Environmental Insurance Products Available for Brownfields Redevelopment, 2005

Northern Kentucky University

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Executive Summary

This study provides a summary of environmental insurance products, available as of 2005, that are useful to those involved in the revitalization of brownfields. The research updates a 1999 report conducted by Northern Kentucky University for the US Environmental Protection Agency (EPA). The data presented here are based on a detailed survey administered to representatives of nine insurance companies and in-depth interviews with the representatives. Drafts of chapters based on the information gathered were sent to the insurers for validation of accuracy.

Pollution Liability Policies

Pollution Liability (PL) policies are the most widely used and oldest brownfields insurance product. They provide protections against claims for third party cleanup costs, bodily injury, and property damage arising out of pollution conditions on, under, or migrating from an insured site; legal defense expenses arising from third party claims; and cleanup of pollution conditions discovered by the insured at an insured site.

PL policy periods range from one year to a maximum of ten years. Insurers offer Extended Reporting Periods (ERPs) that lengthen the time in which a claim may be made against the insured and reported to the insurer as long as the claim arises out of pollution conditions that commenced prior to the end of the policy period. Insurers are legally required to offer automatic ERPs at no charge. These range from 30 to 60 days, depending on the insurer. They also offer optional ERPs that can be purchased. These vary by carrier from 36 to 48 months and can add as much as 200% to the premium without the optional ERP.

For the study, insurers were asked to provide estimates of PL policy dollar limits, premiums, and deductibles for a five-year, single-site policy that does not include special terms and coverages requested by the insured. While the lowest policy dollar limit for all insurers was $1 million, the maximums varied from $10 to $100 million. The most common deductibles for the policy ranged from $25,000 to $250,000 and the most common premiums ranged from $40,000 to $250,000. Variations in the dollar amount of insurance purchased, the policy deductible, and the risks at specific brownfield sites prevent meaningful estimates of typical cost-per-million dollars of PL coverage.

Cost Cap Policies

Cost Cap (CC) policies help protect against costs incurred by an insured party that exceed the estimated cleanup costs based on a remediation plan. The CC market is relatively new and small; only five insurance companies offer the product.

The policies are not appropriate for cleanups of less than $1 million to $2 million. Given the fixed costs of necessary site engineering and the ease with which cost overruns can occur on small projects, the premium an insurer would need to charge renders the policies cost-ineffective for small cleanups.

Policy periods vary with the time it takes to conduct a remediation. The most common length varies from three to ten years, with ten being the maximum. Policy dollar limits range from 50% to 200% of the estimated cleanup costs. Because of differences among insurers in the methods used to price the policies, summaries of CC premiums are difficult to present. However, estimates of premiums by insurers range from 6% to 25% of the estimated cleanup costs at a site.

Depending on the insurer, a policy may include a self-insured retention (SIR) or the amount above the estimated cleanup costs that an insured is obligated to pay before the policy is activated. The most common SIRs range from 10% to 30% of the estimated cleanup cost. A policy also may include a co-insurance feature that involves the payment by the insured of a predetermined proportion of costs once the insurance begins to pay. The most common co-insurance percentages vary from 10% to 30%. Because CC policies are based on estimated cleanup costs, an insured party must complete a thorough site assessment before an insurer will review the engineering and provide a policy. Insurers differ in their willingness to offer rough indications of premiums prior to submission of completed site assessments.

In addition to offering CC policies to owners/developers, insurers provide the coverages for Guaranteed Fixed Price Remediation (GFPR) contractors that offer a fixed price to complete an agreed-upon level of cleanup at a site. The percent of all CC policies written for these contractors in last twelve months varied among insurers from 25% to 75%.

Pre-Funded Programs

Pre-Funded (PF) programs involve up-front payment of the anticipated expenses at a brownfield site where a cleanup is planned. They include a CC component and may include PL coverages. Like CC policies, the programs require extensive site assessments and are individually structured for specific projects. Four of the nine insurers in this study offer PF programs. One of these offers the programs infrequently and on a limited basis. For the remaining three, the programs function as follows.

At the inception, the insured pays the policy premium and the portion which represents the net present value of the expected cleanup costs is credited to a 'notational commutation' account held by the insurer. The policy is used for cleanup expenses, per the terms and conditions of the policy, which the insurer pays as they are incurred by the remediation contractor. If there is a balance remaining in the notational commutation account at the end of the cleanup, the insured can commute the remaining funds, thus receiving the account balance (which includes the interest accrued) and releasing the insurer from coverages associated with the program. If the cleanup costs are higher than expected, the policy pays the additional costs up to the policy dollar limit. The programs are appropriate for brownfields where cleanup costs are high (most commonly $5 to $60 million, depending on the insurer) and remediation is expected to take multiple years (most commonly five to twenty years, depending on the insurer).

Secured Lender Policies

Secured Lender (SL) policies protect lenders from losses due to pollution conditions at properties used to secure loans. Owners/developers benefit in that the policies may increase lender willingness to provide capital. At present, four carriers provide the policies.

Coverages, which are conditional on a loan default occurring during the policy period, differ by insurer. However, prior to foreclosure, all provide a lender payment of the lesser of the estimated cleanup costs or the outstanding loan balance. After foreclosure, one carrier offers either payment of the lesser of the cleanup costs or the outstanding loan balance while three offer the estimated cleanup costs only. All but one provide bodily injury and property damage claim protections and legal defense costs to defend against the claims.

The most common policy periods are three to ten years. Depending on the insurer, for a five-year, single-site policy, policy dollar limits are $3 million to $10 million; premiums are $45,000 to $70,000; and deductibles are $10,000 to $100,000.

Other Products

Additional policies, not discussed in detail in this report, include liability protections for professional consultants and contractors and products providing surety bonds to guarantee the performance and payment obligations of contractors. In addition, one insurer offers a land use control policy for sites at which contamination has intentionally been left in place and engineering controls (physical measures such as containment caps) and institutional controls (legal mechanisms, such as deed restrictions) have been established. However, indications from the insurer are that the number of the policies sold is small.

Changes in Brownfields Insurance

Since the 1999 study was conducted, there has been significant turnover among carriers providing brownfields insurance. While four insurers in this study were in existence prior to 1999, five carriers have left the market since that year and five have entered. This turnover underscores the need to investigate the financial status of carriers before purchasing insurance.

Insurer opinions of changes in policy terms, coverages, and conditions industry-wide from 1999 to 2005 include the following:

- With respect to PL policies, premiums have increased and maximum policy periods have decreased (e.g., from twenty to ten years for three insurers).

- The number of carriers offering CC policies has decreased, primarily because the insurers providing them dropped out of the market. Carriers indicated that premiums have increased industry-wide and that there is a trend toward more conservative underwriting (e.g., higher SIRs, lower dollar limits, and requisites for more thorough site assessments).

- The use of GFPR contracts in conjunction with CC and PL coverages either for contractors or owners/developers has become increasingly popular in recent years.

- Changes with respect to SL coverages include a reduction in policy periods (from three to fifteen years in 1999 to one to ten years in 2005); increased site assessment requirements; and a reduction in the number of insurers offering portfolio policies (currently only one). In addition, there is a trend toward offering the policies on the basis of payment for the lesser of the outstanding loan balance *or* the estimated cleanup costs rather than payment for the outstanding loan balance only.

Since its inception in the eighties, the environmental insurance industry has rapidly changed with respect to the terms and coverages available, the pricing of the policies, and the insurers offering the products. This report thus provides only a snapshot in time of available brownfields insurance.

Chapter 1.0
Introduction and Methodology

In the last ten years, environmental insurance products have become standard risk management tools that facilitate the cleanup and redevelopment of brownfields. The first study summarizing these products, *Potential Insurance Products for Brownfields Cleanup and Redevelopment*, was produced by the US Environmental Protection Agency (EPA) in 1996. Three years later, Northern Kentucky University produced an expanded update under a cooperative agreement with EPA., *Environmental Insurance Products Available for Brownfields Redevelopment, 1999*.

As a relatively new industry sector, the brownfields insurance market remains in flux. The current study was undertaken to bring brownfield stakeholders up to date on coverages available as of late 2005. It is not an in-depth technical analysis, but a review of key information about the products intended to enhance the efficiency of those working to revitalize brownfields.

1.1 Overview of the Insurance Products

By definition, a brownfield project involves a site at which there exists the known presence or perceived potential presence of contamination, and thus risks.[1] Even for a site with known contamination, there may be unknown pollution problems as well – either undiscovered quantities of known pollutants, or the presence of not-yet discovered types of contamination. When a brownfield project is associated with a real estate transaction, as is very often the case, the perceived risks and willingness to accept them may differ between buyers and sellers, so that allocating risks can become central to the completion of a property sale.

Different insurance products have been created to address the two major sources of uncertainty in a brownfield project – the environmental response required to make the site condition acceptable for the intended new use, and the environmental liability that may arise from any damage done by the pollution. The two basic types of brownfield policies discussed in Chapters 1.0 and 2.0 of this report address these risks. Note that, while we use the term 'developer' to generically indicate a policy purchaser, several types of actors may be insured, including public and private developers, owners, sellers, buyers, and lenders.

Chapter 2.0 describes Pollution Liability (PL) policies that provide coverages for third party bodily injury, cleanup costs, and property damage claims; legal defense expenses; and cleanup of pollution conditions discovered by the insured at the insured's site. Chapter 3.0 centers on Cost Cap (CC) policies that protect against costs incurred that exceed the estimated expenses in a site remediation

[1] The term brownfield means "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant"(US Congress, 2001).

plan. In both of these chapters, basic characteristics of the products are discussed including policy dollar limits, premiums, deductibles, and policy periods (the duration of coverage).

Several additional products are addressed in Chapter 4.0. These include Pre-Funded (PF) programs that involve up-front payment of the anticipated expenses at a brownfield site where a cleanup is planned. They include a CC component and may include PL coverages. Secured Lender (SL) policies are another product of interest to developers. They can facilitate access to capital by protecting lenders from losses due to pollution conditions at properties used as loan collateral. Other insurance policies designed for brownfield contractors and consultants are introduced, but not discussed in any depth, since the focus here is on the insurance products most appropriate for purchase by brownfield developers.

The report ends with Chapter 5.0, which presents insurer perceptions of changes in brownfield coverages since 1999. These include shifts in insurers in the marketplace, changes in policy provisions, and modifications of selected policy characteristics such as policy periods and premiums. As we emphasize, brownfield insurance coverages and costs are constantly changing. This report thus provides only a snapshot of the products at this particular point in time.

1.2 Methods

Data collection relied on a detailed survey about insurance products that was drafted by the authors, critiqued by insurance brokers, and revised. The written questionnaire was given to nine insurance carriers and in-person interviews were held in their offices to allow them to clarify and elaborate on their responses. Those sessions generally lasted two to three hours, depending on how many brownfield policies an insurer offered. Each session was tape recorded and the tapes were transcribed to assure accuracy. Drafts of chapters then were sent to the insurers to allow them to correct any errors in reported findings on their own firm and to solicit their comments on the data analysis. These comments were collected through telephone follow-up interviews and emails.

Throughout the report, tables are provided that present survey findings. These summary presentations are supplemented with excerpts from the taped interviews.[2] The identities of the participating companies have been cloaked to allow respondents greater freedom to divulge detailed information about their firms' operations. In the tables, insurers are identified as A, B, C, etc. To create further anonymity, the order in which each company's information is presented is scrambled from table to table (e.g., Insurer A in one table may be Insurer H in the next). This procedure assures that no proprietary information can be uncovered by tracing a particular company across the different tables.

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[2] Although meaning was preserved, editorial liberties were taken with the quotes to make them flow smoothly. For example, false starts to sentences were omitted, intervening phrases and sentences that confused meaning were eliminated, ambiguous pronouns were clarified, and so on.

Table 1.1 summarizes key characteristics of each of the insurers in the study. While some are new to the brownfields market, others have been offering environmental insurance since the eighties. The many improvements in the products as they matured through the nineties improved their utility to brownfield developers, and refined a market that other firms now have entered.

Table 1.1 The Insurance Companies

	Pollution Liability First Offered	Capacity*	AM Best Rating**	Products Offered			
				Pollution Liability	Cost Cap	Pre-Funded Programs	Secured Lender
A	1980	$100M	A+ Superior	✓	✓	✓	
B	1986	$50M	A+ Superior	✓	✓		✓
C	1992	$50M	A Excellent	✓	✓	✓	✓
D	1994	$50M	A++ Superior	✓			✓
E	2003	$50M	A- Excellent	✓	✓	✓	✓
F	2002	$25M	A+ Superior	✓	✓	✓	
G	2001	$25M	A Excellent	✓			
H	2002	$25M	A- Excellent	✓			
I	1999	$10M	A Excellent	✓			

* The policy dollar limit that an insurer can offer on a single policy ***as of December 1, 2005***

** AM Best finance strength ratings ***as of December 1, 2005***. Ratings for secure insurers are: A++, A+ (superior); A, A- (excellent); B++, B+ (very good).

As the third and fourth columns indicate, the firms vary in underwriting capacity and financial strength. For a developer with a $10 million project that any of the firms could cover, the capacity measure alone may not be the basis for selecting an insurer. In fact, since none of the firms shows financial strength below “excellent” on the AM Best rating scale, the choice of insurer, in many instances, will be made on the basis of the particular coverage terms provided in a policy.

