

A Perspective on General Liability Insurance and the Pollution Hazard: Exposures and Contracts[†]

George B. Flanigan^{*}

Summary

The Insurance Services Office estimates that insurance industry paid losses arising from the pollution hazard will approach \$200 billion. For two decades the primary insurance coverage for environmental losses (the Comprehensive General Liability policy (CGL)) was far too open handed, and its weaknesses contributed substantially to the extent of losses. This paper explores the setting—social and economic, legislative and regulatory—of the era before the absolute pollution exclusion was introduced to the market in 1985. The discussion is followed by an analysis of policy provision issues arising from the 1973 CGL including the limited pollution exclusion that is the predecessor of the absolute pollution exclusion. Next, the paper discusses and analyzes the absolute pollution exclusion, currently in use as it has evolved since its introduction. Finally, the paper surveys

[†] The writer would like to acknowledge the help of James Jones, CPCU, Director of the Katie Insurance School, who read a near final draft of the paper and made very useful comments. He would also like to acknowledge Pei-shan Tsai, his able graduate student who labored long, and the Katie School for providing her services. Finally, he would thank the National Association of Insurance Commissioners who awarded him the *Journal of Insurance Regulation* Research Grant; without the expectations their support carried, this paper might never have been completed.

^{*} Insurance Industry Professor, Katie Insurance School, Illinois State University, Normal, IL. E-mail: gbfiani@ilstu.edu

non-CGL products and markets for environmental insurance in use at the present time.

The history of pollution insurance and the 1973 CGL has been a "financial calamity" for the P&C industry. The paper traces the increasingly complex and novel loss adjustment problems faced by the industry as courts and regulators clarified—some would say modified—the coverages under commercial general liability policies. Many traditional legal defenses were weakened or eliminated by legislation and court rulings. Remarkably, it was only in 1985 that an absolute limit on what a particular CGL would pay for occurrences of pollution damage was added. Thus, the same policy can be bombarded time and again for multiple claims against the same policy.

The author attributes much of the fault for the mounting, unanticipated losses to the lack of vision among underwriters, clinging to the use of old policy language even after sentinel cases signaled a change in the legal environment. Compounding this, he contends, were communications with regulators during the form approval process that weakened defenses in court for a narrower interpretation of coverage.

Introduction

The effective, efficient, and profitable operation of the insurance mechanism is critical to a successful economy. At the center of this mechanism is the insurance contract. The contract includes an insuring agreement, where the promise to pay is made, as well as terms and conditions and exclusions that carefully hone the promise. A basic function of regulation is the oversight of forms. Standard forms are developed by the Insurance Services Office (ISO) and other rate service organizations as well as by private consultants. Individual companies often develop their own forms and seek regulatory approval for their use.

The early history of pollution insurance is replete with examples of claims not contemplated by the underwriters in the terms and conditions or in the rate level when the contract was issued. Changes in the social, legal, and political climate affect many lines of insurance, but they had a particularly dramatic effect upon the various "hazards" normally included in CGL coverage. CGL now stands for Commercial

General Liability; but before 1986 CGL stood for "Comprehensive General Liability." Whether or not the name change was intended to signal limitations on scope of coverage, this product has consistently been intended to cover the same exposures: premises, operations, products and completed operations, and contractual liability. Insurance against pollution liability is included in varying degrees in various editions of "standard" policy forms, such as from ISO.

The first part of this article focuses on the decade preceding the 1985 CGL revisions. After the hard casualty market of the mid-1970s, a prolonged soft market set in to be followed by the great hard market of 1985 and 1986. It was reported that 25 percent of surveyed members of the United States Chamber of Commerce faced insurance cost increases of 500 percent or more (*Business Week*, 1985). In the hard market of the 1980s, some insurance became impossible to buy and the world experienced an "insurance crisis." Such fluctuations distort and disrupt the economy and are damaging to society. Regulation would that such distortions and disruptions be minimized. One thesis of this article is that the liability insurance delivery mechanism, the contract, was fatally flawed and should have been fixed long before it was. The long use of this flawed contract contributed mightily to the crisis.

Part of the article focuses on contemporary liability insurance for environmental exposures. It begins with a discussion of the 1985 forms and the absolute pollution exclusion; it also includes a discussion of some widely used endorsements. What is not covered defines what the markets provide elsewhere or not at all. The article concludes with a survey of the products available in the contemporary non-CGL marketplace.

