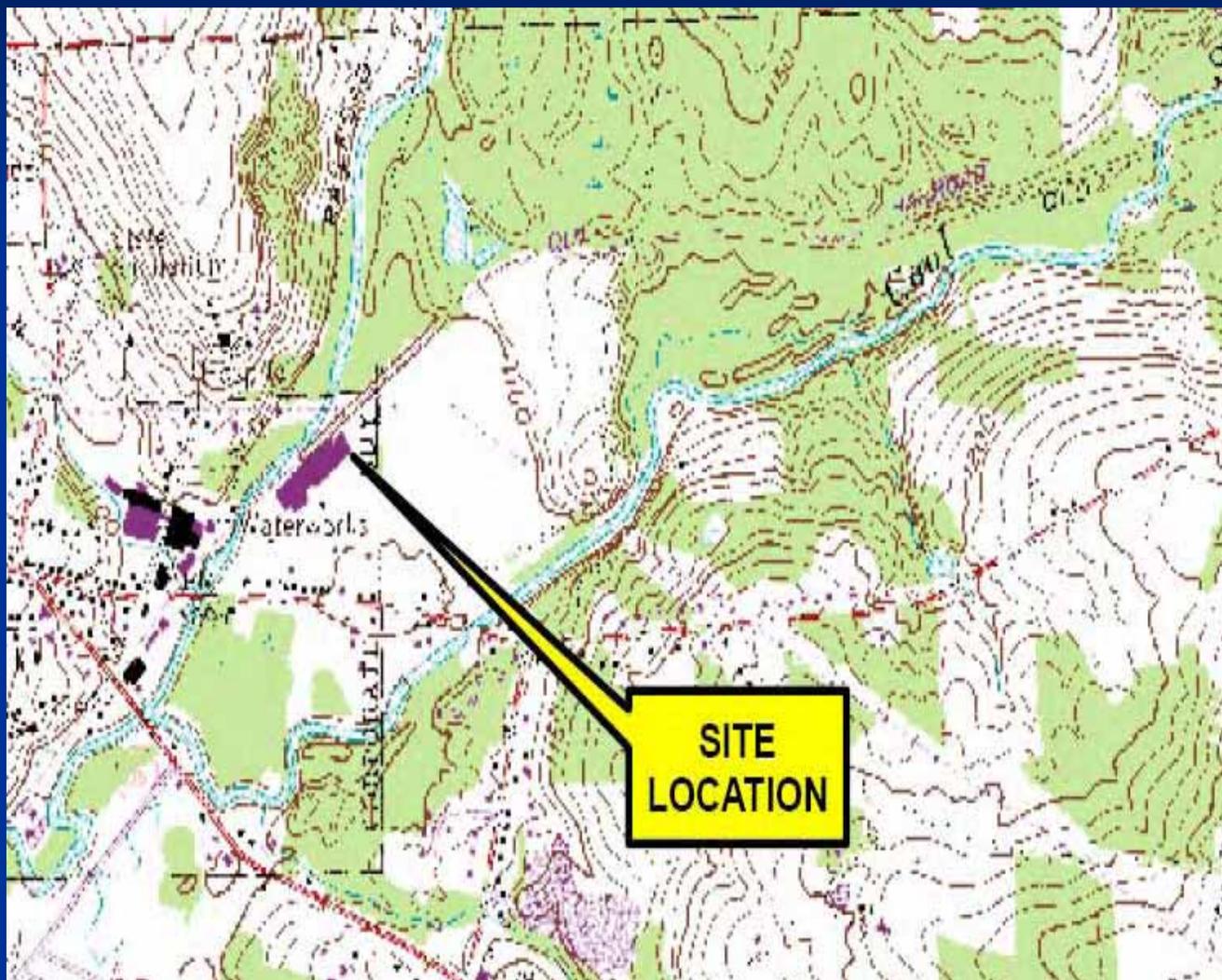
Aerial Photographs



January 2007



Topographic Maps





Other Historical Sources

- Others
 - Newspaper archives
 - Internet sites
 - Community organizations
 - Local libraries
 - Historical societies
 - Miscellaneous maps



Government Records Review

- AAI requires review of federal, state, and local government records (or databases containing government records) for
 - Subject property (312.26(b))
 - Nearby and adjoining properties (312.26(c)(1,2))
- Review tribal records if property is located on or near tribal-owned lands



Government Records Review, cont.