The final four columns on the right in Table 1.1 provide the brownfield policies offered. All the carriers listed also offer the other types of environmental insurance products, discussed in Chapter 4.0, that have been developed for brownfield industry service providers, including environmental counsel, environmental assessment firms, and site mitigation contractors.

Note that, although we sampled only nine carriers for this study, there are a number of other insurance companies that offer environmental coverages. However, their policies are limited to specific types of policies, sites, and purchasers (e.g., products for underground storage tank coverages only, for environmental contractors only). Nationwide, there are only six carriers – Insurers A through F – that offer a range of coverages for brownfields including PL, CC, PF, and/or SL policies. In general, these insurers are more willing than insurers G through I in the table to underwrite highly complex brownfield projects that entail cleanups and property transactions.

1.3 Introductory Notes and Cautions

The coverages discussed here differ in a number of very important ways from the insurance with which most readers are familiar, such as homeowner and automobile policies. Several basic points and caveats about brownfields insurance policies thus need to be clarified at the outset.

- The products are 'claims made and reported' which means that, in order for coverage to apply, a claim must be made against an insured party and reported to an insurer during the policy period or any extended reporting period. The alternative type, an 'occurrence' policy, would respond to liabilities arising from damage or injury that occurred during the policy period, regardless of when a claim is made against the insured. Thus a problem that might have been caused during the policy period but is not discovered until some future date is not covered under a 'claims made' policy.

- The 'occurrence' policy language is common in Commercial General Liability (CGL) policies, which are *not* the subject of this report. Prior to the growth of environmental concerns, those policies did not have an absolute pollution exclusion. They thus have been open to claims filed years after they lapsed in cases in which claimants felt they could prove that damage they suffered began when the policy was in force. These older coverages continue to be the targets of 'insurance archeology' suits to recoup funds for cleanup on brownfield projects.

  The products discussed in this report should not be confused with the old CGL policies that were never intended to address environmental problems. Environmental insurance products available now are specifically written to provide protections from environmental liabilities and the carriers offering them have paid claims for environmental damage and site mitigation cost overruns.

- Unlike automobile, homeowner, and life insurance policies, brownfield insurance policies usually are individually 'manuscripted' or tailored to suit the needs of particular projects. While insurers most often begin with a base form, it is modified by 'endorsements' or changes that add specific coverages or, alternatively, exclude coverages from the base form if they represent too great a risk or provide protection against risks for which the insured does not need coverage.

- Most commercial property and liability insurance policies are written on standardized forms and are 'admitted' policies, i.e., the coverages provided by different insurers are the same, and the terms have been approved by a state insurance regulatory agency. Brownfield insurance products are 'non-admitted' policies. They do not need to be approved by state regulators and are issued as 'excess and surplus lines' insurance. This type of policy is necessary for brownfields because of the need to craft policy provisions suited to each unique project.

- This report should *not* be relied upon as a guide to the purchase of insurance. The coverages provided in a policy will depend on a number of elements contained within it. While definitions of key policy terms are provided here, we generalize across the legally binding terms in individual policy 'definitions' sections. Especially for complex projects entailing remediation, redevelopment, and sale of a site, it is important to seek the advise of brokers and attorneys specializing in brownfields insurance.

The emphasis on insurance in this report is not meant to imply that it is the only mechanism for managing brownfield project risks or that purchasing insurance is always in the best interest of a brownfield developer. The costs and benefits of a policy may not warrant the expenditure, especially for developers with the capacity to effectively self-insure for risks or obtain reliable 'indemnifications' or contractual commitments in which one party agrees to protect another party from expenses such as unexpected cleanup costs and third party damage claims. There also are general problems with all insurance products that should be kept in mind, including the possibilities that an insurer may refuse a claim or become insolvent and unable to pay a claim. Furthermore, coverage may not be available for all risks facing a developer, and the time and/or dollar limits on policies offered may not be sufficiently high for a project.

A carefully developed risk management strategy takes into account the options of risk retention and contractual agreements other than insurance. However, even if other risk management mechanisms can be brought to bear, some issues may remain that require insurance coverage. For example, when indemnifications are made, insurance may be used to support the agreements by providing protections the indemnitor is unwilling to offer and/or by backing promises made by an indemnitor. Indemnifications without insurance have disadvantages for both parties. The indemnitee may find that the indemnitor does not have the financial resources to fulfill the commitments made, while the indemnitor's financial statements and credit rating could be weakened by the potential liabilities associated with providing the indemnification.

In some situations, the availability of insurance for a brownfield project may be the key to moving a transaction forward. Depending on the financial status of the parties to a transaction, developer risk retention or seller indemnification may be perceived as unacceptable options. Differences between buyer and seller estimates of remediation costs and/or the liability exposures created by known or suspected contamination can lead to gaps between the purchase price demanded by one and offered by the other that appear insurmountable. In these instances, and in others like them, insurance may be the only mechanism that permits a deal to be consummated.

In conclusion, any insurance coverage comes at a price, and the cost of a transaction thus rises if brownfield insurance is needed. However, if the risk transfer can overcome factors that otherwise would stymie the deal, then the buyer, the seller and the community hosting the brownfield can all benefit from coverage that allows the remediation and redevelopment of contaminated and underutilized real estate.

Chapter 2.0
Pollution Liability Policies

Environmental insurance policies referred to in this report as Pollution Liability (PL) policies have been given various names by different companies. These include, for example, Environmental Impairment Liability, Pollution Legal Liability, Pollution and Remediation Legal Liability, Environmental Cleanup and Liability, Premises Pollution Liability, Environmental Site Liability, and Environmental Site Protection. Some insurance carriers have more than one PL policy relevant to brownfield developers.

PL policies are the product most widely sold to owners/developers of brownfields. They have been in existence for some 25 years, although their scope and utility has greatly improved since they first were written. Their overall purpose is to provide protections for liabilities arising from pollution conditions and cleanup of unexpected pollution conditions.

The policies can cover both pre-existing contamination and contamination newly released by ongoing operations at a site. In fact, the majority of PL policies sold are intended to provide protections for releases from *operating businesses* such as chemical plants and have been adapted to provide coverages for a smaller subset of sites with pre-existing 'legacy' issues, i.e., brownfields. In this report, our focus is on the latter and coverages for new releases are not discussed.

A PL policy begins with a declarations page signed by the insurance company that sets forth the parties involved in the contract; the property or properties insured; the policy term, limits of liability (policy dollar limits), deductible, and premium; and, in some cases, a list of policy endorsements. This is followed by several other sections in varying order depending on the carrier:

- The 'Insuring Agreement' describes the overall coverages to be provided (e.g., indicating what the insurer will pay for losses arising from pollution conditions).
- The 'Definitions' section provides precise meanings of most - but not necessarily all - of the policy's key terminology (e.g., the definitions of a pollution condition). Terms defined in this section are noted by bolded and/or capitalized text in the rest of the contract.
- The 'Exclusions' section limits coverages, noting what will not be covered (e.g., certain pollutants, criminal fines and penalties).
- The 'Conditions' section specifies various contractual stipulations (e.g., cancellation procedures, responsibilities of the named insured, subrogation rights, and policy assignment).
- The 'Extended Reporting Period' section describes the automatic extension to the policy term limit and optional extension that can be purchased.
- 'Endorsements' provide the modifications to the policy agreed upon by the insured and the insurance company.

Other provisions of the contract may be provided as separate sections that describe, among other matters:

- notification of claims requirements,
- the rights of the company and duties of the insured,
- limits of insurance and deductibles, and
- transfer of legal defense duties.

It is important to note that a policy needs to be reviewed in its entirety as each section is intricately tied to others. In other words, to understand any particular coverage, it is necessary to refer to the Insuring Agreement, Definitions, Exclusions, Conditions, and other sections.

2.1 Coverages

Variation exists among insurers in how they categorize and word basic coverages in their Insuring Agreements. Some companies provide relatively detailed menus of protections offered, while others describe coverages quite broadly. Some explicitly distinguish between pollution conditions that are 'onsite' (at, on, or under the insured property) and 'offsite' (beyond the insured property but migrated from the insured property). Other companies do not make this distinction, but refer only to 'first party' claims (made by the insured to pay on their behalf losses arising from cleanup of pollution conditions) and 'third party' claims (liabilities asserted against the insured).

Despite differences across insurers, a basic categorization of the PL coverages can be extrapolated:

- *Third party claims* for bodily injury, cleanup costs, and property damage arising out of pollution conditions on, at, under, or migrating from an insured site. The claims can come from private parties in the form of assertions, such as lawsuits, and from government mandates.
- *Legal defense* expenses arising from third party claims.
- *First party claims* for cleanup, required by a regulator, and expenses related to pollution conditions *discovered by the insured* on, at, or under the insured site.

Table 2.1 provides these coverages in greater detail and indicates how they are offered by each insurer. As noted in the last chapter, PL policies usually are manuscripted or tailored to fit each brownfield project. Insurers begin with a template that provides 'standard' coverages. This base policy is then modified by 'endorsements' or changes that either add specific coverages or exclude them. Note, however, that a standard coverage may be excluded by the insurer by endorsement for a particular brownfield project.

Over the past ten years, each insurer has developed a set of 'standard endorsements' or those that are used relatively frequently and have undergone legal review. Other 'special endorsements' needed for a specific project must be written largely from scratch and usually must be reviewed by the insurer's counsel before they can be added to a policy.

Table 2.1 Pollution Liability Coverages									
	A	B	C	D	E	F	G	H	I
Third Party Claims (Made against the Insured)									
Cleanup, required by a regulator, of previously *unknown* pollution conditions at an insured site	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cleanup, required by a regulator, of *known*, previously remediated pollution conditions at an insured site. (Also called re-opener coverage)	✓	✓	✓	❊	✓	✓e	❊	✓	✓
Bodily injury/property damage caused by pollution conditions at an insured site	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cleanup/bodily injury/property damage caused by pollution conditions migrating from an insured site to a neighboring site	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cleanup/bodily injury/property damage caused by pollution released during the transportation of cargo	✓e	✓	✓e	✓e	✓e	✓	✓	✓e	✓
Cleanup/bodily injury/property damage caused by pollution conditions at or migrating from a non-owned disposal site	✓	✓e	✓e	✓e	✓e	✓	✓e	✓	✓
Legal Defense Costs to Defend Against Third Party Claims	✓	✓	✓	✓	✓	✓	✓	✓	✓
First Party Claims (Made by the Insured)									
Cleanup of previously unknown pre-existing pollution conditions at actionable levels that is *discovered by the insured* at an insured site	✓	✓	✓	✓	✓	✓	✓	✓	✓
Business interruption losses incurred by the insured caused by previously unknown, pre-existing pollution conditions	✓	×	✓e	❊	✓e	✓e	✓e	✓	✓
Soft costs incurred by the insured due to previously unknown, pre-existing pollution conditions	✓	✓e	×	❊	✓e	✓e	×	✓	✓e

✓ Standard Policy ✓e Standard Endorsement ❊ Special Endorsement × Not offered

To understand what actually is being offered with these coverages from a particular insurer, it is necessary to attend to variations in certain definitions, exclusions, and ‘triggers’ or conditions that activate coverage. We begin with a discussion of the dimensions of property damage.

2.11 Property Damage

Among different carriers, property damage is defined in terms of physical injury to property including the resulting loss of use, loss of use of property that has not been physically injured, property value diminution as a result of pollution conditions, and natural resource damages. The latter generally includes physical injury to wildlife, flora, air, land, and ground and surface water on properties controlled or held in trust by a government entity or Indian tribe.

Table 2.2 Property Damage Coverages

	A	B	C	D	E	F	G	H	I
Third Party Claims									
Property value diminution	✓	✓	✓	✓	❍	✓	✓	✓	❍
Need physical injury?	No	Yes	Yes	Yes	❍	No	No	No	❍
Business interruption	✓	✓	✓	✓	✓	✓	✓	✓	❍
Natural resource damage	✓	✓	✓	✓	✓	✕	✓	✕	❍
First Party Claims									
Property value diminution	✕	✕	✕	✕	✕	✕	✕	✕	✕
Business interruption	✓	✓	✓	✓e	✓e	✕	✓e	✓e	✓e
Soft costs	✓	✓e	✓	✓e	✓e	✓e	✓e	✕	✕

✓ Standard Policy ✓e Standard Endorsement ✕ Not offered ❍ Policies are silent on the issue

However, as Table 2.2 indicates, there are differences among carriers with respect to coverages of specific dimensions of property damage and the parties to whom protections are offered. For example, *first party* property value diminution is not offered by any carrier. Third party property value diminution is offered by all carriers with the exception of two whose policies are 'silent' on the issue, i.e., the policies do not explicitly address diminution. One of these noted that whether or not property damage includes value diminution depends on how property damage is defined by the local jurisdiction of the brownfield site.

For four of the nine carriers, property value diminution does not need to involve physical injury to a property; for three others there does need to be physical injury. The link to physical damage is to avoid providing coverage for 'proximity' or 'stigma' damage, i.e., when a neighbor's property has not been damaged, but the neighbor believes the value of their property has decreased by virtue of proximity to the insured's property.

Business interruption loss must be caused *directly* by a pollution condition for the coverage to apply. The losses are addressed in policies in two ways, depending on the beneficiary of the coverage. First party business interruption is included as a coverage part in the insuring agreements of three carriers and can be arranged by endorsement by all but one other carrier. With respect to third party claims,

business interruption losses are not explicitly noted on a policy because they are considered to be a component of property damage, i.e., they are aspects of loss of use and resulting income loss.

