

US EPA ARCHIVE DOCUMENT

PHASE I & II
Environmental
Site Assessments

The Consumer's Perspective

Objectives of Training

- Familiarize you with AAI requirements
- Provide overview of how AAI impacts Brownfields grant process
- Provide overview of technical requirements of what constitutes an AAI-compliant Phase I ESA and what is good practice within the industry
- Overview of Phase II



AAI in Perspective

- All Appropriate Inquiries often is a critical step in a continuum of property investigations.
 - AAI / Phase I
 - Phase II Sampling and Analysis
 - Additional Site Characterization
 - Cleanup and reuse planning
- Investigate potential environmental conditions or challenges and address the contamination to protect public health/environment and pursue redevelopment.



How Does AAI Affect You?

- Threshold Criteria for Brownfields Grant Applicants
 - To apply for *Cleanup grant or Site-Specific Assessment grants* an eligible entity must demonstrate protection from CERCLA liability
- Recipients of Brownfields Assessment Grants
 - Must conduct Phase I assessments in compliance with AAI
- Help others understand and manage AAI
 - Parties seeking protection from CERCLA liability *must conduct AAI prior to purchasing property*



AAI – the "Other" Perspective

- 2002 Brownfields Amendments to CERCLA
 - Amended CERCLA and provided liability protections for certain property owners
 - Clarified Innocent Landowner Defense
 - Added Contiguous Property Owner
 - Added Bona Fide Prospective Purchaser
 - Required EPA to develop regulations establishing standards and practices for conducting AAI
 - Established EPA's Brownfields Grant Program



Brownfields Grants – Applicants, Generally

- 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(20)(D))
 - Acquired property by eminent domain (CERCLA 101(35)(A)(ii))
 - Are a bona fide prospective purchaser (BFPP)
 - Meet requirements for BFPP, but purchased property prior to January 11, 2002



But there is more...

AAI = BFPP + Continuing Obligations

Bona Fide Prospective Purchaser

- AAI prior to purchase
 - 1-Year w/ 6-mo. Update
 - ASTM E1527-05
- Acquire after disposal of hazardous substances occurred
- Not potentially liable or affiliated with liable party

Continuing Obligations

- Comply with land use restrictions
- Do not impede institutional controls
- Take reasonable steps to stop and prevent releases
- Provide legal notices on discovery
- Provide access and information upon request



Stepping up to Continuing Obligations

(to maintain liability protections)

- Activity and Use Limitations (AULs)
 - Broad term encompassing institutional and engineering controls
 - Stay with the property – FOREVER
 - Noncompliance can jeopardize liability protections
 - Work with the state to change or eliminate
 - Create a monitoring plan to document long term compliance



Stepping up to Continuing Obligations

(to maintain liability protections)

- Seek closure to recognized environmental conditions identified in the AAI/Phase I report
- Address identified releases to limit human and environmental exposure to contamination
- Prevent any future releases (by owner or operators)
- Notify the State on new and /or previously unidentified releases to the environment
- If disaster strikes, call in the state and/or EPA for assistance



Reminder on AAI for local governments

- Involuntary taking of property, through tax foreclosure or eminent domain, provides inherent liability protections
 - Remember – Continuing Obligations apply
- Taking a property through donation or any dollar amount requires AAI to establish BFPP status (and all that goes with it)



When Must AAI be Performed?

- Any party seeking liability protection must perform AAI before acquiring the property (before date of title transfer).
- AAI must be conducted or updated within one year prior to date of acquisition.
- Interviews, records review, site inspection, and the environmental cleanup lien search must be conducted or updated within 180 days **prior to** the date of acquisition.