The Pre-1986 Era

This section traces some of the events and developments that led to the watershed change in pollution insurance as manifested in the 1985 CGL revisions. The discussion is organized into three parts: 1) social and economic developments; 2) public policy events and issues; and 3) insurance coverage issues.

Social and Economic Developments

The history of insurance coverage against pollution parallels the developments in the public's awareness of environmental issues. Re-

peated and dramatic incidents of environmental tragedy had substantial effect on the insurance industry; events helped to define existing coverage more precisely and to develop coverage that is more appropriate to the new and unusual circumstances.

What follows is by no means comprehensive. Instead, it relates some of the interesting insurance-related environmental news for the period leading up to the 1985 CGL revisions. Rachel Carson's 1962 book *Silent Spring* is often attributed as setting off a national awareness of environmental pollution. In 1967, the Torrey Canyon supertanker went aground off the coast of England, causing significant environmental damage. In search of responsible parties, the British and French governments seized the Torrey Canyon's sister ship in Singapore and held it captive until Union Oil paid \$7.8 million for cleanup costs. Union Oil's difficulties continued. In partnership with Mobil, Gulf, and Texaco, Union was drilling off California. In 1969, an oil platform off the coast of Santa Barbara, California, blew-out and polluted the ocean and shore. The companies were sued for \$1.3 billion. Public awareness of pollution increased and the insurance industry restricted coverage with particular attention to the oil industry (Bromrich, 1971).

Two of the most substantial and significant events that followed were Love Canal and Rocky Mountain Arsenal. Since 1942, Hooker Chemical and Plastics Corporation had been disposing of chemical wastes in the Love Canal, near Niagara, NY (*Business Insurance*, various dates). Between 1942 and 1952, Hooker dumped approximately 25,000 tons of hazardous waste at the site, both in the canal and in additional pits it had excavated. Other entities that dumped waste at the site included the City of Niagara Falls and the United States Army. The hazardous waste leached into soil throughout the area. Eventually, President Carter declared a second federal state of emergency, thus providing funding for the temporary relocation of a nearly a thousand families. More than 237 families in Love Canal had to abandon their homes when state environmental officials found cancer-causing chemicals leaching into their yards and basements. By 1990, the clean-up was substantially complete and sections of the Love Canal area were resettled. Much of the cost incurred by the owner of Hooker, Occidental Petroleum, was ultimately paid by the insurance industry.

The second defining event was the Rocky Mountain Arsenal, 27 miles from Denver. Experts described part of it as the most polluted

square mile in the United States. The Army used the arsenal for the manufacture of chemical and incendiary weapons, the dismantling of obsolete chemical weapons, and the manufacture of nerve gas. In 1952, the Army leased part of the arsenal to Shell Oil Company. It manufactured pesticides, herbicides and insecticides including DDT. Eventually, the arsenal contained 600 contaminated by-products in 181 contaminated sites including lakes. Estimates of permanent clean-up costs ranged between \$210 million and \$1.86 billion, depending on the clean-up methods (*Business Insurance*, various dates).

Other key events involving environmental pollution included the following. In April 1979 a Louisville & Nashville freight train carrying anhydrous ammonia and acetone derailed in the swampy Florida Panhandle sending clouds of deadly chemical fumes in the air and forcing the evacuation of 5,000 persons in an 80-square mile area near Youngstown, FL. Youngstown was the site of a disastrous accident a year before in which an Atlanta & St. Andrews Bay Railway freight train crashed spewing a cloud of deadly chlorine gas from ruptured tank cars. The story stayed in the news for years as the railroad sought contribution (for what turned out to be a \$58 million award) from various other firms including the manufacturers of its equipment.

Meanwhile, courts in California and New York were sifting through 140 insurance policies covering Hooker Chemical & Plastic to determine who would defend and finally pay claims arising from the pollution of Love Canal. Over 40 American and London market insurers underwrote policies for Hooker during a 16-year period. Suits seeking in excess of \$1 billion in compensatory damages and \$9 billion in punitive damages were filed. It was reported some insurers were seeking to deny coverage because they could not specifically identify when the damages occurred, whether the leaching was a "sudden and accidental" occurrence, or whether a New York State prohibition in effect since 1973 against insuring "non-sudden" damage caused by toxic substances was applicable. Others disputed the statute of limitations, specifically whether it should run from the time the event occurred or when the event was discovered. Ultimately, the insurance industry would not prevail on these issues.

