Environmental Insurance and Reinsurance

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Section I

Environmental Insurance: A Brief History

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Polling Question #1

Do you agree with this statement?

"The pollution exclusion in the CGL policy provides strong protection for (re)insurers from environmental exposures"

Select one:

1. Strongly agree
2. Somewhat agree
3. Not at all

Pollution Exclusion on CGL Policy: History

1973 — CGL Endorsement
In response to the legal and social environment, ISO created a pollution exclusion endorsement that became part of their 1973 CGL form

1984 — Absolute Exclusion
As a result of legal challenge developments, it became apparent that a successor exclusion was needed, which led to adoption of the "absolute" pollution exclusion by ISO in 1984

1988 — Hostile Fire Exception
A few years later, the 'hostile fire' exception was added to the exclusion, which was incorporated into the main body of the CGL form in 1988.

1990-95 — Custom Exclusions
Despite the intended "absolute" nature of this exclusion, there was continuing litigation and controversy, so ISO and many carriers adopted their own "total" pollution exclusion during the 1990-95 timeframe.

Love Canal
The Love Canal disaster, uncovered in the late 1970s, helped lead to federal Superfund legislation in 1980

Can we rely on the *"Total Pollution Exclusion?"*

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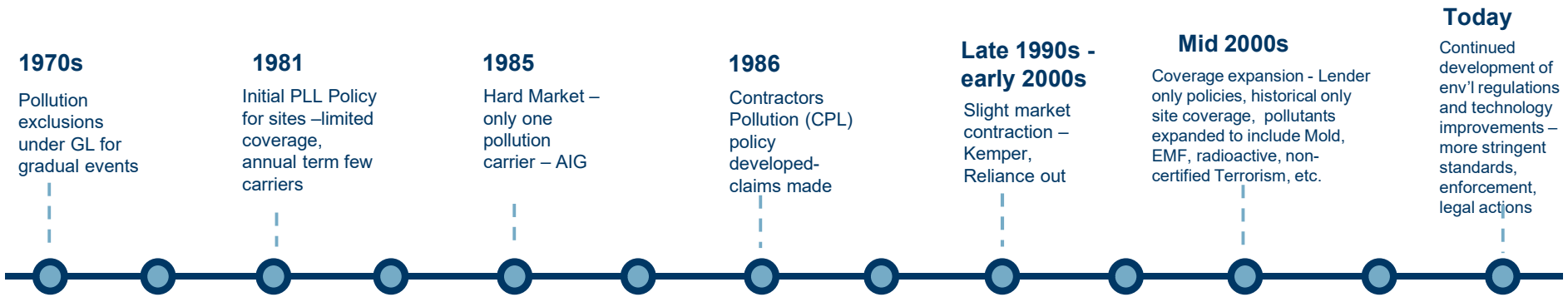
Environmental Insurance: A Brief History



1970s
Pollution exclusions under GL for gradual events

1980
New Environmental Regulations (RCRA, CERCLA) - financial requirement

1981
Initial PLL Policy for sites –limited coverage, annual term few carriers

1984
40+ carriers offering ISO form – mostly casualty underwriters

1985
Hard Market – only one pollution carrier – AIG

1986-1990
Market Slowly expanded to several environmental carriers – AIG; ECS/Reliance, Zurich – PLL coverage to include on-site coverage

1986
Contractors Pollution (CPL) policy developed- claims made

1990s
Several new carriers, market expansion, new coverage offerings: Occurrence CPL, Professional Liability added, Multi-Year PLLs, Cost-Cap coverage, Closure/Post Closure

Late 1990s - early 2000s
Slight market contraction – Kemper, Reliance out

Mid 2000s
Several New Markets – ACE, Chubb, Great American

Mid 2000s
Coverage expansion - Lender only policies, historical only site coverage, pollutants expanded to include Mold, EMF, radioactive, non-certified Terrorism, etc.

Late 2000s-Today
Significant market expansion: 40+ carriers, expanded coverage, higher limits, rate reductions, etc.

Today
Continued development of env'l regulations and technology improvements – more stringent standards, enforcement, legal actions

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Section II

Current Marketplace (Pre-COVID-19)

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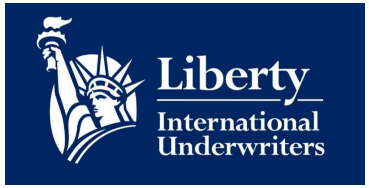
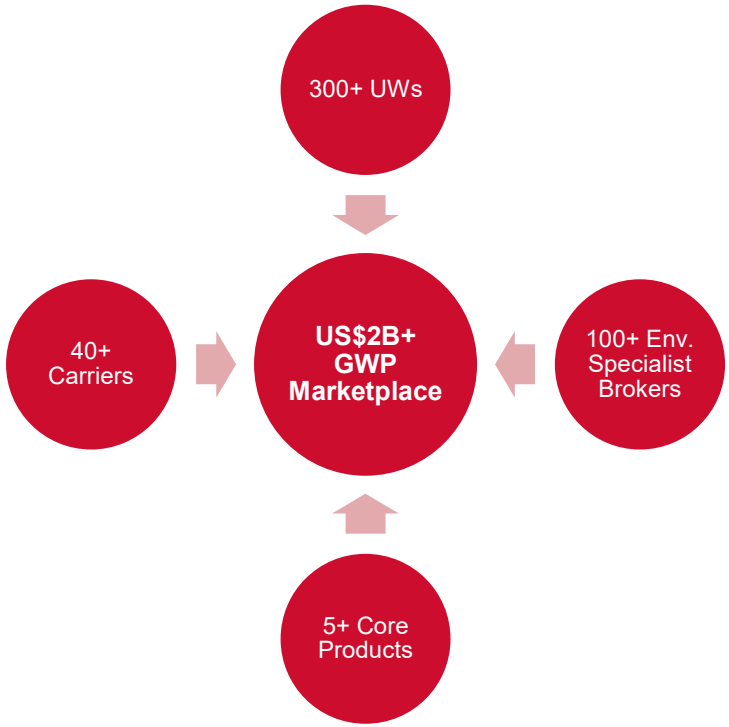
Competitive Landscape: 2007



