Evaluating Site Contamination for HUD Projects

August 22, 2012 Webinar

HUD Office of Environment and Energy
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Webinar Format

Presentation will last approximately one hour, followed by 30 minutes of Q&A

Recording of this and the entire environmental webinar series will be posted on HUD's Office of Environment & Energy website by October 2012

Audience members are muted due to the high number of participants

Audio Issues During the Webinar

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- Logging off, then logging back in again
- Requesting help through the Q&A Box that will appear on your screen

How to Submit Questions

Type your questions in the Q&A box that will appear on your screen during the presentation

- Technical questions will be addressed right away
- Content questions will be answered after the presentation

Learning Objectives for Today

- ✓ ***To understand the basics*** of evaluating site contamination
- ✓ ***How*** to evaluate contamination – conducting "due diligence"

Why

Site Contamination must be addressed

HUD Policy on Contamination

…**all** property being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, **where a hazard could affect** the health and safety of occupants or conflict with the intended utilization of the property.

24 CFR Part 58.5(i)(2) & 50.3(i)

Why Care about Site Contamination?

HUD's Mission

- Decent, safe, and sanitary home and suitable living environment for every American
- Strong, sustainable, inclusive communities

Public Health Implications

- Cancer, birth defects, and illness

Why Care about Site Contamination?

Financial Implications

- Lower property values
- Borrower may default on loan - foreclosure
- Tenant losses, lease complications

Liability Considerations

- Joint and several liability under CERCLA (Comprehensive Environmental Response, Compensation & Liability Act) – a.k.a., "Superfund"

Times Beach, Missouri

- County road dust control project contaminated the town with dioxin
- EPA closed the small town of 2,200 people
- Remedy: onsite incineration at a cost of **$110 million**
- Relocation cost of **$30 million**

Bill Pierce/Time & Life Pictures/Getty Images

When Site Contamination must be Evaluated

Due diligence must be completed **before acquisition** of property

Prior to HUD/State environmental approval [aka, release of funds], neither recipient nor any participant in the development process, may take action that will limit the choice of reasonable alternatives.

24 CFR Part 58.22(a)

What is Site Contamination?

For purposes of this presentation…

The release of a hazardous or toxic chemical or substance, including petroleum products, on or in proximity to the project site in sufficient quantity as may be harmful to the environment, humans or other living organisms

Examples of Site Contamination

Landfills

Unexplained dirt piles / mine tailings

Buried Waste

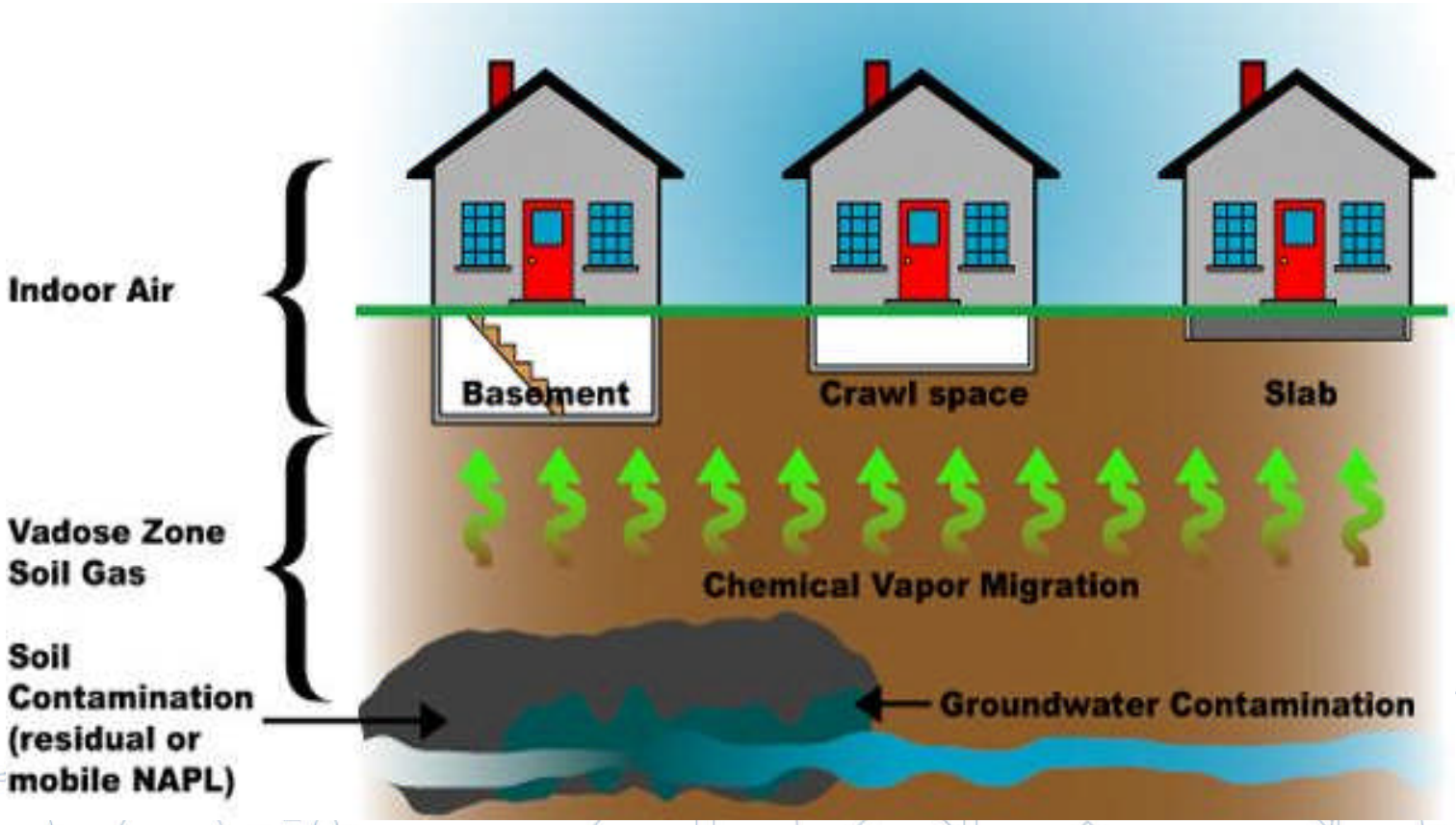
Underground Tanks

Pathways to Exposure

Risk is transmitted to humans and other living organisms through pathways

- ***Contaminated Soil***
- ***Contaminated Surface water***
- ***Contaminated Ground water***
- ***Contaminated Air***