'Soft costs' are similar to business interruption costs. Business interruption, however, refers to loss of revenues from sales, rental income, etc. from an ongoing operation. Soft costs pertain to added costs of a construction/development project that are consequential to a pollution condition. The two insurers that include them in their standard policies refer to them as delay or additional expenses the insured incurs as a result of a delay in the completion of an insured project. Examples of expenses that may be included are interest on money borrowed; advertisements and renegotiation expenses to sell or lease an insured site; added architectural, engineering and consulting fees; or the costs of personal protective equipment for workers. When coverages for these costs are offered, as a general rule, the specific expenses covered are listed in the policy. Note that the term soft costs stems from the construction industry and is frequently used by those in the insurance industry. However, it is not used in actual policies and is not uniformly conceptualized across insurers.

2.12 Coverages for Known and Disclosed Pollution Conditions

The distinction between pollution conditions that are 'known and disclosed' versus newly discovered, pre-existing pollution conditions is significant. This is so, first of all, for claims purposes. Policies generally contain an exclusion specifying that coverage will not be provided if a defined set of people knew or reasonably could have expected that a pollution condition existed prior to the inception of the policy, but did not disclose the condition to the insurer. Failure to disclose a known condition can cause claim denial or policy cancellation.

Second, there are critical differences in coverages for previously known and newly discovered pollution. As noted earlier, PL policies most often are written for ongoing operations to protect against the costs of new releases of contaminants. Those who purchase the policies for brownfields, however, are most concerned with pre-existing pollution.

As Table 2.1 above indicates, it is standard for all carriers to provide coverage for the unexpected – for conditions that existed before but were unknown. Coverages for *known* conditions are a different matter. Cost Cap (CC) policies, discussed in the next chapter, protect against first party cost overruns on a cleanup of known conditions; PL policies do not.

PL policies, however, may address pre-existing pollution in two ways. First, insurers offer 're-opener' coverage for cleanup of previously remediated conditions for which a regulatory agency issued an assurance – such as a No Further Action letter or Certificate of Completion – if additional cleanup is ordered by a regulator.

Second, it is possible to obtain coverage for bodily injury and property damage arising from known conditions. This may be offered when a regulatory assurance document has been issued with respect to the pollution conditions. Insurers differ, however, with respect to willingness to offer such

coverages *prior* to the issuance of such a document, i.e., before and during a remediation. During interviews, two insurers said that they do not offer the coverage prior to the issuance. Some indicated that, although the coverages are on their standard policy, they are frequently excluded by endorsement depending on the contaminants and conditions at a site. The following excerpts provide examples of the approaches insurers take to known conditions:

> *Insurer:* If conditions are known and disclosed, they're not excluded under the standard form. However, it is our underwriting stance to then take a look at those specific conditions and see what we want and don't want to cover. I don't want to give the impression that they're always going to be covered. We might be comfortable with some conditions and not others – the decision is account specific.

> *Insurer:* We have a standard endorsement that very explicitly lists the known conditions that are excluded. And if a known condition is above a regulatory limit, we'll exclude it. That's the guiding philosophy.

> *Insurer:* The policy grants bodily injury and property damage coverages but we decide whether to restrict it or not. The known conditions exclusion says all conditions known prior to the policy's inception are excluded completely. Then we grant back coverage and restrict how that known condition is covered. Usually we only restrict cleanup, but we may restrict third party coverages if a third party already has been impacted.

With respect to known conditions, it is critical to understand the importance of a 'retroactive date' on a policy as coverage for pre-existing contamination is restricted by this date. The retroactive date limits when the pollution conditions had to commence. If the conditions commenced after the date, there may be coverage. However, if the commencement began prior to the date, no coverage would be available. One insurer emphasized that, even if an assurance document has been issued, insurers will not be willing to offer bodily injury coverages for contamination in place prior to the date:

> *Insurer:* We may chose to exclude bodily injury where there is a known pollution condition that has a No Further Action if there's an historical toxic tort issue. Under no circumstances are we going to include historical bodily injury claims. There might be a lot of groundwater contamination where we have no intention of picking up the bodily injury claims as a result of long-standing ingestion exposures.

2.13 Cleanup Coverages and Triggers for Newly Discovered Pollution Conditions

Generically, cleanup or remediation costs mean reasonable and necessary expenses to investigate, clean up, and monitor contamination in the soil, surface water, and groundwater to the extent required by environmental law. With the consent of the insurer, legal expenses incurred because of a cleanup also are included, as are 'restoration' or 'replacement' costs. The latter refer to expenses

incurred by the insured to repair or replace property damaged in the course of responding to a pollution condition. As several insurers stressed, the costs must be approved by the insurer and do not include expenses to improve or better a structure. The intent is to restore the property to substantially the same condition it was in prior to being damaged during a cleanup:

> *Insurer:* Our underwriting intent is to cover restoration costs, but not betterment. For example, if you have to destroy a building and it was grand-fathered and you now have to upgrade to code, the code upgrades don't get covered.

An important concept for environmental insurance is the policy 'trigger,' a term that is frequently used by insurers, but is not included in the policies themselves. It refers to conditions or events that activate coverages. In PL policies, there are two triggers for cleanup of newly discovered, pre-existing pollution at an insured site. The first is a third party claim made by any third party including a state or federal government agency. All carriers offer this on their standard policy.

The second is a 'discovery' trigger, meaning that the insured finds contamination on the insured property in quantities great enough to be deemed 'actionable' under environmental laws. This trigger is important because, if a policy does not have it, an insured would need to ask a government authority to demand action before the policy would respond and that may result in project delays. When asked, all carriers indicated they do offer a discovery trigger on their standard policies. Two qualifications need to be noted, however. The first, emphasized by one carrier, is that the discovery trigger for pre-existing pollution conditions may be excluded in certain cases:

> *Insurer:* If a site has a lot of history on it, we might take out the discovery trigger for pre-existing conditions. We would want it to be a state-ordered cleanup and not just something where, in the course of digging, you find something and want us to pay for it.

The second qualification concerns the actual mandate to conduct a cleanup. While all carriers cover cleanups necessitated under state and/or federal laws, one carrier indicated that the company's PL policy would not respond if a cleanup was recommended under state or federal *guidance* documents. The insurer noted that, "It has to be truly a law. A guideline has not gone through the same process. It's just a suggestion. It doesn't have the force of law."

2.14 Exclusions and Coverages for Particular Contaminants and Sources

Table 2.3 presents differences among carriers with respect to coverage for contaminant types and sources. Many of the standard or special endorsements noted on the table indicate that the contaminant is excluded on the standard policy and must be granted back in by endorsement to be covered. Keep in mind that a coverage offered on a standard form may be excluded by endorsement if it poses exceptional risks.

Table 2.3 Coverages for Contaminants and Contaminant Sources									
	A	B	C	D	E	F	G	H	I
Known underground storage tanks	✓e	✓e	✓e	✓e	✓e	✓e	✓e	✓e	✓
Unknown underground storage tanks	✓	✓	✓	✓e	✓	❊	❊	✓	✓
Man-made radioactive matter, low level	❊	❊	✓	✓e	✓	✓	✓	❊	✓
Natural radioactive materials	❊	✓e	✕	✓e	✓	✕	✓	✓	❊
Lead-based paint in buildings	✕	✓e	✓	✓e	✓e	✕	✓e	✓e	❊
Lead-based paint in soil	❊	✓	✓	✓e	✓	✓	✓	✓	✓
Mold/microbial matter in buildings	❊	✓	✓e	✓e	❊	❊	✓e	✓e	✓e
Asbestos in buildings	❊	✓e	✓	✓e	❊	✕	✓e	✓e	✕
Asbestos in soil	❊	✓	✓	✓e	✓	✓	✓e	✓	✓

✓ Standard Policy ✓e Standard Endorsement ❊Special Endorsement ✕ Not Offered

When discussing this topic, insurers made other points they felt should be commented upon:

- Lead based paint and asbestos in buildings may be covered for bodily injury and property damage, but not abatement or cleanup of a building.
- Some coverages, such as mold and microbial matter, may be made available for third party coverages, but not first party coverages.
- With respect to known underground storage tanks, if a tank is closed in place, the insurer essentially is offering re-opener coverage and will need to see the closure documents.

2.2 Other Policy Characteristics

In this section, we discuss other PL policy characteristics. We begin with policy periods, then turn to policy dollar limits, premiums, and deductibles/self-insured retentions.

2.21 Policy Periods

Table 2.4 provides information on PL policy periods. There is a consensus that the shortest period purchased is one year, although this is not a minimum mandated by carriers. The maximum figures – five to ten years – do represent company underwriting guidelines. Although one insurer has the latitude to write up to five years, the representative noted that, “We very rarely write longer than three years. Ninety-nine percent of our business is written for twelve months.”

One thing to keep in mind is that the most common periods are a matter of negotiation between the insurer and insured. As one insurer noted, “A lot of it comes down to pricing. We’ll offer both five and ten years and then they’ll see where it fits into their budget.”

Table 2.4 Pollution Liability Policy Periods for Brownfields and Cost to Double Them					
Policy Periods in Years					**Cost to Double Term from Five to Ten Years**
	Low	Maximum	Most Common	Second Most Common	
A	1	10	5	10	Proprietary
B	1	10	10	5	40% - 60%
C	1	10	5	10	60% - 70%
D	1	10	5	10	60% - 70%
E	1	10	1	3	100%
F	1	10	3-5	5-10	Varies greatly
G	1	5	1	1	10 years not offered
H	1	5	3	1	10 years not offered
I	1	10	5	10	Proprietary

As emphasized earlier, brownfield insurance policies are 'claims made and reported' policies. This means that for the coverage to respond, a claim must be made against the insured and reported to the company during the policy period. Losses caused by environmental conditions, however, may take years to manifest (e.g., for polluted groundwater to migrate to an adjacent site and be discovered). Thus, there is value to the insured of a longer policy period, but a longer period increases the risk to the insurer and, therefore, restricted policy terms and conditions or increased premium charges may apply.

One item on the survey asked for estimates of the effects on a premium to double the policy term from five to ten years. The responses, presented in Table 2.4, are estimates by insurers – an actual increase will depend on the particular site. The figures indicate considerable divergence from 40% to 100%.

A 'guaranteed policy renewal' provision is not really an option for increasing policy length. Eight of the nine insurers do not offer it, although some have offered it in the past. The remaining insurer estimated that the company sells the guarantee in less than 5% of policies issued.

A 'rolling renewal' provision that adds a year to a policy each year for a guaranteed price *may* be a possibility, but only in some circumstances. Only two insurers offer this policy extension but do so rarely and with conditions attached. For example, the renewal is subject to factors such as the insured's loss ratio and changes in the price of re-insurance. As one insurer noted, clients usually choose not to purchase the endorsement once they understand these conditions.

There are ways of addressing the claims-made requirement through an automatic or optional 'extended reporting period' (ERP). The ERP lengthens the period in which a claim may be made against the insured and reported to the insurer. However, the claims made and reported during the

ERP must arise out of pollution conditions that commenced prior to the end of the policy period.

Table 2.5 notes the lengths of these periods. Insurers are required by law to offer an automatic ERP at no charge. These range by carrier from 30 to 60 days. Insurers also offer an optional ERP that can be purchased. These vary by carrier from 36 to 48 months and can add as much as 200% to the premium.

The optional ERP does not need to be purchased at the inception of the policy. Most insurers allow 30 days after the policy period ends; one, however, mandates that it be purchased during the policy period. Both the price and the length of the optional ERP are negotiable and depend on the risks at a site. One insurer pointed out that the option of buying an ERP may be removed from the policy if the insurer's maximum policy period has been purchased.

Table 2.5 Extended Reporting Periods

	Automatic Extended Period	Optional Extended Period	Percentage Increase in Premium for Optional Period
A	90 days	36 months	Up to 100%
B	60 days	36 months	Up to 200%
C	30 days	36 months	Up to 200%
D	90 days	36 months	Up to 200%
E	60 days	40 months	Up to 200%
F	60 days	48 months	Up to 200%
G	60 days	48 months	Up to 200%
H	60 days	48 months	Up to 200%
I	60 days	36 months	100% for 12 months 150% for 24 months 200% for 36 months

In addition to an ERP, another mechanism to address the claims-made requisite is a notice of potential claim provision. This provision allows an insured to notify the insurer of a claim that *may* be made due to a pollution condition existing during the policy period but has not yet been made. If the insured notifies the insurer of such a possibility and the potential claim becomes a claim, the insurer will treat it as a claim first made and reported during the policy period. Only three of the insurers in this study offer such a provision for brownfield legacy issues. A five-year time limit for reporting an actual claim usually is imposed as are certain conditions for the notice of potential claim (e.g., the bodily injury, property damage, or cleanup costs that may result from the pollution condition, engineering information on the pollution condition giving rise to the possible claim, and the circumstances by which the insured became aware of the possible claim).

2.22 Policy Dollar Limits, Premiums, Deductibles, and Self-Insured Retentions

PL policy dollar limits and premiums are reflected in Table 2.6. For both types of data, insurers were asked to provide estimates for a *five-year standard policy* for a single site that does not include endorsements requested by the insured.