Recommends

ASTM 1527-05 Report Format

- Summary
- Introduction
- Site Description
- User Provided Information
- Records Review
- Site Reconnaissance
- Interviews
- Findings
 - Known & suspect RECs
 - Historic RECs
 - De minimis conditions
- Opinion
 - RECs (yes or no)
 - Significant data gaps
 - Additional appropriate investigations
- Conclusions
 - RECs & ASTM declarations
- Deviations
- Additional Services
- References
- Signature of EP
- Qualifications of EP
- Appendices



Phase I Report – Checklist

- **Required To-Do** for Grant Project Managers

Require Review of:

- EP Opinion of environmental conditions
 - Identify data gaps
 - Qualifications and signature of EP
 - EP Opinion regarding additional investigation
- Available on EPA AAI website and from your grants project officer

Required Checklist for All Phase I Site Assessments Conducted using EPA Brownfields Assessment Grant Funds

Grantee Name: _____

Grant Number: _____

Program Manager Name: _____
(Point of Contact)

Contact Phone Number: _____

Name / Address of Property Assessed: _____

Please indicate that each of the following All Appropriate Inquiries documentation requirements were met for the Phase I assessment conducted at the above listed property:

- An *opinion* as to whether the inquiry has identified conditions indicative of releases or threatened releases of hazardous substances on, at, in, or to the subject property.
- An identification of *data gaps* (as defined in §312.10) in the information collected for the inquiry that affect the ability of the environmental professional to identify conditions indicative of releases or threatened releases of hazardous substances on, at, in, or to the subject property, as well as comments regarding the significance of these data gaps.
- Qualifications and signature* of the environmental professional(s). The environmental professional must place the following statements in the document and sign the document:
 - “[I, We] declare that, to the best of [my, our] professional knowledge and belief, [I, we] meet the definition of Environmental Professional as defined in §312.10 of this part.”
 - “[I, We] have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. [I, We] have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.”
- In compliance with §32.31(b), the environmental professional must include in the final report an *opinion regarding additional appropriate investigation*, if the environmental professional has such an opinion.

Signature of Grantee Program Manager

Date

Submission of this checklist to EPA does not constitute a determination of CERCLA liability by EPA and does not confer protection from CERCLA liability.



Phase I ESA vs. Phase II SI

Phase I ESA ASTM E1527-05

Standard research study intended to gather sufficient information to **assess the environmental condition of the property** and identify actual or potential areas where hazardous substances may have been released to the environment.

Phase II SI ASTM E1903-11

Intrusive study where **actual physical environmental samples are collected** and analyzed to characterize the type, distribution and extent of hazardous substances in the environment.



Phase I ESA

- **Purpose (ASTM E1527-05)**

*“Identify the 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.” **Blah...Blah...Blah...***



What is a Phase I ESA?

- **Research Historical Documents/Information**
 - Land-use activities
 - Business activities
 - Land development timeline
 - Areas where hazardous substances may have been used, handled, stored, generated, and/or released
 - Regulatory history
 - Environmental liens



Purpose of a Phase I ESA

- Assess the potential for hazardous substances to have impacted the property (REC)
- Liability protection under CERCLA
- Support go/no go decisions to acquire real property
- Brownfields grant programs require Phase Is to be completed
- Identify continuing obligations



Liability Protections

- Innocent Landowners
(CERCLA Sections 101(35)(A))
- Contiguous Property Owner
(CERCLA Sections 107(q))
- Bona Fide Prospective Purchaser
(CERCLA Sections 101(40) and 107(r))



Phase I Requirements

- **All Appropriate Inquiry (AAI)** - Any party seeking liability protection must perform AAI before acquiring the property (i.e., before date of title transfer)
 - 40 CFR Part 312
- **ASTM E1527-05** Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
- **ASTM E2247-08** Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property



Who can prepare a Phase I ESA?

- Qualified Environmental Professionals include:
 - Professional Engineers and Geologists with 3-years experience
 - Environmental practitioners having a baccalaureate or higher degree in engineering or science with 5 years experience
 - Environmental practitioners with 10-yrs of full time experience in the environmental field



What is included in a Phase I ESA?

- Property Description
- Building/Structure Descriptions
- Historical and Current Land Use
- Interviews
- Historic Aerial Photo and Map Summaries
- Governmental Database Reviews
- Historic Document Summaries
- Site Reconnaissance
- Findings (identification of RECs)



What is *NOT* typically included?