In February 1980, Jackson Township in New Jersey made news defending itself against a \$51.5 million class action suit arising from the contamination of wells near a public landfill. Since 1972, the

township had permitted fee payers to use the site. Allegedly, the landfill had been used for illegal dumping of toxic chemical wastes. The result was contamination of drinking water to 165 families. The insurers declined to pay defense costs because the contamination was the result of long-term seepage rather than pollution of a "sudden or accidental" nature. *Business Insurance* noted that New Jersey had more than 10,000 chemical manufacturing facilities and opined the problem was likely to recur because manufacturers tend to hire low cost truckers to dispose of their wastes.

A few months later there were developments with Love Canal. A state Supreme Court decision required Utica Mutual Insurance Company to defend claims against Niagara County stemming from the Love Canal. It was heralded as a victory for all defendants in Love Canal litigation. The court held that the pollution exclusion did not apply because the county was not an "active polluter." An attorney for Hooker opined that the pollution exclusion would not apply to Hooker's coverage either. After all, the firm's actions had been storing the chemicals underground not willfully polluting. His point was that, although intentional injury should not be covered, there should be coverage when injury is not clearly foreseeable as the consequence of intentional acts, turned out to be the rule. The Hooker attorney also opined that the "sudden and accidental" exception to the pollution exclusion did not apply since chemicals were suddenly discovered to have leaked from storage in supposedly impermeable clay. By October 1983, Occidental Petroleum was on the verge of settling more than \$10 billion in personal injury claims over the pollution of the Love Canal area for only about \$25 million. It was reported that of that amount, about \$20 million was covered by insurance. Hardest hit among the insurers was Hartford Accident & Indemnity, Occidental's primary liability insurer from before 1942 through 1973.

In late 1981, thirty-four New York City firefighters were suing Consolidated Edison for more than \$150 million because they were exposed to deadly toxins while battling a transformer blaze that blacked out most of lower Manhattan. The transformers contained toxic PCBs that gave off poisonous dioxin when burned. The firefighters alleged the utility failed to warn them that the burning cooling oil contained PCBs. Dioxin is considered to be the most dangerous component of Agent Orange, the controversial substance used as a defoliant in the Vietnam War.

Going forward two years we find news of Rocky Mountain Arsenal. Shell Oil Company was asking its liability insurers to pay part of the multimillion-dollar bill that government agencies had presented the oil company to clean up the Rocky Mountain Arsenal and some other sites. Various government agencies had notified Shell of its responsibility to pay cleanup costs, but none had yet taken legal action against the oil company nor specified exactly how much Shell should pay. It was reported that Travelers provided primary liability insurance to Shell from 1948 through 1975 and that at some times there were pollution exclusions. But at this point in time one might wonder if the exclusion would bar coverage.

Early in 1984 there was a classic insurance contract ambiguity case. Michigan Chemical was responsible for the necessary destruction of 40,000 farm animals that consumed contaminated feed that Michigan Chemical had shipped in 1973. The animals ate the feed in both 1973 and 1974. Michigan Chemical sought \$56 million in coverage equal to the aggregate limits for both years. The insurers argued that they should pay only \$28 million for policy year 1973 because the shipment of the feed took place in 1973. The court agreed with Michigan Chemical and ruled that the definition of occurrence was ambiguous because it could construe the aggregate as applying at the time injury results just as easily as when products are shipped.

Michigan Chemical was a products liability case that involved toxic materials. The exclusion in the 1973 CGL applied to: 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 water course or body of water. Michigan Chemical's release was not into air or water or onto land.

The Michigan Chemical case relates to the asbestos problem that was prominent at the time. Asbestos would undoubtedly qualify as an irritant or a contaminant. It is interesting to note that in the products liability area, insurers and insureds were quarreling about the same problem as in the Michigan Chemical case: exposure, manifestation and triple triggers as regards such products as DES and asbestos. In a later section the products liability issue as it relates to pollution will be discussed.

Finally, Exxon was in the news in 1984, years before the notorious and very expensive *Exxon Valdez* oil spill. *Business Insurance*

reported in May that the state of New York was suing Exxon for more than \$15 million, alleging that Exxon oil tankers polluted the Hudson River while illegally removing fresh water for use in the company's refining operations. Also in 1984 was Bhopal, India, where a Union Carbide plant emitted poisonous chemicals killing 2,000 and injuring 300,000 (Leavit, 1985).

