

# Using Environmental Matters to Create Deal Value

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# Why go beyond the Phase I ESA?

The mergers and acquisition process is complicated, and investors juggle many moving pieces during a compressed and aggressive transaction schedule.

Often the environmental due diligence portion consists of the Phase I Environmental Site Assessment (Phase I ESA). This is useful for:

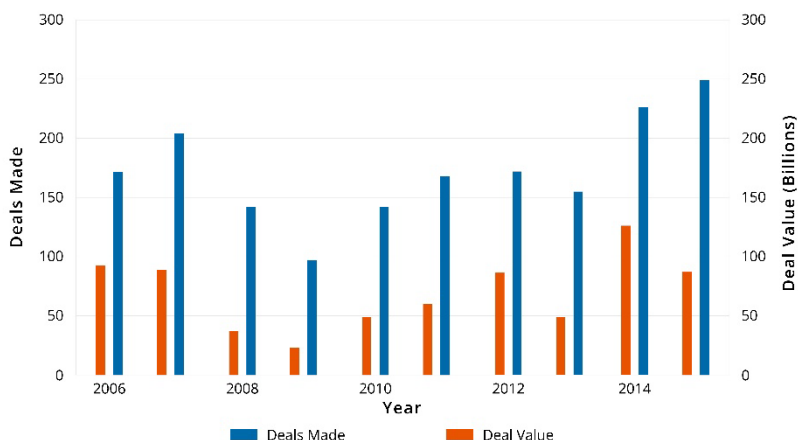
- (1) identifying potential sources of on-site pollution-related liabilities and;
- (2) establishing certain legal defenses related to those liabilities.

However, if the an investor intends to operate an entity as a going concern, other environmentally-related liabilities and assets may be present which would not be contemplated as part of the Phase I ESA.

These additional assets and liabilities, if properly quantified and negotiated, can profoundly affect ROI.

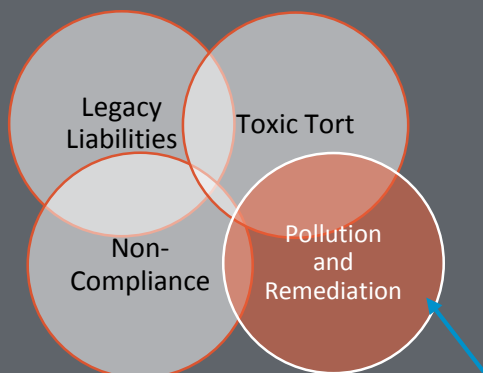
## 10-Year Historical Data for Industrial Manufacturing M&A Activity

Source: PwC, "Assembling value Highlights Executive summary Deal activity Deal market characteristics Large deals Methodology Fourth-quarter 2015 industrial manufacturing industry mergers and acquisitions analysis," 2016.

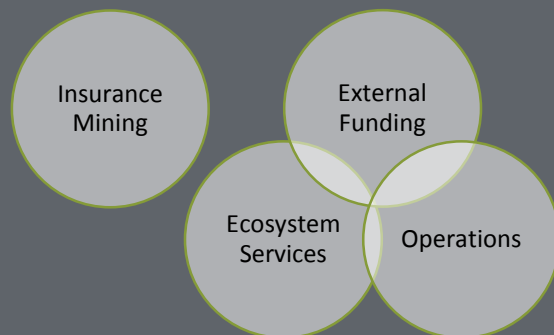


*Global M&A deal volume is trending up but deal value (for deals >\$50MM) is down at the end of Q4 2016. So, identifying additional sources of value, such as environmental liabilities and assets, is critical.*

## Sources of Environmental Deal Value in M&A



Limits of  
Phase 1 ESA



# Uncovering Hidden Sources of Value

“The industrial real estate sector can capitalize on the high M&A activity, in part because the real estate impact from these mergers is not typically a top consideration during negotiations and is at times overlooked completely until the deal is done, according to Greg Matter of JLL.

“What seems like such common sense to us in the property business is often not thought about until after the deal is completed—which is unfortunate, because there’s a lot of value to be found in these assets today.”