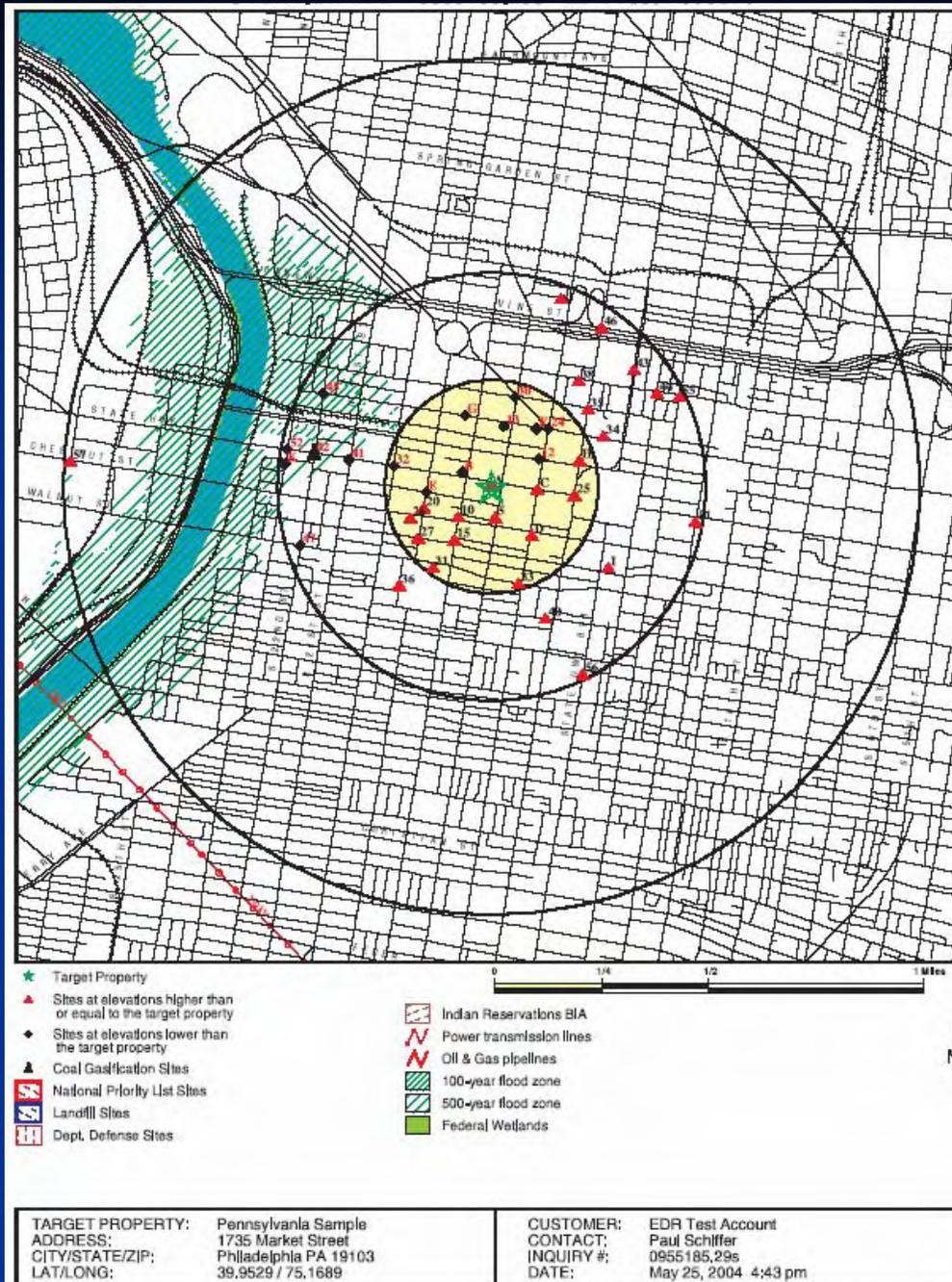
- What is new under the AAI standard (and ASTM E1527-05)?
 - Review of local government records/sources is no longer optional
 - Review of tribal records is mandatory for properties located on or near tribal-owned lands

Government Records Review - Federal/State/Tribal



<i>Standard Environmental Record Sources (where available)</i>	<i>Approximate Minimum Search Distance miles (kilometres)</i>
Federal <i>NPL</i> site list	1.0 (1.6)
Federal Delisted <i>NPL</i> site list	0.5 (0.8)
Federal CERCLIS list	0.5 (0.8)
Federal CERCLIS NFRAP site list	0.5 (0.8)
Federal RCRA CORRACTS facilities list	1.0 (1.6)
Federal RCRA non-CORRACTS TSD facilities list	0.5 (0.8)
Federal <i>RCRA</i> generators list	<i>property and adjoining properties</i>
Federal institutional control/engineering control registries	<i>property only</i>
Federal <i>ERNS</i> list	<i>property only</i>
State and tribal lists of <i>hazardous waste</i> sites identified for investigation or remediation:	
State- and tribal-equivalent <i>NPL</i>	1.0 (1.6)
State- and tribal-equivalent CERCLIS	0.5 (0.8)
State and tribal <i>landfill</i> and/or <i>solid waste disposal site</i> lists	0.5 (0.8)
State and tribal leaking storage tank lists	0.5 (0.8)
State and tribal registered storage tank lists	<i>property and adjoining properties</i>
State and tribal institutional control/engineering control registries	<i>property only</i>
State and tribal voluntary cleanup sites	0.5 (0.8)
State and tribal Brownfield sites	0.5 (0.8)