- Hazardous Building Materials Survey
 - Asbestos
 - Lead-Based paint
 - PCB/Mercury light ballasts/switches
- Wetland Surveys
- Radon Gas Surveys
- Floodplain Assessments
- Geo-Hazard Assessments



Results of a Phase I ESA

- Recognized Environmental Condition (REC)
- Historic Recognized Environmental Condition
- De Minimis Condition



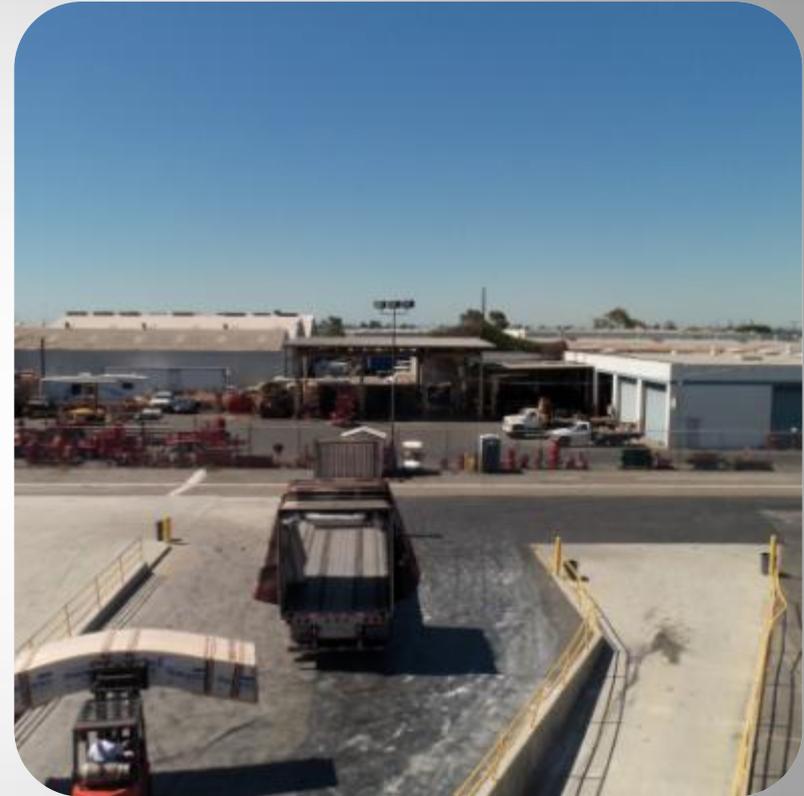
What else do I need to know...

- More than the minimum can be requested
 - Recommendations for further actions
 - Hazardous Substance Surveys
 - Geohazard Surveys
- Allow 4 to 8 weeks for completion
 - Typical Schedule Drivers
 - Site Access
 - Interviews
 - Regulatory Agency Data Requests



Phase I Cost Drivers

- Don't judge a book by its cover
 - Industrial Area
 - Small Property
 - Vacant Property
- Lowest cost is not always the best!!!
 - Cost should be a reflection of the level of liability protection



How Can I Manage My Costs

- Complete site eligibility forms completed and approved before hiring a consultant
- Facilitate site access for your Phase I provider
- Select properties/parcels within a focused area
- Select properties with known willing sellers
- Facilitate interviews