All insurers indicated that $1 million is generally the lowest policy dollar limit, but this does not represent a minimum. The maximum policy dollar limit, however, indicates the limit that a carrier will offer.

Table 2.6 Brownfield Pollution Liability Policy Dollar Limits and Premiums for a Five-Year Policy*

	Dollar Limit Estimates			**Premium Estimates**		
	Low Example	Maximum	Most Common	Low Example	High Example	Most Common
A	1M	50M	10M to 25M	Varies greatly	Varies greatly	Varies greatly
B	1M	50M	10M	Varies greatly	Varies greatly	Varies greatly
C	1M	100M	10M to 25M	25K	10M	50K to 1M
D	1M	100M	5M to 20M	Proprietary	Proprietary	Proprietary
E	1M	50M	5M to 10M	30K**	1M	75K to 250K
F	1M	25M	5M to 10M	10K	200K	75K to 100K
G	1M	25M	1M to 10M	10K**	300K	40K to 100K
H	1M	25M	1M to 5M	5K	1M	50K
I	1M	10M	1M to 5M	30K	200K	40K to 75K

* Based on information available as of December 1, 2005
** Figure represents a minimum premium

The right three columns provide estimates for policy premiums. Double astericks indicate that the low premium figure is a minimum required by an insurer. As with any type of insurance, premiums are a function of the amount of coverage purchased and a policy's deductible or self-insured retention (described below). Other variables affecting PL policy price pertain to risk factors attendant on a site. These include:

- The intended future use(s) of the site (e.g., industrial versus residential).
- The quality of the site assessment.
- The size of the site.

- The toxicity of the contaminants.
- The media in which contaminants are found (soil, groundwater, surface water).
- The likelihood of migration off site (which depends in part on the contaminants and media).
- Proximity of the site to sensitive human uses such as homes and schools and to vulnerable natural resources such as lakes, rivers, and wetlands.
- Proximity to other sites from which contaminants may migrate *to* the insured site.

The interactions among these risk factors and the coverages provided for a site are too complex for any meaningful estimates of typical cost-per-million dollars of PL coverage.

Table 2.7 presents estimates for a five-year policy of either a deductible or self-insured retention (SIR) required for the policy. The difference between the two is that an insurer is not obligated to pay an SIR; the policy is not triggered until the insured pays it in full. With a deductible, however, the policy is activated when a claim is made and the insurer is obligated to pay the deductible if an insured fails to pay it. In this event, the insurer must seek to recover the deductible amount from the insured. Thus, an insurer is at credit risk with a deductible, but not with an SIR. For this reason, carriers that usually use deductibles may require SIRs if the amount is high.

Table 2.7 Pollution Liability Policy
Deductibles/Self-Insured Retentions (SIRs) for Five -Year Policy

	Deductible	SIR	Low Example	High Example	Most Common
A		✓	10K	500K	30K
B	✓		25K*	Varies	100K
C		✓	10K	2M	25K to 100K
D	✓		25K	1M	50K to 250K
E	✓		25K*	250K	50K to 100K
F	✓		25K*	250K	50K to 100K
G	✓		10K	1M	Varies
H		✓	25K	1M	100K to 250K
I	✓		25K*	1M	50K to 250K

* Figure represents a minimum deductible

2.3 Site Assessments

The two columns on the left in Table 2.8 indicate the most common site assessments conducted on sites for which insurers have provided PL policies. All carriers require a Phase I and, of course, a Phase II if the Phase I indicates problems. Two carriers noted that the company will not issue a PL policy without a Phase II. [3]

As we have emphasized in previous reports, there is no substitute for a good site assessment. Without a thorough investigation conducted by a trusted firm, insurance companies may exclude certain coverages or set higher premiums and deductibles/SIRs. Alternatively, they may decline to insure a site at all. The right column of the Table provides insurer estimates of the percentage of projects for which they have refused to provide policies because of inadequate assessments. Surprisingly, insurers reported that some inexperienced brokers have given them submissions for sites that have had *no* assessments conducted on them.

Table 2.8 Site Assessments for Brownfield Pollution Liability Policies

	Assessment Insured Sites Most Often Have		Policies Declined due to Inadequate Assessment
	Phase I	Phase II	
A	✓		10%
B	✓		10%
C		✓	20%
D	✓		25%
E		✓*	30%
F	✓		50%
G		✓	Uncertain
H	✓		Uncertain
I		✓*	Uncertain

* Will not issue a brownfield policy with less than a Phase II or equivalent.

[3] This report references ASTM Phase I and Phase II site assessments as standards for determining site environmental conditions <www.ASTM.org>. In November 2005, EPA published the final "All Appropriate Inquiry" rule that establishes new regulatory requirements for inquiries into the conditions of a property for the purpose of qualifying owners for certain liability protections under CERCLA. ASTM's Phase I standard will remain the interim rule until November 1, 2006.

2.4 Special Risks to Insurers

It should be apparent at this point that there is a great deal of flexibility in terms of provisions that can be endorsed to a policy. However, some provisions are difficult or impossible to negotiate for a particular site or they may be very expensive because of the risks they pose to a carrier. During our sessions with insurers, we presented some of these provisions and asked them to rate them as risks and to discuss why they are risky. Table 2.9 presents the rating results. Cells with an X indicate that the insurer does not provide the item on the left.

Reinstatement of Limits. The highest rating for risk was given to a provision that reinstates the policy dollar limits for an additional premium if an insured exhausts the limits. The additional premium can be substantial (e.g., 200% or more of the original premium for reinstatement of the original policy limit). Depending on how the endorsement is written, the premium can be paid at the inception of a policy or later in the policy period. Typically, the new limits cannot be used to cover the same claim(s) that exhausted the original limit. Six of the nine insurers do not offer this endorsement. Essentially, there is an 'adverse selection' problem in that those with the riskiest sites will be more likely than others to purchase additional limits. As one insurer who does not offer this noted, "If you've made such an underwriting error that you've paid out your limits on a deal, why would you want to put up a whole other set of limits?"

Table 2.9 Special Policy Provisions: Risk to Insurers

	A	B	C	D	E	F	G	H	I
Reinstatement of Limits	☒ ✢✢✢	☒ ✢✢✢	☒ ✢✢✢	☒ ✢✢✢	☒ ✢✢✢	☒ ✢✢✢	✢✢✢	✢✢✢	✢✢
Notice of Potential Claim	✢	☒ ✢✢	✢✢	✢✢	☒ ✢✢✢	✢	✢✢✢	✢	☒ ✢✢✢
Aggregating the Deductible	✢✢	✢✢	✢✢	✢✢	✢✢✢	✢✢	✢✢	✢✢✢	✢✢✢
Auto Transfer to Lender	✢	☒ ✢✢	✢	✢	✢	✢✢	✢✢	✢	✢✢
Adding Named Insureds	✢✢✢	✢	✢✢✢	✢	- -	✢✢	✢✢	✢✢✢	✢✢

Based on a 10 point scale with 1 being very little risk and 10 being extreme risk

- - Missing data

✢ Low Risk - rated 1 to 3

✢✢ Moderate Risk - rated 4 to 6

✢✢✢ High Risk - rated 7 or higher

☒ Provision not offered by insurer

Notice of Potential Claim. As noted earlier, a notice of potential claim provision allows an insured to notify the insurer of a future claim that possibly may be made due to a pollution condition existing during the policy period. If a claim actually is made later, it is regarded as first made and reported during the policy period. The risk involved with this provision is that it renders the insurer vulnerable after the policy period has ended. One insurer made the following point: "The risk is huge. It's

conceptually the same as taking a claims-made policy and making it an occurrence policy. Why would you want to do that?"

Those who rated the risk as low in Table 2.10 did so because they do not offer the provision for brownfield legacy issues:

> *Insurer:* The provision is standard in our form, but it only deals with new conditions which commenced during the policy period. We do not provide notice of possible claim for conditions that commenced prior to the inception date. So, when we're talking about brownfields, this particular extension of coverage involves very little risk. In our standard business, it becomes a higher risk because we're insuring businesses like chemical plants that are operational in nature and may be more likely to have a new release.

Aggregating the Deductible. In PL policies, the deductible generally applies to all losses arising from the same, continuous, or related pollution incident. If, for example, an insured with a $10,000 deductible experiences a loss from one type of pollutant in the first year of the policy and from another pollutant in the second year, the insured would pay two deductibles of $10,000 each. Aggregating the deductible involves setting a cap on it for the policy period and can be structured in various ways such as reducing the deductible as pollution incidents increase.

This poses a risk to insurers because, as everyone who has automobile insurance knows, a deductible serves as a deterrent to filing a claim. Other concepts, key to environmental insurance, also come into play. First, this type of insurance is especially vulnerable to adverse selection. That is, potential purchasers who anticipate the greatest losses seek the most insurance coverage. Second, brownfields insurance always has been considered appropriate for low frequency, high severity losses:

> *Insurer:* Aggregating the deducible increases your risk and we charge a lot of premium for it. There's more due diligence in underwriting that goes into it. Our experience has been that it's asked for when people have both a severity and a frequency potential. What insurance companies don't like is writing zero deductibles. And once you've aggregated your deductible, you could be at a point where you're on it from zero dollars and that's a nightmare for a carrier.

As the insurers explained, aggregating the deductible depends on the risks at a particular site and how low the insured would like to aggregate the payments:

> *Insurer:* Say you have a $250,000 deductible, you might be able to aggregate it at $1 million for four losses. Under these policies, you may not expect four losses. Therefore, aggregating the deductible in that instance doesn't really impact the risk. But if the insured wanted to aggregate the deductible at $500,000, only two losses would have to occur prior to the policy limits being exposed. So the limits are much closer to the fire automatically. The lower the aggregate of the deductible, the higher the risk.

Automatic Transfer to Lenders. Brownfield projects usually involve cleanup of a site for sale and redevelopment. PL insurance can accommodate a transaction in one of three ways: a) a buyer can negotiate a separate policy, b) a buyer and seller can both be insured on the same policy, c) a seller's policy can be assigned to a buyer. Standard PL policies carry a condition that an insured may assign a policy, but they stipulate that the insurer must give written consent for a particular assignee. This is because the carrier needs to investigate the buyer to determine what they will be doing at the site in terms of site investigations and uses of the property and the ability of the buyer to meet deductible commitments.

Insurers indicated, however, that *automatic* transferability to a lender is a relatively low risk, since lenders do not want to jeopardize their protections afforded by the 1996 Asset Conservation, Lender Liability, and Deposit Insurance Protection Act – also known as the Lender Liability Law – that specifies actions lenders can take to avoid liability as an owner if they foreclose.[4]

> *Insurer:* We have a standard endorsement that does this, and I don't see very much risk in it. We all understand that, in general, a financial institution does not like to be in the chain of title of a contaminated property. So it's our expectation that, if they did have to foreclose, they would flip the property and not deal with the contamination themselves. They don't want to be considered the owner-operator, but they want to be covered as a named insured at the point that they take title. When they find a buyer, they come to us with the buyer's qualifications and, if we accept them, the new buyer may be substituted on the policy as the new named insured.

As Chapter 4.0 addresses, this provision is important for making capital for brownfields available, especially in light of the fact that fewer insurers now are offering Secured Lender policies for brownfield sites.

Adding Named Insureds. When more than one insured party is included on a policy, different statuses are designated. The *first named* insured is responsible for payment of premiums and deductibles/SIRs and generally acts on behalf of other insureds. Other designations are a) additional insureds and b) additional *named* insureds. The distinction between these two types of parties has long been a discussion within the insurance industry and is a source of confusion for insured parties. In large measure, this is because conceptions of the rights of the two types can vary among insurers and among specific insurance policies. However, the most widely accepted description is as follows: Named insureds differ from additional insureds in that the latter are covered only when their liability arises from the named insured's operations or ownership of a site. That is, it is vicarious liability. An additional insured can submit a claim only if liability derives from the named insured.

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[4] According to the law, lenders can avoid liability as an owner if they foreclose as long as they sell the property at the earliest practicable time. Post-foreclosure activities that do not impose liability include preparing a site for sale, maintaining business operations, and undertaking a cleanup.

Both types of parties do have equal rights to the policy limits. For some insurers, however, an additional insured has the right to file a claim only when a lawsuit also is filed against a named insured. For other carriers, if an additional insured is sued and the allegations imply liability of the named insured, the policy would be triggered and the additional insured could file a claim without the named insured being sued.

In terms of risk to the insurer, including additional insureds on a policy is something of a risk, but it is not great. Some insurers noted that they don't charge additional premium for doing so. Adding additional *named* insureds – the risk indicated on Table 2.10 – carries a much higher risk because the carrier is picking up the direct liability of more than one party and increasing the potential for claims.

> *Insurer:* Obviously, the more named insureds you add on a policy, the greater the risk becomes– the more people or entities who may be named in a suit, the more people or entities you have to defend. It can be extremely risky to add entities, depending on the potential liabilities they are exposing the policy to.

2.5 The Need for Expertise

It should be apparent at this point that brownfield insurance policies can be complicated because of the necessity of tailoring the contracts. On the survey, insurers were asked their opinions regarding the percentage of PL policies that require a great deal, some, or very little manuscripting. Table 2.10 provides the results.