Competitive Landscape: Today

US Environmental Marketplace Overview



- 20-30% of Direct EIL premium is ceded to reinsurers
- International EIL market estimated to be 10-20% of the US

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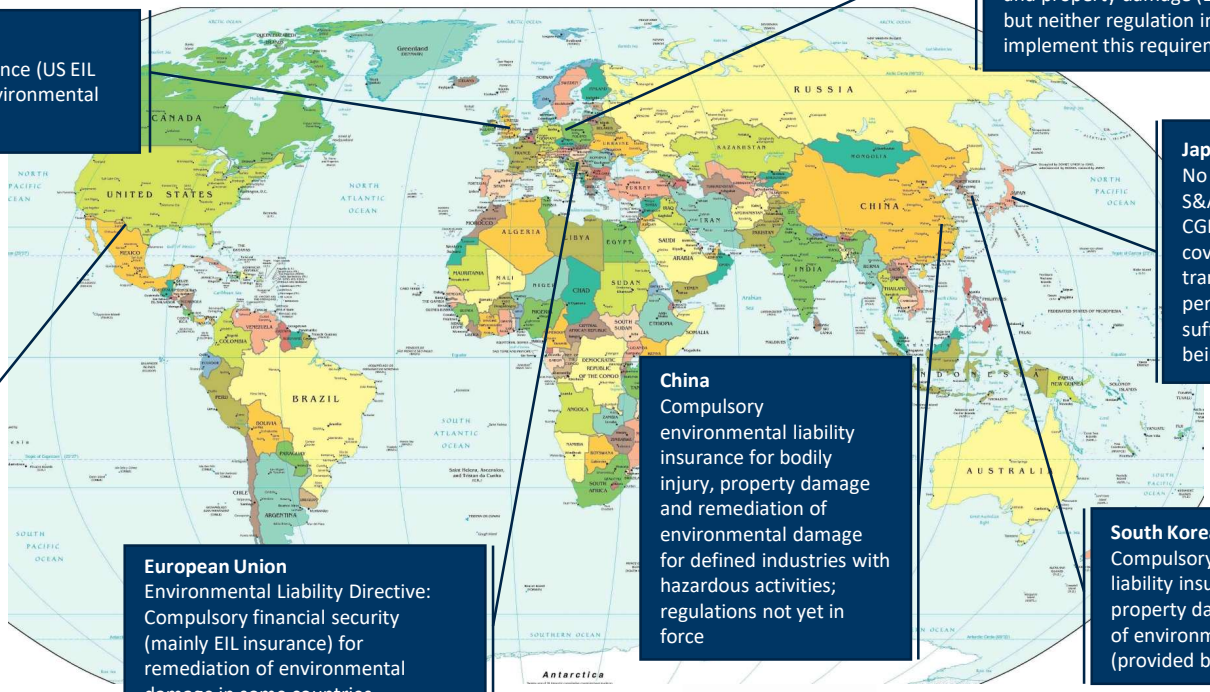
Environmental Insurance is a Global Issue

United Kingdom
Increasing demand for EIL insurance (US EIL style) despite no compulsory environmental liability insurance regime

Germany
Compulsory environmental liability for bodily injury and property damage (Environmental Liability Act, but neither regulation in force nor planned to implement this requirement since 1990)



Japan
No specific activities; S&A pollution covers in CGL and some selected covers for EIL mainly transactional business perceived to be sufficient for the time being

Mexico
Compulsory environmental liability insurance for sudden & accidental pollution incidents for Oil & Gas industries

China
Compulsory environmental liability insurance for bodily injury, property damage and remediation of environmental damage for defined industries with hazardous activities; regulations not yet in force

European Union
Environmental Liability Directive: Compulsory financial security (mainly EIL insurance) for remediation of environmental damage in some countries

South Korea
Compulsory environmental liability insurance for bodily injury, property damage and remediation of environmental damage (provided by EIL Pool)

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Section III

Core Products Available

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Polling Question #2

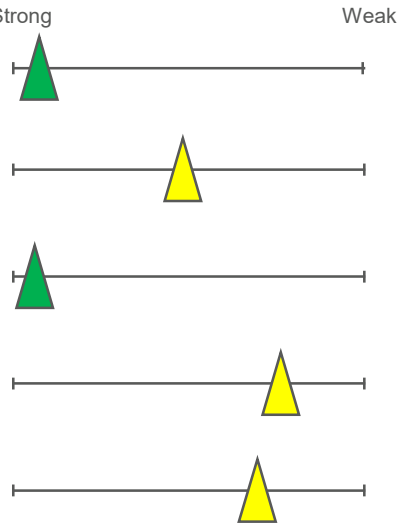
Which of these companies should consider purchasing an Environmental policy?

Select one:

1. Apartment building owner
2. Residential contractor
3. A company that has never had an environmental claim
4. All of the above: Every company should consider their risks and evaluate the benefits of an EIL policy

Who buys and why

Driver	Buyer Motivation
I. Compulsory coverage (Tanks, Regulatory)	Strong
II. Contractual / lender requirements (Real Estate)	
III. High risk operations (Oil & Gas, Power, Mining)	
IV. Risk management	
V. Emerging risk issues (Odor, Legionella)	Weak



- ✓ Regulatory obligation
- ✓ Perceived true exposure
- ✓ Good risk management
- ✓ The bank/lender told them to
- ✓ To satisfy contractual obligations

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Core Business: Sites

COMMERCIAL FACILITIES
Including food and warehouse facilities, airports and universities.

