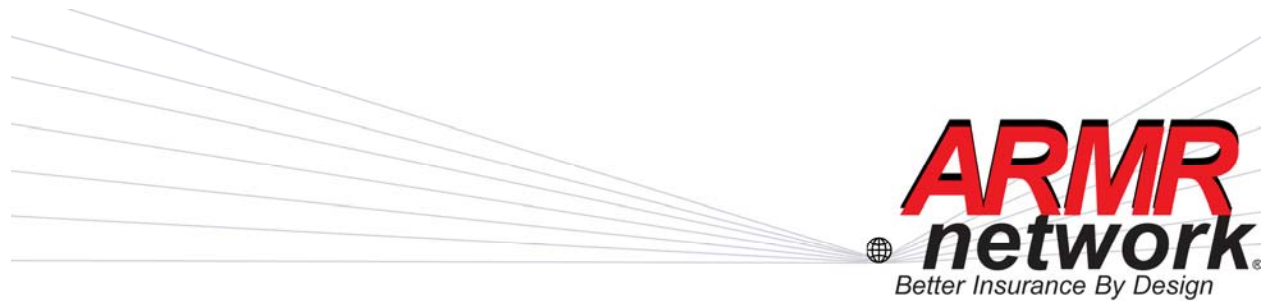


A User's Guide to Environmental Insurance



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Environmental Insurance

Pollution exclusions in general liability, automobile liability, and property insurance policies create a coverage void for many industrial and commercial insureds. To fill this gap in insurance coverage, a number of specialized environmental insurance policies have been developed to address a wide range of loss exposures. In practice many of the separate coverage's that will be discussed in this chapter are combined either by the underwriter or intermediaries to build a more complete environmental insurance program to address the needs of a particular insured.

Environmental impairment liability insurance has existed as a separate insurance coverage since 1977 in the United States. The market for environmental insurance remained relatively restricted until the late 1980s. Since that time, the marketplace for these coverage's has expanded rapidly. Current annual premium volume for environmental insurance exceeds one billion dollars. The vast majority of these premiums are written in North America. However demand is building for environmental insurance in other parts of the world, as the uses of the coverage become better understood.

In this chapter, the term "environmental insurance" is used in a general sense to denote both first-party (property) and third-party (liability) insurance policies, whose primary purpose is to manage pollution-related loss exposures. Within in this context, environmental impairment liability insurance (also called pollution liability insurance) is just one type of environmental insurance.

It is not possible in the space of this chapter to review all of the different environmental insurance policies offered by insurers today. The common denominator for the inclusion of a coverage form in this discussion of environmental insurance is the existence of a specific environmental coverage grant in the insuring agreements. The broad intent of the most popular environmental insurance forms will be presented along with an analysis of the more common exclusions contained within the various policy forms.

The legal basis for environmental liability, as it has evolved under American law, will also be examined.

Legal Basis for Environmental Liability

Environmental liability losses can be incurred through torts, contractual obligations, or violations of statutes. In addition to these traditional sources of liability, there is a unique legal aspect to environmental liability that makes these risks more difficult to manage. This aspect is, legislated, retroactive, strict liability for clean-up costs under some of the environmental protection laws. The source of the liability for most environmental losses will be the actual or alleged release of pollutants, the violation of a law designed to protect human health and the environment from those pollutants or becoming responsible to pay environmental remediation expenses.

Torts

In the realm of torts, liability for pollution can be based on negligence, intentional torts, or strict liability.

Negligence

Negligence is the failure to do what is reasonable under the circumstances to protect third parties from injury or damage. The following are examples of negligent acts that have resulted in actual environmental liability claims:

1. An oil spill from a petroleum refinery contaminated a municipal water supply, which resulted in bodily injury and property damage claims.
2. A contractor working at a manufacturing facility left a valve open on a process line overnight. The next day it was discovered that the contents of a storage tank connected to the line had been released into an adjacent stream, causing property damage, bodily injury, and natural resource damage.
3. A hazardous waste hauler transporting toxic waste to a disposal facility had an auto accident in the downtown section of a city. The hazardous liquid being transported was released into the street. Passersby inhaled the fumes, and the business district of the city was evacuated for two days as cleanup contractors responded to the spill. Claims were filed against the transporter alleging bodily injury, property damage, and business interruption.

Other sources of potential liability involving negligence would include the manufacturing of hazardous or toxic products, or the failure of a product that causes a release of damaging materials into the environment. The negligent selection of environmental services vendors, or the improper handling of hazardous materials are more examples of potential sources of environmental liability caused by negligence.

Intentional Torts

The intentional torts most commonly alleged in environmental claims are nuisance and trespass.

Nuisance

A property owner is entitled to the peaceful enjoyment of his or her property. If a neighbor or another third party engages in an activity that interferes with the owner's right of enjoyment of the property, the owner may bring an action alleging nuisance against the party causing the interference. Potential environmental loss exposure alleging nuisance include the creation of loud noises, noxious odors or producing fog or electromagnetic fields.

Trespass

Unlike nuisance, which requires no transmission of materials from one property to another, trespass involves the physical deposition of pollutants on the property of the claimant alleging injury. The material that is deposited may be a toxic substance, but it does not have to be. Claims have resulted from releases or deposits of water, sand, and clean soil. As long as the deposits are objectionable to

the property owner, a trespass claim can be brought against the party responsible for the release. Examples would include discharging chemicals or runoff into a stream or changing its temperature. Blowing dust or particulate from a smoke stack are other examples of potential trespass claims.

Strict Liability

When manufacturing operations use inherently hazardous materials or processes, courts may impose strict liability, which eliminates the common-law defenses normally available to the defendant in a negligence suit. No degree of care is considered to be adequate for ultra hazardous activities or materials. For example, a remediation contractor working on a job to incinerate nerve gas could face strict liability for ultra hazardous activity if a release of the nerve gas injures a third party, even though the contractor might exercise a very high degree of care in performing the work. Some examples of materials or activities that could create strict liability loss exposures would include working with nuclear materials, polychlorinated biphenyl (PCB) materials, or extremely hazardous waste.

Contractual Obligations

A general contractor that agrees to hold harmless and indemnify a project owner for all claims that arise during the course of the project may incur an environmental loss under the contract if the proximate cause of the loss is a release of pollutants. For example, a worker who is employed by a subcontractor at the project and is injured as a result of breathing ammonia might sue the project owner, thus activating the general contractor's contractual obligation to hold harmless and indemnify the owner.

Environmental Statutes

The affects of environmental laws and regulations are the most complicating factors in the management of environmental risks. Environmental statutes contain provisions that can lead to injunctions, fines, and penalties for noncompliance. The statutes also contain provisions for the criminal prosecution of individuals, including corporate officers. Although this latter point is not a subject of insurance, it is an important point to consider when developing environmental management protocols. For insurance practitioners, the most common and significant risk management implications of these statutes are the cost recovery provisions for clean-up expenses and the proof of financial responsibility requirements under a few environmental laws.

The "modern era" of environmental legislation began with the passage of the National Environmental Policy Act (NEPA) of 1969. NEPA resulted from the efforts of conservationists to compel the federal government to consider the environmental ramifications of proposals for new highways, dams, and other public projects capable of affecting wildlife or scenic areas. Since this time, there has been a proliferation of environmental laws to protect human health and the environment. After the passage of NEPA, public interest soon changed from protecting conservationist values to protecting specific environmental media, primarily surface waters (the Clean Water Act) and the air (the Clean Air Act). As the "environmental movement" caught on, the more ambitious and complex Resource Conservation and Recovery Act (RCRA) of 1976 and the Comprehensive Environmental

Response, Compensation, and Liability Act (CERCLA) of 1980 soon followed. Both CERCLA and RCRA can have a significant impact on the risk management programs of many organizations.

Federal statutes provide the baseline standards for state and local environmental laws. Local governments are able to establish standards that are more restrictive than the federal standard. This legislative freedom and the popularity of laws protecting the environment lead to a profusion of environmental regulations that can vary geographically.

Many environmental laws contain common-law theories of liability, however they typically do not require fault or negligence on the part of the party charged with responsibility, in effect creating strict liability by statute.

One of the common threads that run through most of these laws is the theory that the person that caused the pollution should be responsible to pay for the clean up of that pollution in the case of a spill or release. This is commonly referred to as a "let the polluter pay" funding scheme. Since the political alternative to a "let the polluter pay" funding scheme would be a "make the tax payer pay" scheme, which would require a new tax to pay for it is easy to understand why politicians throughout the globe favor "polluter pays" environmental protection laws. Various forms of environmental insurance can be utilized to finance many of these statutory loss exposures.

Some of the most influential federal environmental laws are summarized in the sections that follow. Most states actually administer these laws under state statutes that have different names but virtually the same content as the federal law. For insurance practitioners, the most common and significant implications of these statutes are the cost recovery provisions for clean-up expenses and the proof of financial responsibility requirements under some of the laws.

The **Clean Water Act (CWA)** seeks to improve the quality of surface waters by prohibiting or regulating the discharge of pollutants into navigable waters and restoring them to "fishable" and "swim able" quality. A number of activities are regulated under the legislation including discharging pollutants into waterways, storm water run off, and mandatory preparation of Spill Prevention, Control and Countermeasures plans for certain regulated facilities.

The **Clean Air Act (CAA)** seeks to improve the quality of ambient air by regulating emissions from both mobile and stationary sources of air pollution. Permits are required to construct or operate sources of air emissions. The terms of the permit vary from one emission source to another and from one pollutant to another. Similarly, restrictions are tighter in areas of poor air quality (such as urban areas) than elsewhere. The zones around cities where ambient air quality fails to meet CAA requirements are classified as "Nonattainment Areas". In these areas, regulators are able to curtail new industrial or commercial development by denying the required air permits.

The purpose of the **Motor Carrier Act of 1980** is to protect the environment from releases of harmful materials during transportation of such materials by motor carriers in interstate or intrastate commerce. The Motor Carrier Act of 1980 established minimum levels of financial responsibility sufficient to cover third-party liability including property damage and environmental restoration for both private and for-hire carriers of hazardous materials. The requirements set forth by that law are outlined in Exhibit 12-1.

One insurance mechanism that meets the requirements set forth in Exhibit 12-1 is the MCS 90 endorsement. This endorsement must be attached to a commercial vehicle liability insurance policy and, when attached thereto, becomes a promise from the insurer that the insurer will pay any claims or judgments made against the transporter for public liability (bodily injury, property damage, or environmental restoration costs) resulting from operation of the vehicle.

The MCS 90 endorsement is essentially a surety instrument in that it requires the insured to reimburse the insurer for any payments made under the provisions of the MCS 90 that would not have been paid under the insurance policy in the absence of the endorsement. Because commercial auto insurance policies typically exclude most claims for loss caused by the release of pollutants, it is probable that the insured will have to reimburse the insurer for many losses that might be paid by the insurer under the MCS 90 for release of contaminants. To provide true insurance coverage, an additional endorsement (ISO endorsement CA 99 48 being the most common) must be used to modify the pollution exclusion on the standard business auto, truckers, or motor carrier coverage form.

The primary purpose of the **Toxic Substance Control Act (TSCA)**, enacted in 1976, is to regulate the chemical manufacturing industry and to prevent the importation or manufacture of dangerous chemical substances without adequate safeguards to ensure that their use does not harm human health or the environment. Its statutory framework, however, also facilitates extensive regulation of individual hazardous substances on a case-by-case basis. Consequently, TSCA has been used to regulate PCBs and, to a more limited extent, asbestos and radon. The EPA has also contemplated using TSCA to impose extensive regulations on the use of lead. Under TSCA manufacturers of chemical substances must provide extensive information to the EPA regarding the formulation, use, and risks of each such substance they manufacture or import, including any information with respect to known or suspected adverse health or environmental effects.

The **Resource Conservation and Recovery Act (RCRA)** provides “cradle-to-grave” regulation of hazardous waste. It imposes strict waste management requirements upon generators and transporters of hazardous wastes and upon hazardous waste treatment, storage, and disposal (TSD) facilities. It also regulates underground storage tanks, medical wastes, and nonhazardous solid wastes, although the requirements for some of these waste categories are considerably less stringent than those for hazardous wastes.

RCRA was one of the early adaptors of Proof of Financial Responsibility requirements for permit holders. Under these provisions, the owners of hazardous waste treatment, storage or treatment facilities, landfills, and underground storage tanks are required to provide evidence that they have the financial resources to clean up any material from the facility that causes environmental damage, and to compensate victims for bodily injury and property damage. Permit holder have a number of options available to evidence this proof which include, specially endorsed insurance policies, performance bonds, letters of credit, cash in escrow, qualification as a self insurer or in some states any financial arrangement acceptable to the regulators. The amounts of required proof vary by the type of facility and by state regulations. The specific requirements under these statutes are beyond the scope of this chapter. Insurance practitioners in need of advice on compliance with these regulations should consult with the state environmental regulators for the current requirements and acceptable methods of providing the Proof of Financial Responsibility.

RCRA includes a wide variety of wastes within the scope of its regulatory program. The most notable exceptions are waste oil and certain high-volume, low-toxicity wastes (such as various mine wastes and incinerator ash). Waste generators must manage hazardous wastes in accordance with detailed regulations governing containers, labels, record keeping, storage, spill prevention and control, and employee training. On-site storage is limited both with respect to amounts and time. Shipments of hazardous waste require completion of a shipping manifest that tracks the journey from “cradle to grave” thus ensuring final disposal only at proper facilities.

Because RCRA regulations cover active but not abandoned waste disposal sites, the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or “Superfund”)** was passed in 1980 to facilitate the cleanup of any abandoned or uncontrolled sites containing hazardous substances, including numerous old dump sites.