Table 2.10 Opinions of the Extent to which Pollution Liability Policies are Manuscripted

	A	B	C	D	E	F	G	H	I
Great Deal (%)	70	80	60	50	20	25	10	10	2
Some (%)	30	20	40	40	70	50	60	20	5
Very Little (%)	0	0	0	10	10	25	30	70	93

Seven of the carriers indicated that the majority of policies require either a great deal or some tailoring and four reported that half or more require a great deal. Insurers generally agree that PL manuscripting has decreased somewhat in the last several years as standardized endorsements have been developed. However, they also note, as one carrier did, that "The endorsements most often don't fit. Something needs to be tweaked; someone wants specific language put in." Comments from the two insurers who reported that most policies require very little manuscripting indicate that they do not usually insure more complex brownfield projects.

The flexibility in underwriting PL and other brownfields insurance policies makes the products adaptable to individual projects and therefore valuable while, at the same time, creates the need for skilled underwriters and specialized brokers and attorneys to negotiate the policies. Negotiators need to be aware of what can and cannot be done by endorsement and the intricate ways in which coverage is affected by the elements of a contract such as definitions, retroactive dates, etc.

Unfortunately, experienced brokers are in short supply. When insurers were asked to provide their opinion of the number of *individuals* brokering brownfield insurance in the US who are ‘highly qualified,’ the answers ranged from ten to fifty. The insurers’ responses should be tempered, however, in that they were referring to brokers capable of negotiating complicated, high-risk projects involving remediations and property transactions. One insurer commented that, “There are probably hundreds of brokers qualified to do basic (PL) coverages and tidy real estate transactions. But if you want to talk about cost cap, your numbers are very small.”

Chapter 3.0
Cost Cap Policies

Policies we refer to as Cost Cap (CC) have various carrier names including Cleanup Cost Cap, Remediation Cost Cap, Remediation Cost Containment, Remediation Stop Loss, and Environmental Remediation Stop-Loss. Overall, the policies help protect against costs incurred by the named insured that exceed the estimated cleanup costs based on a remediation plan.

The CC market is relatively new and small. While some underwriters began developing the product in the early nineties, CC has only been marketed as a product beginning in 1996. The five brokers surveyed for the *Products Available, 1999* study reported selling a total of 162 individual policies from 1996 to 1999. When insurers were asked in the present study for estimates of the number of CC policies sold nationwide in the last twelve months, those who ventured a guess estimated no more than 100 policies sold per year. At present, only five insurers offer the policies.

CC policies are intended for cleanups and are complementary to PL policies that provide third party liability and legal defense protections: CC policies do not offer these coverages. However, both policies may be purchased at the same time. Three of the five carriers in this study offer a policy form that combines PL and CC.

In this chapter, we describe the coverages offered and summarize other policy characteristics. We then turn to the site assessments necessary for CC insurance and use of the product in combination with Guaranteed Fixed Price Remediation (GFPR) contracts. Finally, we discuss the mixed opinions of insurers about the potential of portfolio CC policies to insure small brownfield projects.

3.1 Coverages

Table 3.1 summarizes CC coverages that may be provided, depending on the carrier and specific mitigation project. The only variation among carriers noted in the table are for 'soft costs' arising from delays caused by the discovery of pre-existing contamination that must be remediated. Those insurers that do not cover soft costs in a CC policy *do* offer the coverage their PL policy.

All insurers indicated that the remaining coverages are offered in their standard CC policies. The policies, however, are very highly manuscripted and one insurer emphasized the following important caveat about referring to any CC policy as 'standard.'

> *Insurer:* I have to say as a preface to this discussion of cost caps, that I find absolutely nothing standard about our (cost cap) line of business. Nothing. We don't even have a standard form. We have a specimen form, which is our starting point. We don't assume it would be purchasable; you've got to decide how you want to craft it. So, are these coverages generally contemplated in our policies? Yes, but it depends on how you cut the deal.

Table 3.1 Cost Cap Policy Coverages					
	A	B	C	D	E
Cleanup of greater volumes/higher concentrations of known pollutants than anticipated in the remediation plan	✓	✓	✓	✓	✓
Cleanup of newly found, pre-existing pollutants not noted in the remediation plan	✓	✓	✓	✓	✓
Site assessments needed after finding previously unknown pre-existing pollutants and development of a remediation plan	✓	✓	✓	✓	✓
Costs due to regulatory changes during performance of the remediation plan	✓	✓	✓	✓	✓
Remedy failure during the performance of the remediation plan	✓	✓	✓	✓	✓
Soft costs due to delays caused by pollution	❈	✕	❈	✕	✕

✓ Standard Policy ❈ Special Endorsement ✕ Not Offered

Because of the flexibility of the policies, the need for expertise noted with respect to PL policies is especially acute for CC contracts. In particular, the remediation plan or scope of work attached by endorsement to the policy needs to be carefully specified. If the insurance contract is not carefully crafted and understood, unanticipated problems in coverage may arise. For example, on some policies, the remediation plan is described in terms of very specific activities (e.g., excavation of soil, installation of soil vapor extraction). On such policies, the insured runs the risk that an additional remediation activity not listed in the scope of work that turns out to be required in order to meet cleanup standards may not be covered if it results in a cost overrun.

Other aspects of the policies should be attended to carefully as well. For example, carriers vary with respect to a discovery trigger for newly discovered, pre-existing pollutants. While all insurers provide the trigger for PL policies, one insurer does not offer the trigger for CC policies. This means that, after the pre-existing pollution is discovered, the insurer requires that a regulator issue a legally binding order to the insured to take the additional actions that result in the cost overrun.

3.2 Other Policy Characteristics

Sections 3.21 through 3.23 describe the range of cleanup costs for sites insured with CC policies, policy dollar limits, premiums, SIRs, co-insurance features and policy periods. As the reader will see, the insurers differ in terms of how they approach calculation of premiums, retentions, and other aspects of the policies.

3.21 Cleanup Costs and Policy Dollar Limits

Table 3.2 provides examples of estimated cleanup costs on CC policies and policy limits as percentages of the cleanup costs for individual sites. The first column exhibits one problem with the policies – lack of their availability for small-scale projects with cleanups of less that $1 to $2 million, depending on the carrier.

Table 3.2 Cost Cap Policies: Estimated Cleanup Costs and Policy Dollar Limits for Individual Site

	Estimated Cleanup Costs		Policy Dollar Limits as Percentages of Estimated Cleanup Costs		
	Minimum	High Example	Low Example	High Example	Most Common
A	1M	25M	100%	200%	100%
B	1M	32M	50%	200%	100%
C	2M	Varies greatly	50%	100%	50% - 100%
D	2M	25M	100%	200%	50% - 150%
E	2M	25M	100%	200%	100% - 200%

Some of the most dramatic losses since CC began to be offered on a wide-scale basis were incurred on smaller brownfield projects. This is because it takes very little change in a remediation plan to cause a cost overrun on a small cleanup, even with a thorough site assessment, i.e., it is not difficult to reach the ‘attachment point’ or point at which the policy begins to pay:

> *Insurer:* If you have a $500,000 cleanup and a 50% SIR or $250,000, it's only $750,000 to get to the attachment point and that’s pretty easy to do. That's a lot different than a $10 million policy with a 25% SIR or $2.5 million. $2.5 million is a lot of cleanup money. So, as the projects get bigger, the attachment point becomes more remote. And in order to cover ourselves on the smaller projects, we've got to charge an exorbitant amount.

Moreover, owners and developers of smaller brownfields tend to contract with engineering firms that submit the lowest bid, a decision that may not produce the most thorough site investigation. In order to offer CC products for smaller sites, insurers in the nineties sometimes forewent further engineering in order to make the policies available and losses resulted. The premium an insurer generally would need to charge to cover expenses for a thorough engineering review renders the policies cost-ineffective to purchasers. Thus, around the year 2000, the carriers began making it clear that they were unwilling to underwrite small projects.

Exceptions to this should be taken into account. First, the carrier providing policies for the Massachusetts’ Brownfields Redevelopment Access to Capital (BRAC) state program, does offer CC for cleanups as low as $200,000 for program participants only. However, due to minimum premium constraints, these small-limit policies are rarely purchased. For example, for a $500,000 estimated

cleanup with a $1 million policy limit, the insured would pay a $75,000 premium. Second, carriers do make exceptions to the minimum on rare occasions if it entails very little engineering on the carrier's part and other risk mitigating factors are present such as use of a highly trusted remediation firm. One approach for dealing with the small-sites issue is discussed in section 3.5.

The last three columns of Table 3.2 provide examples of CC policy limits. One insurer makes it a standard practice to provide a limit that is 100% of the cleanup costs. Although the carrier has no fixed minimum, the representative explained the risk to an insurer of providing low policy limits:

> *Insurer:* Our standard way of looking at cleanup costs is on a one-to-one basis. If your cleanup is $1 million, we put $1 million excess above it. There is no minimum, but if you have a $1 million cleanup, and you come to us for $100,000 excess of $1 million, the premium may not be reduced because the risk that we are being asked to assume is typically higher in the lower layers. If someone comes to us with a less than one-to-one ratio request, red flags go up. Anything a little bit less than that we tend not to look at favorably, unless there's a good business or regulatory reason. We can offer higher limits, but what is most common on a day-to-day basis is a one-to-one limit.

A second underwriter emphasized the capacity constraints that led the firm to set the limit at 100% of the expected cleanup costs:

> *Insurer:* The highest percentage relative to the estimated cleanup costs is 100%. We will not offer more. If the cleanup is $10 million, you get $10 million in overrun limits. Not $12 million, not $20 million. Historically, we might have offered more, but there's not enough capacity in the market to do that now.

3.22 Premiums, Self-Insured Retentions and Co-Insurance Participation

It is difficult to provide a simple presentation of CC premium estimates due to differences among insurers in the methods used to price the policies. Because each policy is unique, examples of low, high, and common premiums as percentages of the cleanup costs are difficult for all insurers to provide. However, Table 3.3 offers indications that some respondents were able to translate as percentages of cleanup costs.

Table 3.3 Cost Cap Policy Premiums	
A	Common range: 6%-10% translated into percentage of estimated cleanup costs
B	Common range: 13% to 25% translated into percentage of estimated cleanup costs
C	Common range: 12%-20% of estimated cleanup cost
D	Common range: 10% - 14 % of limit purchased
E	Minimum: 10%-15% of estimated cleanup cost. $300,000 minimum

The following quotes offer examples of the ways in which CC premiums are calculated and/or offered:

Insurer: We provide all of our rates based on limit purchased. Our range is 10% to 14%. So if you buy $1 million in limits, it's $100,000 to $140,000.

Insurer: Our minimum premium to buy a cost cap is $300,000. It's not a percentage. If you have a $1 million limit excess of a $1 million cleanup, our starting premium will be $300,000. The reason is, there's a lot of engineering that goes into underwriting a cost cap risk and we don't typically charge for the engineering up front. We may bind 40% of all the sites we engineer, but there is still an overhead cost for engineering all of them. So there's a base amount that's charged. Then as you get higher up in your limit, the minimum would be in the 10% to 15% range of the insurance limit purchased above the estimated cleanup costs.

Insurer: We're probably looking at 13% to 25% (of the estimated cleanup costs). The highs could be 25%, 30%, or more, depending on the risk of the deal. But I'm not sure this is meaningful. We don't calculate the premium as a percentage of the estimated cleanup costs. We never have and never will. We use a model to look at the potential for overruns.

A premium may be affected by a self-insured retention (SIR) and/or a co-insurance feature. These are depicted in Table 3.4 and explained below.

Table 3.4 Self-Insured Retentions (SIRs)* and Co-Insurance Participation

	SIR as Percent of Estimated Cleanup Cost			Co-Insurance Participation			
	Minimum	High Example	Most Common	Percent of Policies with Co-Insurance	Low Percentage Example	High Percentage Example	Most Common Percentage
A	10	50	10 - 20	5	10	40	20 - 25
B	10	40	15 - 20	40	5	20	10 - 20
C	20	40	25 - 30	60	10	70	10 - 15
D	NA**	NA	NA	Small	5	30	10 - 30
E	NA	NA	NA	25	Varies	Varies	Varies

*SIR The percentage *above* the estimated cleanup cost for which the insured is responsible.
**NA Not Applicable.

As discussed in the last chapter, an SIR differs from a deductible in that an insurer is not obligated to pay an SIR; the policy is not triggered until the insured pays it in full. SIRs have been a source of confusion to potential purchasers, in large part because the term is used in two different ways. At times, the SIR is meant to refer to the estimated cleanup costs *plus* a 'buffer' or amount that the insured is obligated to pay before making a claim. At other times, insurance representatives are referring *only* to this buffer. To add to the confusion, when this second meaning is intended, the SIR

may be called a deductible (especially by brokers) because this is a concept most people understand. In Table 3.4 and elsewhere in this report, the terms buffer and SIR are used synonymously.

For some carriers, the SIR is calculated as a percentage of the estimated cleanup cost. Thus, for example, on a planned $10 million remediation with a 10% SIR, the policy 'attaches' or starts paying only after a total of $11 million has been spent by the insured. One carrier, however, does not compute the SIR in this way. Rather, the buffer is determined by a model:

> *Insurer:* We don't calculate the SIR as a percentage of estimated cleanup cost. It's set based on the spread of risk in our model. If we try to convert it back, it doesn't give you a meaningful answer about what that is.