REAL ESTATE PROPERTIES
Including apartments, condominiums, hotels, offices and shopping centers.

MUNICIPALITIES AND UTILITIES

HEALTHCARE FACILITIES
Including hospitals, healthcare centers and nursing homes.

ENVIRONMENTAL FACILITIES
Including landfills, recyclers and treatment plants.

INDUSTRIAL FACILITIES
Including light and general manufacturing plants and treatment plants.

CHEMICAL/PETROLEUM FACILITIES
Including distribution, manufacturing and storage facilities.

Premises Liability

- Limits of liability up to $50M from certain carriers
- Policy terms up to 10 years
- Aggressive minimum premiums by coverage type
- Covers locations in the U.S., U.S. territories, and Canada, International coverage available through some carriers or via parental guarantee

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Core Business: Services

Alternative Energy Contractors

HVAC Contractors

Utility Contractors

Demolition Contractors

Construction Managers / General Contractors

Plumbing Contractors

Design/Build Contractors

Drilling Contractors

Painting Contractors

Contracting

- Limits of liability up to $50M from certain carriers
- Policy terms up to three years
- Aggressive minimum premiums
- Covers locations in the U.S., U.S. territories, Canada, and other select countries

Contracting: Project Specific

- Limits of liability up to $50M from certain carriers
- Policy terms up to 10 years; 12 years completed ops; max 17 years combined
- Minimum premiums vary by carrier
- Covers locations in the U.S., U.S. territories, Canada, and other select countries

Professional and Contracting Combined

- Limits of liability up to $50M from certain carriers
- One year policy term for practice policies
- Greater minimum premium than for pollution only
- Covers professional and contracting services in the U.S. and Canada, including incidental foreign exposures

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Other Products: Excess, Lenders, Closure / Post-Closure

Excess

- Limits of liability up to $50M from certain carriers
- Aggregate Limits of $300M+ available in marketplace
- Up to 10 year policy term
- $50,000 average minimum premiums

Lenders

- Limits of liability up to $50M from certain carriers
- Up to 13 year policy term for Lenders/Banks

Closure / Post-Closure

- Limits of liability up to $50 million in the aggregate
- One-year policy term
- $25,000 minimum premium for annual policy
- Covered locations in U.S., U.S. territories

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Section IV

Environmental Liability Exposures – Sites

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Does your Insured have Exposure?

Underwriting Considerations

"I've never had a pollution loss."

Pollution losses have become both a **severity** and **frequency** issue - so many more companies have experienced losses which could be very painful.

Almost everyone is exposed to environmental risk

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Polling Question #3

Which of the following pollutants is not a potential hazard under an Environmental policy?

Select one:

1. Cleaning fluids spilled into groundwater
2. Microscopic dust containing irritants
3. Acid gas released in a residential area
4. Campaign slogans leading up to the next election

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Habitational / Hospitality Sites

- Mold
- Lead-based paint and asbestos
- Above and underground storage tanks
- Contamination from past use of property (built on brownfield)
- Migration from off-site sources (vapor intrusion)
- Carpets, paints, cleaning chemicals, herbicides, pesticides
- Violent crimes (Biological Hazards)
- Meth labs

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Retail Properties

Dry cleaners	Gas stations	Auto servicing and oil lube centers
Contamination from adjacent properties	Mold	Asbestos and Lead-based Paint

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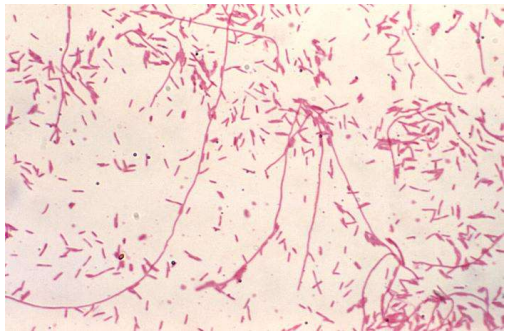
Other Commercial Buildings (Offices, Hotels, Casinos)



Legionella	Indoor air quality	Medical use and medical-wastes
Mold	Pollutants in the cooling systems	Historical contamination

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Redevelopment Sites

- Historical operations / proximity to contaminated sites
- Development costs: Underwrite shovel risks
- Tort liability: responsible parties, new owners, tenants
- Contaminants: ongoing remediation vs. residuals
- Offsite liabilities: contaminated waterways, adjacent operations
- Re-Openers for new contaminants
- "No further action" does not equal "Clean"
- Lender Obligations

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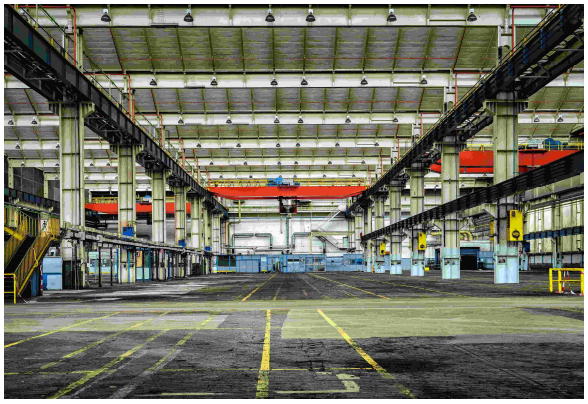
Warehouses / Self-Storage



Cold storage (ammonia) – potential for bodily injury, property damage and business interruption

Chemical storage

Fire releasing pollutants into the air causing evacuations and business interruption

Illicit Abandonment (e.g. Self-Storage warehouse)

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Manufacturing and Industrial

- Pollution from storage of raw materials and wastes
- Releases during processing
- Air emissions
- Emerging pollutants (PFOA)
- Fires
- Adjacent Properties
- Transportation and waste liabilities
- Historical contamination

Section V

Environmental Liability Exposures – Services

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Contractors Pollution: What does it cover?