Throughout this era, pollution was big news, losses were many and varied, and the insurance industry was paying. According to Leavit, the EPA was estimating there were 17,000 hazardous waste sites in the United States. They also estimated that 25 percent of the 2.3 million underground storage tanks in the country were leaking (Leavit, 1985). At the same time the insurance market was soft and rates continued to fall, seemingly driven by investment income. But that changed in 1984. The first signs of a market turn appeared in the reinsurance market. By 1985 it had spread to the primary market, particularly the casualty markets. 1985 was also the year that the totally new CGL forms were offered for approval by state regulators.

Public Policy Approaches and Issues

Public policy made a one hundred eighty degree reversal over the years 1970–1982. Beginning with 1970, Congress passed the National Environmental Policy Act that signaled a national commitment to environmental protection. However, in 1971 the state of New York took the interesting step of making illegal insurance on any pollution risk other than sudden and accidental incidents. New York's logic was that such insurance coverage would be inherently against public policy. Parties responsible for other than sudden and accidental pollution should pay for cleanup and indemnity without the aid of insurance proceeds. Indeed, it was feared insurance might encourage some companies to commit willful acts of pollution. This New York policy position dovetailed neatly with the insurance industry's approach of providing coverage against sudden and accidental pollution only, and the two were closely intertwined and inter-related. The amendatory endorsements preceded the New York law.

The massive environmental setbacks (in New York and elsewhere) of the 1970s refocused the issue of insurance for non-sudden events. Responsible parties could sometimes not be identified, or could not pay, or would not pay to clean up pollution. Legal tangles continued the delay, and the pollution remained. In May 1982, New

York law changed. Hazardous waste handlers and others in New York would be able to purchase from domestic insurers pollution liability insurance for gradual or, as it was often called, "non-sudden" occurrences. In between the two New York law changes there were many events including those discussed earlier.

Congress passed the Resource Conservation and Recovery Act of 1976 (RCRA). RCRA put teeth into the National Environmental Policy Act of 1970. It empowered the Environmental Protection Agency (EPA) that was created in 1971 to establish by regulation financial responsibility requirements for both the operation and the closure of waste disposal sites. In addition to financial responsibility, RCRA imposed detailed regulations upon generators of waste as regards containers, labels, record keeping, storage, spill prevention and control as well as requiring regular groundwater testing. Also passed in 1976 was the Toxic Substance Control Act that imposed safeguards on the chemical industry.

In December 1980, the "Superfund" Act or the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) became law. CERCLA gave the federal government extensive powers including the right and duty to:

- provide emergency response to clean-up hazardous substances,
- recover clean-up costs from responsible parties,
- force potentially responsible parties to conduct a clean-up and reimburse the government for funds expended,
- provide clean-up funds when the liable party is unknown, and
- provide funds for cleaning up inactive disposal sites.

CERCLA introduced the term "potentially responsible parties" (PRP) to the corporate lexicon. A PRP is a person or organization identified as contributing to an environmental problem. Under the law, PRPs can be called upon to deal with the problem. The liability imposed on PRPs and others is strict, that is, liability without regard to fault. It is also joint and several meaning that any PRP can be held accountable for the entire loss irrespective of its percentage share of responsibility. Finally, the liability was retroactive in nature. Thus, if the source of any waste in a Superfund or other polluted site can be traced to a PRP, liability can be imposed: (1) irrespective of where,

when, or how the waste found its way to the site, and (2) irrespective of whether the disposal had been consistent with the law.

The very broad and retroactive liability feature of the environmental laws has led many to question the fairness of such laws. Party A can buy a piece of property today from Party B. Suppose further that Party B purchased the property from Party C in 1990. Finally, suppose that next week previously undetected pollution is discovered the source of which is Party C's activities in 1975, before either RCRA or CERCLA became law. Party A, the unfortunate buyer, is readily identifiable and can be called upon to pay all damages. Of course it is true Party A can and will seek contribution from Party C. The essence of joint and several is that such contribution is strictly a matter between A and C. The writer remembers a conversation with the risk manager of a Fortune 500 company many years ago. He related an instance where the EPA found and identified a piece of the company's product at a waste site where there were few other PRPs identified. The company was responsible for the cleanup despite the fact they had no knowledge about any of the circumstances concerning the history of the site.