Funded under a “Let the Polluter Pay “ funding scheme that features legislated, retroactive, strict liability, Superfund is harsh and expensive. The passage of CERCLA and the resulting flood of claims by Responsible Parties under General Liability policies were largely responsible for the proliferation of pollution exclusions in U.S. commercial insurance policies in 1986. The far-reaching cost recovery provisions of the Comprehensive Environmental Response, Compensation and Liability Act create an entangled web of potential liability for a broad spectrum of the American economy. Most of the prospective loss exposures associated with Superfund can now be insured against though a combination of various forms of environmental insurance. This coverage will be address latter in this chapter.

The average cost of a Superfund cleanup of a site on the National Priority List is approximately \$30 million, exclusive of transaction costs, which are usually substantial. There are approximately 1,300 Superfund sites on the National Priority

List. There are more than 3,500 sites targeted for cleanup under state programs similar to CERCLA. These sites can take more than twenty-five years to remediate if ground water is involved. The EPA has investigated over 40,000 potential Superfund sites between 1980 and 1995 only a small percentage of these will be cleaned up under CERCLA.

CERCLA authorizes the EPA to clean up sites where there is a release or threatened release of a hazardous substance into the environment. The EPA can either have their own contractors clean up the site or the EPA can force liable parties to conduct the cleanup. If the EPA conducts the work, they can seek cost recovery from the responsible parties as they are defined in the statute for up to three times the amount of the actual clean up expenses. As an alternative to EPA contracted cleanups, private parties may conduct a cleanup voluntarily and, under appropriate circumstances, recover their costs from other responsible parties. CERCLA provides an express right of contribution where one or a group of PRP's can bring an action that seeks contribution from another PRP. A private CERCLA recovery action may be brought against any liable party regardless of whether the federal government has initiated either cleanup or a cost recovery action of its own. Parties that settle with the government, however, are not liable for contribution.

Potentially Responsible Parties (PRP's) are the people or entities that are legally responsible for the costs of remediating a Superfund site. Parties involved with a Superfund site are referred to as Potentially Responsible Parties (PRP's) until liability under the act is established. At that point they become Responsible Parties (RP's). They are responsible for all costs associated with cleaning up the site, including the costs of identifying and evaluating contaminants and developing a plan for remediation.

Following the "Let The Polluter Pay" principle, the drafters of the original legislation cast a very broad net to capture all parties who enjoyed an economic benefit from the waste disposal activities or in the ownership of the site. The list of Potentially Responsible Parties includes the current owners and operators of site (even if they had no involvement with the original waste disposal activities), prior owners and operators who were involved with the site during the disposal of hazardous materials, the generators of the waste materials disposed of at the site, the transporters who hauled waste to it, and anyone who "arranged" for the disposal of materials at the site. Owners/operators immediately preceding state or local government ownership or control acquired "involuntarily through bankruptcy, tax delinquency, abandonment," etc., are also liable for the clean up expenses. Lessees may be liable as "operators" of the site as can individuals, such as corporate officers or shareholders of closely held corporations.

Parent corporations may be liable for subsidiaries that are PRP's, depending on the extent of control over their subsidiaries and/or their involvement in waste disposal practices or decisions. Traditional notions of "piercing the corporate veil" (invalidating the legal protections of the corporate entity and suing the owners individually) will generally be applied during cost recovery efforts by the government. Similarly, corporate successors may also be liable, depending on their

involvement and/or the application of traditional principles of successor liability (e.g., “continuing enterprise,” “de facto merger,” or “fraudulent conveyance” theories of liability).

Lenders can incur Superfund liability-as “owners” or “operators.” This is especially true if the lender forecloses on a property that becomes a Superfund site. Even bankrupt parties may incur liability under CERCLA.

Superfund liability is strict, i.e., without regard to “fault,” and it is retroactive. This legislated liability is a significant deviation from traditional theories of recovery under common law, which normally requires negligence on the part of the defendant in order for the plaintiff to recover damages. In fact, many of the disposal sites that ultimately became Superfund sites were permitted, legal operations at the time the site was actively accepting waste.

Superfund liability is also joint and several (i.e., any liable party may be responsible for the entire amount, regardless of its “fair share”) if, as is usually the case, the harm is indivisible. In allocating liability for the clean up costs of a particular site a PRP’s assessment can be based on the volume of waste contributed to the site, not the toxicity of the waste. Therefore the contributor of large volumes of nonhazardous materials to a Superfund site could be responsible for a large part of the clean up cost even though they only contributed nonhazardous waste to the site.

There are only three defenses to CERCLA: (1) acts of God, (2) acts of war, and (3) acts of an unrelated third party. The third-party defense is narrowly defined as “an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant.” The third-party defense rarely applies and is largely intended to be limited to such occurrences as the unanticipated acts of vandals. Included in the “third-party defense” is a provision known as the “innocent landowner defense,” an important provision for lenders and those who lease or acquire real property. CERCLA excludes liability for persons who acquire contaminated property and did not know, and had no reason to know, it was contaminated and who did not contribute to the contamination. The purchaser must, at the time of acquisition (which may have occurred many years ago), have undertaken “all appropriate inquiry into previous ownership and uses of the property consistent with good commercial and customary practices in an effort to minimize liability.”

The case of ACE* manufacturing below is illustrative of how the cost recovery procedures can affect PRP’s

Potential Loss Exposure Under CERCLA

ACE* Manufacturing Company disposed of its off-specification chemical materials in Joe’s Dump between 1960 and 1970. Joe’s Dump was licensed for this entire period by the state in which it is located under a law applicable to municipal solid waste disposal facilities. ACE had hired Sam’s Sanitary Service to transport the

hazardous waste material from ACE to Joe's Dump. In 1972, Joe sold his land to Wonder Products Incorporated. Wonder still owns the land but discontinued use of the landfill in 1980.

In 1984, the drinking water supply of a nearby municipality was found to be contaminated. Groundwater investigations determined that Joe's Dumpsite was the source of the contamination. The cost to remediate, and reconstruct Joe's Dump is expected to be \$30,000,000. Under CERCLA, the following parties are Potentially Responsible Parties, subject to strict liability for the cleanup and third-party bodily injury and property damage expenses:

- Joe's Dump as an owner/operator
- ACE Manufacturing Company as a waste generator
- Sam's Sanitary Service as a transporter to the site
- Wonder Products incorporated as the current owner and a past operator of the site

All responsible parties face joint and several liability for the cleanup expenses. In this case, if Joe's Dump, ACE Manufacturing, Sam's Sanitary Service, and other PRP's were out of business at the time of the EPA Superfund cleanup action, Wonder Products could be assessed the entire cleanup expense.

The **Oil Pollution Act (OPA) of 1990** seeks to reduce the risk of spills of petroleum or hazardous materials into United States coastal or navigable waters by mandating technical standards for facilities and vessels operating in or near such waters and by imposing requirements upon owners of facilities and vessels to prevent releases and/or pay for the costs of releases that are not prevented. Similar in concept to the proof of financial responsibility requirements under the Resource Conservation and Recovery Act, OPA mandates that each party responsible for a vessel or facility from which oil is discharged (or is threatening to be discharged) into or upon navigable waters, adjoining shorelines, or the exclusive economic zone of the United States is liable for removal costs and damages.

The amounts of required financial responsibility can be in the hundreds of millions of dollars. Similar to RCRA, the methods that may be used to meet these requirements include specially endorsed insurance, a surety bond, a letter of credit or qualification as a self-insurer.

Enforcement of Environmental Laws

For many years, the focus of environmental regulatory activities was compliance in a very technical sense. Under the Clean Air Act, the Clean Water Act, and a host of earlier environmental laws, compliance involved monitoring the outflow from pipes into streams and from smokestacks into the air. The EPA set standards, counted contaminants in parts per million, and lowered the enforcement boom with stiff fines that could exceed hundreds of thousands of dollars a day on people or firms that could not measure up to the standards. The process was highly empirical. Technically trained inspectors met with the corporate mechanics that controlled the

tools of compliance. Those subjected to enforcement actions were often the compliance personnel and technically trained employees who operated pollution control systems or the equipment that failed to meet the EPA standards. Risk managers were rarely involved in this process.

The fines for noncompliance with an environmental regulation can be staggering. Many of the environmental protection laws have penalty provisions of up to \$25,000 per day for each violation with the provision of treble damages for subsequent violations.

To illustrate how these fines accumulate, assume a manufacturer stored four barrels of hazardous waste on their loading dock for 120 days. The manufacturer had a policy to dispose of all of its' hazardous waste within 60 days to avoid the extra regulatory compliance costs of being a licensed hazardous waste storage or treatment facility under RCRA. The manufacturer is a licensed hazardous waste generator and was in full compliance with all of the applicable regulations for a hazardous waste generator. However, the waste disposal firm that was supposed to pick up the barrels every 60 days missed the facility on their last pick up. During an inspection by the EPA on the 120th day the inspector discovered that the barrels had been on the loading dock for a longer period of time than would be allowed for a permitted waste generator. In theory the manufacturer could be fined for the following violations; operating a hazardous waste storage facility without a permit, and not providing proof of financial responsibility for a hazardous waste storage facility which would have required at least \$1,000,000 per loss and \$2,000,0000 annual aggregate of sudden and accidental pollution insurance coverage, a surety bond, letter of credit or cash in escrow. The theoretical fine could be 2 violations X \$25,000 X 120 days, which comes to \$6,000,000. Where a fine of this magnitude would never be assessed for this fact scenario, it does illustrate the potential harshness of fines.

This enforcement model has changed dramatically in recent years. Now, an evaluation of compliance not only includes a review of the physical facilities, but it also considers management systems and control of the processes that pose a threat to the environment. Such an evaluation reviews the accountability of the board of directors for environmental matters, the assignment of environmental responsibility within senior management ranks, the effective dispersion of responsibility through all levels of the organization, and the day-to-day operation of the system in controlling activities that involve hazardous materials.

Also of concern to the EPA in its compliance evaluation is the appropriate assignment of personnel and other corporate resources to environmental affairs. This includes a realistic budget for all environmental activities, including compliance with the laws.

Executive Accountability for Environmental Management Decisions

A trend has developed in recent years to hold a corporation's management accountable for its strategic decision-making process as it relates to environmental matters. This means that the EPA and the corporation's shareholders and employees expect that certain components of a corporate environmental risk management program should be in place.

Such a program begins with a written corporate environmental policy, which is implemented by written procedures by the executives responsible for the management of day-to-day activities. This formal plan should be adequately funded to ensure that it will be successful. A reporting system provides management and the board of directors with enough information to assure that all is working as intended. When extraordinary events take place within a corporation, such as a major environmental incident or the merger with or acquisition of an organization having environmental exposures that are different from those of the acquiring company, additional expectations must be addressed.

Management's Responsibility for Environmental Compliance

One company's experience illustrates the current trend for regulators to focus on the responsibility of management in assessing environmental compliance. The corporation was involved in metal fabrication processes at thirteen plants geographically dispersed in seven states with a total workforce of more than 8,000.

At one facility, the regulators were called in when neighbors discovered hydrocarbon solvents in drinking water supplies. An inspection of the facility found that the normal practice for cleaning up trichloroethylene spills from the shop floor was to hose the material out the door and let it run into storm water drains. Further inquiry revealed that the company had only one employee assigned to environmental compliance for all thirteen manufacturing facilities.

Fines were assessed against the corporate executives and the corporation for failure to adequately provide for environmental management within the company when the hazards associated with the materials in use were widely known. The chief executive officer of the firm was given a suspended sentence and three years' probation as a first offender; a result that would not occur today under the current mandatory minimum Federal Sentencing Guidelines for violations of environmental protection laws.

A shareholder suit against the officers and directors for failing to properly manage the firms' environmental matters quickly followed the environmental enforcement litigation. The shareholder suit alleged that because of the failure of senior management to develop an adequate environmental management protocol, the corporation incurred unnecessary expenses to resolve the ensuing enforcement actions.

The risk manager quickly learned how important an environment risk management program was when she was asked to provide a detailed analysis of the incident and an explanation of what insurance protection the company had for this incident and future events of a similar nature. Of course, the insurance coverage available to help pay for this costly claim was of great interest to the directors and officers of the firm. It is easy to imagine their disappointment when they were informed that pollution, and failure to maintain appropriate insurance protection exclusions in the Directors and Officers Liability policy and pollution exclusions in the General Liability and Umbrella policies, effectively eliminated any possibility of an insurance recovery to help offset the expense of the legal actions.

This case is a good example of how environmental insurance can be used as tool to help manage environmental risks, not just insure them. During the underwriting process, it is likely that the woefully inadequate environmental management protocols of this particular firm would have surfaced as an area of concern for the underwriter. Environmental underwriters are in a position to benchmark one applicant to another and are therefore able to provide useful advice on the adequacy of the environmental management systems relative to the applicants peer group. Thus the underwriting process may have given the firm an early warning that they needed to improve their environmental management efforts. Environmental insurance could have provided coverage for the clean up of the facility, potential third party claims, the shareholder suit and the cost of defending all three actions. Unfortunately for the Chairman, there would not be insurance for the jail time.

Environmental Risk Management

As the effort to clean up contaminated sites in America gains momentum, risk managers are increasingly faced with the daunting task of effectively managing their firms' environmental impairment liability exposures. Estimates for the cost of the environmental cleanup effort at all contaminated sites in the United States range between seven hundred billion to well in excess of one trillion dollars and will take over twenty five years to complete. These figures do not include third party claims, or the future cost of industrial spills or other releases of pollutants in the environment.

There is a common misconception is that environmental liability losses affect relatively few industries and a limited number of organizations within a given industry group. However, with the far-reaching cost recovery provisions of Superfund and similar state cleanup laws, the ultimate cost of environmental remediation and of liability claims will be shouldered by a relatively large number of organizations within the U.S. economy. Even banks, insurance companies and property managers have become entangled in the web of environmental liability. When the costs of environmental liability are reflected in the increased costs of products and higher insurance premiums, the ultimate price of the cleanup will be paid by society as a whole. However, from a risk management standpoint, because of the potential severity of environmental damage claims, organizations must plan for these risks if they are to survive long enough to pass these increased costs of doing business on to their customers. To implement such a plan, managers must develop effective environmental risk management programs that include adequate funding and support from corporate management.