Quoted from “[High deal volume in Manufacturing creates deal value for Industrial Owners](#)” National Real Estate Investor, April 1, 2016

1. **Non-Compliance issues** - Evaluate operations-related non-compliance issues, such as missing environmental permits, ongoing violations, and worker safety violations
2. **Evaluate legacy liabilities** – If the target retains liabilities for formerly held properties, those are transferred to the purchaser during a stock deal. Similarly, liabilities related to off-site legacy disposal issues may also transfer.
3. **Assess the presence of environmental assets**. Typical examples include untapped tax credits for on-site wetlands or sources of project funding or operational efficiencies.
4. **Quantify**. Estimated costs should be developed for any environmental assets or liabilities identified. These can be used to negotiate purchase price adjustments, set up escrows, or otherwise shift risks to the other party.
5. **Environmental Reserves**. The adequacy or deficiency of the target’s environmental reserves should be evaluated.

*Case studies that illustrate these steps are presented in the following pages.*

# Evaluating Non-Compliance

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When an investor purchases an operation as a going concern, the investor also takes on the liabilities associated with non-compliance. These can include both environmental issues (e.g., missing permits, plans or control measures) as well as worker safety (i.e., OSHA matters).

Non-compliance matters are commonly present, but are not evaluated as part of a Phase I ESA. Consequently, investors who do not evaluate compliance as part of due diligence activities leave money on the table at the closing, and miss out on an opportunity to create value prior to the investment exit.



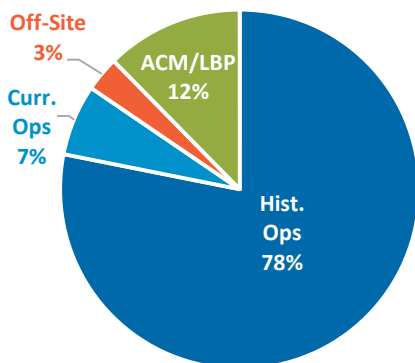
# Case Study: Evaluating Non-Compliance

## Situation:

- Investor sought to purchase stock of a privately held high-end appliance manufacturer.
- Target owned 79 total properties
- 8 Manufacturing facilities + showroom and training facilities
- Hangars, Hotels, Gas Stations, and more
- Assorted legacy properties

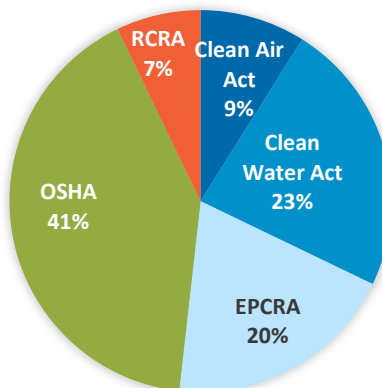
## Findings

### Phase I ESA Findings:



Key Phase I ESA Concerns: **57**  
Cost to Cure: **\$5,923,000**

### Compliance Findings:



No. Compliance Issues: **56**  
Cost to Cure: **\$717,000**

## Outcome

### Finding summary:

- Compliance issues accounted for almost 11% of liabilities
- Due diligence spend was approx. 1.5% of liabilities identified

### Strategy:

- Costs placed in escrow at seller's expense.
- Indemnities for legacy properties

### Effect on Financials:

- Added >11%/yr to EBITDA (3-yr amortization)
- Doesn't include indemnities for potential toxic tort cases

# Evaluating Legacy Liabilities

Probably the biggest source of environmentally related “left-tail risk” in a transaction, legacy liabilities consist primarily of:

- (1) Formerly owned contaminated property for which liability was retained after a sale, and
- (2) Historic operational decisions that affect off-site, unowned properties (e.g., waste disposed at an unsuitable landfill).

Legacy liabilities are of particular concern during a stock purchase transaction. Because legacy liabilities relate to properties unowned at the time of the transaction, they are not uncovered during a Phase I ESA.

Unidentified legacy liabilities have a strongly negative effect on ROI for the following reasons:

- Cost-to-cure for legacy issues tends to be high;
- Responsibility for remedies can be multi-party, which leads to complicated relationships, and possible lawsuits;
- They are typically associated with unowned properties, which further complicates access and flexibility in coping with the problem.

*“...Successor liabilities challenge the most thorough due diligence, and present the risk of tremendous financial liabilities. Indeed, few issues have the potential to derail a deal more from a liability standpoint.”*

-- ACE Insurance Progress Report, “M&A Risk Management: Avoiding Pitfalls, Finding Solutions.”

# Case Study: Evaluating Legacy Liabilities

## Situation:

Investor sought to purchase a company who produced industrial coils, and who had been in operation for >50 years. The process generated waste solvents from degreasing the coils. Historically, the solvents had been dumped in an on-site wetlands. These impacts would have been identified during a basic Phase I ESA.,

However, as part of a legacy liability review, it was identified that solvents were also sent to a municipal landfill across the street, which was not equipped or permitted to accept hazardous wastes.