Similarly, many but not all would argue that insurance companies have been treated unfairly. A remarkable doctrine developed in New Jersey, in *Summit Associates v. Liberty Mutual*, the court ruled that the "potential for damage to the environment is great. Consequently, the health, safety, and welfare of the people of this state must outweigh the express provisions of the insurance policy in issue." The court went on to reason that the cost of cleanup is so great that individual insureds cannot be expected to pay (definitely not always the case), so the insurer must pay (Anderson, 1989).

One lawsuit that typified strict, joint and several, and retroactive liability concerned a company called Enviro-Chem. In late 1983, it was reported in *Business Insurance* that more than 130 United States industrial firms (including Union Carbide, Ford, and American Can) were pursuing a major suit to compel owners and operators of hazardous waste sites (and their insurers) rather than their customers to pay for government ordered clean-ups. The suit involved the six-acre Enviro-Chem waste disposal site operated between 1977 until May 1982. When closed, there were several thousands waste-containing drums in various stages of decay and contaminated surface water standing on the site. The EPA declared it a Superfund site and the press dubbed it "valley of the drums." Corporate America and their

insurers (readily identifiable PRPs) were paying for years of accumulated illegal and reckless dumping.

At the same time the courts were interpreting the pollution exclusion against insurers as will be discussed below. Some cases, including the *Summit* case above, went so far as to hold that on-site hazardous waste cleanup costs imposed under CERCLA or other laws are covered by the CGL. Such law is equivalent to making a liability policy (designed to compensate injured third parties) into a first party insurance contract. Other CGLs were called upon to pay for pollution on the policyholder's premises. Successful arguments for coverage, not illogically, often apply to the underground water table. Since in most places underground water moves about without reference to property lines, by definition, the contamination has gone off premises. Similarly it has been argued that the state owns the underground water so the owned property exclusion cannot apply (Becker, 1992).

Waste liability became as controversial an issue in the 1980s as product liability was in the 1970s. For insurers, the shift in emphasis to waste safety meant a chance to sell a new product: insurance against non-sudden or gradual pollution. However, it also meant undefined liability for clean-up of old dumps that had to be paid for by decades-old liability policies written on an occurrence basis. Hazardous waste landfills and storage impoundments became a more notorious issue in early 1982 when two men died at a waste disposal site in Utica, MI, because two chemicals in the dump combined and caused the release of hydrogen sulfide gas. The EPA's attempt to issue tougher new regulations drew criticism from private industry that generally opposed them. EPA temporized and vacillated. Meanwhile, some states (Louisiana, Missouri, New Jersey, Oklahoma and Washington) tired of waiting and promulgated EPA-like regulations for sudden and non-sudden pollution. It was reported in early 1982 those states intended to keep their regulations even if the EPA declined to issue national regulations. New Jersey's law went so far as to provide for jail terms and fines for business executives responsible for wastes generated by their companies that were disposed of at unauthorized sites in the state.

Mandatory insurance for waste handlers against non-sudden pollution follows naturally from financial responsibility imposed by RCRA and CERCLA. In January 1983, the federal government began phasing in rules requiring insurance against gradual or non-sudden

pollution liability. Under the EPA regulations, companies that owned or operated hazardous waste landfills or storage impoundments were required to buy insurance for non-sudden pollution liability with \$2 million occurrence limits and a \$6 million annual aggregate. Regulations also applied to closure/post-closure requiring that companies with hazardous waste sites show "financial responsibility" for closing the site and maintaining such sites after closure. By November, *Business Insurance* reported in "EPA Knuckles Down on RCRA Financial Rules," that state and federal environmental officials were cracking down on companies that ignored the financial responsibility rules. However, it was also reported that rather modest amounts of insurance coverage was generally unavailable for many aspects of Superfund liability, particularly on-site cleanup and known environmental contamination. Hints of the hard market were starting to appear by mid-1984 particularly in reinsurance.

Insurance Coverage Issues

With all the events above discussed and many others, insurance companies were busy evaluating, defending, paying, and denying claims for pollution. Coverage disputes were many and varied. Following are some principle issues.

Damages and Reasonable Expectations. Some claims were denied because they were not "damages" and thus did not fall within the terms of CGL coverage as defined in the insuring agreement. Insurers and their attorneys argued that since environmental losses often are the direct result of government orders to clean-up polluted sites, such payments are "equitable relief" (designed to restore the status quo or prevent future injury) and not legal monetary damages. As such, they are not payable by the CGL. As mentioned above, there were disputes about owned property. All liability policies that cover property damage exclude owned, borrowed, loaned to property or property in the policyholders care, custody, or control. Insurers argued there is no property damage unless the pollution extended off the premises of the insured. As discussed earlier, underground water mingles first and third party damages and interests in cleanup.