Durfee Ave

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Google

459 ft

lat 34.030623° lon -118.060505° elev 0 ft



Durfee Ave

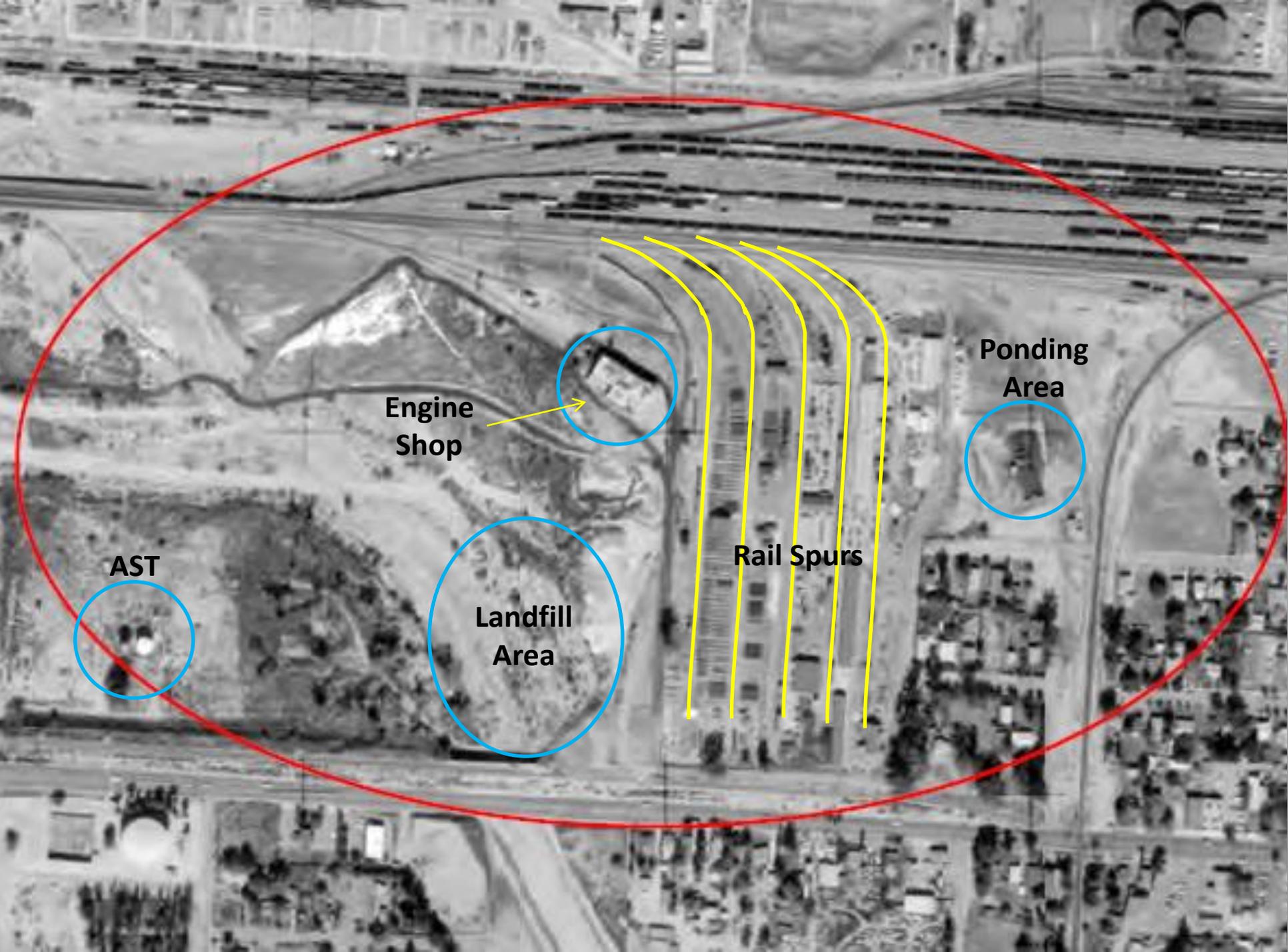
Image U.S. Geological Survey
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469 ft

lat 34.030623 lon -118.060505 elev 0 ft

Google





AST

Engine Shop

Landfill Area

Rail Spurs

Ponding Area

Phase II Site Investigations



- Standard ASTM E1903-11: Phase II Environmental Site Assessment Process
- Purpose
 - Determine whether a release has occurred
 - Delineate the extent of contamination
 - Develop remediation cost estimate
 - Baseline environmental condition for liability purposes
 - Obtain regulatory closure

Typical Phase II Deliverables

- Work Plan
 - Sample and Analysis Plan
 - Purpose
 - Site Background
 - Areas of Concern
 - Chemicals of Concern/Target Chemicals
 - Conceptual Site Model
 - Sample Location/Media Rationale
 - Sample Techniques
 - Analytical Methods
 - Quality Assurance Plan
 - Health and Safety Plan



Typical Phase II Deliverables Cont'd



- Phase II Report
 - Purpose or goals and objectives
 - Summary of field activities
 - Summary of analytical results
 - Health Risk Assessment
 - Published Standards
 - Site-Specific HHRA
 - Data Validation
 - Results & Recommendations

Typical Phase II Process

- Work Planning
 - Establish goals and objectives
 - Define Site Investigation Boundaries
 - Develop Conceptual Site Model
 - Determine regulatory oversight needs