Environmental Database Search Results





Records Review - Others

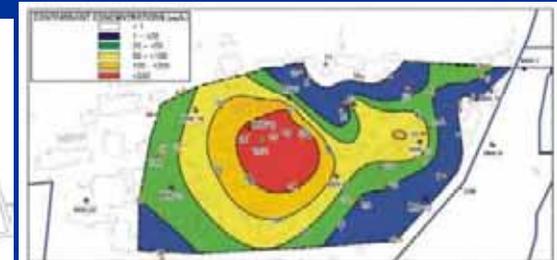
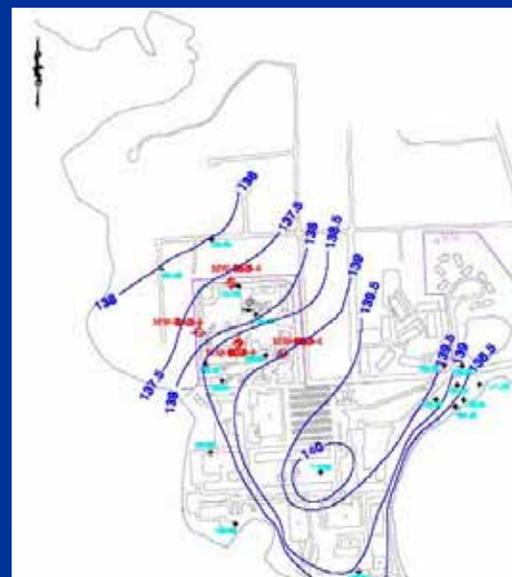
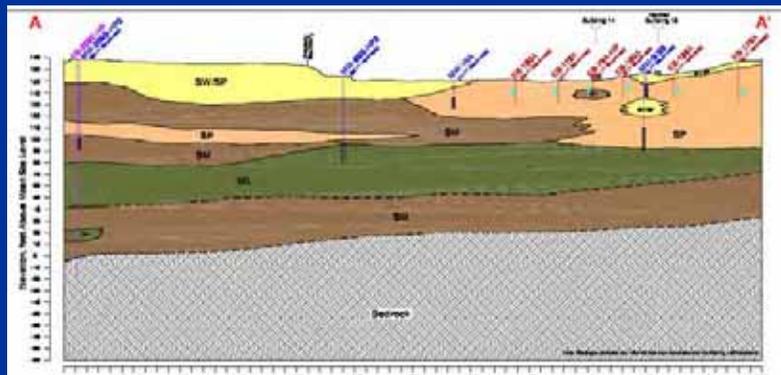
- Facility/property plot plan or map
- Description of operations
- Site assessment, remediation, and groundwater monitoring reports
- Compliance audit reports
- Permits/permit applications (solid waste, hazardous waste, wastewater, NPDES, well)
- UST and AST inventory
- Chemical inventory/MSDS
- Spill/release inventory
- Air emission and wastewater discharge monitoring data
- Transformer inventory
- Inspection/enforcement correspondence (NOVs, consent decrees)
- Community right-to-know plans
- Preparedness and prevention plans
- Spill prevention, countermeasure, and control plans
- Legal correspondence/litigation associated with hazardous substances/petroleum products

Records Review – Others

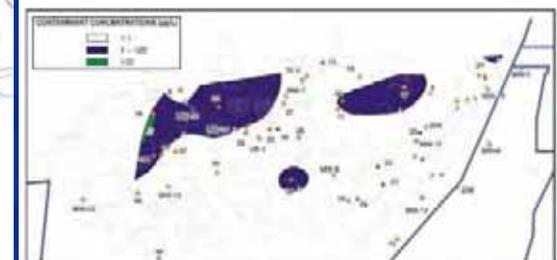


Sample Location Name	MCP GW-1	EPA MCL		EB-400A GX400A28		MW-128A MX128A30	
Sample Identifier				Field Sample		Field Sample	
QC Type				10/20/2004		11/11/2004	
Date Collected				Ground Water		Ground Water	
Media							