Coverage Drivers

- Contractual Requirements
- Fungus & Legionella
- Dust
- Fuel, Workplace Chemical Releases
- Construction Defects = Sick Building Syndrome
- Silt & Sedimentation Exposure
- Asbestos
- Lead (not just Lead-Based Paint anymore!)
- Defense
- Emerging Pollutant Risk
- Media Focus on Pollutants
- Peers Experiencing Environmental Claims
- Wood Frame Construction / Climate Change
- ODORS
- Transportation Spills – Loading/unloading
- Waste Disposal PRPs

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Contractors Pollution: Drivers of Growth

- **Contractual requirements being pushed down to subcontractors by**
  - Large GCs
  - Project owners/developers
  - Government entities
- **Increased claim activity:**
  - Fungus/mold events
  - Fuel spills
  - Silt/sedimentation & NRD claims
  - Defense protection
- **Pricing "softness" increasing buyers**
  - Product no longer being perceived as expensive policies with limited coverage
- **Broadening of coverage terms:**
  - CPL
  - Transportation
  - Waste disposal
  - Fungus
  - Defense outside
  - Emergency response
  - Environmental crisis management
- **Increased risk management awareness**
- **Ease of purchase:**
  - On-line portals
  - Automation of small contractors

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Contractors Pollution – Underwriting Considerations

Underwriting

- What do you do?
- History & experience
- Mix of business

Complexity

- Inclusion of Professional Liability
- High Risk Services
  - Wood Frame Construction
  - Oil & Gas
  - Coal Plant Decommissioning

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Section VI

Actuarial Analysis of Environmental Liability Insurance

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Polling Question #4

Do you agree with this statement?

"Standard actuarial methods can be applied to Environmental Insurance"

Select one:

1. Yes, it's no different from any other LOB
2. Yes, but it requires appropriate adjustments
3. No, these are not applicable

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Environmental Books – Not all the same

- Most environmental books have 2-4 core products, with different earning patterns and less correlated risks
- Combined casualty and professional coverages are predominately annual policies (attractive) that earn over 12 months but have both frequency and severity of claims
- Site pollution and some contractors pollution books earn over multiple years but have low frequency of claims and are subject to severity that may develop years after an initial reserve is set

Core Products	Average Term	Risk Frequency	Risk Severity
Site Pollution	2-3 years	Low	Medium - High
Contractors Pollution	1-3 years	Low	Low-Medium
Contractors Pollution + Professional	Annual	Low-Medium	Medium-High
Combined Casualty + Pollution/Professional	Annual	High	Medium-High

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Pricing Considerations: General

	Sites	Services	Package
Exposure	# Locations – often non-linear	Revenue – often non-linear	Revenue
Term	1-3-5 typical for operational Transactional up to 10	One year most common Some multiyear up to 3 Projects up to 6 + Compl. Ops	One year
Coverage provided	First party – cleanup, bus. interruption Third party (BI/PD)	Third party only May include professional	Third party only
Defense coverage	Additional limits, may be capped	Additional limits, may be capped	Outside limits
Coverage trigger	Claims Made	Occurrence / Claims Made	Occurrence
Covered pollution date(s)	Ongoing: present / recent / retro date Historical: preexisting conditions on site Usually combined in single policy	Injury or damage occurring during policy term	During policy term
Classes	Based on type of property / use of location	Type(s) of services performed	GL Classes

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Pricing Considerations: Sites

Class – e.g. Commercial vs. Habitational

 # Locations – factor applied, less than linear

Quality of risk

- Quantitative, e.g. historical claims
- Qualitative, e.g. risk management practices

Additional coverages

- Non-owned disposal sites
- Storage tanks
- Transportation

Additional considerations

- Emissions

Policy Term

- Term factors are often significantly less than linear…
  - More significant underwriting cost for environmental study
  - For historical, elevated exposure during redevelopment
  - Exposure throughout policy term to changing technology and regulations
  - Harder to reconcile for Operational and Services Policies

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Pricing Considerations: Services

Class:

- E.g. Electrical vs. HVAC vs. Oil contractor
- Residential vs. Commercial
- Environmental remediation vs. other services

Revenue – factor applied, less than linear

Quality of risk:

- Quantitative, e.g. historical claims
- Qualitative, e.g. risk management practices

Additional coverages:

- Professional / Design exposure
- Cyber

May be combined into a basket rate or priced individually

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Actuarial Analysis Challenges

Data

- High severity / Low frequency nature means data for large claims (the ones we care most about) is sparse
- Long Term policies and long claim latency means that most industry loss experience is immature

Rate Changes

- Transactional business typically does not renew
- Package policy rate change may be distorted by changing weights of Environmental and other coverages
- Other policy changes can require complex adjustments to capture meaningful rate change
- Impact of factor changes from year to year can be tricky to calculate

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Actuarial Adjustments: How is Environmental Different

	Other lines	Environmental
Earning Premium	Average of two years' WP may be a good estimate	Multiyear nature of policies means that EP can grow slowly over time
On Level Factors	Average of two years' WP factor may be a good estimate	A single year's EP may be comprised of policies written over many years
Triangles / LDFs	Policy Year or Accident/Report Year can work	Policy Year can take much longer to mature, and will be distorted if the term profile has changed
Weighting of historical experience	Usually ok to add total premium and loss from multiple sublines / coverages as long as each is developed appropriately	Due to longer sites terms on average, adding sites and services business will typically overweight services which earns more quickly