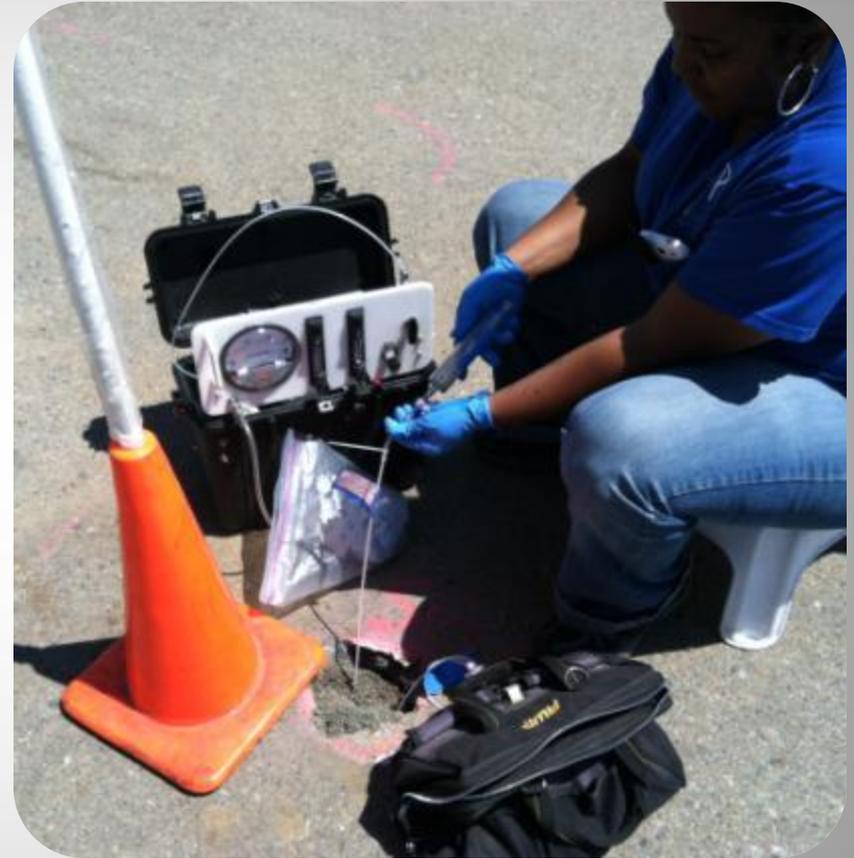
Typical Phase II Process Cont'd

- Pre-Field Work Activities
 - Permitting
 - Drilling/Well Permits
 - Street Closure/Encroachment Permits
 - Site Access
 - Subsurface Utility Clearance
 - Underground Service Alert (USA)
 - Geophysical Survey



Typical Phase II Process Cont'd

- Field Work
 - Access limitations
 - Soil Vapor Surveys
 - Groundwater Sampling
 - Mobile Laboratory
- Reporting
 - Summary of Field Activities
 - Summary of Analytical Results
 - Health Risk Assessment
 - Recommendations & Conclusions



Phase II Cost Drivers

- Regulatory Involvement
- Access Limitations
 - Physical
 - Work Time
 - Media of Concern
 - Analytical Methods
- Investigation Derived Wastes
- Site Specific Human Health Risk Assessment



How Can I Best Manage My Costs

- Provide All Site Background Information
- Facilitate Site Access with Property Owner/Operator
- Focused Site Delineation
- Well Defined Scope of Work and Project Objectives
- Coordinate Scoping Meeting
- Ask to see a detailed breakdown of project costs
- Conduct Phase II on Sites that are not Expected to Require Remediation



Case Study

North Santa Fe & Orange Property - Vista



- Challenges
 - Property vacant and unused
 - Prior studies recommended costly remediation
 - Center parcel not eligible for BF funding.
 - Restrictions prohibit planned redevelopment

Site Investigation Approach

- Involved DTSC early in the planning phase
- Clearly established project goals and objectives
- Strategically located boring locations
- Shared preliminary results throughout project



Results and Recommendations

- Target VOCs show trending decrease in concentrations
- Concentrations do not present an unacceptable risk to human health
- DTSC concurred that **No Further Action** was warranted
- **Saved the City of Vista up to \$500K in remediation costs.**

Thank You!!



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