Insurers also argued the principle that they were entitled to be able to gauge the amount of risk they were assuming when issuing contracts. They said they were paying amounts not contemplated in

rate level or contract drafting. The emerging and contrary position in the courts was "reasonable expectations," that is, insureds expected much more certainty about coverage when they purchased the insurance and thus were entitled to recovery (Becker, 1992). Another emerging interpretation that undermined the insurer's position is the "discovery rule," so called by Katzman and others (Katzman, 1986). The discovery rule has the effect of vitiating the statute of limitations by saying that the statute of limitations clock starts to run when the injury or damage is discovered, not when the acts that caused the injury and damage took place. Thus a polluting act many years ago is not barred from legal recovery just because of the passage of time.

Occurrence Coverage. Many coverage disputes have revolved about the word "occurrence." The 1955 and earlier CGL policies responded to claims "caused by an accident." Although not defined in the policy, accidents are accepted to mean sudden and unexpected happenings. *Webster Revised Unabridged, 1996*, says an accident is:

Literally, a befalling; an event that takes place without one's foresight or expectation; an undersigned, sudden, and unexpected event; chance; contingency; often, an undersigned and unforeseen occurrence of an afflictive or unfortunate character; a casualty; a mishap; as, to die by an accident.

Therefore, although the accident contracts were entirely silent as regards pollution, many pollution incidents were not covered by insurance because they were not accidents, were not sudden and unexpected or were intentional. Larger and more sophisticated insureds, however, did purchase "occurrence" coverage by way of endorsement (Culp, 1956). The occurrence endorsement emphasized foreseeability and intent while yielding on the time dimension. These factors became the focus for determining coverage in liability claims, including those involving pollution.

In 1966 a new CGL was introduced. It covered occurrences in much the same way the earlier endorsed forms did. The definition in the 1966 form is: "'occurrence' means an accident, including injurious exposure to conditions, which results, during the policy period, in bodily injury or property damage neither expected nor intended from the standpoint of the insured." In the 1973 form

occurrence is defined as: " 'occurrence' means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured." Aside from the departure of the word "injurious," the "during the policy period" requirement was moved to the respective definitions of bodily injury and property damage. The change was an important one firmly establishing that it is the injury that must be in the policy period, not the occurrence. This difference was not important for accident-based policies because normally the accident and injury were concurrent. It was a potential ambiguity in the 1966 occurrence form.

The words "expected and intended" appear in both definitions. In the 1985 CGL, expected and intended was moved to a specific exclusion: "*Bodily injury*" and "*property damage*" expected or intended from the standpoint of the insured. Also note that the word "accident" appears in both the 1966 and 1973 definitions as it still does in the contemporary policies. An interesting case reported by Anderson is on point, the Bagley case in New York (Anderson, 1984). In that 1978 case, it was found that unintended consequences of intentional acts are not the focus of the word intended. The insured was sued for damages arising out of spraying his oat field with chemicals that migrated onto his neighbor's land. The court found that he did not intend the migration to occur despite the fact he intended to spray the oats. Another New York case (Klock Oil) established the similar point in 1980. Klock was sued for injury arising out of negligent maintenance of a tank that leaked and permitted gasoline to percolate through the soil and onto a neighboring property. The court ruled that since there was no intent to cause harm, it was not intentional property damage. The reader should not be too surprised at these rulings. The automobile driver who has a collision while driving 30 miles per hour over the limit intends only to drive fast, not to have a collision. The word "expected" presents difficulties as well. Consider the leaking underground storage tank. It seems reasonable to assert, as the insurers did, that one should expect leakage when tanks are not properly maintained. Becker reports that the courts required more, generally in the form of warnings. The facts must be so strong as to forewarn a reasonable person that there is a high probability not just a likelihood of the tank leaking (Becker, 1982).

Another case involved a New Jersey company responsible for pollution in the Hackensack River. It sought insurance coverage for

clean-up costs. The insured maintained tanks for the storage of asphalt oil. Vandals opened the valves on two of the company's tanks. The court found that, in the absence of a specific definition in the policy, the words "expected and intended" were to be interpreted in accordance with their commonly understood meaning. It also ruled the definition of "occurrence" contained in the policy suggests that whether the occurrence is accidental must be viewed from the standpoint of the insured, and since the oil spill was neither expected nor intended by the insured, there was coverage.