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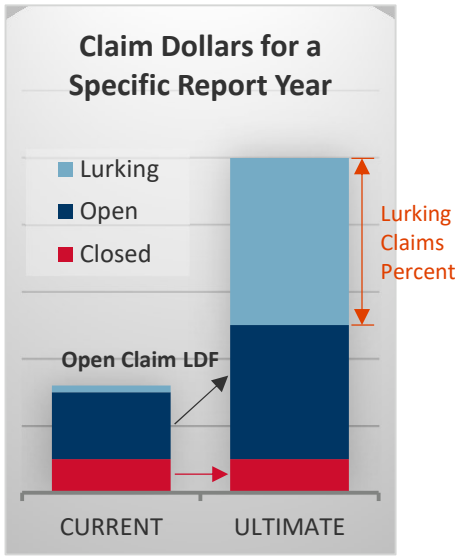
Report Year Severity Approach for Claims Made Coverage

Advantage: All claims known from a given Report Year (RY)
However: Not known which will become major

1. Experience

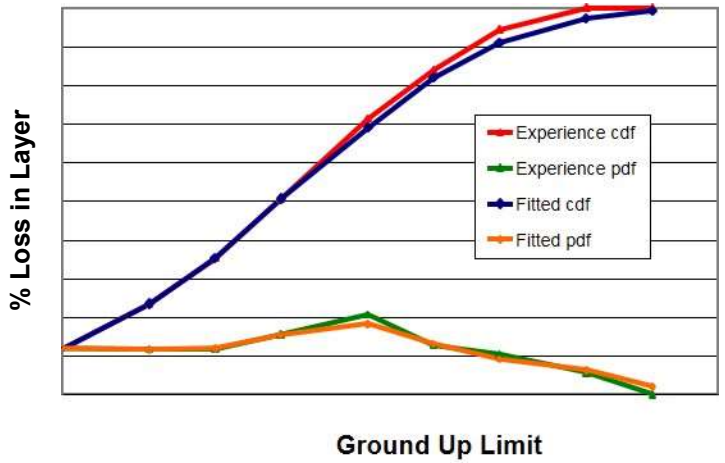
- Develop current claim dollars by component:
  - Lurking claims (early in valuation)
    - Final value is unknown
    - Lurking claims percent to vary by age
  - Open claims (ultimate value estimated)
    - On average, will grow over time
    - Higher LDF than for total claim cohort
  - Closed claims
    - Will not develop further in most cases
- Using the above, estimate ultimate aggregate claim value by layer
- Repeat for each Report Year



Report Year Severity Approach for Claims Made Coverage

2. Exposure

- Postulate a prospective ground up ("PGU") severity distribution
  - Independent of policy attachments and limits
- Detrend to each historical year
- Determine expected loss by layer *if* that (PGU) distribution is correct (A)
- Compare to actual loss by layer (B)
- Minimize the error between (A) and (B) to derive a PGU severity distribution to use for this year's modeling



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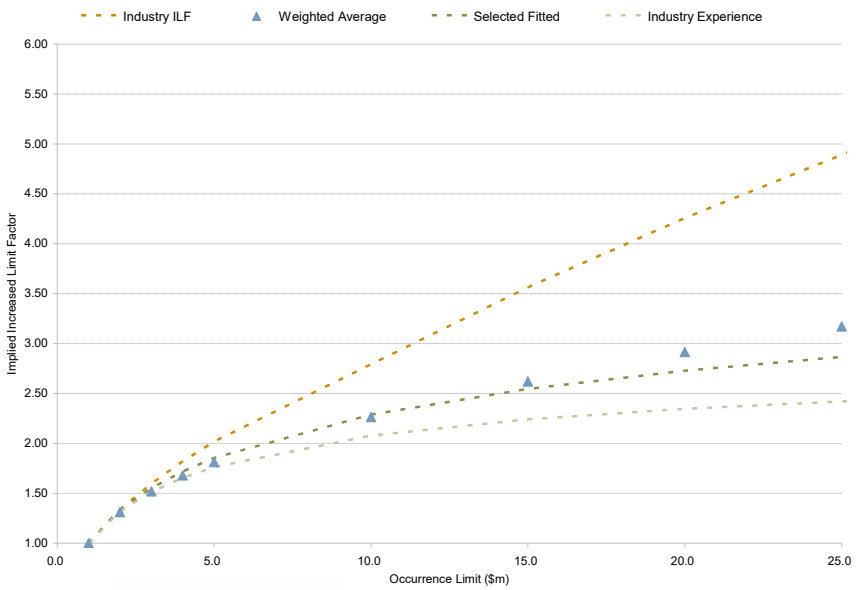
Pricing Considerations: ILFs and Severity

Market ILFs universally imply a much higher severity than has been observed historically

Two sets of theories:

- Coincidence
  - Common Source
  - What the market will bear
  - Irrational fear of the product
- Intelligence
  - Catastrophic potential due to change in:
    - Scientifically accepted thresholds
    - Legislative / Regulatory Doctrine
    - Judicial Award Practices



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Pricing Considerations: SIRs and Limits

Two general approaches:

Apply SIR factor and ILF independently

- This is the simpler, more traditional approach
- Can over- or under-state the impact of the SIR in outlying cases
- May be justified by relying on the high correlation of SIR and Limit

Calculate SIR credit ($) using base limit premium

- Can be facilitated by a difference-of-factors approach
- More common: lookup tables for net ILF using SIR and Limits chosen
- Assumption: Value of SIR is independent of limit… sounds reasonable