THE ENVIRONMENTAL RISK ASSESSMENT PROCESS

A three-step environmental risk assessment process forms the cornerstone of risk identification in the development of an environmental risk management strategy. The first step in the process is to identify what materials are present, the quantities of those materials and the potentially harmful properties of the materials at the locations in question. The second step is to identify the potential environmental routes that those materials could take if there was a release from the facility. Air, ground water, surface water or sewers are all examples of environmental routes that contaminants can follow. The third step is to identify the target populations of living things that could be affected if those materials followed those routes, to the populations in question. When developing an environmental risk assessment it should be kept in mind that a material does not need to be hazardous or a waste to create an environmental impairment liability loss exposure.

Risk managers should be aware that non-hazardous materials in sufficient quantities could create environmental losses if they are released into the environment. An actual case in point was a fire at food storage warehouse. The warehouse was filled with processed cheese and butter, which promptly melted in

the fire and ran into the sewer system. Vast quantities of solidified cheese, clogging a sewer system creates a chain of associated claims and expenses. These would include including business interruption claims from neighbors who also cannot use the sewers until they are cleaned up, and extra expenses from the sewage treatment plant which was put in violation of their Clean Water Act discharge permits. Depending on the actual fact situations in a particular claim and the actual language of the pollution exclusions on the warehouse owner's insurance policies these claims may have been subject to pollution exclusions.

Other actual environmental claims include chlorine releases at a swimming pool, spilling a large quantity of milk in a stream, creating fog that interfered with traffic on a highway and pumping water out of a river to make snow for a ski hill. It is important to note that environmental claims encompass a broad spectrum of potential contaminants.

It is also important to note that the pollution exclusions that will be discussed later in this chapter are not dependent on a material being either hazardous or a waste to fall under the exclusionary language of a "pollutant". Practitioners developing environmental risk management strategies should expand their thinking beyond "hazardous waste".

Characteristics of Environmental Loss Exposures

Environmental loss exposures have some unique characteristics that must be considered when developing a plan to manage them. Many environmental loss exposures are difficult to identify because they arise from activities that were conducted many years in the past; or may be created by extremely small quantities of hazardous substances that are difficult to detect or measure. In the case of the food warehouse example above, some environmental loss exposures are outside the scope of traditional thinking.

Environmental loss exposures tend to elude many traditional exposure identification methods. For example, reviewing summaries of historical losses may not contain any information on potential future environmental claims. Physical inspections of facilities do not always reveal possible causes of environmental damage that may be buried underground or otherwise hidden from view. Even a review of the accounting statements and the historical business records may contain little or no information on the environmentally related activities of the organization.

Establishing the time, place, and amount of an environmental loss presents another challenge. There is often no direct cause-and-effect relationship between a release of pollutants and the actual damages incurred. The link between the exposure to a substance and the measurable injury is usually difficult to determine because of the long latency period of some injuries or diseases associated with toxic exposures. In other cases the minute quantities of contaminants that are alleged to have caused the harm are difficult to measure. The absence of a direct and verifiable causal link between exposure to a substance and being injured may create a claim for a perceived, rather than real exposure to a toxic material or a claim for fear of future manifestation of an injury due to an actual exposure.

These factors combined, make the amount of the loss difficult to measure at a particular point in time.

Environmental losses are often expensive. Most environmental remediation laws are funded in accordance with a “let the polluter pay” funding concept. Under these laws, organizations and individuals can be retroactively liable, without fault, to pay for bodily injury, property damage, cleanup expenses, and natural resource damages. There is also a danger that courts will award multiplied damages, fines, and criminal prosecution under these laws. Environmental remediations under these laws tend to be expensive. The average cost to clean up a Superfund National Priority List site is \$30 million. The average cost to clean up a leaking underground storage tank is \$150,000. The *Exxon Valdez* oil spill in Alaska is reported to have cost in excess of \$3 billion in cleanup costs and \$1 billion in third-party claims.

Another challenging aspect of environmental losses is that advances in technology can change the exposure to loss. As detection equipment is developed that can measure smaller quantities of contaminants, the loss exposure increases. For example, if current state-of-the-art equipment can measure concentrations of contaminants only to ten parts per *million*, a new machine with detection capabilities of ten parts per *billion* would change the detection threshold a thousand fold. In a cleanup project in which the goal is to achieve “non-detect” levels of a particular contaminant, a change in measuring technology could dramatically change the costs of the cleanup. Or in the case of bodily injury claims for exposure to a toxic or hazardous substance, advances in measurement technology can increase the number of claimants.

The final unique aspect to environmental damage claims is that the amount of the loss can increase exponentially over time as the contamination migrates farther from its source. To appreciate this phenomenon it helps to envision a leaking underground storage tank. If the leak is discovered on the first day, the remediation could be as simple as removing the tank and one shovel full of contaminated soil. If however the leak is not discovered until after the material has gotten into the ground water, the remediation could take more than twenty-five years to complete.

Overcoming the Difficulties in Managing Environmental Exposures

Because most managers are not environmental scientists or lawyers, environmental exposure identification presents a new challenge. After the passage of more than twenty years of dealing with environmental laws and the hazards of working around toxic materials, many environmental exposures still have not been adequately identified or evaluated. This presents a significant risk management challenge since loss exposures that have not been identified and inventoried cannot be effectively managed.

The difficulty of identifying environmental exposures can sometimes be overcome by the effective use of internal and external resources. Environmental compliance personnel are often familiar with the laws that apply to the operations of the firm. Legal counsel is another source of expertise with respect to the regulatory risks that

an organization must address. Operational personnel who work with hazardous materials on a daily basis are usually familiar with those that are toxic and the risks associated with their use. Environmental consultants can also be used to assist in the identification of environmental exposures, through independent audits or as part of an internal/external environmental audit team.

To effectively manage environmental loss exposures, the risk manager should attempt to distinguish between exposures stemming from prior activities and those from ongoing and future operations. Obviously, a lesser number of risk management options are available if the activity that created the exposure has already been conducted. For example, a firm that has been designated a responsible party in a Superfund cleanup action cannot prevent that loss from occurring.

Risk managers can, however, formulate effective strategies for dealing with the environmental liability exposures associated with past activities of the entity. Here is where exposure identification continues to be important in the overall risk management program. With limited exceptions it will be less expensive to preempt third party intervention in environmental matters. Risk managers should attempt to identify the "skeletons in the closet" and address as many of the environmental exposures as possible before having to answer to a regulatory body, citizens' action committee, class action suit, or third-party claim.

If an environmental problem can be identified and corrected, the risk manager may have the opportunity to prevent all or part of a liability loss from occurring. For example, leaking barrels of toxic waste material may have already caused contamination that requires a cleanup, but perhaps their prompt removal will prevent contamination of groundwater and possible third-party bodily injury claims. Such action can be considered a risk control measure-that is, preventing a small loss from turning into a larger one.

Risk Financing

Most organizations have one or more liability insurance coverage's to protect themselves against various types of liability claims. However, general liability policies, auto policies, and most other types of liability policies exclude some or all claims for injury or damage resulting from pollution, including the cost of cleaning up released pollutants. Most commercial property insurance policies provide coverage for cleanup of pollutants, if the loss is caused by an insured peril and the clean up is limited to the insured property. However this coverage is often subject to low sub limits that would provide little relief for a substantial pollution incident. Those who wish to insure environmental loss exposures must therefore understand how each of the insurance policies in the portfolio will respond to certain pollution related losses. Pollution liability loss exposures that are not covered by an organization's traditional liability policies can be covered either purchasing pollution coverage extensions on the traditional policies or through the purchase an appropriate form of environmental liability insurance.

1970 Exclusion in CGL Policy

Environmental awareness in the late 1960s prompted insurers in 1970 to introduce a pollution exclusion endorsement for use with the comprehensive general liability policy and other commercial liability policies. The exclusion, which was later incorporated in the 1973 CGL policy form, was expressed in the following language:

This insurance does not apply to bodily injury or property damage arising out of the discharge, dispersal, release or escape of smoke, vapor, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon the land, the atmosphere or any water course or body of water; but this exclusion does not apply if such discharge, dispersal, release or escape is sudden and accidental.

Because the exclusion reinstated coverage for claims that resulted from a "sudden and accidental" release of pollutants (thus implying that only gradual releases were excluded), it was often referred to as the "gradual pollution exclusion" even though it did not use the word "gradual" anywhere in the exclusionary language. This exclusion remained in the standard CGL policy form until ISO introduced the commercial general liability coverage forms in 1986.

The gradual pollution exclusion in occurrence-based comprehensive general liability policies became a problem for the insurance industry in the early 1980s. The passage of the Superfund legislation with its "polluter pays" funding mechanism created retroactive, strict liability for large groups of PRP's. As the PRP's received their cost recovery letters from the government beginning in 1982, some of them submitted claims to their general liability insurers, asserting that the letters were a demand for money or damages as a result of property damage and were therefore a covered claim under general liability policies. While coverage disputes continue to surround these claims, the flood of new claims in the early years of Superfund caught the insurance industry's attention.

By the mid-1980s, courts had accepted legal theories that enabled a policy holder to recover damages under any liability policies that were in effect during the time

the claimant was exposed to the hazardous substance, while the hazardous substance was residing in the claimant's body, and when a resulting disease was manifested. The courts' decisions to cumulate policy limits over many policy years (this is commonly referred to as the triple trigger theory) greatly expanded insurers' exposures to environmental claims because (1) comprehensive general liability policies did not have pollution exclusions before 1970, (2) the policy aggregate limits typically did not apply to premises and operations claims before 1986, and (3) the phrase "sudden and accidental" in the 1970 pollution exclusion was not defined in the policy. The combination of new loss exposures with the passage of Superfund, and these coverage issues spurred the insurance industry to move quickly in 1986 to introduce new pollution exclusions in commercial insurance policies.

Environmental Claim Under Pre-1986 CGL Policy

To understand the possible exposures of CGL insurers for environmental damage claims, assume that ACE* Corporation used the Alpha and Beta waste disposal sites from 1960 to 1982, when the EPA under Superfund closed both sites. ACE Corporation had purchased on an annual basis a Comprehensive General Liability policy from the Ultimate Insurance Company from 1960 to 1982 with limits of liability of \$1,000,000 per occurrence and a \$1,000,000 annual aggregate for products and completed operations.

In 1982, ACE received a cost recovery letter from the EPA seeking to be reimbursed for the cleanup costs of \$22,000,000 at each disposal site for a total cost of \$44,000,000. Theoretically, Ultimate Insurance Company could be exposed to all \$44,000,000 in claims under the expired \$1,000,000 per occurrence limit Comprehensive General Liability policies. Since the insurance policies that Ultimate Insurance Company contained pollution exclusions and the amount of the claim is substantial it is likely that the claim and coverage determination would be handled in a courtroom.

Ultimate Insurance Company would argue in court (1) that only one policy should apply (the 1982 policy year), (2) that a leaking disposal site claim should be excluded because the pollution was not sudden and accidental, and (3) that damage to the insured site should be excluded. However, ACE Corporation would argue (1) that prior to 1970, the policy had no pollution exclusion, (2) that the words "sudden" and "accidental" are ambiguous in the policies and those words should therefore be interpreted to mean "unexpected" and "unintended," and (3) that since the unexpected and unintended pollution took place over twenty-two years (from 1960 to 1982), each policy year should provide a per occurrence limit, at each site, to address the government's \$44,000,000 demand.

Variations of the facts detailed in this case have been litigated in the U.S. courts for more than a decade, with the insured's and insurers prevailing in a roughly equal number of cases. Although the 1973 Comprehensive General Liability policy form is no longer available for purchase, it is important to have an appreciation of the loss history of environmental claims the pollution exclusion

Pollution Exclusion in 1986 and Subsequent CGL Policies

The insurance industry's exposure to environmental damage claims and long-tail products liability claims was largely responsible for the redrafting of the Comprehensive General Liability policy into the Commercial General Liability policy, which was introduced in many states in 1986. The two most significant changes in the policy regarding environmental damage claims were the addition of a general aggregate limit (to avoid the stacking of limits over multiple policy years as detailed in the previous example) and the rewriting of the pollution exclusion to make it more effective at barring coverage for claims arising from the release of contaminants.

The 1986 and 1997 policy forms do have these common characteristics within the pollution exclusions. The pollution exclusions effectively eliminate all coverage for pollution claims arising from the insured's premises, waste streams, or from disposal sites. They also exclude bodily injury, property damage, and cleanup costs when the insured is a contractor and either brings the pollutant onto the site or is involved in operations that are testing for, monitoring, removing, or remediating contamination.

The 1997 ISO CGL policy form makes further advances in clarifying the intent of underwriters to cover some losses created by releases of pollutants. Specifically, coverage for clean up expenses that may be incurred as a result of products and completed operations losses was added to the 1977 form.

Since individual general liability policies can vary a great deal on their treatment of environmental claims, based on which version of the policy is used and how it has been endorsed, it is very important for the practitioner to carefully match the coverage needs of the insured (based on the environmental risk assessment discussed above) and the coverage provided by the various insurance forms in the organizations' insurance portfolio.

A word of caution is warranted at this point. If the risk assessment identifies environmental loss exposures and the practitioner is reading between the lines of a pollution exclusion or exclusions to determine where the insurance coverage may be for a particular loss scenario, it would be easy to become very disappointed with the insurance recoverable in the event of an actual loss. For example, in order to have coverage under the general liability policy for an environmental claim, a specific fact scenario would have to trigger coverage under the insuring agreement and not be excluded under the pollution exclusion. In any given case, a slight change in the facts surrounding the event that lead to the loss can create a completely different coverage determination.