## Findings

Although the off-site landfill was not owned by the target:

- The solvents sent to the landfill resulted in significant groundwater contamination
- The contaminants in the groundwater migrated back to the target property, and created a hazardous condition, and possible toxic tort situation.
- Because the target contributed to the landfill contamination, it also retained liability for those impacts

## Outcome

Because the legacy issues were identified during due diligence, the purchaser mitigated risk through the following:

- Negotiating an escrow to install a vapor intrusion system to eliminate on-site hazards, and reduce the potential for a toxic tort claim;
- Obtaining an indemnity from the seller related to any off-site legacy issues (i.e., improper landfill disposal);
- Obtaining a pollution Legal Liability (PLL) insurance policy, at the seller's expense, to backstop future claims related to the landfill impacts.

# Evaluating Environmental Reserves

SEC Regulation S-K requires businesses to disclose future risks that are known to management and which are reasonably likely to have material effects on a company's financial condition. Narrative disclosure requirements and guidelines as prescribed by Sarbanes-Oxley regulations (SEC Regulations S-K Items 101, 103, and 303) and GAAP requirements specified by the Financial Accounting Standards Board (FASB).

An overfunded reserve may be an untapped source of cash in the deal. By contrast, an underfunded reserve can unexpectedly impede cash flow or result in a shareholder lawsuit.

Scenario	Treatment / Technology	Fair Value - Investigation / Remediation Costs (0-50 years)	Cost Savings	Low End	High End	Scenario Weight		Most-Likely Value & Cost Savings
						Low End	High End	
Scenario A - Spot Removal / GW Pump & Treat / In-situ Chemical Oxidation		\$12,137,413	(\$6,790,000)	\$48,976,210	(\$4,431,000)	50%	50%	(\$5,600,000)
Scenario B - GW Pump & Treat / In-situ Chemical Oxidation		\$9,151,488	(\$1,555,000)	\$18,183,254	(\$771,000)	50%	50%	\$25,000,000
Scenario B - GW Pump & Treat / In-situ Chemical Oxidation		\$12,143,463	(\$6,790,000)	\$32,207,379	(\$4,431,000)	50%	50%	\$13,700,000
Scenario B - GW Pump & Treat / In-situ Chemical Oxidation		\$9,157,538	(\$1,555,000)	\$18,741,379	(\$771,000)	50%	50%	(\$1,200,000)
Scenario C - GW Pump & Treat / In-situ Thermal Desorption		\$17,656,679	(\$6,790,000)	\$63,786,436	(\$4,431,000)	50%	50%	\$12,500,000
Scenario C - GW Pump & Treat / In-situ Thermal Desorption		\$13,795,754	(\$1,555,000)	\$30,164,158	(\$771,000)	50%	50%	\$22,200,000
Scenario D - Reactive Barrier		\$12,596,856	\$0	\$33,288,758	\$0	50%	50%	(\$5,600,000)
Scenario D - Reactive Barrier						50%	50%	\$35,100,000
						50%	50%	\$22,000,000
						50%	50%	(\$1,200,000)
						50%	50%	\$20,800,000
						50%	50%	\$22,900,000

# Case Study: Evaluating Environmental Reserves

## Situation:

A global manufacturing company acquired a firm with over 50 owned or legacy sites in North America. Many of the acquired sites had been operated industrially for over a century, and included manufacturing facilities, landfills, warehouses, and an airport hangar.