EPH MADEP						
2-Methylnaphthalene	10 ug/l	NA	0.025 ug/l	38 ug/l		
Acenaphthene	20 ug/l	NA	0.023 U ug/l	2.1 ug/l		
Acenaphthylene	300 ug/l	NA	0.023 U ug/l	0.48 ug/l		
Anthracene	2000 ug/l	NA	0.023 U ug/l	0.061 ug/l		
Benzo(b)fluoranthene	1 ug/l	NA	0.023 U ug/l	0.021 U ug/l		
C11-C22 Aromatics	200 ug/l	NA	97 U ug/L	350 ug/L		
Fluoranthene	300 ug/l	NA	0.039 ug/l	0.021 U ug/l		
Fluorene	300 ug/l	NA	0.023 U ug/l	2.5 ug/l		
Naphthalene	20 ug/l	NA	0.05 U ug/l	91 ug/l		



CCl₄ – Prior to SVE



CCl₄ July 2001



Search for Environmental Cleanup Liens

- AAI regulation requires search for environmental cleanup liens against the subject property that **are filed or recorded** under federal, tribal, state, or local law (312.25(a))
 - Recorded land title records – record of historical fee ownership which may include leases, land contracts, activity and use limitations
 - Usually at municipal or county recorder or clerk
 - Obtained by title companies or local government agency



Search for Environmental Cleanup Liens, cont.

- What is new under the AAI standard (and ASTM E1527-05)?
 - No requirement as to who is responsible for performing the search

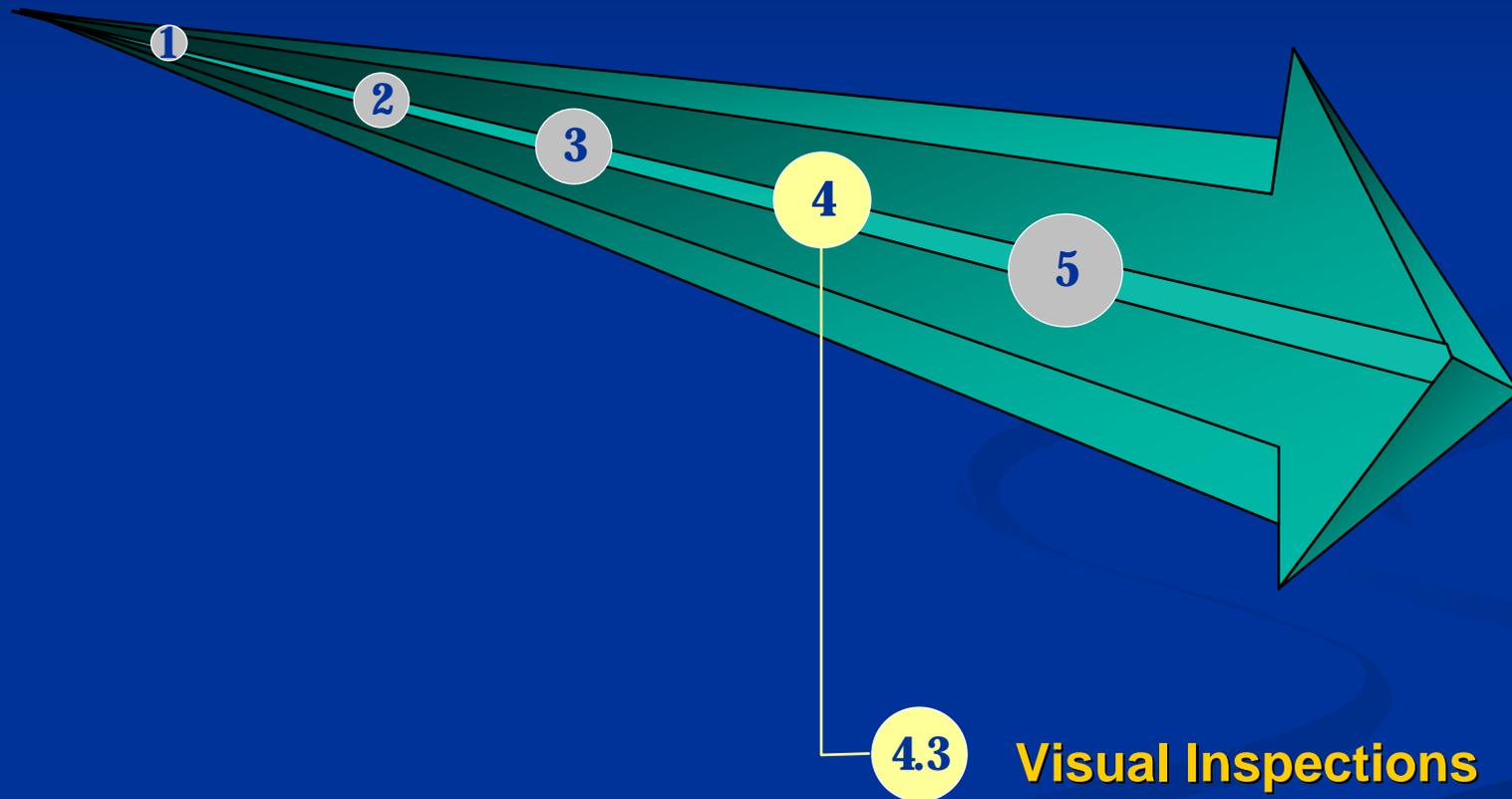


Search for Environmental Cleanup Liens, cont.