As a general rule, if a policy contains an exclusion referred to in the insurance industry as an "Absolute" or "Total" pollution exclusion, it is safer to assume the literal meaning of those words when designing an insurance program for an organization. In the event of an actual environmental loss, it is much better for the insured to be pleasantly surprised by discovering the "Absolute Pollution Exclusion" did not absolutely exclude all coverage for the fact scenario of the loss, than it is to discover that the language of the pollution exclusion was given the name "Absolute" for a reason. Due to the nebulous nature of the pollution coverage remaining within in the context of a pollution exclusion, it is usually better to address environmental

loss exposures with specialized environmental insurances that incorporate a broad coverage grant for environmental claims in the insuring agreements than it is to read between the lines of pollution exclusions looking for the remaining coverage.

Despite ISO's effort to clarify the intent of the exclusion with several revisions since 1986, and a significant change in the 1997 policy form, the pollution exclusion still creates confusion for practitioners. One problem is that exclusion (f.) which appears in both the 1986 and 1997 commercial General Liability policy form is widely referred to in the insurance industry as the "absolute pollution exclusion" even though it does not contain the word "absolute" and does not absolutely exclude all pollution claims. Theoretically, the pollution exclusion in the commercial general liability policy does not eliminate coverage for pollution-related claims arising from the products and completed operations hazard.

However, the 1986 version excludes coverage for cleanup costs separately even for claims that arise from products or completed operations. Excluding all environmental clean up expenses significantly limited the coverage provided under the General Liability policy for products and completed operations claims that included an element of environmental damage in them. The 1997 policy form corrects some of these coverage gaps in the 1986 policy form by adding back coverage for clean up expenses for products and completed operations claims.

The introduction of the new 1997 policy form and a host of new pollution coverage endorsements for it gives practitioners more tools to address the coverage needs of an organization. A few of the limited coverage extensions for pollution include endorsements that name "Designated Pollutants", "Named Perils", or "Short Term Pollution Events" as limited exceptions to the provisions of the pollution exclusion. Unfortunately for practitioners, a series of partial fixes adds to the complexity of designing an effective insurance program for an organization. Particular attention should be paid to which version of the policy form is being utilized since there can be significant coverage differentials for pollution claims between the 1986 and 1997 policy forms.

To give underwriters an additional tool to eliminate pollution claims under CGL policies, a "total pollution exclusion" endorsement was introduced in 1986. Unlike the standard pollution exclusion in the policy form, which does not exclude all pollution liability claims, the total pollution exclusion attempts to eliminate any potential coverage for pollution liability claims from the CGL policy, including those arising from the insured's products or completed operations. For practitioners these exclusions are relatively easy to identify since the word "Total" actually appears in the title of the endorsement. There are endorsements available that make the "total" pollution exclusion less total, with exceptions for "Hostile Fire" and/or "Building and Heating Equipment". Even more caution needs to be utilized when structuring an insurance program that anticipates coverage for pollution related losses when a "Total Pollution" exclusion is attached to the policy, even those with exceptions will have coverage gaps.

The widespread use of the regular CGL pollution exclusion and the total pollution exclusion in CGL policies has protected insurers from many of the claims that arose

under earlier forms. Although the standard pollution exclusion (f.) does provide limited coverage for bodily injury or property damage claims arising under the products-completed operations hazard, this coverage has not led to frequent claims against underwriters by insured's attempting to broaden the pollution coverage available under the CGL policy. There are even fewer challenges to the exclusion of pollution claims under the total pollution exclusion endorsements. The majority of cases seeking to find pollution coverage under the 1986 and later editions of the CGL policy have been unsuccessful.

Environmental Claim Coverage Under A 1986 CGL Policy and A 1997 CGL Policy

A company that manufactured and installed fuel tanks for emergency generators was insured under a standard ISO commercial general liability policy that included the 1996 wording of the pollution exclusion. Products and completed operations of the insured were covered by this policy. A tank that the company manufactured and installed last year leaked, resulting in a release of diesel fuel inside the customer's warehouse building. Stock was damaged by contamination, and two employees of the customer were injured by inhaling fumes. The diesel fuel seeped through a floor drain into soil where it had to be cleaned up in accordance with an order by state environmental officials. The insured received a claim for the following amounts:

- a. Tank replacement \$ 6,500
- b. Lost fuel \$150
- c. Stock damage \$15,000
- d. Customers Employee s \$25,000
- e. Cleanup of spill \$75,000

Question: Which parts of this claim will be allowed under the CGL policy?

Answer: 1986 Policy Form

- a. The damage to the product itself (the tank) is excluded by exclusion k (damage to your product).
- b. The policy will pay for the lost fuel.
- c. The pollution exclusion does not exclude coverage for the property damage claim for damage to or destruction of the warehouse stock arising from a release of pollutants (read carefully the four subparts of part (1) of the exclusion).
- d. Similarly, the pollution exclusion does not exclude bodily injury resulting from exposure to pollutants released because of failure of the insured's products.
- e. In the 1986 form, the cost of cleanup is **excluded** by part (2) of the absolute pollution exclusion, even though these costs are the result of a release of contaminants caused by a failure of the insured's products and/or completed operations. Cleaning up spilled fuel is a regulatory requirement and is therefore excluded from coverage.

Answer: 1997 Policy Form

- a.-d. Same as above
- e. Clean up costs could be covered as long as they are considered "property damage" within the terms of the policy.

Pollution Exclusions in Other Liability Policies

The new environmental protection regulations in the late 70's lead to a flood of pollution claims under other liability and even first party property insurance policies.

This was particularly true for automobile liability policies, since the release of hazardous materials from vehicles was a relatively common occurrence. With new environmental laws, releases of hazardous materials that were being transported as cargo or even of fuels that the vehicle carried for its own power became much more expensive to clean up. Emergency response requirements meant that special teams equipped to manage spills of toxic materials were required for a release of any hazardous substance. Treatment and disposal of the materials that were picked up also became much more expensive. Third parties, aware of the potential for toxic injuries, were also more likely to bring claims for bodily injury or property damage or both when hazardous materials had been released as a result of a vehicle accident. When the new absolute pollution exclusion was added to the commercial general liability policy in 1986, a more restrictive pollution exclusion was added to commercial auto policies.

In the mid-1980s, pollution exclusions were also added to professional errors and omissions liability policies for architects, engineers, consultants, and other professionals, as well as directors and officers' liability policies. The worsening loss experience in CGL and auto liability policies often resulted in a secondary claim against a design professional, manufacturer, or other party that was alleged to have been responsible for or shared the blame with the owner of a site or vehicle from which contaminants were released.

Similarly, corporate executives found that they were being held responsible for poor management of hazardous materials on the part of their corporations, and suits alleging their fault were filed by shareholders and other parties seeking to recover the loss of value of their investments following a major environmental incident or the discovery of the organization's involvement in historical activities that made it a PRP under Superfund or similar state strict liability statutes. Unlike the pollution exclusions found in the CGL and commercial auto policies, the exclusions incorporated into E&O and D&O policies were intended to exclude all pollution-related claims. With some exceptions, courts have upheld the exclusion of pollution claims under E&O and D&O policies written since the mid-1980s in the majority of cases.

Directors and Officers policies actually have three exclusions that have a bearing on environmental damage claims. The first could be described as a total pollution exclusion. The second exclusion is for bodily injury and property damage claims and the third exclusion is for claims that arise from failing to maintain adequate insurance on the firm. Interestingly, an adequate EIL policy fills the coverage gap created by all three exclusions in the D&O policy. Directors and Officers of the firm are automatically named insured's in most EIL policies. With adequate coverage for environmental claims, the root cause of D&O claims for poor environmental management could essentially be eliminated.

Common Pollution Coverage Extensions in Standard Liability Forms

With the introduction of more restrictive pollution exclusions in commercial general liability and other policies, it is now often necessary to add pollution coverage endorsements to general liability forms or to purchase environmental liability insurance if pollution liability claims are to be insured. As was briefly mentioned in the previous section, ISO now offers a series of endorsements to tailor the pollution exclusion on the CGL policy to add back limited Bodily Injury and Property Damage coverage for certain causes or types of pollution claims. These endorsements include exceptions to the pollution exclusion for named perils, short-term pollution events; certain designated pollutants or installed building heating equipment. Individual insurance companies have also filed a number of coverage extensions for exceptions to the general liability pollution exclusion to offer their customers.

These coverage extensions have a few common characteristics. The first is that they do make the “Absolute “ pollution exclusion in the General Liability policy less absolute. The second common trait is that they all still deal with the exclusion section of the general liability policy, they do not add a coverage grant for environmental clean up or environmental restoration expenses (which may or may not fall within the definition of “Property Damage” in the policy).

Coverage extensions to a General Liability policy do not turn a GL policy into an EIL policy. A more accurate way to refer to a CGL policy that has been endorsed to grant an exception to the pollution exclusion would be, General Liability insurance with a limited exception for pollution losses. Unfortunately there is a tendency in the insurance industry and the press to refer to the environmental coverage that may be incorporated into General Liability and other policy forms as “environmental insurance”. This lack of specificity has led to a great deal of confusion over the years, resulting in many uncovered claims and a healthy policyholders plaintiffs bar. A more accurate referencing of what “environmental insurance” is could eliminate much of confusion and disappointment. For the purposes of this chapter, “environmental insurance” specifically provides coverage for pollution related losses, usually by adding environmental restoration or clean up to coverage to the coverage grant. An insurance policy that only refers to pollution related issues in the exclusion section of the policy form should not be confused with “environmental insurance”.

For practitioners designing environmental insurance programs for specific insureds a couple of rules of thumb should help. The first rule is, if coverage is available by endorsement as an exception to the pollution exclusion in the general liability policy, buy it. In general, some coverage is better than no coverage and the endorsements tend to be very inexpensive or even free. The second rule is compare the coverage provided by the endorsed general liability policy, and the corresponding coverage gaps, to the coverage provided by the appropriate environmental impairment liability policy. This is usually a very enlightening exercise, especially if the coverage review is conducted with the benefit of an environmental risk assessment for the insured. Many insurance buyers are surprised to see the coverage gaps for environmental claims that even an endorsed CGL policy leaves.

Most general liability insurers have been reluctant to offer any significant pollution coverage in the CGL form, often because of restrictions against such coverage in their own reinsurance programs. In contrast, auto liability insurers more commonly provide pollution coverage for insured's that require the protection.

U.S. Department of Transportation regulations under The Motor Carrier Act, require that vehicles carrying Class A or B explosives, poisonous gases, or bulk quantities (defined as a load weighing more than 3,500 gallons of water) of hazardous materials demonstrate financial responsibility for bodily injury, property damage and environmental restoration, with limits of \$5 million per occurrence. Consequently, that limit is most often selected for pollution liability coverage by firms that transport hazardous materials or wastes. Transporters moving smaller quantities of hazardous materials, including oil, may have lower limits than those required for bulk transporters. These transporters usually select a limit of \$1 million per occurrence. The business auto policy is commonly modified by the MCS 90 endorsement (which adds environmental restoration coverage) and the ISO endorsement CA 99 48 to add the pollution coverage to the Commercial Auto policy.

Many Professional Errors and Omissions liability policies for engineers, architects, consultants, and others are modified for firms that need coverage for environmental exposures by deleting the pollution exclusion in its entirety. Unlike general liability or auto policies, there is no standard form used by the insurance industry to write professional E&O coverage. Many of the policies offered in the marketplace are similar, but no two are exactly alike. This makes the comparative analysis of coverage extremely difficult for both the insured professional organization and for the entity that is employing the professional. Organizations that are hiring professional environmental services, should carefully prepare a set of insurance specifications that must be met by the engineer or consultant.

The pollution exclusion that is typically incorporated in the D&O liability policies removes all coverage for pollution-related claims brought against executives of the firm or against the entity itself. When underwriters are willing to modify this broad pollution exclusion, they most often allow coverage only for shareholder derivative actions filed against individual officers or directors. With this modification, the policy will provide not only indemnity payments for such claims, but also defense, which is often as important in the D&O field as coverage for indemnity.

Cleanup Coverage in Commercial Property Policies

Contemporary commercial property forms usually provide a nominal amount of coverage for the cost of cleaning up pollutants from land or water at the insured premises. This type of coverage was added to commercial property forms after insurers began to be confronted with claims for cleanup of pollutants at the insured's premises. Such claims were often covered because the pollutants were debris of covered property and thus covered under the debris removal provision.

By excluding cleanup of pollutants from debris removal coverage and covering them under a separate coverage agreement for a small amount, insurers reduced their exposure to these losses. For example, the ISO building and personal property

coverage form limits pollutant cleanup and removal coverage to \$10,000. Some insurers are willing to increase the amount of insurance provided for pollutant cleanup in return for an additional premium. Pollution clean up can either be purchased as part of the property policy by increasing the insured value of the property or by purchasing on-site clean-up coverage as part of an environmental impairment liability policy.

It is important to note that, by addressing clean up expenses separately, the intention was to limit coverage for these claims, not expand it. This becomes obvious in many policy forms that go on to exclude the costs of removing pollutants from soil or water from the debris removal coverage. These exclusions severely limit the usefulness of the property policy in insuring environmental damage claims.

Debris Removal Coverage for Environmental Clean Up Expense in the Property Policy

Relying on the debris removal coverage on the property policy to address environmental clean up, serves as a good case in point on the potential short falls of relying on standard policy forms to address environmental damage claims. The debris removal coverage on a property policy is intended to address debris removal from the insured location. Assume a tornado (a covered peril in a property policy) hits a warehouse containing a small quantity MED** (Methyl-ethyl-death) and deposits it a half mile down wind, evenly over a forty acre field. After a \$200,000 engineering study, the remediation is simple, scrape the top six inches of topsoil off the field and pay to have it disposed of in a toxic waste facility. This would produce 32,000 yards of topsoil, which would cost about \$2,000,000 to dispose of.