Section VII

Claims Trends

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Traditional Environmental Loss Leaders

- Oil & Gas
- Mining Sites
- Redevelopment Sites
- Mold & Legionella
- Dry Cleaners

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Emerging Environmental Claim Challenges

Current Trends

- Emerging Contaminants: PFOAs, 1,4-dioxane, 1-2-3-TCP, Capsaicin, hexavalent chromium
- State remediation and screening levels are being revised = opportunity for reopener
- Extreme weather & natural event – hurricanes, fires, etc.
- Mold
- Citizen Suits: private parties standing in shoes of government, e.g. bay keepers, river keepers

Claims Challenges

- Increasingly challenging claim regulations e.g., OR, WA, CA
- Unfavorable insurance coverage decisions in certain jurisdictions
- Increasing sophistication of opposing coverage counsel and the creative manipulation of product language to attempt to expand coverage where none is intended
- Managing cases within SIR
- Social Inflation

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Section VIII

Looking Forward: Emerging Issues, including COVID-19

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State of the Environmental Market

Growing Market Segment

1. Large percentage of insureds are first time buyers
2. Contractual requirements increasing from GC's, lenders
3. Increased environmental awareness

Contractors Pollution

1. Flat to decreasing rates
2. Near immediate response time
3. Broadest terms and conditions
4. Strong construction rebound, large growth in wrap-up policies, increasing owner/GC requirements

Site Pollution

1. Decreasing rates on most profitable classes
2. Tightening terms and pricing for habitational risks and long-term redevelopment deals
3. Redistribution of UW Talent 2008 – Present
4. Market contraction on long term policies, redevelopment risk

Combined Environmental / Casualty

1. Increasingly competitive space on most profitable classes
2. Significant movement from standard market carriers

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LOOKING FORWARD - MARKET DISRUPTORS

- Excess capital entering marketplace resulting in **new entrants**
- **Continued Soft Market** with rate reductions and coverage enhancements – (AIG new CPL policy)
- **Challenging Legal Climate** in many jurisdictions (WA, CA)
- **Broad Interpretation** of coverage offerings
- **Emerging Contaminants** and **Tightening Standards** (re-opener)
- **New Technologies**
- **Weaker economic** conditions

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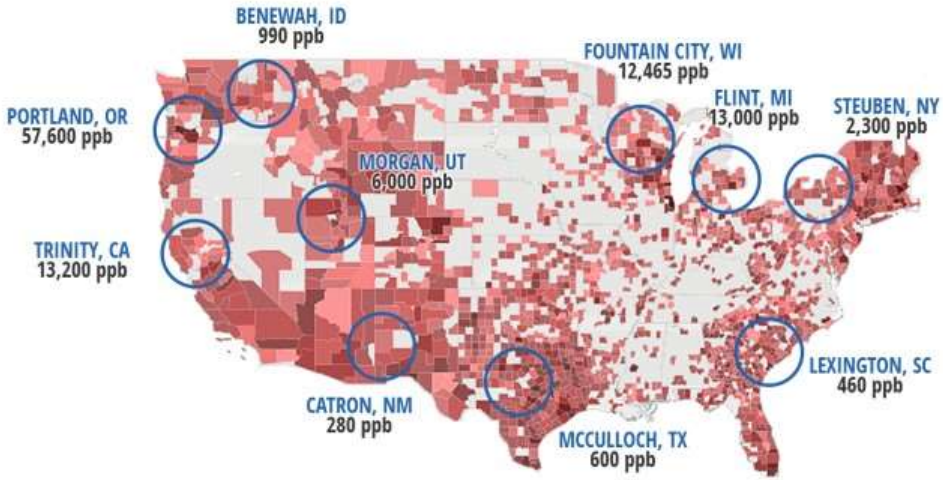
Emerging Risk Issues

Lead in Drinking Water

- Pervasive across the entire US
- Lead is leaching from aging infrastructure with old lead pipes and plumbing fixtures
- Flint water crisis related changing water supplies and then failing to treat water with corrosion inhibitors allowing lead to leach from old pipes



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Potential Impact of COVID-19

Coverage Issues

- Is policy triggered based on Insuring Agreements?
- What coverage grants are being provided: Bodily Injury, Clean-Up Costs, Business Interruption, Disinfection?
- Does COVID-19 fall within the definitions of Pollution Condition? Pollutants?
- Specific Policy Exclusions: Communicable Diseases? Naturally Occurring Materials?

Secondary Issues

- Site specific policies: vacant, unoccupied, unattended buildings, or units – development of mold, legionella, other pollution conditions
- Contractor policies: projects placed on hold or abandoned – development of mold, spills from leaky equipment, pollutant run-offs
- Lender policies: borrowers default on loans leaving lenders to foreclose on potentially contaminated properties
- Credit Risk policies – based on financial stability of guarantor

Other Concerns

- Vacant properties being re-purposed for other uses, Hotels to Hospitals – could increase original exposure
- Re-development of sites not anticipated during underwriting
- Re-occupying closed or vacated sites without proper testing of potential existence of pollutants
- Properties undergoing remediation projects left uncontrolled – could exacerbate pollution conditions

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Polling Question #5

Given the knowledge we have and the risks involved, Environmental Insurance today is:

Select one:

1. By now, well understood and predictable
2. Better understood, but there is still a lot we don't know
3. Uninsurably risky

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Conclusions

Environmental exposure is more common and prevalent than you might think

Environmental insurance isn't as easy to define as some people think

- It isn't all 'environmental'
- Some commonalities with general casualty but also many unique aspects