Vapor Intrusion



Pollution Sources, Exposure Methods, and Health Implications

Source	Exposure Method	Associated Pollutant	Potential Health Effects (http://www.atsdr.cdc.gov/toxfaqs/index.asp)
Petroleum Storage Tanks	Vapor Intrusion through floors	Benzene, MTBE, PAHs and other solvents	Leukemia, other cancers
Dry Cleaning	Vapor Intrusion, Ambient Air	• Perchloroethylene • Tetracholorethylene	Central Nervous System Effects, Cancer
Agricultural Industries	Onsite or buried pesticide containers	Various Pesticides and Herbicides	Range of effects including acute and chronic neurological effects, cancer, birth defects
Industrial Production Facilities	Air emissions, buried containers, toxic releases, spills	Range of toxic chemicals depending on production process	Range of effects including cancer, birth defects, chronic effects, acute neurological
Meth Labs	Chemical explosions. Inhaled, absorbed through skin, ingested	• Acetone • Lithium • Toluene • Sulfuric Acid • Pseudoephedrine	Fire and explosion hazard, acute and chronic CNS effects, cardiac arrest, lung damage, renal failure, stroke death, developmental toxicity

How

Site Contamination Is Evaluated

Different Programs, Different Requirements

- CDBG, HOME, EDI, ESG, ONAP, PIH… The Responsible Entity determines appropriate due diligence
- FHA multi-family mortgage insurance… HUD follows Multi-family Accelerated Processing (MAP) Guide, Chapter 9
- FHA single-family mortgage insurance… HUD appraisers follow Handbook 4150.2
- Section 202 & Section 811 Programs… ASTM Phase I and, as appropriate, Phase II required
- Condominium Insurance – Mortgagee letter 11-22 (HUD Clips)

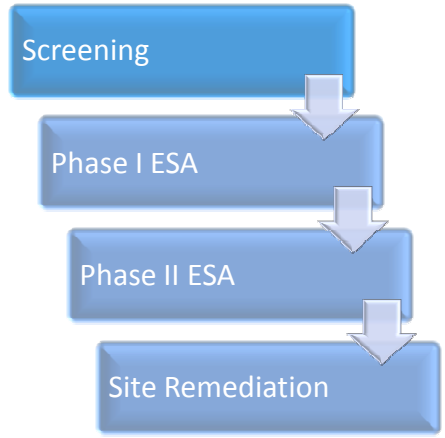
Overview of Evaluating

- Screening
- Phase I ESA
- Phase II ESA
- Site Remediation
- Other studies as needed
- Clean-up as needed

Screening

Is a Phase I Environmental Site Assessment (ESA) necessary?

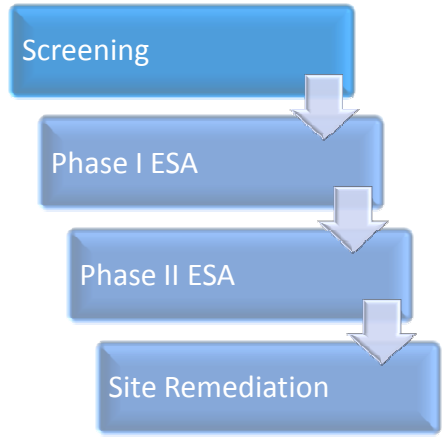
- Required for all multifamily (5+ units) and nonresidential projects - ***OR***
- If contamination is known or strongly suspected



If neither, you must still conduct due diligence

Screening

Due diligence is *always* necessary



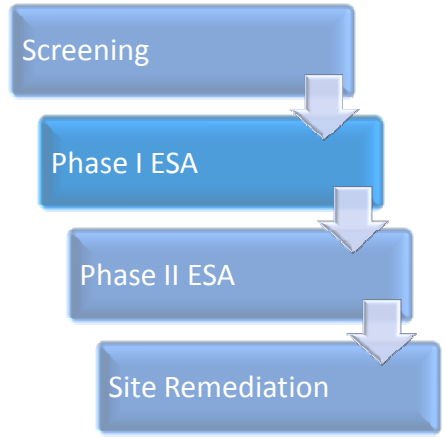
Approach to due diligence:

- **Field Inspection**
- **Historic Use**
- **Records Search**

then… **Evaluate the Results**

Phase I Environmental Site Assessment (ESA)

Phase I ESAs are investigations performed by Environmental Professionals

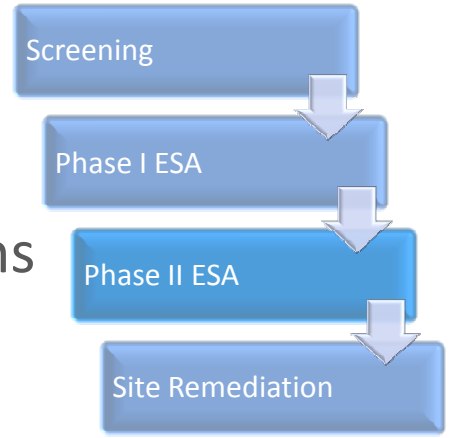


Did the Phase I identify any potential Recognized Environmental Conditions?

Does HUD have any further concerns with contamination at this site?

Phase II Environmental Site Assessment (ESA)

Phase II ESAs involve actual testing



Were any Recognized Environmental Conditions identified?