How would the property policy respond to the claim? It wouldn't. The debris removal was away from the insured site, and the policy does not respond to the cost of removing pollutants from the soil or water.

What if the MED stayed on the insured site? The debris removal coverage might apply, subject to a \$10,000 sub limit. However, there is still the restriction on the removal of pollutants from the soil. To say the least, the property policy is not going to be of much use in either circumstance.

** This material does not exist, however the remediation costs in the example are reflective of actual prices.

General Liability Insurance Coverage for an Environmental Loss arising from a Hostile Fire

Using the same examples as in the previous case, except in these loss scenarios the proximate cause of the release of MED is a hostile fire. How would the CGL policy respond to the environmental restoration expenses?

The answer would depend on the exact facts of the circumstances that lead to the loss, which version of the CGL policy was in force (1986 or 1997), what state the warehouse was located in and/or the state in which the policy was sold. WHY? The CGL policy has exceptions to the pollution exclusion for losses that are caused by a "Hostile Fire". One overlying problems with recovering environmental remediation

costs under a General Liability policy is that these costs are not specifically addressed in the insuring agreements. In order for the loss to be covered the remediation must constitute "Property Damage". Does removing the topsoil constitute property damage? The answer could be "it depends" and this is the problem with depending on insurance policies that have pollution exclusions to pay for environmental losses. Since this example involves MED, it would be an easy argument to make that there was property damage. Every state has its own case law regarding "Property Damage" and coverage under CGL policies for environmental damage claims. The 1986 version of the CGL pollution exclusion, could exclude this claim because of the blanket environmental clean up exclusion in (F, 2.) and the care custody and control exclusion for the insured premises scenario.

The 1997 version of the CGL policy might cover the off sight clean up costs if the contaminant was not MED. The 1997 version says that it will provide coverage for Bodily Injury and Property Damage coverage by deleting the affects of exclusion (1,a.). Through the use of a double negative the pollution exclusion does not apply to Bodily Injury or Property Damage losses from a hostile fire.

However, if the loss was caused by MED, the environmental regulators would be swarming around the site, there would be extensive requests, requirements and demands by the regulators that the materials be cleaned up, and the CGL insurer would likely deny the claim under the provisions of (F, 2.)

These case examples illustrate how difficult it would be to design a meaningful environmental insurance program utilizing the standard liability and property insurance policy forms. However, loss exposures created by the release of irritants, contaminants or pollutants into the environment can be insured through the use of a wide range of true environmental insurances.

Types of Environmental Insurance Available

To address the diverse needs of insurance buyers, the environmental insurance market place is very flexible which also makes the marketplace very complex.

There are eight basic types of environmental insurance coverage, which will be discussed in this chapter. There are no accepted industry standards for environmental insurance. Each underwriter typically creates their own manuscript policy forms and different names for the same coverage are created for marketing purposes between underwriters. To add to this complexity, different policy forms can be significantly modified by endorsement or combined to provide coverage packages of different types of environmental insurance that share a common policy limit. Many environmental insurance policies are available only as part of specialty insurance packages, for example a specific policy may only be available to golf courses or doctors offices. Including these specialty policies, there are more the one hundred different “environmental” insurance policies available in the marketplace.

There are still only a handful of full service environmental underwriters capable of writing a full range of environmental coverage’s and supporting those policies with claims and loss control services. The majority of these carriers are based in the United States but new markets are developing in Europe as well.

It is not possible in this chapter to explore all of the environmental insurance policy forms available today. However, the following major types of environmental insurance will be reviewed:

1. Site-specific environmental impairment liability insurance
2. Contractors environmental impairment liability insurance
3. Environmental professional errors and omissions liability insurance
4. Asbestos and lead abatement contractors general liability insurance
5. Environmental remediation insurance
6. Remediation stop-loss insurance
7. Underground and aboveground storage tank insurance
8. Combined CGL/EIL insurance

The above list is meant to be a generic listing of the various types of coverage forms. In the marketplace, the actual policies will be titled somewhat differently. However the basic components of the coverage will follow one or more of these coverage forms.

Site-Specific Environmental Impairment Liability Insurance

Environmental Impairment Liability Insurance originated in the late 70’s as a gap filling coverage for the Comprehensive General Liability policy. These policies are sometimes called Pollution Legal Liability policies. In essence an EIL or PLL policy is a CGL policy that only responds to claims that are caused by a release of pollutants. EIL will be used in this chapter to refer to the policy for the sake of simplicity.

Early EIL policies only addressed losses that were caused by gradual pollution releases because the CGL policies being issued at the time contained an exception to the pollution exclusion for the “sudden and accidental” release of pollutants. In other words only gradual pollution losses were excluded.

Contemporary EIL and CGL policies no longer differentiate between sudden and accidental or gradual pollution releases. However, some umbrella and excess liability policies will provide coverage for Bodily Injury and Property Damage claims under a “Time Element” provision that very specifically states the number of hours or days the pollution must take place in and how fast the claims need to be reported in order to have coverage under the policy.

EIL policy forms cover claims arising from sudden as well as gradual releases of pollutants from insured locations. Coverage enhancements allow policyholders to purchase protection against the costs of on-site cleanup, to protect themselves against claims arising from releases from third-party disposal sites, and to insure against claims arising from pre-existing pollution at insured sites.

Factories, waste disposal sites, golf courses, farms, municipalities, ware houses and oil refineries are just a very short list of the types of risks that purchase EIL insurance coverage. EIL insurance is used where site-specific coverage is appropriate.

Insuring Agreement

The typical insuring agreement in an EIL policy obligates the insurer to pay on behalf of the insured a *loss*, in excess of any deductible, for *bodily injury*, *property damage*, *cleanup costs* and *defense expenses*. The loss must result from *pollution conditions* that exist beyond the boundaries of the site(s) listed within the policy declarations. However, on-site clean up is commonly added by endorsement to the policy form. All of the italicized terms shown above have specific policy definitions. The policy definitions of “bodily injury” and “property damage” are the same as those in other liability insurance policies, with two notable qualifications. The first is that for the environmental coverage to apply, the bodily injury or property damage must result from pollutants emanating from an insured site. The second qualification is that some of the policy forms require physical injury or actual (as opposed to suspected) exposure to pollutants in order to trigger coverage for bodily injury claims. These requirements could substantially restrict coverage under the EIL policy for claims alleging “cancer phobia” or a similar fear of future disease or injury. Because some EIL policies do not contain these restrictions, each policy must be analyzed to determine the extent of coverage provided.

The definition of the term “loss” often includes the cost to defend pollution claims within the scope of the policy. The term “cleanup costs” may appear as a separate coverage term, or it may be included within the definition of “property damage.” The policies sold by different insurers may contain differences in their definitions of “cleanup costs.” Most of the definitions include, as a minimum, the expenses the insured incurs in the removal or remediation of soil, surface water, groundwater, or other contamination in responding to a covered pollution liability loss.

EIL policies respond to loss arising from “pollution conditions.” The definition of “pollution conditions” follows the definition of “pollutants” in the ISO pollution exclusions found in general liability, auto liability, and other liability insurance

policies. Accordingly, EIL policies are often viewed as filling the coverage gap created by the pollution exclusion in the CGL policy. Since the EIL policy is replacing coverage that has been removed from the CGL policy, it is important to compare the language of the CGL pollution exclusion with the definition of “pollution conditions” in the EIL policy to make certain that all coverage gaps are filled.

A typical definition of “pollution conditions” in an EIL policy reads as follows: “*Pollution conditions* means the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or any watercourse or body of water.”

The definition of “pollution conditions,” like the definition of “pollutants” in the pollution exclusions in the CGL and other policies, does not include the words “hazardous waste” or “hazardous material.” The definition is much broader than hazardous waste, which is an important point to remember when analyzing potential coverage gaps between EIL policies and the insured’s other liability policies.

Claims-Made Coverage

EIL policies provide coverage on a claims-made basis. In most respects, the policies operate like other forms of claims-made insurance, except that EIL forms have three noteworthy characteristics not shared by other liability policies: (1) there is no retroactive date, (2) they have a relatively short extended reporting period, and (3) all claims arising from a pollution incident (release) are treated as a single loss with one deductible and one per loss limit.

In order for a claim to be covered in a typical claims-made policy, the injury or damage must occur on or after the retroactive date contained in the policy, and the claim must be reported to the insurer during the policy period or during the extended discovery period. EIL policies, in contrast, often do not contain a retroactive date. In effect, a claims-made policy without a retroactive date provides unlimited prior acts coverage; this is a valuable feature for covering environmental impairment exposures that are often unknown to the insured. However, when the prior use or the current conditions at the site might make the risk unacceptable, the underwriter can impose a retroactive date in an EIL policy to limit the time period for coverage of prior acts. Adding a retroactive date allows the underwriter to provide EIL coverage prospectively without being overly concerned about the prior use of the site. Once the insured and the underwriter have developed more information about the site, the underwriter might be willing to remove the retroactive date from the policy.

Like other claims-made policies, EIL policies contain extended reporting period provisions that obligate the insurer to provide an extended reporting period for a specified additional premium upon the termination of the insurance. Coverage is provided only for claims that result from pollution releases that occurred (in total or in part) before the termination of the EIL policy. The typical time allowed for the reporting of such claims under the extended reporting period is only two years, in contrast with the option for an unlimited extended reporting period under the ISO claims-made CGL coverage form. Most underwriters are willing to add a longer extended reporting period by endorsement for an additional premium.

The third difference between an EIL policy and other claims-made forms is the way that multiple claims are treated. Several separate claims can arise from a single pollution incident. There may also be a delay in the discovery of damages after the incident that could result in a delay in the reporting of claims. To address these issues, EIL policies commonly treat all claims arising out of the same pollution incident as a single loss, subject to one limit of liability and one deductible. This approach prevents the stacking of policy limits from successive claims-made policies over multiple years. The insured benefits by avoiding the application of multiple deductibles to the same loss.

Application of EIL Limit and Deductible

ACE Manufacturing Company discovered through an inventory reconciliation that approximately 1,000 gallons of plating bath solution from its chrome plating operations could not be accounted for. Further investigation revealed that over a three-year period the materials in the plating bath had seeped from a drainpipe into an adjacent stream. ACE immediately reported the situation to the appropriate governmental agency and completed a cleanup of the stream. ACE had a claims-made EIL policy at the time of the loss. The EIL policy paid for the cost of cleaning up the stream, subject to the policy deductible.

Two years after the cleanup had been completed, a group of fishermen brought a class action suit against ACE alleging that they had been exposed, through the consumption of fish, to harmful levels of heavy metals released by ACE into the stream. The EIL policy that paid for the cleanup will also respond to the fishermen's class action. However, any damages for which ACE becomes liable because of the class action will be considered part of the same loss as the earlier cleanup. Thus, the amount of insurance available for the class action will be the limit of liability less the cleanup costs paid earlier. However, ACE would not have to pay another deductible amount for the second claim. In this situation, it would also be common for all subsequent EIL policies issued by the same or different underwriters to contain an endorsement that would exclude all losses arising from the previous release of plating materials into the stream.

Exclusions

Site-specific EIL policies typically contain the following exclusions. Which can be categorized into the following groups:

Uninsurable Moral Hazards

- Known pre-existing conditions
- Deliberate noncompliance with environmental laws

Uninsurable or Catastrophic Risks

- Alienated premises
- Nuclear liability
- Acid rain
- War

Risks that are insured in other coverage forms

Contractual liability
Damage to the insured site
Products and completed operations
Workers compensation and employers liability
Transportation exposures

Known Pre-Existing Conditions Exclusion

To provide a reasonable degree of protection for the insurer without eliminating all pre-existing conditions, EIL policies commonly exclude only those pre-existing conditions that are known to an individual or a group of designated persons. The exclusion usually limits the list of employees who must have knowledge of pre-existing pollution conditions to (1) those directly responsible for environmental affairs or (2) senior managers. To trigger the exclusion, the specified employees must have known or reasonably foreseen that the pre-existing condition would give rise to a claim under the policy. The intent of this exclusion is to eliminate coverage in situations where the purchaser of the policy knew of an impending claim that would be covered under the policy. The intent of this exclusion is not to eliminate coverage on the basis that the insured should have anticipated that an event could take place that may lead to a claim under the policy.

Exclusion of Deliberate Noncompliance With Environmental Laws

Environmental losses that are caused by the insureds' intentional, willful, or deliberate noncompliance with any current environmental statute or regulation are excluded from coverage under the EIL policy.

Punitive Damages Exclusion

EIL policies usually have broad exclusions for punitive, multiplied, and exemplary damages and for environmental fines and penalties. Insuring such costs is considered to be contrary to public policy in many jurisdictions because it would relieve guilty parties of a portion of the burden imposed by law for their culpable acts. In those states where the law allows insuring punitive or exemplary damages, the exclusion can be modified to cover such damages.

Workers Compensation and Employers Liability Exclusions

EIL policies contain workers compensation and employers liability exclusions that are, in most cases, nearly identical to those found in the CGL coverage form.

Contractual Liability Exclusion

Unlike CGL policies, EIL policies do not cover liability assumed under an "insured contract." The contractual liability exclusion in an EIL policy eliminates coverage for all liability assumed under contracts, other than liability that the insured would have incurred in the absence of the contract.

Exclusion of Damage to the Insured Site

The purpose of an EIL policy is to insure third-party claims for bodily injury and property damage arising from the release of pollutants and to provide for the cleanup of the pollutants. This exclusion mirrors the intent of the Care, Custody and Control exclusion in the General Liability insurance policy. In order to reinforce the third-party nature of the contract, EIL policies have traditionally contained exclusions that eliminate all coverage for releases of contaminants that did not migrate beyond the boundaries of the insured site. It is also common for the policies to specifically exclude on-site cleanup expenses. However, this is changing, and EIL policies that cover first-party exposures (on-site clean up) are now available.