In the last few years, another carrier has veered away from using the term SIR and from the calculation of a buffer based on estimated cleanup cost. The following representative explains:

> *Insurer:* We don't tend to use SIR for this program anymore and that's why the engineering is so critical. We work out all the expected costs on a line-by-line item basis. Then the 'buffer' is what we consider to be a contingency load. We look at, if A went wrong or B went wrong, what's the flexibility to correct the issue at hand? What would be the upside and downside? And then we come in somewhere in the middle. So it's not a percentage based on the actual remediation plan. It's different, deal by deal. There are contingencies built into the total amount that the insured is responsible for paying, but there isn't a fixed percentage number on any deal.

In addition to an SIR, a CC policy may include a co-insurance or co-participation feature. This involves the payment by the insured of a predetermined proportion of all costs above the amount at which the insurance begins to pay. Depending on their approach to underwriting, carriers have different preferences for using this feature. One does not use it in policies purchased by owners/developers, although it is standard in all of their policies sold to remediation firms. Another rarely uses the feature at all:

> *Insurer:* Some markets use co-insurance a lot. We heavily engineer cost cap here and we either come to a consensus on cost with our clients or we don't. And when we don't, we say, thanks, but no thanks. It's an underwriting approach.

Another insurer noted the role of credit risk in willingness to use co-insurance. That is, if the insurance has been triggered, but the insured cannot pay its share of the cost overrun, the insurer may have to pay both its own and the insured's overrun cost and seek reimbursement from the insured:

> *Insurer:* Maybe a quarter of our policies have co-insurance. We're seeing more demand for it because people want to control their expenses. But, whether we permit that or not is completely dependent on the credit risk for the party who wants the co-pay.

3.23 Policy Periods

Policy periods for CC policies vary with the time it takes to conduct a cleanup. As Table 3.5 indicates, the most common length that most carriers experience is about 5 or 6 years with ten years being the maximum. These figures again reflect the fact that insurers are not providing CC for small cleanups that may take less than a month in some cases. Note that carriers will allow some time for delays when the policy term is written into the policy. The time varies with the situation. However, once the policy period is established, extensions are not granted later.

Table 3.5 Cost Cap Policy Periods (Years)

	A	B	C	D	E
Maximum	10	10	10	10	10
Most common	3 to 10	3 to 6	5 to 7	5 to 10	10

3.3 Site Assessments

Before purchasing a CC policy, a prospective insured needs to have a remediation plan with cost estimates in hand. As noted previously, careful delineation of this plan is at the heart of a CC policy. If a site has been poorly characterized, an insurer will not offer a policy. When asked about the percentage of cases brought to them with site characterizations so inadequate that the insurer could not consider binding a policy, the insurers estimates ranged from 30% to 50%. Two insurers elaborated on their approach to site assessment requirements and willingness to provide ballpark estimates on premiums:

> *Insurer:* Many people call us and after three minutes we say, you're so not ready for this. Go characterize your site. We weed out a lot by making it pretty clear to people up-front that this is not a gambling activity – this is an estimation activity. We occasionally give indications in rough numbers and say if you came to us with adequate information, this is what the price might be. But that's pretty rare. We don't have the staff to do that. This question reflects a problem with buyers who think they can buy a policy instead of doing site characterization. That's an incorrect assumption. They buy this to back stop any inadequacy in a site characterization that meets professional standards. Even if you meet professional standards, there are still mistakes and that's really what's getting picked up.

> *Insurer:* We want to know up front that they have good information before we start going down the road of engineering everything because we don't charge up front. What we will do, though, before we actually receive their due diligence and do our own, is provide a ballpark indication. If your information says X, here's the coverages we could anticipate with this pricing. That first step is done on close to100% of the sites that we see. If the client is interested, the second stage then is for us to review your information. If people say, we haven't really got any recent due

> diligence information, the site goes on the back burner. We're not going to start our engineering review unless there is an acceptable amount of information available on the site and potential remediation plan.

Because of the expense of reviewing the engineering for a CC policy, three of the five insurers sometimes charge an underwriting fee which is applied to the premium if a policy is purchased. The fees reported ranged from a) $10,000 to $25,000; b) $10,000 to $75,000; and c) $25,000 to $35,000. The determination to charge a fee depends primarily on the insurer's perception of the likelihood that the prospective insured will actually buy a policy:

> *Insurer:* Typically, if the project's large enough that we're going to incur tremendous costs, we just want to see if our potential client is willing to share in that. Believe it or not, some people treat us like we're a consulting firm and we give the information for free. You assume the best intentions, but it has happened once or twice.

> *Insurer:* We don't have a hard and fast rule about when we do or don't charge a fee. If we think the deal's not likely to go, we'll tell them the only way we'll do it is for a fee to make sure they're serious because it's just too much expense for us.

Insurance companies also differ with respect to requiring that a remediation plan be approved by a government regulatory agency. One carrier never makes this requirement, while another requires government approval for all of its CC policies. For the remaining insurers, the decision depends on the particular project. Estimates of the percentage of projects for which they require government approval of a plan were 60%, 75%, and, for the following carrier, less than 5%:

> *Insurer:* I would say we require that a remediation plan be approved in less than 5% of our policies. Unless we think they're asking us to underwrite something we don't think the regulators will approve, we think that's part of the core regulatory risk that we assume. In some cases we tell them that we don't need approval, but we're going to make the attachment point based on what we think the regulators are likely to approve.

3.4 Cost Cap Policies for Guaranteed Fixed Price Remediation Contracts

Guaranteed Fixed Price Remediation (GFPR) contracts are those under which the contractor receives a fixed price to complete an agreed upon level of cleanup, generally defined in terms of attaining state approval of a mitigation. With a GFPR, the contractor negotiates and holds environmental insurance to protect itself against cost overruns.[5]

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[5] This is an alternative to the traditional time and materials contracts under which a mitigation firm receives payment based upon the actual time and materials costs of performing a cleanup, plus a fee. With a time and

All of the insurers in this study provide CC coverages for remediation firms as well as for owners/developers. The minimum estimated cleanup cost is the same for both – $1 to $2 million, depending on the insurer. Table 3.6 presents the percentages of all CC policies that are written for a remediation firm and indicates the percentages of GFPR policies that include PL protection for a firm or its clients.

Table 3.6 Cost Cap Policies for Firms Offering Guaranteed Fixed Price Remediations (GFPR)

	A	B	C	D	E
Percent of total CC policies written for GFPR firms in last 12 months	75%	25%	35%-40%	50%	50%
Percent of GFPR polices that include Pollution Liability coverages	50%	50%	80%	80%	75%

3.5 Portfolios of Small Sites for Government-Led Programs

The majority of brownfield sites are small and, in our previous studies, local government representatives have voiced consistent and widespread interest in finding ways of providing CC policies for them.[6] One suggestion that has been made is to combine multiple small sites and insure them under a single portfolio policy. By including several sites, the $1 to $2 million minimum cleanup cost threshold can be reached. Portfolio policies usually have an 'aggregate' limit (the most a policy will pay for all losses across all properties) and, in some cases, different 'sub-limits' such as a limit for coverages at any one site.

PL portfolio policies, especially for the ongoing operations of firms using hazardous materials, are quite common. This is less the case with CC policies. Three insurers in this study said that less than 10% of the CC policies they sell are portfolios and two said that roughly 10% to 20% are portfolios. Outside of military base closures and realignments, none of the insurers had sold a portfolio CC to a public sector entity such as a state, local government, or a quasi-public economic development organization.

We pursued insurer perceptions of the prospects of creating a portfolio for small sites by presenting a scenario and asking them how feasible insuring it would be. The scenario involved five to ten sites with estimated cleanup costs ranging from $200,000 to $500,000. All the sites would be in the same

materials contract, the developer oversees the work and makes the decision whether or not to purchase a CC policy.

[6] See Northern Kentucky University and the University of Louisville 2002 (*Models*...) and 2005 (*State Brownfield Insurance*...).

city, but would not be contiguous. Based on our previous analyses of what would make the program doable, the following additional conditions were stipulated:

1) The policy would have a single aggregate limit.
2) All the sites would be owned by the same party (e.g., a municipality or developer).
3) Site assessments and cleanups would be performed by the same, highly trusted contractor.

Two insurers said that underwriting the proposed scenario was feasible, two said possibly feasible, and one indicated that data specific to actual sites would be needed to make a determination. In the discussions, the insurers confirmed the importance of the three conditions listed above, especially the first two. They also added other factors and offered caveats about the overall approach. Here, we briefly summarize issues they raised.

The policy could not have per-site sub-limits. The insurer's attachment point would need to be based on the aggregate of all the sites. With sub-limits, the insured has a greater potential to access the working layer or dollar range where losses are likely to occur. If a policy does *not* have per site sub-limits, there is a chance that the insurer will not pay a claim (e.g., if an insured has five sites and four come in under-budget while one comes in over-budget). Moreover, having individual sub-limits and SIRs means greater expense for the insurer since each site needs to be monitored separately.

The properties could only have one owner and project manager. This is a considerable barrier for municipal revitalization programs, since the scenario that many redevelopment agencies confront consists of small, privately owned parcels. The primary difficulty with having more than one owner is that one or a few insureds may exhaust the aggregate policy limit, leaving others unprotected. In addition, one insurer noted:

> *Insurer:* My biggest concern with portfolios is being able to have control. We're really underwriting the insured's ability to manage the cleanup. If we were looking at aggregating ten sites with ten separate owners, that's a problem to us because we're managing ten separate projects. If it's one owner, we would push for having a project manager who would manage all the sites and that's who we would work with. Otherwise, we can't do it.

Cost savings would be doubtful. Some in the insurance industry have argued that portfolio treatments result in cost savings because insurers spread their risk, i.e., losses incurred at some sites are offset by the accumulated premiums collected for all sites. Two insurers in particular in this study expressed overall skepticism about the small-site CC portfolio concept, primarily because of the chances of cost overruns on *each* site. One carrier emphasized that insureds should not hold hope for cost reductions using the approach and pointed to problems even if an insurer shares risk with a GFPR contractor:

> *Insurer:* To suggest that aggregation of risks will result in reduced price is preposterous, because the risk is so high. Having the cost spread at $200,000 to $500,000 means it's almost dead on arrival because a very minor amount of contamination change has a huge percentage

affect on the numbers. If you're talking about a single aggregate limit, all you've done is aggregate risks. If you had ten limits and collected ten times that amount of premium, maybe you would have collected enough premium to survive one of them that goes bad. But if you give any discount whatsoever for spreading those limits over five, you might not even have enough money to survive that single loss. That's the problem. If a municipality just cannot afford an overrun, the question becomes, will a contractor take the risk with a guaranteed fixed price contract? Then you've got the credit risk for the contractor so maybe the contractor can get overrun coverage and the credit risk is ameliorated. But the contractor's going to have a 50% co-pay because we want them to have skin in the game. But in many cases, the contractor can't absorb the 50%. There's all sorts of market structuring problems here. So I have a big problem with this whole thing.

Other qualms also were raised. These included factors such as a) the expense of alternative remedies if cleanup actions should fail and, b) the cumulative regulatory risk – the possibility that state regulations might change and simultaneously affect all sites in the portfolio.

In summary, the utility of the approach would depend on variables specific to the actual sites in the portfolio, especially the adequacy of site assessments. If the skeptical insurers are correct, the approach may not provide the hoped-for, economically viable CC coverages for small sites.

Chapter 4.0
Other Brownfield Insurance Products

In this chapter we provide brief descriptions of other brownfield insurance products. These include Pre-Funded (PF) programs that incorporate CC coverages and, in many cases, have a PL component. We then discuss policies intended for lenders and those created for the environmental service industry. We end with a discussion of a policy designed by one insurer that provides protections when, as part of an approved remediation, contamination has been left at a site.

The policies addressed in previous chapters and this one do not exhaust the environmental products provided by insurers. In fact, the number of these products offered by the three oldest insurers in the market range from eleven to over twenty per insurer. Products not summarized in this report fall into three categories. First, they combine coverages that are addressed in the report (e.g., combined PL and CC policies). Second, they provide PL protections for specific types of contaminants or contaminant sources (e.g., storage tank polices, and asbestos/lead abatement insurance). Third, they provide PL protections for particular types of facilities (e.g., schools, golf courses, hospitals, automotive repair shops, and properties owned by local governments).

4.1 Pre-Funded Programs

Pre-Funded (PF) programs also are referred to as Finite Risk or Blended Finite Risk programs. They include a CC component and, in many policies, PL coverages. As the name indicates, they entail pre-funding of expenses at a brownfield site where a cleanup is planned. Like CC policies, the programs require extensive site assessments and are individually structured to meet the needs of a specific project. Four of the nine insurers in this study offer PF programs. The following paragraphs describe how they function with respect to three of these insurers. Differences for the fourth insurer then are summarized.

At the outset, the insured pays the policy premium and the portion which represents the net present value of the expected cleanup costs is credited to a 'notational commutation' account held by the insurer.[7] The policy is used for cleanup expenses, per the terms and conditions of the policy, which the insurer pays as they are incurred by the remediation contractor. If there is a balance remaining in the notational commutation account at the end of the cleanup, the insured can commute the remaining funds, thus receiving the account balance (which includes the interest accrued) and releasing the insurer from coverages associated with the program.

If the cleanup costs are higher than expected, the policy pays the additional costs, per the terms and conditions of the policy, up to the policy dollar limit. The insurer also is accepting a 'timing' risk (the

[7] Installments of the premium may be arranged if pay-outs for cleanup activities will occur in the future.

possibility that expenses will be paid out faster than estimated). Together, these elements constitute the 'underwriting risk' associated with the program.