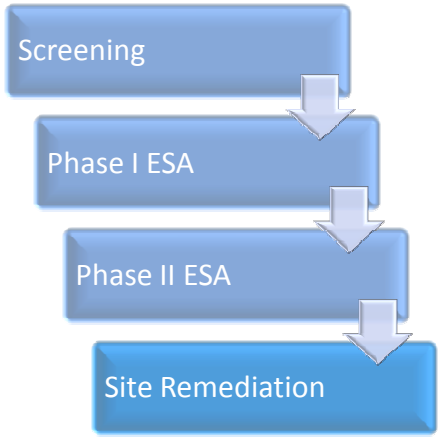
Was the report comprehensive?

Is further testing required, such as site characterization or a risk assessment?

Site Remediation

If Recognized Environmental Conditions are identified, formulate a clean-up program

- State Voluntary Clean-Up Plan



Other Studies and Clean-Up

Why Consider Site Contamination

Risks of neglecting due diligence:

- Adverse impacts to human health
- Being liable for an expensive clean-up

Phase I ESA: A Closer Look

Phase I Environmental Site Assessment (ESA)

ASTM Standard E 1527-05

- Objective: To identify conditions indicative of release or threatened release of hazardous substances or petroleum product
- Voluntary, **non-intrusive** investigation into historical uses of the site and visible evidence of environmental conditions
- Can order directly from ASTM online
- *A Phase I ESA is not synonymous with an environmental assessment (EA) under NEPA*

COMMUNITY PLANNING & DEVELOPMENT

ASTM Phase I ESA

- Can help understand potential environmental risk/liability associated with a property **prior** to acquisition, construction, rehabilitation, etc.

- Typically does **not** include "**Non-scope considerations**:" asbestos, lead, mold, radon, NEPA, etc.

- Vapor Encroachment – can be added as Non-Scope item
  - Volatile chemicals in contaminated soil or groundwater that "off-gas" and migrate into the indoor air of overlying/adjacent structure

Use of Qualified Professional

Environmental Professional (EP) must be:

- Professional Engineer or Geologist with 3 Years of Relevant Fulltime Experience; **or**
- Licensed or certified to perform due diligence and three years of fulltime relevant experience; **or**
- Engineering of science Baccalaureate degree or higher and 3 years of fulltime relevant experience; **or**
- Ten years of fulltime relevant experience

  ✓ HUD's MAP Guide, 9.2.D.1, does **not** recognize this experience qualification as sufficient

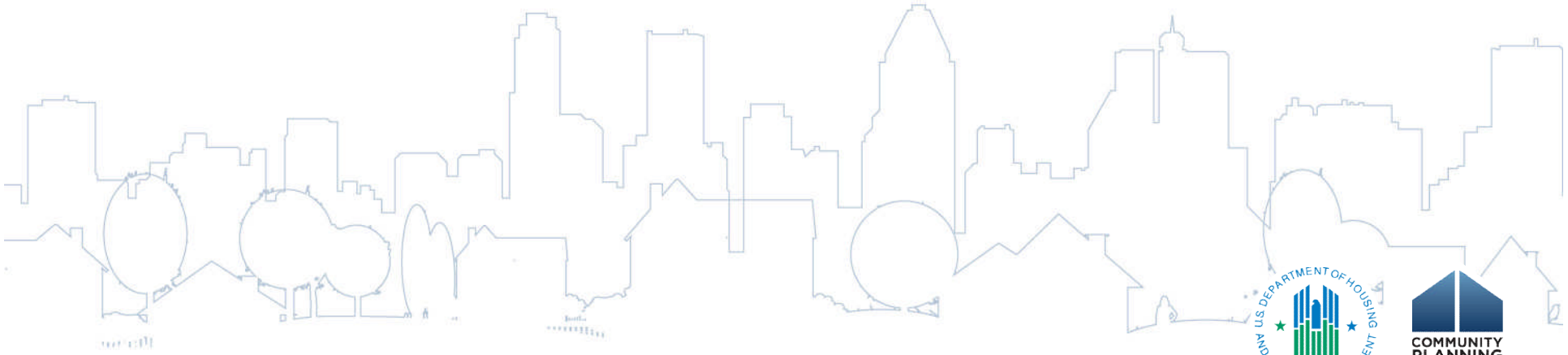
Key Elements of ASTM Phase I ESA

- **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

ASTM Phase I Shelf-life

A past Phase I report cannot be used indefinitely

- Phase I must be conducted within one year of the date of property acquisition
- If Phase I is more than 180 days old and less than one year old, it must be updated



Outcome of ASTM Phase I

"Recognized Environmental Condition" **(REC)** = Presence or likely presence of any hazardous substances or petroleum products under conditions that indicate a release or threatened release

If one or more **REC** is present:

- Proceed to **Phase II** to validate if contamination is present

  or

- **Reject site** if no corrective action appears feasible

Outcome of ASTM Phase I

Ensure report is complete – Go back to EP or applicant for more information or clarification

- Get a copy of the ASTM standard
- Require Phase I report follows ASTM recommended format ("Appendix X4")
- Use a checklist to evaluate completeness

HUD/RE may disagree with findings – e.g., may require Phase II *even if EP finds no REC*

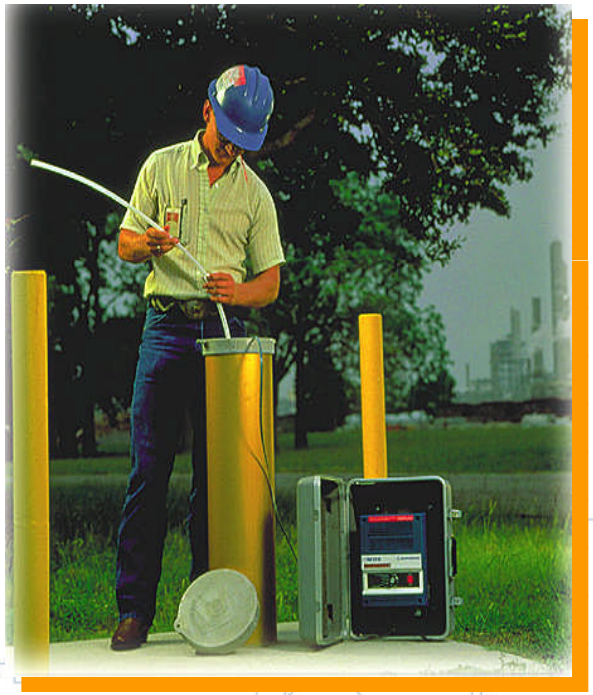
Phase II ESA

- Sampling various media – soil, ground water, surface water
- Chemical analysis to identify types and general extent of contamination
- Evaluate risk to receptors
- Compare to relevant criteria to determine need for cleanup or risk management