On-site cleanup coverage is particularly important where groundwater beneath the insured's property is contaminated by a release emanating from the site. Some, but not all, courts have determined that such water resources are owned by the people or the state (third parties). If groundwater were considered to be a part of the insured site, an EIL policy would not cover cleanup costs to remove contamination from an aquifer beneath the site without a specific endorsement that includes on-site cleanup.

Alienated Premises Exclusion

This exclusion eliminates coverage under the EIL policy for an insured location that the insured has sold or leased to others, or of which the insured has otherwise relinquished operational control. Underwriters have felt this exclusion to be necessary because they expect the insured to exercise operational control over the site.

Nuclear Liability Exclusion

EIL policies have nuclear exclusions comparable to the broad form nuclear liability exclusion that is attached to the CGL policy. The exclusion refers to the Atomic Energy Act of 1954 and defines certain terms within the exclusion as they are referred to in the act. In general, the nuclear exclusion eliminates coverage for high-level nuclear materials. Low-level nuclear materials can be covered under the EIL policy, with the exception of materials that are covered under liability policies underwritten by the nuclear pools.

Products and Completed Operations Exclusion

Products and completed operations loss exposures are not contemplated within the insuring agreement or in the underwriting process that leads to the issuance of an EIL policy. Under the terms of the current CGL pollution exclusion, pollution claims for products and completed operations are not excluded unless the insured's products are used at a waste disposal site or the completed operations involve remediation of contamination at any owned or non-owned site. Products pollution liability coverage is available in a stand-alone policy that is often issued without a pollution exclusion. Contractors can purchase environmental liability coverage for completed operations, including remediation of contaminated sites. This type of insurance is discussed later in this chapter.

Acid Rain Exclusion

Claims arising from acid rain are excluded in most EIL policies. Acid rain is caused in part by sulfur dioxide emissions from large industrial and commercial boilers that

are fired by fossil fuels. Because the damage caused by acid rain can be widespread and occur at considerable distances from the source of emissions, underwriters have been reluctant to delete this exclusion from EIL policies unless the insured does not operate the type of equipment that can cause acid rain.

Transportation Exposures Exclusion

Site-specific EIL policies exclude liability based upon or arising out of the maintenance, operation, use, loading, or unloading of any automobile, aircraft, watercraft, or railcar. Exposures to environmental impairment liability arising out of the transportation of pollutants are insurable under separate policies.

War Exclusion

EIL policies typically exclude liability resulting from war in any form.

Limits of Liability and Deductibles

As discussed earlier, EIL policies are typically subject to a per loss limit of liability, which is the most that the insurer will pay for bodily injury, property damage, cleanup costs, and defense expenses resulting from each release of pollutants. EIL policies also contain an aggregate limit of liability.

The inclusion of defense expenses within EIL policy limits is an important difference from the CGL policy, which pays defense costs in addition to the applicable limit of liability until such time as the limit is used up by the payment of damages. Defense expenses in an environmental damage claim can be substantial due to the normal requirement for technical experts and testing of materials. Provisions should be made for these costs when selecting limits of liability. For example, installing one groundwater monitoring well can cost \$10,000. If a claim is made against an insured for contamination of an aquifer, the groundwater investigation used to determine the condition of the resource can easily cost in excess of \$100,000. These costs, along with attorney fees and other defense costs, reduce the amount of recoverable insurance for other claim expenses under the EIL policy.

Selecting appropriate limits for the EIL policy is comparable to selecting limits for any other type of insurance. The process begins with an identification of exposures. This is followed by an effort to quantify the loss potential associated with the exposures identified. Quantification of the loss potential requires a systematic approach but is not beyond the capability of many risk managers. If assistance is required, plant environmental personnel, outside consultants, underwriters, or insurance producers may be able to offer additional expertise in assigning numerical ranges to the identified environmental exposures.

When considering how much pollution insurance is enough, the insured should remember that two elements of claim costs are included within the limit of liability in EIL policies that are not commonly found in other liability policies, cleanup costs and defense expenses. As was mentioned earlier, both cleanup costs and defense expenses in environmental damage claims can be substantial, and the policy limits, which encompass all loss costs, should be established to allow for these costs along with damages for bodily injury and property damage.

Substantial limits of liability are available today from the markets that write environmental insurance. Limits of \$100 million per loss are available from a single insurer, and the total market capacity is in excess of \$400 million per loss.

Contractors Environmental Impairment Liability Insurance

The **contractor's environmental impairment liability insurance policy** (hereinafter "contractors policy") was introduced to the U.S. market in 1987. The policy form was developed to address the environmental insurance needs of contractors that were performing environmental remediation services on contaminated sites. The contractor's policy has its roots in the site-specific EIL policy discussed above. In fact, the original contractors policies actually used a lengthy endorsement to a site-specific EIL policy to create the contractors' version of EIL coverage.

Many of the policy terms and conditions in the contractor's policy are similar to those found in the EIL policy. Both provide coverage for bodily injury, property damage, cleanup, and defense costs. However, many of the features of the EIL policy had to be modified substantially to address the contractors' insurance needs. The EIL policy is written on a designated premises basis, whereas the contractor's policy is designed to cover a contractor's operations and activities at a number of construction sites. There was also a need in a contractor's policy to cover completed operations and contractual liability.

The contractor's policy was designed to provide pollution coverage for the operations and completed operations of a contractor. These policies are commonly purchased by environmental services vendors. However, a very broad range of contractors now purchase this coverage because of the far-reaching pollution exclusion in the CGL policy. Any contractor that works on a waste disposal or storage site, handles or stores any materials that could be a contaminant or pollutant, or could unexpectedly run into a material on a job that could cause pollution or contamination, needs a contractor's EIL policy to fill the gaps in coverage created by the pollution exclusions in the General Liability policy.

Insuring Agreement

Unlike site-specific EIL policies, contractor's policies provide blanket coverage for loss arising from the described *operations* of the named insured. The obligation of the insurer to indemnify or pay a "loss" on behalf of the insured has the same meaning in the contractor's policy as in the EIL policy, which is to cover claims arising out of a pollution incident for bodily injury, property damage, cleanup costs, and defense expenses.

There is a significant difference between the way an EIL policy addresses prior acts and the way they are handled in the contractor's policy. Although most site-specific EIL policy forms do not contain a provision for a retroactive date and, therefore, provide full prior acts coverage, contractor's policies provide coverage for claims that arise only from operations performed subsequent to the retroactive date on the policy. Prior acts coverage is available in a contractor's policy, but it has to be negotiated and added to the policy.

Claims Made and Occurrence Coverage Forms

Contractors environmental insurance policies are available under both a claims made and occurrence coverage format.

Exclusions

A contractors EIL policy eliminates three exclusions that are commonly found in site-specific EIL policies:

- Completed operations
- Damage to the insured site
- The cost of remediating the job site for a loss created by the contractor's operations

The following additional exclusions are commonly found in contractor's policies:

- Asbestos abatement operations
- Radioactive matter (more restrictive than the standard ISO nuclear exclusion)
- Underground storage tanks

The three additionally excluded exposures can be insured by endorsement to the contractor's policy. With regard to nuclear materials, the contractor's policy can provide coverage for low-level radioactive exposures but not for risks associated with high-level materials used for weapons or fuel rods in nuclear power reactors.

The exposure of an asbestos contractor can be addressed under an asbestos or a lead abatement liability insurance policy, which will be discussed later in this chapter.

Claims Made versus Occurrence Based Environmental Insurance

There is a considerable amount of controversy surrounding the topic of which type of coverage trigger is better for the insurance purchaser, claims made or occurrence. The dynamics of environmental losses are unique enough to deserve a brief revisiting of this topic.

The occurrence trigger on contractors environmental insurances requires knowledge of when the pollution that led to the claim actually took place. In the event of continuous exposure over time, as would be the case with gradual pollution, the occurrence policy in force at the time of the first exposure to the pollutants is the one that would respond to all of the resulting claims.

The claims made coverage trigger requires knowledge of when the claim was first made that was a result of the pollution release. All subsequent claims that arise from the pollution event will be covered under the policy in force at the time the claim was first made to the underwriter,

Leaving the discussion of which policy form is better in the event of a non-renewal by the underwriter aside for the moment, which policy would be better to address an environmental damage claim?

If there is a sudden above ground release of pollutants that cause damage that results in a claim under the policy, there is no difference between the two coverage triggers. The policy in force at the time of the pollution release will respond to the claim.

The difference between the two coverage triggers becomes more significant in the event of hidden pollution that takes place over time.

The distinct disadvantage of the occurrence-based policy is that it will be very difficult to establish which policy to assign the claim to in the event of a gradual pollution release. This will become even more of a problem if the insurance buyer has changed insurance companies over the period of time that the pollution was causing damages. Under these circumstances there is a very real possibility that each underwriter will take the position that the other underwriters should be responsible for the full amount of the claim. Of course the insurance buyer will be arguing that all of the underwriters should share liability since the exact timing of the pollution event was impossible to determine with certainty. The coverage litigation that is likely to ensue over which insurer should respond to the claim will be reminiscent of that surrounding the old occurrence based General Liability policies, and their triple trigger theories of cost allocations.

The Claims made coverage form has the distinct advantage in the area of knowing which policy to assign a claim to. The policy in force at the time the claim is made and reported to the underwriter is going to be the policy that responds to the loss. As long as the pollution took place subsequent to the retroactive date on the policy (if any) it is not necessary to determine when the pollution that led to the damages took place. The other advantage to claims made insurance is that current claims are matched with current limits of liability. This is not an insignificant issue when there are real world environmental damage claims that trace their origins back to the 1930's.

The main disadvantage of claims made coverage forms is that there is no insurance for future claims in the event of non-renewal of the policy. The solution to this shortfall is to negotiate terms for extended discovery periods of sufficient duration.

On balance, this author prefers properly structured claims made insurance for environmental damage claims.

Environmental Professional Errors and Omissions Liability Insurance

The "Cleanup America" effort of the 1980s created a large environmental consulting industry in the 1990s. Environmental engineers and consultants face many of the same environmental exposures as site owners, with the exception of legislated liabilities for prior acts involving the disposal of hazardous wastes (the major risk of PRP's under Superfund). Environmental service vendors may also incur PRP liability for prospective work at a Superfund site either as an "arranger" for deposit of materials at a designated facility or as an "operator" of a site as those terms are defined in the act. Cleanup contractors have lobbied for a change in Superfund on this issue, arguing that they are there to help solve the problem and should not be

considered to be a “polluter” under liability provisions of CERCLA. To date, these changes have not been incorporated into the legislation.

In addition to Superfund liability, environmental service vendors can face potential liability from negligent professional errors, acts, or omissions. Claims against such vendors may include allegations that they have failed to identify contaminants, that their characterization of the site contains errors, that their design for remediation of contamination is faulty, that they have made mistakes in analysis of samples, or that they have otherwise failed to perform in accordance with the standards of their profession.

At the same time that environmental consultants were experiencing rapid growth in their business sector during the 1980s, the insurance industry was adding pollution exclusions to all commercial liability insurance policies, including those for professional liability. Consequently, many environmental consultants had to operate without pollution insurance coverage until specialized environmental consultants professional errors and omissions policies were introduced in 1989.

Unlike contractors EIL insurance, which was introduced and gained market acceptance as a monoline, gap-filling coverage for the pollution exclusion in the contractor’s CGL policy, an environmental E&O policy that responded only to pollution claims was quickly eclipsed by a blanket E&O policy that covered all of the traditional E&O exposures of the engineer or consultant, including claims for environmental damages.

Today, these E&O policies are purchased by a wide spectrum of the engineering industry. At one point in time, E&O policies that excluded environmental losses were less expensive than those that provided coverage for them. However this pricing differential has become less noticeable over time and many engineering firms utilize these policies for their entire practice, not just their environmental work. These policies are useful to any professional services firm that does environmental work or who’s work could lead to a pollution loss.

Insuring Agreement

The early environmental E&O policy forms amended the insuring agreement of the Contractors EIL coverage form to cover “negligent professional errors, acts or omissions in the performance of the Insured’s Professional Services”. Many of the early policies provided coverage only for personal injury (similar to bodily injury, but including libel and slander in the definition), property damage, cleanup costs, and defense expenses. These were more restrictive than the broader insuring agreements in traditional engineers professional liability policies that responded to “claims arising out of professional services.” “Claims,” in the traditional E&O policies, could encompass considerably more than personal injury, property damage, cleanup costs, and defense expenses. Therefore environmental engineers found it expedient to purchase two Professional E&O policies, one to cover environmental claims and one to cover non-environmental claims on a broader basis.

Contemporary environmental professional E&O policies now contain insuring agreements that resemble the coverage grants of traditional engineers professional liability policies, without a pollution exclusion, therefore a single professional liability policy is purchased. A wide range of professional environmental services vendors

purchase these policies, including environmental engineers, testing labs, tank testers and environmental consultants.

Environmental professional E&O liability policies are written on a claims-made basis, as are nearly all professional liability insurance contracts. They include substantial deductibles and are available on a “pay on behalf of” or “indemnity” coverage format. Retroactive dates are included in most E&O policies.

Exclusions

None of the insurers offering environmental professional E&O liability insurance use the same policy forms to write this insurance. A careful review of the policies, including all exclusions and endorsements, is important in evaluating the coverage provided by these forms. One popular policy form contains sixteen exclusions. A competing policy form has forty-five exclusions. Interestingly, the one with forty-five exclusions provided broader protection for the insured.