These programs are appropriate for brownfields where cleanup costs are expected to be high and remediation is expected to begin at some future date and/or to take multiple years, as reported in Table 4.1.

Table 4.1 Pre-Funded Programs: Project Cleanup Costs and Policy Terms						
	Project Cleanup Costs, Dollars			Policy Terms, Years		
	Low Example	High Example	Most Common	Low Example	High Example	Most Common
A	3M	32M	6M to 15M	6	30	6 to 10
B	5M	200M	5M to 60M	2	10	5 to 10
C	4M	240M	15M to 50M	7	30	15 to 20

The fourth insurer in this study reports offering PF programs infrequently. Moreover, the carrier's product differs in significant ways. First, carriers A, B, and C described above include a PL component in their programs in the majority of PF programs sold, i.e., 80% for two and 100% for the third. The fourth insurer includes these coverages in less than 10% of its programs. Second, the fourth insurer sells the product primarily as a vehicle for two purposes only. One is to satisfy the closure/post closure financial responsibility requirements imposed on hazardous and solid waste treatment, storage, and disposal facilities under the Resource Conservation and Recovery Act (RCRA) and similar state laws. The second purpose is to serve as a credit secure vehicle to hold contributions for a cleanup for multiple Potentially Responsible Parties (PRPs) at a site. For both of these uses, the insurer does not manage the cleanup and dispensation of cleanup funds.

During the sessions with insurers, we discussed the advantages and disadvantages of PF programs compared to buying CC and PL policies. The main disadvantages are that a) substantial funds must be paid up-front, and b) the insured does not have control of the investment or pay-out of the funds.

On the other hand, the approach has several advantages, including the following:[8]

- Longer policy terms for PL components may be available with a PF program than can be acquired outside of a program. Thus, protections can be provided for re-opener coverage and to insure liabilities arising from pollution conditions resulting from the failure of engineering controls and post-remediation operations and maintenance activities.

[8] While tax and accounting treatments of PF programs favorable to an insured have been viewed as advantages in the past, they have been under investigation for the last two years by the Securities and Exchange Commission and other entities. Standards with respect to these treatments await clarification.

- PF programs can be very effective in procuring the cooperation of multiple PRPs and thus bringing about a cleanup. Without the program, conflicts among the parties can continue for long periods. By paying their share of a PF program, each one can be relieved of financial liabilities without worrying about the potential impact of the future bankruptcy of other parties.

- The notational commutation account balance, if the policy is commuted, may be shared with the contractor to provide an incentive for rapid execution of remediation activities.

- Use of a PF program provides assurance to the community that a cleanup will be completed because funding is guaranteed by the financial strength of the insurer, independent of the financial standing of a remediation contractor or PRPs.[9]

4.2 Secured Lender Policies

Secured Lender (SL) protections are provided in policies with names including Lenders Environmental Site Protection, Lender Environmental Protection, Real Estate Lender's Policy, and Collateral Impairment and Environmental Site Liability Insurance. The policies help to protect commercial lenders from losses due to pollution conditions at properties used to secure loans.

While lenders are the insured parties, developers and owners benefit in that the policies may increase lender willingness to provide capital for redevelopments that might not otherwise be supported. The 1996 Asset Conservation, Lender Liability, and Deposit Insurance Protection Act (or Lender Liability Act) dealt with critical lender liability concerns (e.g., by specifying actions lenders can take to avoid federal liability as owners if they foreclose). However, lenders still face risk exposures that SL policies address including collateral property value loss and toxic tort claims if they foreclose.

At present, four carriers provide SL policies. As we discuss in Chapter 5.0, the product has undergone changes in the last few years in terms of the ways in which they are structured and the number of insurers offering them.

Table 4.2 presents the coverages offered. Note that all of the coverages are conditional on a *loan default* occurring during the policy period. All but one carrier offer PL coverages for a lender for bodily injury and property damage claims and legal defense costs to defend against third party claims. For three insurers, mortgage impairment protections vary before and after foreclosure.

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[9] This may also be accomplished by placing the SIR for a CC policy in an escrow account.

Table 4.2 Secured Lender Policy Coverages*				
	A	B	C	D
Mortgage Impairment for Pollution Condition Discovered *Prior to Foreclosure*				
Payment of *the lesser of* the estimated cleanup costs *or* the outstanding loan balance	✓	✓	✓	✓
Option of payment of the *outstanding loan balance only*	✓			✓
Option of payment of either the outstanding loan balance *or* the estimated cleanup costs *if the cleanup costs are at least 50% of the loan balance*	✓			
Mortgage Impairment for Pollution Condition Discovered *After Foreclosure*				
Payment of the *lesser of* the estimated cleanup costs *or* the outstanding loan balance			✓	
Payment of the *estimated cleanup costs only*	✓	✓		✓
Pollution Liability Coverages *After Foreclosure*				
Third party claims for bodily injury and property damage	✓	✓		✓
Legal defense costs to defend against third party claims	✓	✓		✓

* One insurer offers two SL forms; coverages in both policies are reflected in the table.

Three limitations with respect to SL policies are noteworthy. First, for three insurers, a default can occur for any reason. The fourth insurer, however, requires that a borrower's default must be caused by a pollution condition, thus limiting the circumstances under which the policy will be triggered. Second, only one insurer offers the policy for construction loans needed by many brownfield developers and then only on a 'lesser of' basis.

Third, while SL policies do provide brownfield protections in that newly discovered, pre-existing pollution conditions at actionable levels are covered, conversations with insurers indicate that they are understandably risk averse with respect to offering the policies for sites where a strong suspicion of unknown, pre-existing contamination exists. As one insurer noted of the policies, "We really do clean properties."

For single sites, two insurers require at least Phase II site assessments, while the other two will write SL policies on the basis of a Phase I. Currently, only one carrier offers SL policies on a portfolio basis. Site assessments for the portfolios involve lender use of a customized due diligence process designed in partnership with the insurer that screens out high-risk properties.

Tables 4.3 and 4.4 offer additional information on SL coverages for an individual site including policy periods, dollar limits, premiums and deductibles/SIRs. The figures reflect purchase of standard policies currently available from the insurers.

Table 4.3 Secured Lender Policy Periods and Dollar Limits for an Individual Site						
	Policy Periods in Years			Dollar Limits for Five-Year Policy		
	Low Example	Maximum	Most Common	Minimum	Maximum	Most Common
A	1	10	5 to 10	1M	15M	5M - 8M
B	1	10	3 to 10	1M	25M	3M - 10M
C	1	15	10*	- -	25M**	- -
D	1	10	3 to 5	1M	25M	5M - 10M

- - Missing data
* The most common period for construction loans is 1 to 2 years.
** When an 'outstanding loan balance only' provision is offered, the maximum is $10M.

Table 4.4 Secured Lender Policy Premiums and Deductibles/Self-Insured Retentions for Five -Year, Single-Site Policy						
	Premiums			Deductibles/Self-Insured Retentions		
	Low Example	High Example	Most Common	Low Example	High Example	Most Common
A	Proprietary	Proprietary	Proprietary	25K	250K	50K - 100K
B	- -	- -	- -	- -	- -	- -
C	25K	100K	50K - 70K	10K	250K	10K - 25K
D	25K	150K	45K - 65K	25K	250K	25K - 50K

- - Missing data

4.3 Environmental Service Industry Policies

A number of products are intended for the environmental service industry – firms and parties providing advice and analysis and/or construction-related services that may be exposed to liabilities stemming from their involvement at a brownfield site:

- Professional consultants liability coverages provide protections against liabilities arising out of acts, errors, or omissions during the performance of professional services at a brownfield by environmental consultants and engineers, laboratories, and design firms.
- Contractors pollution liability coverages protect against environmental remediation contractors' liabilities for third-party claims caused by pollution conditions arising out of covered operations at project sites.
- Environmental surety products provide surety bonds to guarantee the performance and payment obligations of contractors involved in activities such as asbestos and lead abatement, underground storage tank removal, and other types of environmental remediation activities.

4.4 Owner-Controlled Policies

Contractors and professionals generally purchase their own insurance policies. Some, such as transporters of hazardous materials, are required by law to be insured. However, their policies may not all be adequate for a particular project. For example, insurance policies purchased by some parties may exclude asbestos and/or lead while others do not. Moreover, a developer's project may not really be covered, since it is possible that a contractor's aggregate policy limit already has been expended on claims associated with other projects on which the contractor has worked. To address these issues, developers can purchase a single owner-controlled policy that provides PL coverages for all parties involved with a brownfield project.

4.5 Land Use Control Policy

A unique policy offered by one insurer offers coverages for sites where a Risk-Based Corrective Action (RBCA) remediation has been conducted. In these cases, contamination has been left and 'land use controls' have been put into place to protect human health and the environment. These include 'engineering controls' or physical measures such as containment caps and 'institutional controls' or legal mechanisms, such as deed restrictions, intended to ensure that future site activities do not impair the engineering controls.[10] The policy incorporates four coverage parts that can be purchased independently:

- *Stop Loss* insures against cost overruns in the design and implementation of institutional and engineering controls.
- *Professional Liability* insures against cleanup costs, bodily injury, and property damage claims resulting from errors or omissions on the part of professionals designing or establishing engineering and institutional controls.
- *Failure of Controls* insures against cleanup costs, bodily injury and property damage claims in the event that a properly designed and implemented institutional or engineering control fails, including the event that new scientific developments establish that the controls are no longer adequate.
- *Maintenance and Enforcement of Controls* insures against cleanup costs, bodily injury and property damage claims due to errors or omissions by persons responsible for maintaining or enforcing engineering and institutional controls.

To apply for the policy, the parties involved submit a stewardship plan to the insurer for approval that includes monitoring requirements, access rights from property owners, and other elements. According to the insurer, this process forges a discussion of allocation of liabilities and responsibilities related to residual contamination that may not otherwise occur. The number of the policies sold is proprietary, but indications are that applications for the policy and thus the number of policies sold is quite small.

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[10] For further information on land use controls, see <www.lucs.org.> a Web site operated by the International City/County Management Association, with support from EPA.

Chapter 5.0
Changes in Insurance Products, 1999 - 2005

In this Chapter, we provide a synopsis of changes in the availability of insurance for brownfields since 1999 and discuss insurer opinions of the outlook for the products. We begin with a short summary of shifts in insurance companies that provide the policies. We then describe changes in PL, CC and SL insurance, focusing on selected characteristics such as premiums and terms.

5.1 Insurers in the Marketplace

Perhaps the most notable change in the brownfields insurance industry has been the exit and entrance of insurance companies in the brownfields market. Since 1999, five carriers that offered PL and other brownfield policies have left the market. Five have entered since that year including two that provide more than PL policies.

The magnitude of this turnover in light of the limited number of brownfield insurance providers underscores the need on the part of potential purchasers to investigate the financial status of carriers. There are several rating organizations that provide this information including AM Best, Moody's, Standard and Poors, and Fitch. In the past year, upgrades and downgrades have been occurring with some regularity in the environmental insurance industry.

It is useful to seek information about current ratings from qualified brokers. This is so because, first, *informed* brokers generally are up-to-date on financial problems within a company before they are noted in rating organization publications. Second, to obtain detailed reports, a membership in rating agencies like AM Best must be purchased. Third, the multiple rating organizations use different standards and symbols to designate an insurer's financial condition. Finally, it is necessary to know the name of the company that should be searched. The AM Best ratings for only two of the nine underwriters in this study can be found by entering the name listed in the acknowledgments. Because the insurance industry is regulated at the state level, underwriters use different insurance companies to actually issue policies, depending on an issuer's legal standing in a particular state. Consequently, buyers need to know which company is being used for a particular policy.

5.2 Policy Availability and Characteristics

Sections 5.21 through 5.23 below provide tables presenting the results when insurers were asked to give their opinion about changes since 1999 with respect to PL, CC, and SL policies. The last row of each table exhibits the insurers' opinions of future sales of policy types in the next twelve months compared with the last twelve months. Data are presented only for carriers currently providing a policy. Anticipating that information about an insurer's own company would be proprietary, we asked instead for the extent to which the carriers believed the changes had occurred industry-wide.

The assessments on the tables are subjective and may be assumed to reflect, at least in part, the perspective of each carrier's firm.[11] Two further caveats also are in order.

First, the data cannot be assumed to be representative of all underwriters, since information from most of the companies was collected from only one person. Opinions within firms undoubtedly would differ. Second, as one insurer noted, the responses to the questions depended on whether the insurers had only existing firms in mind or whether their judgments included policies offered by insurers that are no longer in the market:

> *Insurer:* We clearly saw in the late 1990's to the early 2000's the entrance and exit of a series of our competitors. Those of us still left standing would argue that they came in because they saw a market opportunity, but they didn't understand how to underwrite and they basically became financial disasters and fell out because they offered coverage that was too broad for an inadequate amount of money. So when you ask about changes since 1999, one simple answer would be that all the terms have narrowed because all the undisciplined underwriters are now out of the market. If you ask about the more disciplined competitors who are still standing, I would say that everything is about the same as it was.

Because of differences in the carriers studied in the 1999 and 2005 reports, with one exception, we do not offer tables that present direct comparisons of 1999 to 2005 data here. In the main, the comparisons become more confusing than informative. However, observations of noteworthy shifts from the previous study are inserted.