Beyond Phase II ESA

Phase II assessment is **not** a complete and thorough characterization of vertical and lateral extent of contamination

Next step is "**Site Characterization**" – iterative process that delineates (vertical/horizontal) impacts to soil, groundwater, surface water and soil vapor



Remediation through State VCP

- **VCP =** Voluntary Clean-up Program
- Objective: Clean up contamination and obtain State approval – "**No Further Action**" letter
- Advantages:
  - ➢ Provides appropriate oversight
  - ➢ Uses established procedures
  - ➢ Selects cost-effective remedial measures
  - ➢ Responds to urgency & extent of contamination required at site
  - ➢ Utilizes **risk-based corrective actions**, where appropriate

Risk-Based Corrective Action (RBCA)

- **Conceptual Site Model** - Framework for cleanup decisions that protects human health and environment in context of current and future land use
- Requires **Site Characterization** and **Risk Assessment**
- Risk Assessment – determines **exposure pathways** (drinking water wells, recreational use of streams, vapor transport) and potentially affected **sensitive receptors** (schools, homes, water bodies, wetlands)
- **Cleanup level** is adjusted to current & future land use

Risk-Based Corrective Action (RBCA)

- **Engineering controls** (EC)
  - ✓ capping with concrete (hard cap); slurry walls; vapor barriers; capping with soil (soft cap); fencing
- **Institutional controls** (IC)
  - ✓ deed & access restrictions, protective covenants
  - ✓ operation and maintenance plan (“O&M” plan)
- **Monitoring wells**

Determining When

a Project May (or May Not) Require an ASTM Phase I Report

Screening

Due diligence is *always* necessary

Approach to due diligence:

- **Field Inspection**
- **Historic Use**
- **Records Search**

then… **Evaluate the Results**

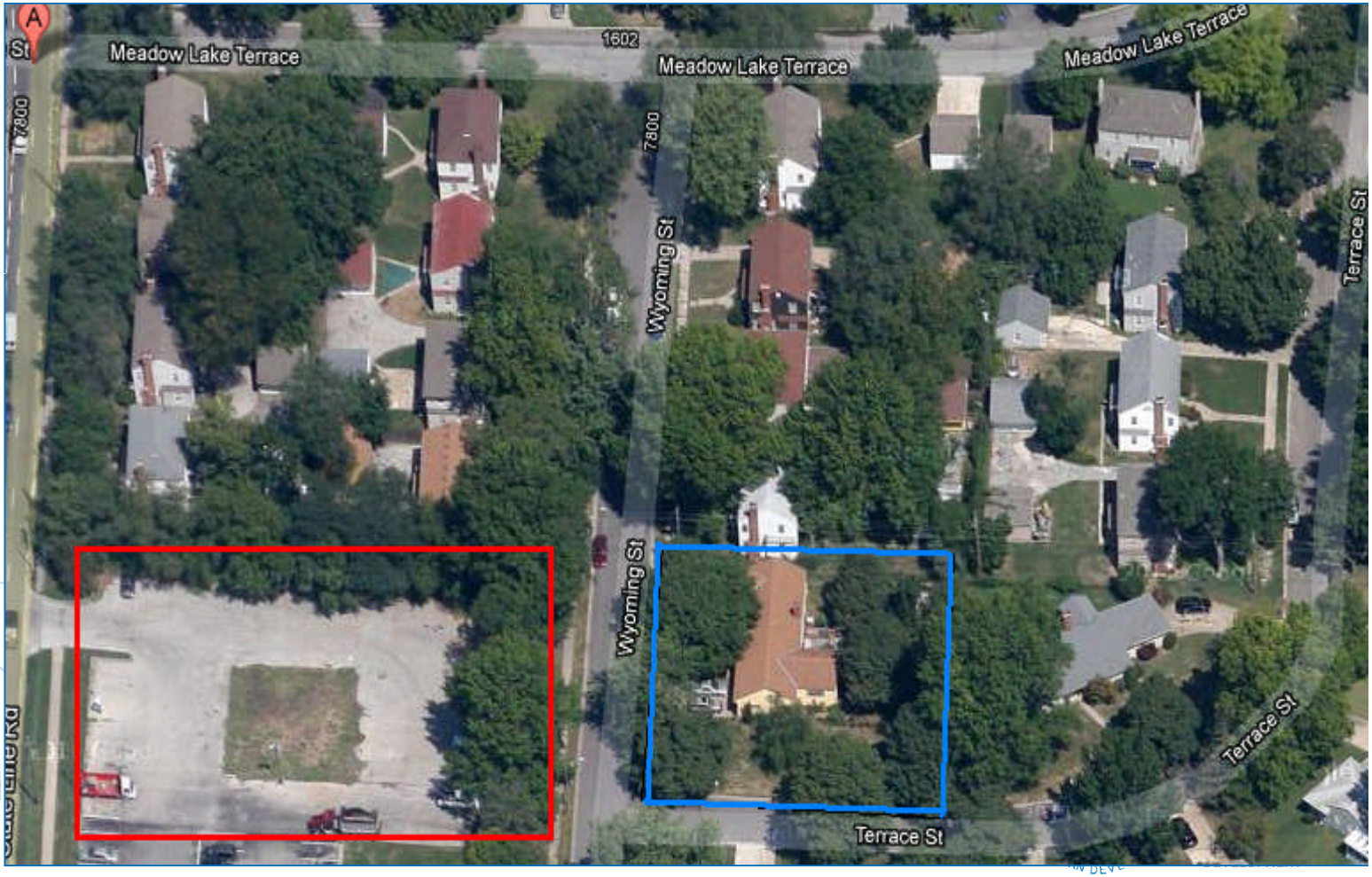
Screening: Field Inspection

- Vents, pipes
- Underground tank (other than SF residential)
- Monitoring well
- Distressed vegetation
- Drums, containers