- User may provide this information to the EP
- EP is not required to perform the search
- Good practice for EP to document the results of search (if provided by user)
- EP may document as data gap if no search results are received from the property owner



Module 4: Key AAI Activities





Visual Inspections

- AAI regulation requires the inquiry of the EP to include:
 - Visual on-site inspection of the subject property and facilities (312.27(a)(1))
 - Visual inspection of adjoining properties from nearest vantage point (312.27(a)(2))
- AAI provides for a limited exemption to conduct the on-site visual inspection (312.27(c)(1)-(3))
- EPA **recommends** that the EP perform the visual inspection



Visual Inspections, cont.

- What is new under the AAI standard ?
 - Prospective property owner can qualify for a limited exemption for “on-site” visual inspection of the subject property
 - Visual inspection of adjoining properties is no longer optional



Visual Inspections, cont.

- Subject property inspection:
 - On-site
- Adjoining property inspection from:
 - Subject property
 - Public rights-of-way
 - Aerial photographs
- Limitations must be noted:
 - snow-covered ground surface
 - limited access to certain areas of site
 - safety concerns





Visual Inspection - Exceptions

- If on-site inspection cannot be performed due to unusual circumstances (physical limitations, remote/inaccessible location), the inquiry must:
 - Visually inspect property via alternative method (aerial photo, fenceline observation)
 - Document all efforts taken to obtain access and why efforts were unsuccessful
 - Document other sources of information that were consulted to assess releases or threatened releases
 - Comment by EP on significance of the failure to conduct a visual on-site inspection
- Mere refusal of a voluntary seller to provide access does not constitute an unusual circumstance.

Visual Inspections – General Site Setting



- Current uses of property
- Past uses of property
- Current and past uses of adjoining properties
- Current and past uses of surrounding area
- Geologic, hydrogeologic, hydrologic, and topographic conditions
- Description of structures
- Roads
- Potable water supply
- Sewage disposal system





Visual Inspections – Interior and Exterior

- Hazardous substances and petroleum products
- Storage tanks, drums, containers
- Odors
- Pools of liquid
- PCBs
- Heating/cooling – fuel sources
- Stains and corrosion
- Drains and sumps
- Solid waste & waste water treatment
- Septic systems, pits, ponds, and lagoons
- Wells (dry, injection, public supply, monitoring, abandoned)





Visual Inspections – Other Observations

- Topography – surface, slope, evidence of filling, remedial activities
- Condition of ground surface/pavement
- New gravel or paved areas
- Soil staining, stressed vegetation
- Discolored water
- Nearest water body
- Discharge of storm water runoff
- Proximity to sensitive receptors (wetlands, wildlife refuge, etc.)
- Proximity to residential/heavily populated areas, schools, etc.