Global market largely driven by local compulsory requirements

Very difficult to be precise about loss picks of individual segments:

- Low volume of relevant data
- Long development pattern
- High limits and long policy terms
- Driven by severity more than frequency

Lack of correlation can make diverse portfolios more predictable

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Questions and Answers

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Appendix

Case Studies

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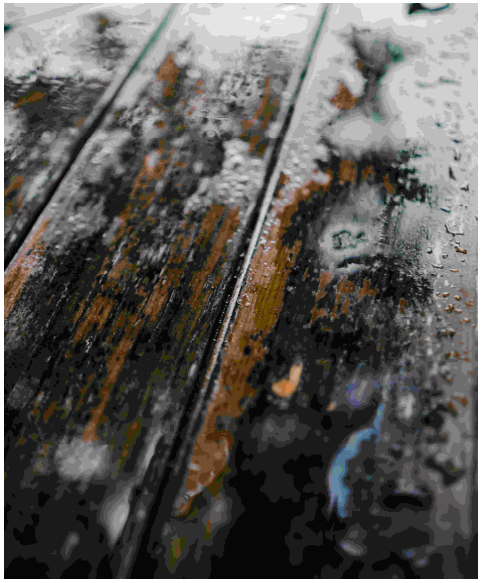
Environmental Claim Example: Apartments – Mold



Widespread mold caused multiple problems for tenants and the property owner. A few years after construction of an upscale apartment community, tenants complained about mold in bathrooms. Multiple buildings and units within the complex experienced similar problems over the next few months. Some tenants moved out and filed claims for alleged bodily injury and property damage. An extensive investigation revealed that construction defects associated with HVAC systems and showers caused severe water intrusion and moisture build-up leading to widespread mold growth. Damages to the property owner included loss of rents, cleanup costs, and settlements with injured tenants totaled over two million dollars.

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Environmental Claim Example: Apartments – Meth Lab

The owner of an apartment building entered a unit that had been vacated and discovered that the renter had left behind an illegal meth lab and related chemicals. The renter could not be located and the landlord was left with the responsibility for the cleanup. Not only did the owner have to clean up the contaminants that had been released into the room, but had to pay to remove the leftover chemicals that were still in containers. Cleanup and disposal costs were in excess of $100,000.

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Environmental Claim Example: Distribution Facility

Over a weekend, vandals climbed the fence at a chemical distribution facility. Besides breaking a few windows, they also damaged a valve on a 10,000 gallon tank of chemicals. The damaged valve leaked until Monday morning when it was discovered by facility employees. While most of the contents of the tank just needed to be removed from the containment area and disposed of, local environmental officials required subsurface testing of soils and groundwater. Total costs reached $90,000.

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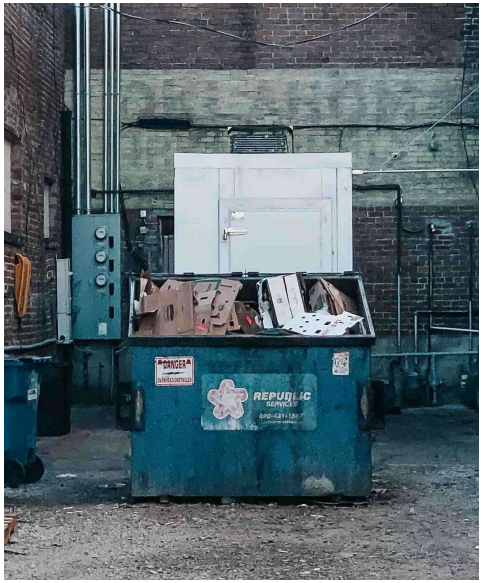
Environmental Claim Example: Manufacturing Facility



An unknown party illegally placed a container of hazardous liquid waste into a dumpster at a small manufacturing facility. The container leaked and contaminated the contents of the load, which in turn contaminated the waste on the tipping floor of the transfer station. Cleanup costs and legal fees exceeded $150,000.

A small paint manufacturing company performed routine drum washing operations over a severely compromised concrete containment pad. Over time, solvent-laced wash water migrated through cracks in the concrete and into the subsurface soils and groundwater. The plume of solvents traveled offsite and contaminated an nearby municipal water supply well. The municipality filed suit for cleanup and property damage as the well had to be fitted with costly remedial technologies to provide safe drinking water for its customers.

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Environmental Claim Example: Warehouse

A fire occurred in the middle of the night at a warehouse facility. Responders to the fire discovered heavy smoke settling over a nearby residential community. It was determined that various hazardous materials were stored in the warehouse, and that vapors from the fire could present a health hazard. Residents were advised to stay in their homes. Hazmat responders set up containment to capture runoff from the fire suppression water and to conduct air monitoring. After the fire was extinguished, testing revealed that contamination was present in the soils beneath and around the warehouse as a result of the contaminated fire suppression water. Further investigation and subsequent cleanup activities were required. Several claims alleging bodily injury due to inhalation of toxic fumes from the fire were also filed by nearby residents. The warehouse owner also incurred additional expenses associated with the defense an settlement.