The insured-versus-insured exclusion and contractual liability exclusion are common exclusions in engineer’s professional liability policies that have found their way into environmental consultants professional liability policies. These exclusions address business risk issues that are not unique to the practice of an environmental consultant. The insured-versus-insured exclusion eliminates coverage for claims in which one insured sues another insured for damages arising out of a professional error, act, or omission. Most professional liability underwriters believe that this is a business risk, assumed by the affiliated entities, which should not be insured. The contractual liability exclusion addresses a similar business risk issue.

It is difficult to explain the persistence of the broad array of other exclusions that appear in environmental consultants professional liability insurance contracts. Some are clearly redundant because the coverage provided by the insuring agreement of the policy is not triggered by a claim of the type contemplated in the exclusion. Particular care must be exercised in evaluating the coverage needs of the insured when dealing with environmental consultants E&O insurance. Most underwriters of this type of insurance have an exceptional amount of latitude in their ability to endorse their policies to address the needs of their insured professionals. Coverage can be negotiated for the vast majority of the exclusions in one of these policies

Asbestos and Lead Abatement Contractors General Liability Insurance

In the mid-1980s, the combined effects of legislation, increased public awareness of asbestos risks, and a strong real estate market created a demand for asbestos abatement services. During the same time period, insurance companies were trying to limit their exposure to asbestos products liability and environmental damage claims by adding stronger pollution and asbestos exclusions to all commercial liability insurance policies. Consequently, a demand for liability insurance covering asbestos abatement arose at a time when the availability of liability insurance, in general, and environmental liability insurance, in particular, was very restricted.

Nonetheless, the law of supply and demand in a free market economy resulted in the introduction of **asbestos abatement contractors general liability insurance**. Essentially the policy is a general liability policy with an exception to the pollution exclusion for asbestos materials. Stated another way, asbestos is not considered a pollutant under the policy. Early policy forms were written on a claims-made basis and were very restrictive in terms of the coverage provided. By 1990, the market for this coverage had switched to occurrence-based policy forms, which are used almost universally for asbestos abatement liability insurance today. The pricing of coverage has also been adjusted to reflect a good loss history in this class of business. The policies are written for one-year terms or longer periods if required by the project owner.

As concern over lead paint has grown, many asbestos abatement insurance markets have expanded their policy forms to include lead paint exposures as well. Coverage terms and conditions for lead abatement contractors are virtually identical to those found in the asbestos abatement forms.

A contractors EIL policy can be used to address asbestos and lead exposures by deleting the exclusions for these particular pollutants. However, because contractors' environmental impairment liability policies were traditionally available only on a claims-made basis, the majority of asbestos and lead paint abatement contractors purchased the occurrence-based policy form. In today's insurance market, occurrence based contractors environmental insurance is available. As a result it is now a viable option to purchase separate Commercial General Liability and Contractors Environmental coverage with coverage for asbestos/lead and have them both on an occurrence basis. It is interesting to note that if an Occurrence Based, Contractors Environmental Insurance policy was purchased by the firm, combined with the CGL policy, the firm would enjoy broader protection for environmental claims than under the contaminant specific Asbestos and Lead Abatement Contractors combined GL and environmental policy form. The only downside to going the separate CGL and Environmental contractors route is that two limits of liability would be purchased and therefore it could be more expensive than purchasing a single Abatement Contractors policy form.

Coverage Form

The asbestos abatement contractor's general liability insurance policy is essentially a CGL policy that contains an amendment to the pollution exclusion deleting asbestos from the definition of "pollutants." Similarly, if the insured's operations include lead abatement, lead can also be deleted from the definition of "pollutants" in the CGL policy. Thus, unlike the contractors EIL policy, which is a "gap-filler" for the pollution exclusion in the CGL policy of the contractor, an asbestos abatement contractor's general liability form covers a contractor's general liability and asbestos abatement liability insurance needs in a single policy.

An asbestos or lead abatement contractor's general liability policy often contains other exclusions in addition to those of the standard CGL policy. For example, many policies exclude liability assumed under any contract for injury to any employee of the insured. The standard CGL policy covers such liability as long as it is assumed under an insured contract as defined in the policy. Because such claims are excluded under the employers liability coverage of the standard workers compensation policy, they may represent a coverage gap for asbestos or lead

abatement contractors, who should seek either to have the exclusion eliminated from their general liability policy or to have the contractual assumption eliminated from their contracts with customers.

Other important differences from the standard CGL form include changes in the limits of liability, deductibles, and defense cost provisions. The asbestos contractor policy forms usually include defense costs within the general aggregate limit. Deductibles are typically higher than those found in most contractors' CGL forms.

Like other forms of environmental insurance, the market for asbestos abatement contractors insurance is changing rapidly, and underwriters compete with each other through the use of manuscript coverage forms as well as on price. There are no standard forms in the market except for the ISO CGL policy, which is the basic building block for the policy. Care must be taken in evaluating the coverage provided by these policies because the asbestos modifications to the policy can delete standard CGL provisions in the process.

Environmental Remediation Insurance

First-party environmental insurance was developed to address the needs of lenders who were concerned that their borrowers might default on loans if a borrower was faced with unexpected environmental cleanup expenses on the secured property. Early versions of the coverage forms were often referred to as property transfer environmental insurance. They are now more commonly called **environmental remediation insurance**, although the title of the policy form also varies. As with all environmental insurance policies, environmental remediation policy forms vary a great deal from insurer to insurer. In essence they are a first party environmental remediation policy that can be used on virtually any class of property that may be contaminated.

Insuring Agreement

Environmental remediation insurance policy forms are designed to pay on behalf of or indemnify the insured for remediation costs or expenses caused by environmental damage at a covered location. To be insured, the environmental damage must be discovered and reported during the policy period. The coverage is intended to insure cleanup costs incurred at the insured location on a first-party basis. In addition, third-party EIL coverage is routinely included within environmental remediation policy forms to insure the traditional third-party EIL loss exposures.

Insuring environmental cleanup costs presents a problem for the insurer in defining what is a covered loss. Environmental cleanups are usually triggered by the discovery of contamination in excess of baseline levels that are set forth in various environmental protection laws. Contamination levels above that level may need to be remediated. To set the baseline for a cleanup action, environmental remediation insurance policies typically define "remediation expenses" as expenses incurred for the investigation, removal, or treatment of pollution conditions only to the extent required by specified environmental regulations such as CERCLA, RCRA, the Toxic Substances Control Act, the Clean Water Act, and the Clean Air Act. Thus, coverage under the policy is triggered when the insured discovers levels of

contamination that the environmental laws or regulations require the insured to remediate.

Environmental remediation insurance policies have broad definitions of insureds to address the insurable interests of the buyer, seller, and lender in a property transfer transaction. The additional insureds must be named in the policy for the coverage to apply to their interests.

Exclusions

The exclusions of environmental remediation policies vary considerably from policy to policy. The exclusions found in nearly all policies include, Known Pre-existing conditions and Intentional or Illegal acts. As is true in all forms of environmental insurance, many of the potential loss exposures that could be covered under the insuring agreement of the policy are initially excluded to force the applicant to disclose those exposures to the underwriter. Once the underwriter has received this additional information, the exclusions can often be removed or modified, usually for an additional premium charge.

Other Provisions

Environmental remediation policies are usually on a claims-made basis. Policy periods of up to five years are common in this line of coverage. However, environmental remediation policies usually have no provision for extended reporting periods. The policies are written with substantial deductibles. Regardless of the number of the same or related pollution releases from a covered location, only one deductible and one per-loss limit will apply.

Remediation Stop-Loss Insurance

Remediation stop-loss environmental insurance (also known as cost cap coverage) was designed to insure remediation costs that exceed the projected or anticipated costs in performing an environmental clean up of a specific location. Remediation stop-loss policies are designed to provide only first-party coverage and do not cover third-party claims. However, third party coverage is often provided as part of an overall insurance package by adding an environmental impairment liability policy form to the transaction.

Remediation stop-loss coverage is very useful in facilitating the sale of contaminated property. Usually there will be a wide range of estimated cleanup costs associated with the remediation of a property. A wide discrepancy often exists between the low and high estimates of cleanup costs, creating a problem for buyers and sellers of property in establishing the sale price. Potential buyers tend to discount the sale price by the maximum potential remediation cost, and, of course, the seller favors the low cost estimate. Since environmental laws impose joint and several liability for cleanup costs on all parties in the chain of title, potential purchasers are extremely cautious about taking title to contaminated property. For similar reasons, sellers desire to transfer properties to parties that have the resources not only to remediate the property but also to protect the seller from any possible future costs related to environmental liability associated with the property. Remediation stop-loss policies are used to close the gap between the sellers and buyers perceived view of the expected remediation costs.

Remediation stop-loss policies typically agree to pay on behalf of the named insured the expenses (in excess of the deductible) that the insured incurs in completing an approved remedial action work plan at a specified location.

A claim under the policy is defined as “written notice to the insured that the remediation costs incurred at the project have exceeded the costs contained within the scope of work.” The description of the “insured scope of work,” which is different in each policy, is usually contained in an endorsement to the policy.

Remediation stop-loss policies typically contain relatively few exclusions because they are written on a first-party coverage basis. As with other types of environmental insurance, these policies are manuscript forms without standard terms or conditions. Some of the more common exclusions found in the remediation stop-loss policies are intentional acts or misrepresentations, bodily injury, contractual liability, fines or penalties, and war.

In underwriting these policies, the insurer reviews the insured’s proposed remedial action work plan to establish the reasonableness of the cost estimates. To avoid “trading dollars” with the insurance company, a sizable deductible is used as a pricing tool to eliminate loss amounts that have a very high probability of occurring. The deductible may also be used to eliminate any profit motive a contractor may have in intentionally underbidding the job and then purchasing remediation stop loss insurance to guarantee the extra revenue on the project to make a profit. Legitimate cost overruns on a project may be created by a design or contractor estimation error, the discovery of new contamination, the failure of the remediation technology or changes in the regulatory or political climate that affect the clean up levels.

Using Remediation Stop-Loss Coverage

Midland Grain Growers Cooperative would like to sell a grain elevator to Able Elevator Company. The appraised value of the elevator is \$3,000,000, and the buyer and seller agree that this is a fair market value for the transaction. However, the land that the elevator is located on is contaminated with chemicals used in the past to fumigate the grain in storage. The seller’s estimate for the expected cost to remediate the land is \$1,000,000. The work plan for this remediation approach was submitted to and approved by the environmental regulators.

Able Elevator Company was concerned about purchasing this contaminated property, so Able hired an environmental consultant to evaluate the cost estimates for the approved work plan. Able’s consultant concluded that the remedial action could cost as much as \$6,000,000 but that there is only a 10 percent chance that the costs will exceed \$1,000,000.

Assuming the information on expected costs is correct, how much should Able pay for the grain elevator? According to its expert’s estimate, an appropriate selling price for this property might be \$1,500,000. This sum is equal to the fair market value of the property if it were clean, less the expected cost of remediation in accordance with the approved work plan, calculated as follows:

Appraised value	\$3,000,000
Less remediation expenses	
Original work plan	(1,000,000)
Expected cost of revised work plan (\$5,000,000 additional cost x 10% probability)	(500,000)
Adjusted sales price	\$1,500,000

In reality, this transaction might never take place. Estimates of environmental remediation expenses are seldom as precise as those cited in this example, and if the cleanup costs an additional \$5,000,000, Able would be responsible for all of the additional expenses, not just 10 percent of them. To encourage Able to purchase this property and not incur any risk for excess cleanup costs, the seller might agree to indemnify Able for costs in excess of the discounted sales price. This option might be unacceptable to Midland Grain Growers because that indemnity would show up on its balance sheet as a contingent liability (perhaps forever). Another alternative would be for the seller to discount the agreed sales price by the worst-case loss scenario-\$6,000,000. In other words, Midland Grain Growers would give Able the title to the property and \$3,000,000 in cash just to take the property off of Midlands' hands. Midland Grain Growers would undoubtedly reject this alternative.

A more viable approach to the transaction would be to use a remediation stop-loss insurance policy with a limit equal to the worst-case loss scenario (\$6,000,000). In this example, there is only a 10 percent chance that the cost of the remediation would exceed \$1,000,000. The pure premium for the policy would therefore be \$500,000 (10 percent of the \$5,000,000 maximum additional cost). The underwriter would set the deductible at an affordable amount above the expected remediation costs of \$1,000,000. A simplified representative insurance transaction on the sale of this property would be:

Policy Form	Remediation Stop Loss
Limit of Liability	\$6,000,000
Deductible	\$1,000,000
Premium	(\$500,000 pure premium plus commissions, profit, taxes and contingencies, \$250,000)
Total premium	\$750,000
Policy Term	The length of the remediation project work plan

Underground Storage Tank Financial Responsibility Compliance Insurance

The Resource Conservation and Recovery Act created Proof of Financial Responsibility regulations that apply to the owners and operators of underground storage tanks. When such tanks are used for storage of fuels (home heating oil is

excluded in most states) or hazardous materials, the RCRA regulations require the owners or operators to demonstrate their ability to pay claims resulting from the release of such materials from the tank. One method by which financial responsibility can be demonstrated is through the purchase of insurance.

The RCRA financial responsibility regulations resulted in the development of a special environmental impairment insurance that is often referred to as **underground storage tank (UST) compliance insurance**. These policies have as their core coverage a site-specific environmental impairment liability insurance contract. To comply with the proof of financial responsibility regulations, an endorsement is attached to the policy form modify the coverage. These endorsements and policy forms vary from insurance company to insurance company, but their basic intent is the same. The regulatory compliance endorsements provide an additional limit for defense, usually equal to 25% of the policy limit. An off the shelf EIL policy would have defense included within the limit of liability. The UST Compliance policy also adds a 60-day notice of non-renewal and an automatic Extended Reporting Period provision. EIL policies can vary on the last two provisions so the endorsements are written to assure the regulators that the Compliance Policy actually complies with the minimum proof of financial responsibility requirements of RCRA or the applicable state regulations.