- Pits, ponds or lagoons
- Stained soil or pavement
- Pungent, foul or noxious Odors
- Dumped material , mounds of dirt, rubble, fill…

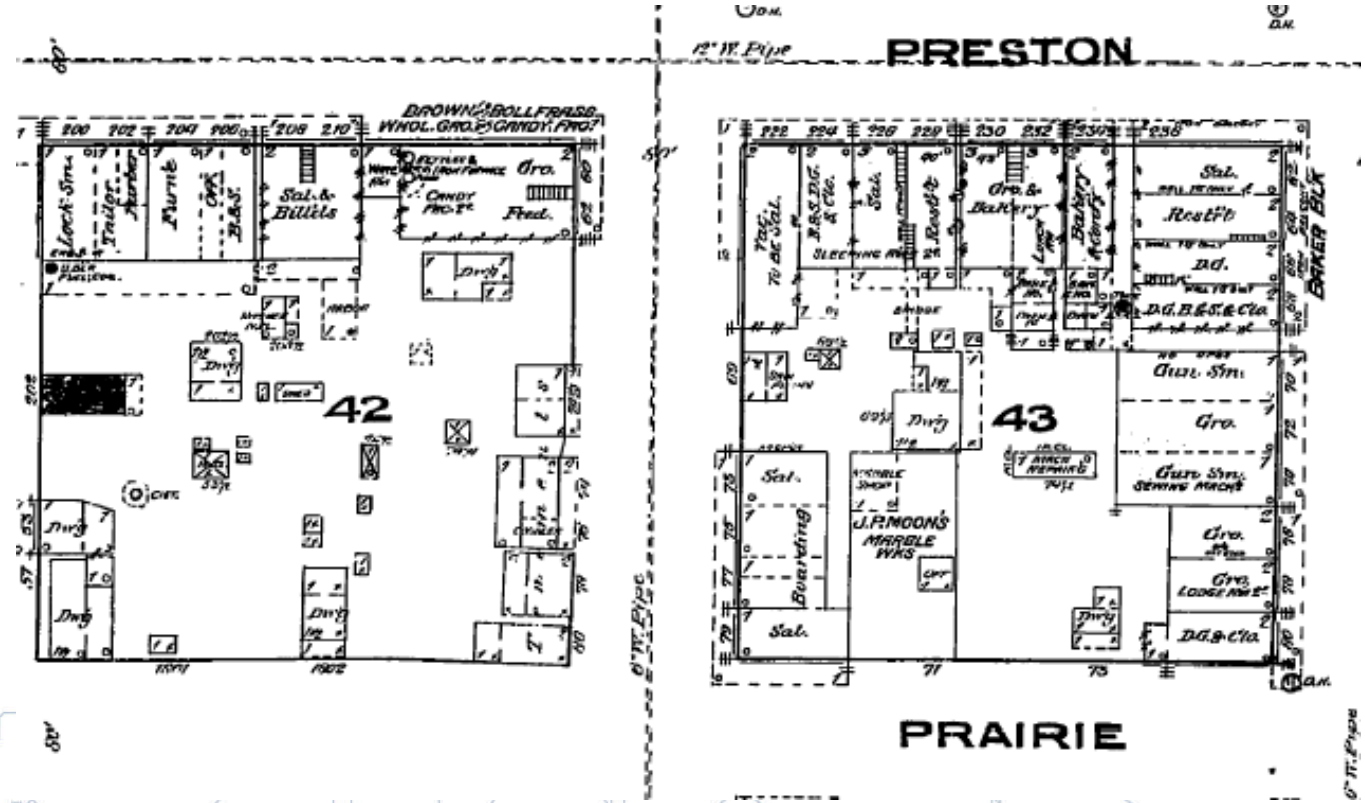
Screening: Field Inspection

Project: Single-Family Rehab



Screening: Historic Use

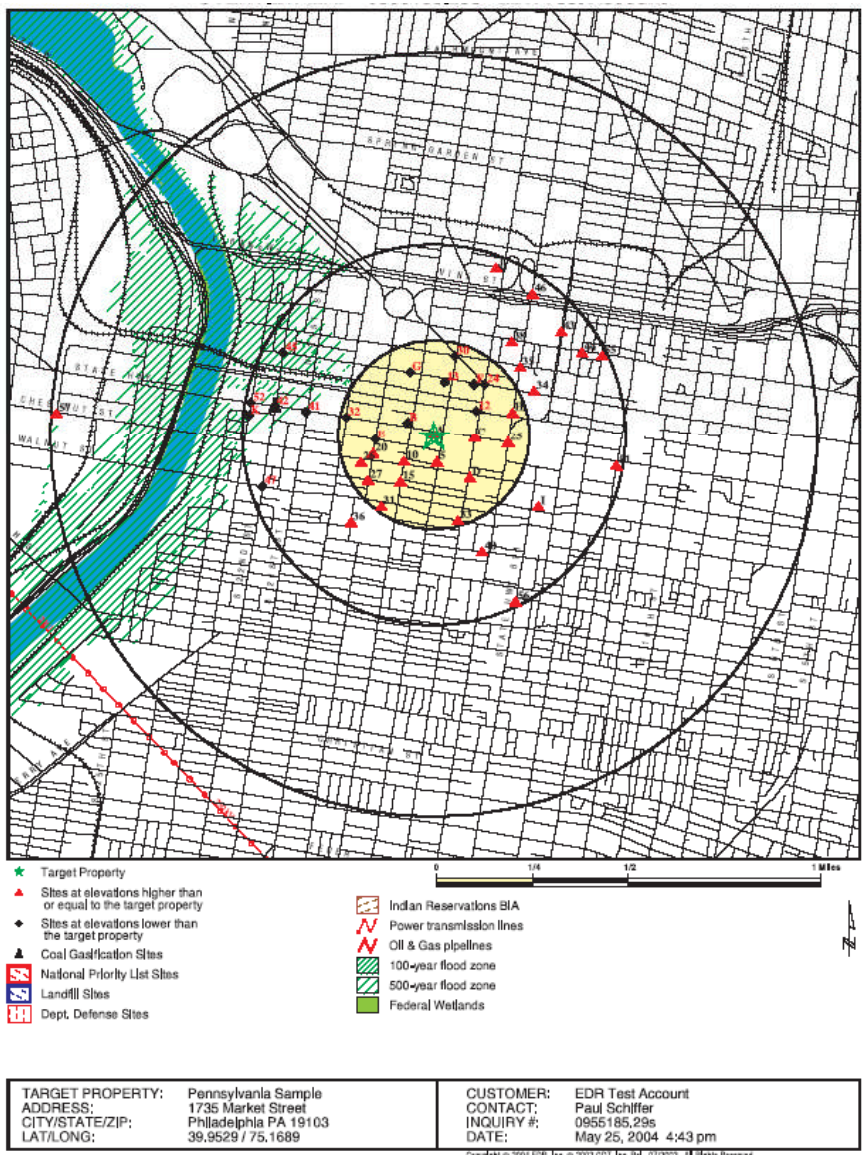
- Sanborn Fire Insurance Rate Maps
- City Directories
- Title Search



Screening: Records Search

Review federal, state, tribal, local government records (databases) for

- Subject property
- Nearby and adjoining properties



Screening: Records Search

Standard Environmental Record Sources	Approximate Minimum Search Distance (mi)
Federal NPL Site List	1
Federal RCRA CORRACTS Facilities List	1
Federal Delisted NPL Site List	0.5
Federal CERCLIS List	0.5
Federal CERCLIS NFRAP Site List	0.5
Federal RCRA Non-CORRACTS TSD Facilities List	0.5
Federal RCRA Generators List	Property/Adjoining Prop.
Federal Institutional Control/Engineering Control Registries	Property Only
Federal Emergency Response Notification System (ERNS) List	Property Only
State- and Tribal-Equivalent NPL	1
State- and Tribal-Equivalent CERCLIS	0.5
State and Tribal Landfill and/or Solid Waste Disposal Site Lists	0.5
State and Tribal Leaking Storage Tank Lists	0.5
State and Tribal Voluntary Cleanup Sites	0.5
State and Tribal Brownfield Sites	0.5
State and Tribal Registered Storage Tank Lists	Property/Adjoining Prop.
State and Tribal Institutional & Engineering Control Registries	Property Only