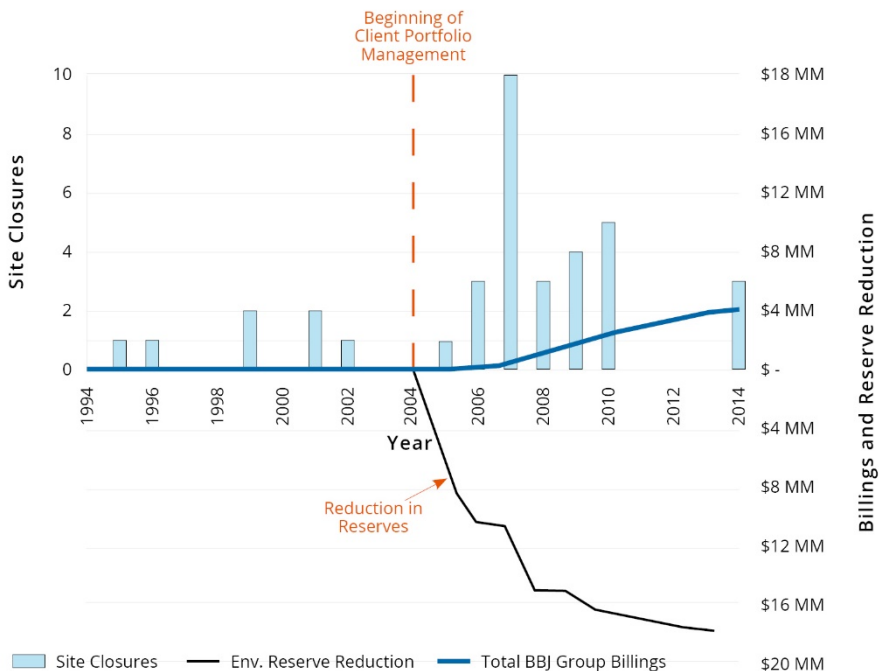
The acquired firm maintained an environmental reserve of over \$30MM. The basis for developing this initial estimate was unknown. The acquired firm's historic approach to managing liabilities was to investigate or closing issues only after state environmental agencies pursued them to do so.

## Approach

- Review historic documentation
- Develop defensible cost model for reserve estimates
- Identify cost-effective approaches to manage and exit issues
- Return excess reserves to shareholders

## Outcome

Client Savings through BBJ Group Management



- Environmental reserve was reduced by \$18 million while spending only \$4 million to address issues
- Sites closure rate increased from 1-2 per year to an average of 5 per year
- Closing environmental issues made disposition of surplus property easier.
- Excess environmental reserve was returned to shareholders.

# Evaluating Environmental Assets

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Often due diligence focuses on a target's environmental liabilities, and certainly those are the focus of a Phase I ESA. However, environmental assets can be available in certain situations, too. For example:

- **Natural Resources** – Wetlands and critical habitat can be sources of tax credits or salable ecosystem service credits.
- **External Funding** – If a property is redeveloped, particularly in conjunction with a municipality, external funding sources may be available to off-set remediation costs.
- **Insurance** – Older operations may have insurance policies that pre-date more modern policies that would have environmental exclusions. These older policies may be used to fund remediation of legacy environmental issues.



# Case Study: Evaluating Environmental Assets

## Situation:

- Developer purchased a former explosives manufacturing facility in New Jersey (~400 acres)
- Unexploded ordnance on the site resulted in unexpectedly high remediation and development costs
- Solvents present on-site also increased development costs
- Development was “upside-down” financially as a result



## Approach

- The site included numerous acres of wetlands and critical, but degraded habitat for the endangered Wood Turtle.
- A Wetland Impact and Mitigation Plan was developed to account for the following:
  - Improve Degraded wetlands on-site (12.8 acres)
  - Opportunities to create additional wetlands (45 acres)
  - Improve Wood Turtle habitat.
- Sell wetland credits to the New Jersey Turnpike Authority, who sought to expand the Turnpike.



## Outcome

The estimated cost of remediation was over \$2.1MM. This was offset by the sale of the ecosystem service credits, valued at approximately \$4.5MM. As a result, a negative ROI project became a positive ROI project.



# Takeaways

For many investors, environmental due diligence consists of the Phase I ESA. When purchasing real estate only, such an approach may be adequate. However, for those engaged in M&A, limiting due diligence only to a Phase I ESA has the potential to miss common liabilities, such as non-compliance issues and legacy liabilities. Similarly, a Phase I ESA may not identify environmental assets such as ecosystem service credits.

A more robust due diligence program can more comprehensively quantify risks with an acquisition, and often within a similar timeframe as conducting only Phase I ESA. Identifying and then quantifying these risks and opportunities allows savvy purchasers to maximize ROI by:

- Negotiating a more favorable purchase price;
- Establishing escrows for liabilities;
- Shifting deal risk through indemnities, contracts, and insurance;
- Creating exit value by eliminating non-compliance from the operations; and
- Reducing the potential for left-tail outcomes resultant from toxic tort lawsuits or unforeseen legacy liabilities.

As appropriate, investors can identify by augmenting basic due diligence Phase I ESA :

- Limited Compliance Review of State and Federal Environmental Regulations;
- Reviewing operations for non-compliance with OSHA standards;
- Taking a “deep dive” into legacy operations to identify the potential for legacy liabilities;
- Evaluating the adequacy of the target’s environmental reserves; and
- Assessing the presence of any on-site environmental assets

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