5.21 Pollution Liability Policies

PL policies are the bread and butter of the brownfields insurance industry. As depicted in Table 5.1, all insurers believed that sales increased from 1999 and anticipated an increase in future sales. Two more points that can be drawn from Table 5.1 warrant discussion.

First, the majority of carriers maintained that there has been an increase in premiums in the industry as a whole since 1999. This assertion is supported by figures collected from the Massachusetts Brownfields Redevelopment Access to Capital (BRAC) state program. This program offers pre-negotiated and discounted PL and CC policies provided by a single carrier to eligible program participants. In 2005, the state solicited proposals from other carriers to serve as the program insurer. While the same insurer that has always provided coverages for BRAC was selected, BRAC personnel report that pricing submitted from another carrier was remarkably similar.

[11] No compiled data bases exist for the policies because they are surplus-lines products. Insurers do not keep separate records for PL and SL policies sold for brownfields.

Table 5.1 Opinions about Brownfield Pollution Liability Policies Industry-Wide									
	A	B	C	D	E	F	G	H	I
Changes: 1999-2005									
Premiums	▲	▲	▲	▲	▲	▲	■	■	▲
Deductibles/Self-Insured Retentions	■	■	■	■	■	■	■	■	▲
Dollar Limits	▼	▼	▼	▼	■	■	▼	■	■
Policy Periods	▼	▼	▼	▼	■	■	▼	▼	▼
Assessment Required	▲	■	■	▲	■	■	▲	▲	■
Sales: 1999-2005	▲	▲	▲	▲	▲	▲	▲	▲	▲
Sales: Next 12 Months Compared to Last 12 Months	▲	▲	▲	▲	▲	▲	▲	▲	▲

▲ Increase ▼ Decrease ■ About the same

Although the BRAC schedule does not provide dollar amounts for all premium/deductible combinations, it does offer clues as to the pricing of the products in the industry. Table 5.2 presents examples of these figures and the premium increases for the 2002 - 2005 period. All four combinations of policy limits/deductibles show a premium increase over three years that exceeds 60% in real (inflation-adjusted) terms. This increase is roughly 20% per year.

5.2 Examples of Brownfield Pollution Liability Premium Increases for a Five-Year Policy under Massachusetts' Brownfields Redevelopment Access to Capital State Program, 2002 and 2005		
	$3,000,000 Policy Limit	$5,000,000 Policy Limit
With $50,000 Deductible		
2005 Current Dollars	$28,397	$36,586
2005 Constant (2002) Dollars	$26,223	$34,301
2002 Current Dollars	$16,211	$21,213
Increase, 2002 Dollars	$10,012	$13,088
Increase, Percentage	64%	62%
With $100,000 Deductible		
2005 Current Dollars	$26,977	$34,757
2005 Constant (2002) Dollars	$25,292	$32,586
2002 Current Dollars	$14,590	$19,286
Increase, 2002 Dollars	$10,702	$13,300
Increase, Percentage	73%	69%

Notes: Current dollar figures are prices actually quoted. Constant dollar figures have been adjusted for inflation 2002-2005, using the Consumer Price Index, the adjustment factor commonly employed by the insurance industry.

Caveats about the figures in Table 5.2 voiced by one insurer should be noted, however. That is, the pricing was offered for a state program that was seeking discounted insurance so that the premiums given may be low for the industry as a whole. It also should be kept in mind that the policy form, which remained the same for both years, does not include additional endorsements that would raise the cost of the insurance. The increases may be overstated as well, since the BRAC insurer may have offered the 1999 prices at an exceptionally low discount.

The second notable change in PL policies described by most carriers pertains to the length of the policy terms offered. In Table 5.3, we make the exception of providing tabular comparisons of those insurers studied for the 1999 and 2005 reports.

Table 5.3 Changes in Brownfield Pollution Liability Policy Periods, 1999 - 2005 Among Insurers Studied

	Maximum		Most Common	
	1999	2005	1999	2005
In Market, 1999 and 2005				
A	20	10	5	5
B	10	10	5	5
C	20	10	5	5
D	20	10	5	5
In Market, 1999. Out by 2005				
E	10		3	
F	15		5	
In Market by 2005				
G		10		10
H		10		5
I		10		1
J		5		3
K		5		1

The primary differences in reported maximum periods are that three insurers in the market for both years lowered their maximum from 20 to 10 years and one that left the market had been offering 15 year PL policies. The most common periods reported have not changed for the carriers in the market for both years. However, two new insurers that have entered the market have five-year maximums and most common periods of 1 or 3 years.

A related observation about changes in length of policy terms since 1999 is that most all insurers operating that year offered a guaranteed renewal and/or a rolling renewal provision. As we discussed in Section 2.21, these provisions are not viable options today for most policy holders.

5.22 Cost Cap Policies

As discussed in Chapter 3.0, estimates by insurers indicated that not that many CC policies are sold – perhaps no more than 100 per year nationwide. From 1999 to 2005, the number of carriers that offered the policies decreased, primarily because the insurers providing them dropped out of the market. In one case, the insurer still offers other brownfield insurance products, but has stopped writing CC. By our count, the total number of insurance companies that offered the product at various times in the 1999-2005 period was ten. Currently, five carriers market the product. Three carriers, new to the market since 1999, never have offered the policy.

As several interviewees noted, insurers experienced losses on CC policies, particularly for small-scale projects. The responses in Table 5.4 suggest that insurers now providing CC coverages perceive a trend toward more conservative underwriting. All five indicated a belief that premiums have increased. Four expressed the opinion that self-insured retentions have become higher, while dollar limits have become lower. Three believed there has been an industry-wide trend toward more thorough site assessments.

In addition, in the 1999 study, all insurers emphasized that CC policies were not cost-effective for small projects. 'Small,' however, was defined as projects involving cleanup costs ranging from $100,000 to $500,000. Now, small is considered to be $1 to $2 million.

Table 5.4 Opinions about Cost Cap Policies Industry-Wide

	A	B	C	D	E
Changes: 1999-2005					
Premiums	▲	▲	▲	▲	▲
Self-Insured Retentions	▲	▲	▲	■	▲
Use of Co-Insurance Participation	▼	▲	■	■	▲
Dollar Limits	▼	▼	▼	■	▼
Assessment Required	▲	■	▲	■	▲
Sales: 1999-2005	▲	▼	▲	▲	▼
Sales: Next 12 Months Compared to Last 12 Months	▲	■	▲	▲	▲

▲ Increase ▼ Decrease ■ About the same

As reported in the table, most insurers predicted an increase in sales industry-wide in the next twelve months. In particular, they drew attention to the growing popularity of Guaranteed Fixed Price Remediation (GFPR) contracts. One commented that perhaps 35% to 40% of their contracts in the previous year were for either the contractor or the owner/developer who commissioned the contractor. Another noted a much higher percentage:

Insurer: In the last twelve months, I would say 100% of our (cost cap) book has been based on the contracts. We insure the owner who's hired a contractor and we insure the contractor. Historically, we've insured owners with the policies, but within the last year we haven't seen much owner business without a (GFPR) vehicle underneath it.

5.23 Secured Lender Policies

Perhaps the most remarkable change with respect to SL coverages was the withdrawal of the policy by one carrier in 2004 due to losses from claims and the inability to balance premiums charged with the long policy periods that were required by purchasers. Table 5.5, completed by three of the four insurers now offering SL policies, presents somewhat mixed opinions about other shifts pertaining to the product.

Table 5.5 Opinions about Secured Lender Policies Industry-Wide

	A	B	C
Changes: 1999-2005			
Premiums	▲	▲	▼
Dollar Limits	▲	■	■
Assessment Required	▲	■	▲
Sales: 1999-2005	▲	▼	▼
Sales: Next 12 Months Compared to Last 12 Months	▲	■	■

▲ Increase ▼ Decrease ■ About the same

Other changes, not presented in the table, can be derived from comparisons of the insurers that now provide SL forms and the five carriers studied in 1999, all of which offered the policies:

- Policy periods have been reduced. In the 1999 study, typical periods were reported to be three to fifteen years while, in 2005, they were reported to be one to ten years.

- Site assessment requirements have increased. In the 1999 study, only two of the five carriers studied indicated that a Phase I was required for a policy purchase; the other three required only database searches. In 2005, the most common assessment for an individual site was a Phase I for two carriers, and Phase II for the other two.

- Policies now most often are offered on a 'lesser of' basis. In 1999, policies were readily available that reimbursed lenders for the *outstanding loan balance* when a borrower defaulted and a pollution condition was present. The insurer that withdrew its SL product was providing the policies on this basis. Currently, only two insurers offer this alternative; most policies now reimburse lenders for *the lesser of* the outstanding loan balance *or* the estimated cleanup costs.

- Only one insurer now offers portfolio policies. All the insurers in the 1999 study did so and all predicted that there would be an increase in the tendency to offer the policies in portfolios in the future.

This miscalculation in the 1999 underwriters' predictions for SL policies underscores the changes that continue to characterize the brownfield insurance marketplace, a topic to which we now turn.

5.3 A Constantly Changing Market

Since its beginnings in the 1980s, the environmental insurance industry has been characterized by rapid change with respect to the terms and coverages available and the pricing of the policies. In the *Products Available, 1999* report, key changes found to have occurred between 1996 and 1999 included broader and more flexible coverages, lower premiums, longer policy terms, and increased carrier capacity in terms of the policy dollar limits insurers could offer. In that time period, the market was 'soft,' i.e., a buyer's market. In early 2001, the market began to harden somewhat, which resulted in premium increases, shorter policy terms, and decreased carrier capacity.

Whether or not an insurance market is soft or hard depends on a number of complex factors that include, among other things, claim losses, competition among carriers, and returns on investment of premium dollars. These factors affect not only insurers, but 'reinsurers' as well. Essentially, a reinsurer is a company that insures an insurer, i.e., it accepts part of an underwriter's risk in return for a premium and thus provides another layer of risk transfer. While the reinsurance market is invisible to insurance purchasers, it has critical impacts on coverage availability and cost.

We close this report by emphasizing that shifts in brownfields insurance will continue. Notable impacts may be expected to come from two recent developments:

- Hurricanes Katrina and Rita in 2005, and the claims that have to be paid as a result.
- The December 2005 implementation of Financial Accounting Standards Board (FASB) Interpretation No. 47 (FIN 47), a step that forces companies to disclose and quantify environmental liabilities associated with properties they own.

Both sets of impacts will be felt after this report is completed and no one at this point can accurately predict their effects on the costs and terms of brownfield insurance policies. However, the pressures and the directions of the trends they portend can be contemplated.

With respect to the hurricanes, one might credibly hypothesize that, to an unknown degree, the events will result in premium increases, higher retentions, shorter policy terms, and reductions in available market capacity. In large part, these effects flow through the reinsurance market that experienced severe losses from the weather events and their aftermaths. When such losses occur, the amount of capital the reinsurers have available to put at risk falls. When the supply of risk capital falls relative to demand, the cost of reinsurance and, thus, insurance rises.

The 9/11 attacks in 2001 exacerbated the hardening of the property and casualty market that had already begun earlier that year with the decline in financial market performance. However, the attacks had primarily indirect consequences for environmental insurance through their effects on the availability of risk capital in general. The impacts of the hurricanes should be greater since they involve environmental claims that weaken the capital reserves of brownfield insurers. These include first party claims for cleanup of contaminants from ongoing operations and third party claims for property damage of homes and businesses impacted by pollution migrating from insured sites.

The implementation of FIN 47, which established the standards and procedures expected for compliance with FASB's September 2001 Statement 143, "Accounting for Asset Retirement Obligations" (FAS 143) should further harden the market. FIN 47 requires companies to account on their current balance sheets for the costs they may incur for retirement of long-lived assets. Firms may want to limit those costs by remediating sites using CC insurance, thus eliminating the need for an allowance for contingencies that would add to the liabilities they now have to declare. Corporations also may pursue disposal of their idle real estate assets that carry contingent liabilities, thus increasing the demand for PL policies that protect site purchasers and users. As a result, the supply of unused environmental risk capital available may be expected to fall, and the price of environmental insurance to rise.

Again, the full consequences of the natural disasters and FASB will not be known for some time. Outcomes will depend on other factors, primarily the returns on investments of premiums. Overall, these have risen in the latter half of 2005. This trend, if it continues, should have a restraining effect on the hardening of the market.

References

Environmental Protection Agency (EPA). 1996. *Potential Insurance Products for Brownfields Cleanup and Redevelopment*. Springfield, VA: US Department of Congress.

Northern Kentucky University. 1999. *Environmental Insurance Products Available for Brownfields Redevelopment, 1999*. Washington, DC: US Environmental Protection Agency. <http://www.epa.gov/swerosps/bf/pdf/insrep99.pdf>

Northern Kentucky University and the University of Louisville. 2002. *Models of Government-Led Brownfield Insurance Programs*. Washington, DC: US Environmental Protection Agency. <http://www.epa.gov/brownfields/pdf/nku2002.pdf>

Northern Kentucky University and the University of Louisville. 2005. *State Brownfield Insurance Programs, 2004.* Washington, DC: US Environmental Protection Agency. http://www.epa.gov/brownfields/pubs/state_report_04_revised.pdf

US Congress. 2001. *H.R.2869, Brownfields Revitalization and Environmental Restoration Act of 2001*. 107th Congress <http://www.epa.gov/brownfields/sblrbra.htm>