



TIERED DUE DILIGENCE

Efficacy of Databases and Transaction Screens

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EPAZ

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**An Analysis of Tiered Environmental Due Diligence:
What Can be Missed?**



Environmental Transaction Screens

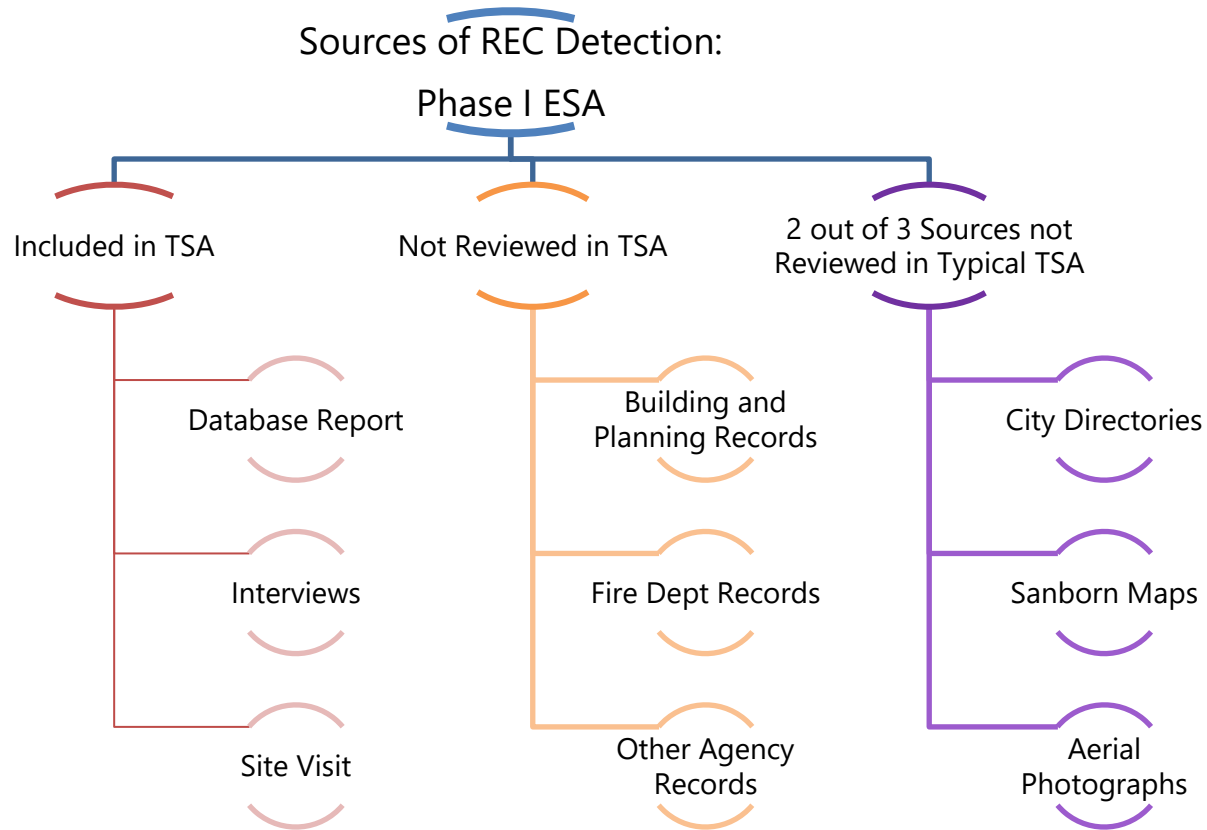
A review required under the typical ETS would miss information from the following sources:

- Planning records
- Building Department records
- Fire Department records
- Other regulatory records
- Potentially two out of three historical sources; including Historical Aerial Photographs, City Directories and Sanborn Fire Insurance Maps

Our Questions

- Do Environmental Transaction Screens miss critical information that could influence the decisions being made regarding the environmental risks posed by a property?
- How often is it missed?
- When there is a miss, how “bad” is it?