Screening: Records Search

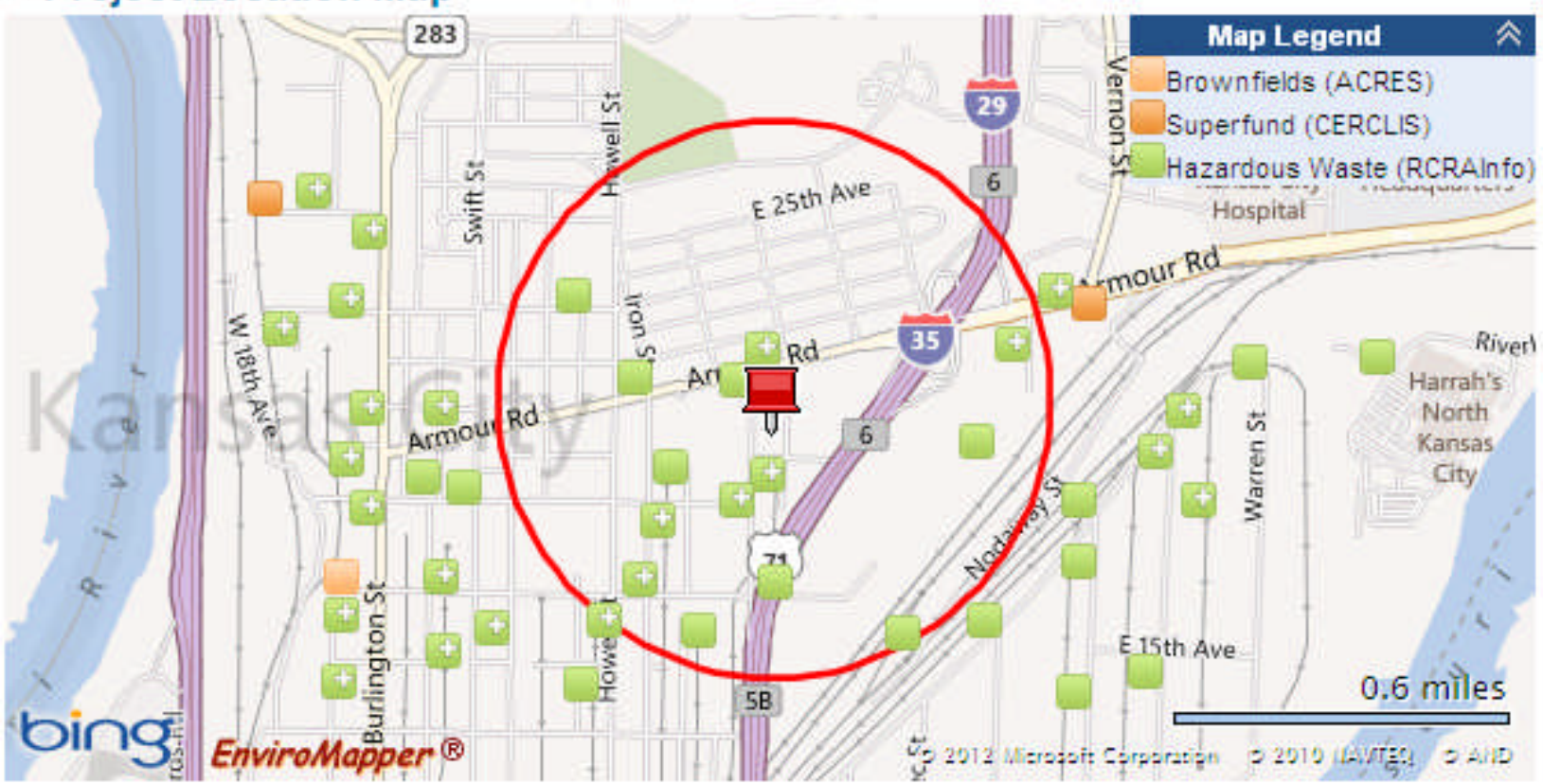
NEPAssist Report

You are here: EPA Home » NEPAssist Home » NEPAssist Report

0.5 mi radius

HUD Site

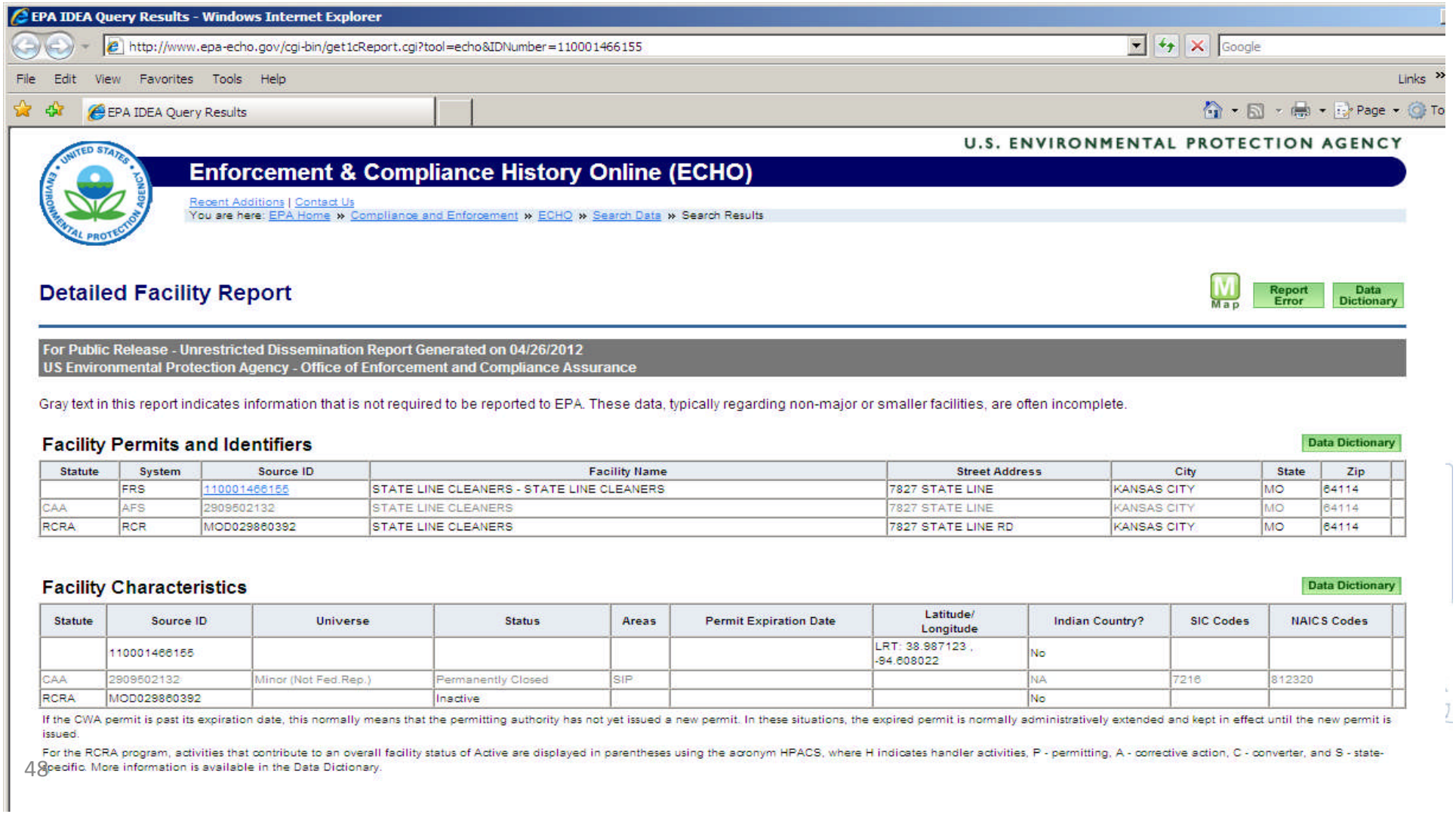
Project Location Map



Screening: Records Search

Screening: Records Search

EPA "ECHO" Database



EPA IDEA Query Results - Windows Internet Explorer

http://www.epa-echo.gov/cgi-bin/get1cReport.cgi?tool=echo&IDNumber=110001466155

File Edit View Favorites Tools Help

EPA IDEA Query Results

U.S. ENVIRONMENTAL PROTECTION AGENCY

Enforcement & Compliance History Online (ECHO)

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Detailed Facility Report

Map | Report Error | Data Dictionary

For Public Release - Unrestricted Dissemination Report Generated on 04/26/2012
US Environmental Protection Agency - Office of Enforcement and Compliance Assurance

Gray text in this report indicates information that is not required to be reported to EPA. These data, typically regarding non-major or smaller facilities, are often incomplete.