RCRA requires that the owners or operators of underground storage tanks provide evidence of financial responsibility for specified limits. For most tank owners, the required limit of insurance is \$1 million per claim. Larger retailers of petroleum products may be required to provide evidence of \$2 million of financial responsibility per claim.

Although the current regulations do not require evidence of financial responsibility of owners or operators of aboveground storage tanks, a number of insurers also insure aboveground tanks on the same policies used for underground tanks. Another point of potential differentiation on compliance policies is that one policy may only cover releases from the UST and underground piping itself, which is all the regulations apply to. Other compliance policies go on to cover releases from the piping, pumps, valves and other equipment directly attached to the insured tank. There is a very real loss exposure from the piping and associated equipment making the second version of coverage much more valuable than the first.

Most of the UST Compliance policies written by environmental insurers are not full EIL policies (as described earlier). It is interesting to note that many off the shelf EIL policies have specific exclusions for UST's and not all of the provisions of the RCRA required endorsement actually work to improve the insurance coverage provided by an off the shelf EIL policy. One restriction of coverage in a UST Compliance is that it does not insure all releases of contaminants from the insured site. Most UST Compliance policies only respond to a "corrective action" as that term is defined in RCRA, and not to other environmental damage claims. This distinction is important for any insured that may face environmental liability claims based on legal grounds other than RCRA. For example, a ware house storing environmentally damaging materials, would not have coverage for those materials under a UST Compliance policy on the gasoline tank used to fuel their fleet.

UST Versus EIL Coverage

The owner of a retail service station that has four underground storage tanks is required to provide proof of financial responsibility for the cleanup of releases from the tanks as well as third-party claims for bodily injury and property damage. A UST Compliance policy is used by the owner for this purpose. The policy responds only to corrective actions under RCRA. The policy has a limit of liability of \$1 million per claim and a deductible of \$5,000 per claim.

While a customer of the station was pumping gas into her car, the hose from one of the pumps ruptured. The gasoline injured the customer and a bystander and also damaged the customer's car, which had to be repainted as a result of the gasoline spill.

Because the UST policy responds only to corrective actions under RCRA, it would not cover the bodily injury or property damage claims of the customer or the bystander. To cover such claims, the owner would need to purchase an EIL policy or have that coverage added to the UST policy. Because of the limited pollution coverage provided in a UST policy that was designed purely for regulatory compliance, it is often recommended that the retail service station owner purchase coverage under an EIL form or on a combined general liability/pollution liability form as discussed below.

There are a few practical steps to utilize when addressing the proof of financial responsibility regulations on UST's. The first is to evaluate the existence and financial viability of any "state UST Funds". These funds vary widely from state to state and are shrinking in popularity over time. If the state fund is not a viable alternative, (there could be any number of reasons for this including the insolvency of the state fund) environmental insurance should be considered. Based on an environmental risk assessment of the locations, an environmental insurance program can be developed. If there are environmental loss exposures at the same locations that have the UST's, separate EIL and UST Compliance policies should be considered to fill the coverage gaps between the two policy forms. EIL policies commonly exclude pollution losses from UST's and UST Compliance policies commonly only respond to environmental losses from the UST's. Where this approach would seem to develop some redundant premiums, the premiums on most UST's is a few hundred dollars per year, based on the size, age, type of construction, leak detection equipment and materials stored in the tank.

Combined Pollution Coverage Forms

As the variety of environmental insurance policies grew, it became apparent that insurance buyers that had more than one type of pollution loss exposure could benefit from having a single policy that combined multiple environmental and sometimes non-environmental coverage's into a single policy.

The demand for combined environmental liability policy forms began with environmental consulting firms that were also involved in on-site remediation of contamination. Because these firms had both a professional liability exposure and a contracting exposure, they found it necessary to purchase both a contractors EIL

policy and a professional E&O liability policy to adequately cover their environmental liability exposures. Once the pattern of combining coverage forms was established, underwriters developed other combinations of coverage to meet the specific needs of various customers.

Today, prepackaged combined policy forms are an important part of the environmental insurance market. Different underwriters combine different insurance coverage's (both environmental and non-environmental), usually for marketing purposes, which makes direct comparisons of the policies difficult.

The number of potential insurance coverage combinations are too numerous to elaborate on within the format of this course work. Examples of combined policy forms would include; Commercial General Liability+Environmental Liability, Environmental Professional Errors & Omissions+Contractors Environmental Insurance, Environmental Impairment Liability+Environmental Remediation Insurance, even Commercial General Liability+Professional Liability+Contractors Environmental Liability can be packaged together into a single policy form with one Deductible and one Limit of Liability.

It is important to first identify the risks that need to be insured before an insurance policy form is selected. The environmental insurance market place is very flexible. Multiple underwriters are usually available for any particular risk. If one underwriter has a prepackaged policy form for a particular class of business, the chances are a competing underwriter could build the same coverage by adding the component parts together. However, ease of use becomes an important consideration in the latter scenario, where a prepackaged policy should have all of the word-smithing between the coverage parts completed.

Combined CGL/EIL Insurance Forms

Organizations that have pollution exposures frequently purchase an EIL policy because of the pollution exclusion in the commercial general liability coverage form. However even when purchasing separate environmental insurances, gaps in coverage between two policies can inadvertently appear depending on the specifics of the loss. For example, in a completed operations loss on a construction project the GL policy and the Contractors Environmental policy may both provide an element of coverage and contain exclusions that create areas where it is not clear which policy should respond to the loss. Combined policy forms attempt to minimize these potential gaps. At a minimum a combined policy form will eliminate the potential conflicts that may arise if there are gray coverage issues between the GL and environmental policies, and the policies are issued by different insurance companies.

Some underwriters offer **combined CGL/EIL insurance policies** to provide a more complete insurance package for such insured's. Because nearly all pollution insurance is written on claims-made policies and most general liability policies are written on an occurrence basis, it has been necessary for the underwriters to develop combined forms with the flexibility to accommodate a variety of coverage needs. These CGL/EIL forms are offered with the EIL coverage on a claims-made basis and the CGL portion on either an occurrence or a claims-made basis. Separate limits can be specified if the insured needs higher limits for the pollution or

the general liability exposures. Both coverage's are subject to a single aggregate limit and typically a single deductible (when both EIL and CGL claims are involved).

Combined CGL/EIL policies may also be specifically endorsed to provide products coverage that includes protection against pollution claims related to a release caused by a failure of the insured's product. The insured can also purchase coverage for pollution risks related to transportation of its products or waste materials when they are carried on vehicles owned by third parties.

Advantages of Combined Insurance Forms

Using combined forms for environmental insurance has several advantages. The first is that it provides the coverage needed by the insured to adequately protect it against pollution claims. As was mentioned above for environmental consultants who also do on-site work, the combination of contractor's environmental insurance with professional E&O insurance provides the pollution insurance needed by the insured in a single policy that takes the place of two forms. A combined policy is typically less expensive than if the two or more coverage forms were purchased separately. The combined policy has a lower price because it typically provides a single limit of liability for both the contracting and the professional liability exposures.

Another advantage of combined forms is that they can eliminate coverage disputes that might otherwise exist if the coverage's were provided by two different insurers. For example, if a contractor that is excavating soil to remove heavy metals contamination unexpectedly strikes an underground storage tank, releasing diesel fuel into an area of clean soil, the fault may be that of the contractor that directly caused the release or the engineer who failed to identify the presence of the tank. If the firm that had done the site assessment is also doing the on-site remediation, it may experience a third-party claim that falls in a "gray area" between the contracting and professional aspects of its work. Having both exposures insured by the same insurer eliminates the possibility of two separate insurers both denying coverage for the "gray area" claim. Superimposing the CGL policy with its less than absolute pollution exclusion, will just add to the confusion to which policies should pay which part of any given environmental loss.

Combined insurance forms also provide a uniform defense for claims because there is no dispute over which insurer is responsible and no need for subrogation, which might be necessary to establish the rights of the parties and/or the insurers when the coverage's are provided in separate policies (typically with different insurers). The combined contractors EIL/engineers professional liability insurance policy is typically less expensive than would be the case if these coverage's were purchased separately. As was mentioned above, this is primarily due to the use of a single policy aggregate limit that applies to both coverage parts. Although this makes the policy less costly, it does have the drawback of offering only one limit when the purchase of separate policies would provide two limits. If a claim involves *both* contracting liability and a professional error, the lesser limit may be a factor. However, only one deductible applies in the combined form, whereas the use of separate policies would result in the application of two deductibles.

Application Process for Environmental Insurance

The process of making application for environmental insurance has often been considered tedious because of the emphasis on details concerning the environmental risks in the applicants' operations and activities. Traditionally, applications often contained more than a dozen pages of detailed questions that could not be answered by the applicant without outside assistance with expertise in environmental management. As a result, in larger organizations the risk manager would have to seek the help from other persons in various parts of the organization just to get an application completed. On larger accounts or high-risk industries, the underwriters would then require an on-site environmental risk assessment from an independent third party to verify the information contained in the application.

Over time insurers have made the application process less complicated and less expensive for the applicant. In some cases, the applications have been reduced from more than twelve pages to as few as two. Some insurers even pay the cost of the environmental risk assessment

Regardless of the process used to underwrite environmental insurance, the application will also include certain warranties that become a part of the policy. The warranties include a statement that the applicant knows of no existing pollution conditions that are likely to lead to a claim against the organization. The warranties also verify the truthfulness of other information submitted to the underwriter. Additional warranties concern disclosure of past claims against the organization and knowledge of violations of environmental laws and regulations. The application is signed by an officer of the organization and attached to the policy when it is issued. Failure to provide honest or accurate information may result in a loss of coverage in the event of a loss.

One of the difficulties faced by potential applicants for environmental insurance has been that the information required in the applications is not common to other forms of insurance. Although gross receipts or some other simple accounting measures may be used as the rating base for the policy, much more detailed information on the specific environmental risks are usually required to underwrite the policy. There are a number of resources that can be utilized to assist in the application process including the underwriters' personnel, specialized insurance producers and wholesalers, and a broad array of environmental engineers and consultants.

The pricing of environmental insurance has been competitive, and the policy forms are constantly being refined to add additional competition to the selection process. With the different policy forms available and the numerous exclusions that are included in or attached to the basic coverage forms, quotations must be compared carefully. Practitioners knowledgeable in this area can provide valuable assistance in evaluating the proposals of insurers and in assuring that the policies adequately address identified environmental exposures. Risk managers may also use consultants to supplement their knowledge of environmental exposures and to evaluate the proposals of the insurers. There are an increasing number of

environmental risk management and insurance specialists employed in the insurance industry that can be called upon for assistance. Many of the major insurance brokerage operations have full time staffs dedicated to this function.

Summary

Liability for pollution incidents can be based on negligence, intentional torts (such as nuisance or trespass), strict liability, or violation of various environmental statutes. These environmental laws have made environmental risk management and insurance much more important than was previously the case. Estimates for the cost of cleanups mandated by CERCLA are estimated at between \$700 billion and \$1 trillion.

Although the risk management process can be applied to environmental loss exposures, such exposures have several unique characteristics that must be considered when planning to manage them. Starting with the risk identification process even determining the exposure to loss presents a challenge. In addition to common law theories of liability for damages to third parties, environmental damage claims can be created by legislated liability for clean up expenses and damage to natural resources. In addition to the increased loss exposure created by the legal environment, environmental damage claims are difficult to quantify as to time, place and amount.

Environmental risk financing is complicated by pollution exclusions in the majority of commercial liability insurance policy forms. A pollution exclusion was incorporated into standard General Liability policies by endorsement beginning in 1970. Eventually, a "gradual" pollution exclusion was incorporated into the 1973 Comprehensive General Liability policy. This exclusion specifically allowed coverage for bodily injury and property damage claims that resulted from the sudden and accidental releases of pollutants. However, this gradual pollution exclusion proved ineffective at barring the flood of Superfund claims that began appearing in 1983. In response to the adverse environmental claims experience on the Comprehensive General Liability policy, ISO introduced a new Commercial General Liability form in 1986. The Commercial General Liability policy contained and "Absolute Pollution Exclusion" in the standard form and gave underwriters the ability to utilize a "Total" pollution exclusion by endorsement. The intent of the 1986 absolute pollution exclusion was to absolutely exclude coverage for environmental damage claims except for Bodily Injury or Property Damage claims for environmental losses that arose from the insureds' Products or Completed Operations. All environmental clean up expenses were also "Absolutely" excluded separately within the 1986 CGL form. The "Total Pollution" eliminated all claims arising from a pollution event including Products and Completed Operations claims. Pollution exclusions were added to most other commercial insurance policies in 1986 as well.

The 1997 version of the Commercial General Liability policy changes the "Absolute Pollution Exclusion" to add back coverage for clean up expenses associated with environmental claims from Products and Completed operations, as well as making other modifications to make the intent of the exclusion more clear and easier to read.

The insurance industry's desire to eliminate coverage for environmental damage claims in standard insurance policies, on an industry wide basis, created a new

class of insurance designed to fill the coverage gaps created by the pollution exclusions in the other lines of coverage.

“Environmental Insurance” includes both first party and third party coverage forms. One of the important common denominators that distinguish environmental insurance from other insurance contracts is the existence of a separate coverage grant in the insuring agreement for environmental damages or environmental clean up expenses.

The major types of environmental insurance include the following:

1. Site-specific EIL insurance
2. Contractors EIL insurance
3. Environmental professional errors and omissions liability insurance
4. Asbestos and lead abatement contractors general liability insurance
5. Environmental remediation insurance
6. Remediation stop-loss insurance
7. Underground Storage Tank Regulatory Compliance Policy
8. Combined Forms

Environmental insurance can be a useful risk-financing tool in an overall insurance program.

* The names of the firms used in the examples are fictitious.