Visual Inspections



January 2007

Visual Inspections



January 2007

Visual Inspections



January 2007

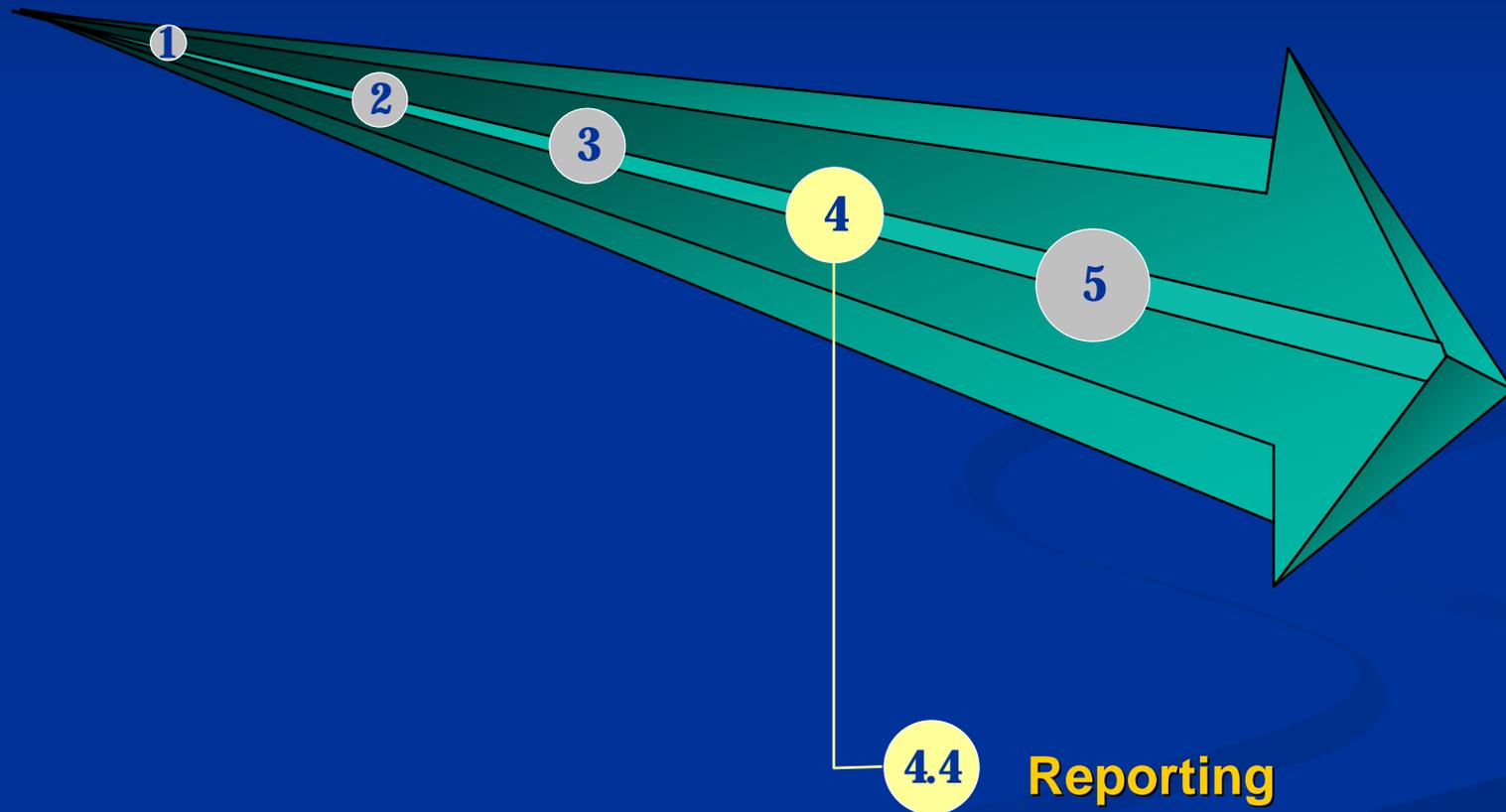
Visual Inspections



January 2007



Module 4: Key AAI Activities





Written Report

- AAI regulation requires results of the inquiry to be documented in a **written report** (312.21(c))
- Written report must include, at a minimum:
 - EP's opinion as to whether the inquiry has identified conditions indicative of releases or threatened releases of hazardous substances (312.21(c)(1))
 - Identification of data gaps (312.21(c)(2))
 - Qualifications of the EP (312.21(c)(3) and 312.21(d))
 - Declaration that person(s) signing meets definition of EP
 - Declaration that AAI was developed and performed in conformance with the standards and practices set forth in 40 CFR Part 312
 - Signature of the EP (312.21(d))



Shelf Life of AAI Activities

- One year, with updates required after 180 days for the following activities:
 - interviews
 - visual inspection of the subject property
 - historical records review
 - search for recorded environmental cleanup liens
- “Date” of inquiry is the date(s) on which activities were performed, not the report date



Written Report

- AAI regulation does not recommend format, structure, or length
- ASTM 1527-05 recommended format
 - Summary
 - Introduction
 - Site Description
 - User Provided Information
 - Records Review
 - Site Reconnaissance
 - Interviews
 - Findings



Written Report

- ASTM 1527-05 recommended format, con't.
 - Opinion
 - Whether inquiry has identified conditions indicative of releases or threatened releases
 - Additional appropriate investigations
 - Conclusions
 - Specific statement regarding evidence of recognized environmental conditions
 - Deviations
 - Additional Services
 - References
 - Signature of EP
 - Qualifications of EP
 - Appendices



Data Gaps

- *“A lack of or inability to obtain information required by this practice despite good faith efforts by the EP to gather such information”*
- EP must identify and document data gaps that affect his/her ability to identify conditions indicative of releases or threatened releases
- EP must comment on significance of data gaps
- Sampling and analysis may be used to address data gaps, but is not required under AAI



Data Gaps, cont.

- What is new under the AAI standard (and ASTM E1527-05)?
 - Documentation of data gaps is no longer discretionary



Data Gaps, cont.