Facility Permits and Identifiers

Data Dictionary

Statute	System	Source ID	Facility Name	Street Address	City	State	Zip
	FRS	110001466155	STATE LINE CLEANERS - STATE LINE CLEANERS	7827 STATE LINE	KANSAS CITY	MO	64114
CAA	AFS	2909502132	STATE LINE CLEANERS	7827 STATE LINE	KANSAS CITY	MO	64114
RCRA	RCR	MOD029860392	STATE LINE CLEANERS	7827 STATE LINE RD	KANSAS CITY	MO	64114

Facility Characteristics

Data Dictionary

Statute	Source ID	Universe	Status	Areas	Permit Expiration Date	Latitude/ Longitude	Indian Country?	SIC Codes	NAICS Codes
	110001466155					LRT: 38.987123 , -94.608022	No		
CAA	2909502132	Minor (Not Fed.Rep.)	Permanently Closed	SIP			NA	7216	812320
RCRA	MOD029860392		Inactive				No		

If the CWA permit is past its expiration date, this normally means that the permitting authority has not yet issued a new permit. In these situations, the expired permit is normally administratively extended and kept in effect until the new permit is issued.

For the RCRA program, activities that contribute to an overall facility status of Active are displayed in parentheses using the acronym HPACS, where H indicates handler activities, P - permitting, A - corrective action, C - converter, and S - state-specific. More information is available in the Data Dictionary.

Evaluating Results

"…Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail"

Council on Environmental Quality, 40 CFR 1500.1(b)

- Must ***analyze*** the data = field inspection, past uses, government records, consultations (EPA, State)…
  - Is facility located w/in the ASTM Search distance?
  - Up-gradient or cross-gradient (Topo map)?
  - Record of compliance problems (ECHO)?
- Time to call in a professional?

Buyer Beware

- Property sold “as is”
- Reluctance to allow inspection
- Reluctance to disclose information about property
- Unexplained concession in price
- Hurried transaction

Lessons Learned

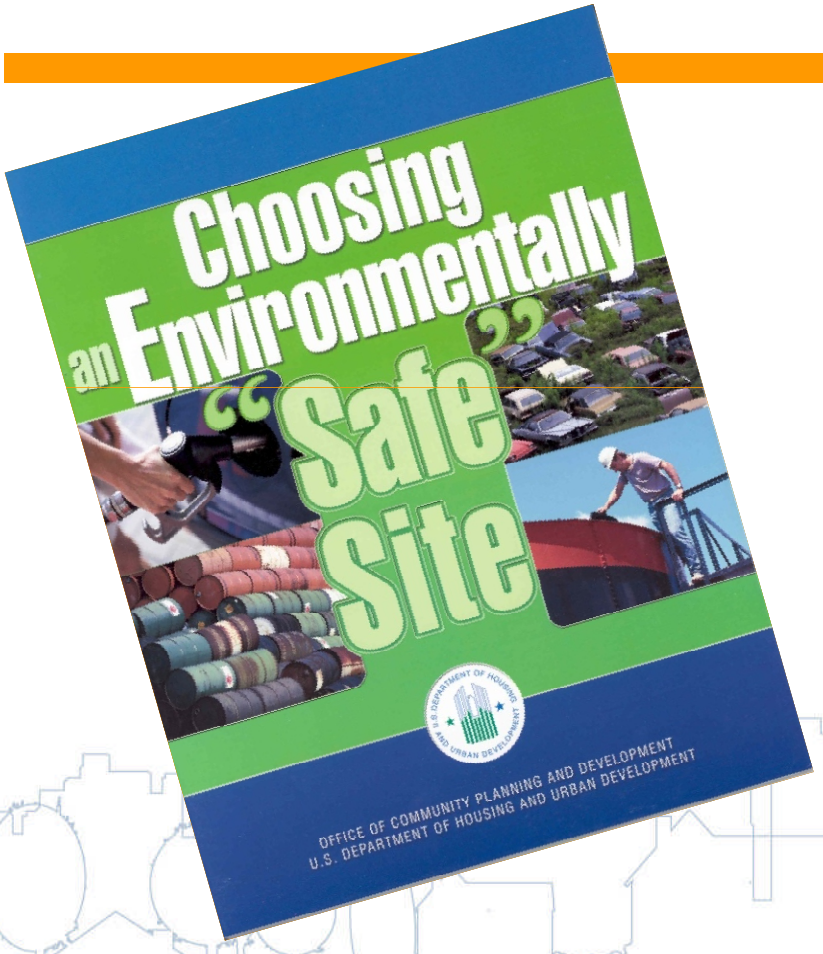
Call in qualified professional (EP) when needed

- Require report format in ASTM Appendix X4
- Ensure EP's report is complete

If not using EP, document ***WHY*** site is safe – requires analysis, supported by

- Field inspection checklist with site photos
- Topographic maps
- EPA, State, local & tribal databases
- Consultation with EPA, state, tribal, local staff

Choosing an Environmentally Safe Site



Guidance designed to assist sponsors or owners participating in the Multifamily Housing Section 202 and Section 811 programs, as well as other HUD program participants, grant recipients, and Responsible Entities considering sites that may have environmental risks.

September 2006

Resources

- HUD "Choosing an Environmentally Safe Site"
  http://archives.hud.gov/funding/2008/safesite.pdf
- Local HUD Environmental Staff
  http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/contact
- HUD Multifamily Accelerated Processing (MAP) Guide (#4430G, Nov 2011) - Chapter 9
  http://portal.hud.gov/hudportal/documents/huddoc?id=4430GHSGG-bm.pdf
- ATSDR "ToxFAQs" hazardous substances summaries
  http://www.atsdr.cdc.gov/toxfaqs/index.asp

Resources

- EPA NEPAssist
  http://nepassisttool.epa.gov/nepassist/entry.aspx
- EPA Envirofacts
  http://www.epa.gov/enviro/
- EPA Enforcement & Compliance History Online (ECHO)
  http://www.epa-echo.gov/echo/index.html
- ASTM Phase I Standard Practice for ESA (E 1527-05)
  http://www.astm.org/Standards/E1527.htm

Questions, Comments, Concerns

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Thank You For Participating

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