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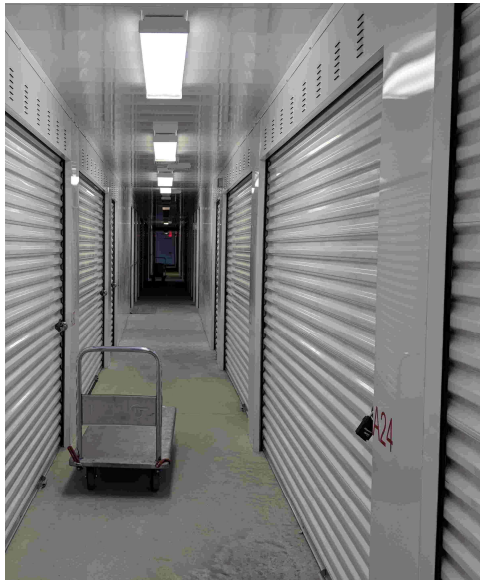
Environmental Claim Example: Self Storage Abandonment



A self storage facility repossessed a locker from a renter who had missed several payments. Upon gaining control of the rental space, they found 12 drums of hazardous material. The renter could not be found, so the owner of the storage facility was required to pay for the cost of disposal of the drums. In addition, soil and groundwater investigations were required due to staining on the floor of the unit, which resulted in the need to excavate several tons of impacted soils.

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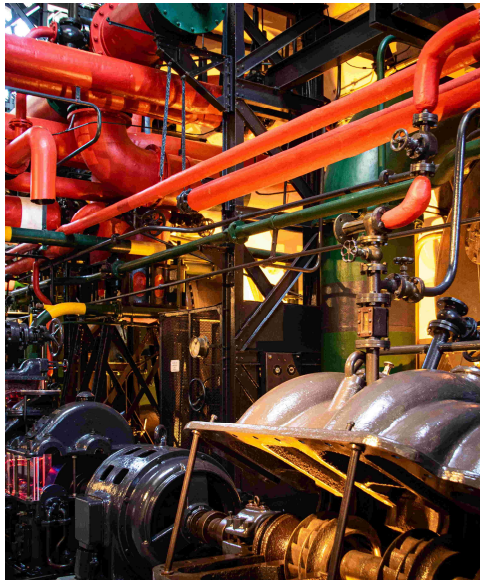
Environmental Claim Example: Chemical Manufacturer



Highly concentrated acid began to overheat in a bulk storage container during a severe thunder storm. Responders were unable to reach the tank due to the weather. The tank ruptured and released the acid. Responders were not able to initiate containment for several hours. Significant cleanup costs were incurred.

A pressure vessel exploded. The contents of the vessel where released onto the property and migrated onto an adjacent property. The insured was responsible for on-site and off-site remediation.

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Environmental Claim Example: Retail Center

Chemical fumes were detected in the basement of a grocery store. PCE from an off-site dry cleaner was the source. The adjacent property owner was not able to finance a cleanup. State required the impacted property to install groundwater and vapor treatment.

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Environmental Claim Example: Hotel

A person became seriously ill a couple weeks after staying in a hotel. Test confirmed Legionnaire's disease. Testing of the hotel confirmed Legionella in the shower head and water system at the hotel. Cleanup costs incurred for hotel along with settlement for bodily injury.

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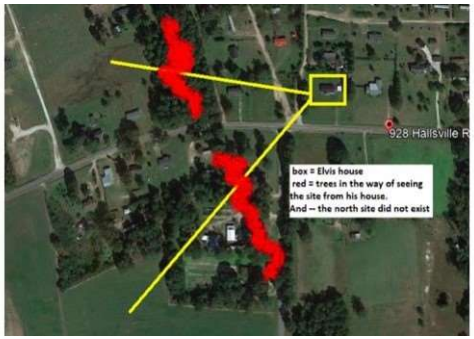
Case Study: Hog Farm

- April 2018 - Jury Awards Neighbors of North Carolina Hog Farm US $50 million In Nuisance Case
- Plaintiffs accused Murphy-Brown of failing to take necessary steps to eliminate obnoxious, recurrent odors and other causes of nuisance, including pests that periodically plagued their properties.



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Case Study: Wood Frame Construction / Mold

The Risk:

- Approx. $30M new construction 5 story Wood Frame 132 multi-family apartment rental building with approx. 128,000 sq ft.
- Project located in Cerritos, CA (Southern CA / Los Angeles area)

The Event:

- Inclement weather / series of rainstorms from Mid Dec 2016 until mid Jan 2017
- Resulting in visible mold growth in areas of the building
- Alleging $500K in Damages to address damaged work and mold growth

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Case Study: Waste Disposal Nightmare

- A hospital located in S. California sent a load of paper & boxes to a recycling facility
- Workers at the recycling company complained that an unknown liquid was leaking from several of the boxes and leaked unto an employee
- Further investigation revealed that several boxes of pathology waste had been inadvertently mixed in with boxes of waste paper
- Incoming trucks had to be stopped and business was interrupted as responders sifted through tons of paper and separated out all of the medical waste
- The medical waste as well as the contaminated paper had to be disposed of at a medical incinerator at significant expense. All plant shredders and equipment had to be decontaminated. A public relations firm was retained and on standby should news of the incident go public.

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Case Study: Alchemy

- A customer stored mercury on insured property
- A district attorney alerted the EPA when they learned through criminal investigations that the suspect was storing mercury at a storage facility. The mercury was intended to extract gold from ore.
- Operations were interrupted at the storage facility for 5 days while 55-gal drums full of mercury were removed from 3 units randomly located throughout the facility. Transportation and disposal costs were significant.
- The policy was triggered due to a threatened release of mercury and detection of mercury fumes at the site

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Case Study: Trouble on the High Seas

- Discharge from corroded pipes at insured site
- Pipe corrosion was accelerated in piping located over salt water. The piping is used to discharge oil from docked vessels.
- During a scheduled discharge, oil was observed leaking from a pipe onto equipment and into the water. The EPA and Coast Guard were notified about the incident.
- Cleanup costs included containment of the oil within the port and removal of oil from the water. Additionally, the vessel and port equipment required cleanup.
- All vessels into and out of the port were stopped, leading to potential demurrage claims.
- The port is undertaking an 18 month project to relocate all piping to avoid contact with salt water moving forward.

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