- Common data gaps:
 - Unknown site usage during certain time periods
 - Inability to conduct visual inspection
 - Inability to interview the key site manager, regulatory officials, etc.
 - Data from previous site investigation not available for review



Exercise: Phase I ESA Reports

Review the example Phase I ESA report and discuss the following:

- Is the report compliant with the AAI standard?
- What are the deficiencies?
- What makes the report a "good" report?
- Is there any additional information you would like to see in the report?



Example Report – AAI Deficiencies

- No EP signature
- No declaration of EP qualifications
- No declaration of conformance with AAI standard
- No discussion of data gaps
 - Site history data gap
- Expired shelf life (> 1 year old)



Example Report – Other Deficiencies

- No past owner interviews to address data gaps
- No aerial photos, Sanborn maps, site photos
- No search for cleanup liens or institutional controls
- No discussion of purchase price
- No executive summary
- Limited attempt to review local records
- No user-provided information
- No references

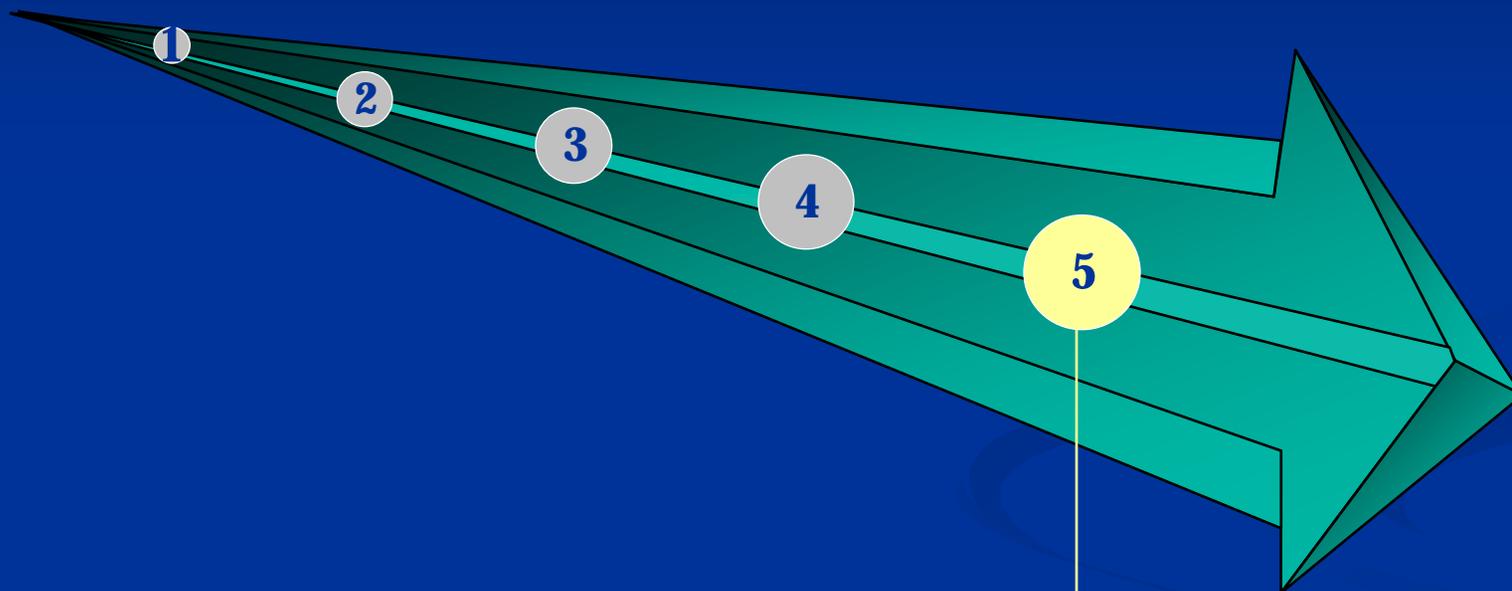


Example Report – What was Good?

- Non-scope considerations:
 - Asbestos
 - Lead-paint
 - Radioactive materials
 - Industrial hygiene surveys
- Explanation of site operations and process
- Site map
- Liability assessment – costs associated with recommended management options
- Discussion of general EHS management operations



Module 5: Differences of AAI and ASTM



Differences of AAI and ASTM

5

Key Differences of AAI and ASTM E1527-00



Key Difference	AAI	ASTM E1527-00
Definition of EP	<ul style="list-style-type: none"> • Specific certification/license, education, and experience requirements • Applies only to individuals supervising AAI 	<ul style="list-style-type: none"> • No specific certification/license, education, and experience requirements • Applies to all individuals conducting AAI
Interview with Current Owner and Occupants of Subject Property	<ul style="list-style-type: none"> • Mandatory 	<ul style="list-style-type: none"> • A reasonable attempt must be made to interview key site manager and reasonable number of occupants
Interview with Past Owner and Occupants	<ul style="list-style-type: none"> • Must be conducted as necessary to achieve objectives and performance factors 	<ul style="list-style-type: none"> • Not required
Interview with Neighboring or Nearby Property Owner and Occupants	<ul style="list-style-type: none"> • Mandatory at abandoned properties 	<ul style="list-style-type: none"> • Discretionary

Key Differences of AAI and ASTM E1527-00 con't.