Sources of REC Detection



Our Methods

- Focus on an asset class that transaction screens are most often utilized for-Multifamily.
- Work “backwards” and focus on the properties where a known potential problem existed.
- Partner reviewed and analyzed data from 138 separate Phase II ESAs that were completed on multifamily properties in which a REC was identified to evaluate issues potentially missed if a TSA was performed instead of the Phase I.

Methods

Review of the data resulted in the identification of three categories:

- RECs that would be missed by a TSA with the following sub-categories:
 - **Sub Category A** - A REC that would have been missed in a TSA due to lack of a review of a building department record, fire department record, or other agency file review - sources which are not required to be reviewed in a TSA.
 - **Sub Category B** - A REC that would have been missed in a TSA because only one out of three historical sources were reviewed.
- RECs that were not adequately analyzed by a TSA because the sources reviewed did not contain enough information to correctly categorize the risk.
- RECs that would have in fact been identified in a standard TSA source.

Findings- How often is it missed?

- Fourteen out of 138 Phase I ESAs (10%) identified RECs that would have been completely missed by a TSA.
- One of these Phase I ESAs identified a REC that would have been missed by a TSA due to the TSA's lack of building record reviews
- Thirteen of the Phase I ESAs identified RECs that would have been missed by a TSA if only one out of three historical sources were reviewed.
- Over half of the environmental issues identified by a TSA (60%) were difficult to quantify

Findings	
RECs that would be missed by a TSA	10%
Sub Category A	0.7%
Sub Category B	9.3%
RECs that weren't missed by a TSA but could have been because the sources reviewed did not contain enough information to categorize the risk correctly	60%
RECs that were not missed by a TSA	40%

Methods- How bad is the miss?

Partner assigned approximate remedial costs to each REC type based on an analysis of 145 Remedial Cost Estimates prepared by Partner on similar types of projects

Average Remedial Cost Estimate (\$)*			
Property/Feature	20% confidence level	Average	80% confidence level
All Sites	350,000	590,000	1,050,000
USTs	400,000	485,000	910,000
Auto Dealerships	40,480	166,000	360,000
Dry Cleaners	255,750	380,000	1,000,000

Findings

- 10% of all TSA reports may be missing a REC that could result in environmental liabilities amounting to over \$1 million in investigation, remediation, and regulatory oversight fees
- There were RECs that would not have been sufficiently identified, characterized and/or analyzed by the TSA because of a lack of sufficient information – and this lack of adequate identification, characterization and analysis occurred up to 60% of the time.

Important Note

- Multifamily properties exhibit the lowest risk type of commercial real estate, if a TSA or less rigorous environmental due diligence product was used for those higher risk property types, the resulting environmental liabilities would likely be far higher.
- Remediation costs do not include other significant costs, damages and other expenses such as loss of revenue due to uninhabitability of the site, stigma damages, diminution in value, and potential liability associated with the contamination migrating beyond the boundaries of the site, implicating property damage claims from adjacent landowners.

Case Study - When a City Directory is the Only Source of a REC

- A Phase I ESA for multifamily property constructed in the 1980s. Historically, the property was developed with a multi-tenant commercial building.
- City directories revealed that a dry-cleaning plant occupied the property from as early as 1947 to 1975.
- Dry-cleaning plant was not identified in any other historical sources.
- Sanborn maps dated prior to the 1980s
- Environmental database report did not identify the dry-cleaning plant due to its operation prior to a time of active regulatory oversight.
- Phase II found significant contamination. It took 3 years to remediate the property at a cost exceeding \$850,000.

Case Study

- A TSA instead of a Phase I ESA could have reviewed only aerial photographs or Sanborn fire insurance maps , skipping City Directories entirely, which would not have identified the existence of the dry-cleaning plant.
- Therefore, for a cost savings of only \$1,000 to \$1,500 in lieu of ordering a Phase I ESA, over \$850,000 in hard losses and several million dollars in potential toxic tort liability was incurred.
- This illustration of the importance of reviewing all available historical sources shows the potential monetary and human health consequences of the limited number of historical sources included in a TSA.