Key Difference	AAI	ASTM E1527-00
Review of Historical Sources	<ul style="list-style-type: none"> • From present back to when property first contained structures or was first used for residential, agricultural, commercial, industrial, or governmental purposes 	<ul style="list-style-type: none"> • All obvious uses from the present back to the properties first obvious developed use or 1940, whichever is earlier <i>(retained by ASTM 1527-05)</i>
Search for Environmental Cleanup Liens	<ul style="list-style-type: none"> • No requirement as to who is responsible for the search • Scope of cleanup lien search includes those filed or recorded under federal, state, tribal, or local law 	<ul style="list-style-type: none"> • User's responsibility • Search results must be reported to EP • Scope of cleanup lien search is limited to reasonably ascertainable land title records
Government Records Search	<ul style="list-style-type: none"> • Federal, state, tribal, and local records 	<ul style="list-style-type: none"> • Federal and state records • Local records/sources at discretion of EP

Key Differences of AAI and ASTM E1527-00 con't.



Key Difference	AAI	ASTM E1527-00
Visual Inspection	<ul style="list-style-type: none"> • Visual inspection of subject property and adjoining property required • Limited exemption with specific requirements if the subject property cannot be visually inspected 	<ul style="list-style-type: none"> • Visual inspection of subject property required - no exemptions • No specific requirement to inspect adjoining properties; only to report anything actually observed
Data Gaps	<ul style="list-style-type: none"> • Requires identification of sources consulted to address data gaps and comments on significance of data gap with regard to the ability of the EP to identify conditions indicative of releases and threatened releases 	<ul style="list-style-type: none"> • Generally discretionary • Sources that revealed no findings must be documented
Shelf Life of Written Report	<ul style="list-style-type: none"> • One year, with some updates required after 180 days 	<ul style="list-style-type: none"> • Updates of specific activities recommended after 180 days

Key Differences of AAI and ASTM E1527-00 con't.



Key Difference	AAI	ASTM E1527-00
Contaminants of Concern	<p><u>Parties seeking CERCLA defense:</u></p> <ul style="list-style-type: none"> • CERCLA hazardous substances <p><u>EPA Brownfields Grant recipients:</u></p> <ul style="list-style-type: none"> • CERCLA hazardous substances, pollutants or contaminants • petroleum/petroleum products • controlled substances 	<ul style="list-style-type: none"> • CERCLA hazardous substances and petroleum products
CERCLA Defenses	<ul style="list-style-type: none"> • Innocent landowner defense • Bona fide prospective purchaser defense • Contiguous property owner defense 	<ul style="list-style-type: none"> • Innocent landowner defense



AAI in California

- Threshold criteria for determining eligibility to enter into a CLRRA agreement with either DTSC or a Water Board.
- Standard for Phase 1 site assessment review process under DTSC oversight for new and expanding schools (new emergency regulation effective 11/27/2006).
- Recipients of Targeted Site Investigation program grants funded through the State Response Program grant are not required must meet the AAI standard but may choose do so in order to assert protection under federal law.



State Requirements for CLRRRA (AB 389)

- Qualifying property owners must have made all appropriate inquiries at the time of purchase as follows:
 - Bona Fide Purchasers: must have made all appropriate inquiries on or before the time of acquisition based on the ASTM standard in effect at the time.
 - Contiguous Property Owners: must have made all appropriate inquiries at the time of purchase and did not know or have a reason to know of a release or threatened release.
 - Innocent Land Owners: must have made all appropriate inquiries at the time of purchase and did not know or have a reason to know of a release or threatened release.



Useful Resources/Links

- EPA Brownfields Cleanup and Redevelopment – AAI: <http://www.epa.gov/brownfields/regneg.htm>
- EPA Terms of Environment: <http://www.epa.gov/OCEPAterms/>
 - On-line list of commonly used terms and acronyms
- EPA Clu-In: <http://clu-in.org/>
 - Hazardous Waste Clean-up Information
- Google Earth: <http://earth.google.com/> and TerraServer: <http://www.terraserver.microsoft.com/>
 - Online aerial photo database
- DTSC Envirostor: <http://www.envirostor.dtsc.ca.gov/public/>
 - On-line database of hazardous substances release sites in Ca



Wrap Up

- Questions & Answers
- Training Evaluation