Finally, consider the Indiana case where a chronic polluter with a record of complaints emitted a cloud of pollutants from its aluminum recycling plant that caused an automobile accident. Their pollution control system regularly malfunctioned, resulting in the discharge of various gases that limited the visibility of drivers on nearby roads. The court held that although the obstructed visibility that caused the crash and death was to be expected, the insured did not intend there be accidents so there was coverage (Anderson, 1984).

The Limited Pollution Exclusion. As mentioned earlier, the insurance industry started issuing amendatory pollution endorsements in 1969. Lloyd's was first but was followed by INA and others. In 1970, the Insurance Rating Board (one predecessor of the ISO) issued two amendatory endorsements. (Fidelity, Casualty, and Surety Bulletins, 1996). One endorsement was for use specifically in the oil and gas industry; it excluded oil and gas operations outright. The second was for use with virtually all other businesses. It did two things: 1) it limited coverage to sudden and accidental events, and 2) it defined pollutants as "smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials, or other irritants, contaminants, or pollutants."

The Insurance Rating Board endorsements of 1970 became boilerplate in the 1973 CGL. The exclusion reads:

This insurance does not apply:

To bodily injury or property damage arising out 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 water course or body of water, but this exclusion does

not apply if such discharge, dispersal, release or escape is sudden and accidental.

This language is generally called the limited pollution exclusion because of the coverage afforded in the exception to the exclusion.

Sudden is defined by *Webster's* as: "happening without previous notice or with very brief notice; coming unexpectedly, or without the common preparation; immediate; instant; speedy." A definite interpretation of drafting intention has been elusive. Clearly, there are problems considering this definition because two separate features arise. First, sudden is unexpected and surprising; second, sudden is abrupt, speedy, instant. Which feature to emphasize is the issue that apparently led the way to the conclusion the word can be interpreted two ways.

One view is that the language was to encourage good behavior by the insured, consistent with the New York law discussed earlier. Some courts agreed but a Michigan court opined:

The argument presupposes that the exclusion was the product of altruistic motives on the part of the insurance industry: namely, to promote socially desirable goals and not simply to eliminate enormous exposure. (Hagglund, 2001).

A Love Canal case was an example. The Love Canal event happened during the time period that the law prohibited gradual pollution insurance in New York. The law was repealed in 1982. In *Niagara County v. Utica Mutual*, a 1980 New York case, the insurer granted coverage to Niagara County. The county had been sued for permitting the dumping of toxic chemicals within the county. The court ruled that the pollution exclusion mandated by New York law was intended to deny coverage only to *active* polluters. Since the exclusion was consistent with the law and came into use at approximately the same time, the court disallowed application of the exclusion by considering the drafting history of the New York law. New Jersey, Rhode Island, and West Virginia have come to similar conclusions by considering drafting history (*Business Insurance*, various dates).

Throughout, the insurance industry maintained there must be an abruptness to the discharge, dispersal, release, or escape. Thus, spills and leaks that result in the normal course of business from gradual leaching are not sudden and thus not covered. An example

of a potential problem here is the sudden discovery of gradual pollution. In contrast, policyholders emphasize the unexpected, not necessarily the time dimension. The insurer's position is supported by the plain language of the policy. The words "sudden and accidental" modify the verbs "discharge," "dispersal release," or "escape" not the nouns "bodily injury and property damage." Many courts, nevertheless, supported policyholders when the incident was not a sudden one but its discovery was. In a New Jersey case, the judge ruled that the initial discharge of a prolonged leak was a sudden event even as it continued over time (*Business Insurance*, various dates).

One might conclude that requiring the "discharge, dispersal, release, or escape" be sudden and accidental put pollution coverage back on a 1955 or an accident basis. Daenzer quotes the minutes of an Insurance Rating Bureau meeting in 1970:

A policy exclusion of pollution that would run to bodily injury and property damage should be adopted for all general liability insurance, the exclusion to except pollution caused by injuries when the pollution results from the classical accident. It was agreed that coverage should be made available on an individual buyback basis.

Policyholders had a different perspective. Some attacked the exclusion based upon its drafting history. It was alleged that the insurers made statements as early as 1969 (at the "point of sale") that contradicted the interpretation they were placing on the policy at "point of claim." Specifically, they claimed (some say with benefit of selective context) that various insurance industry representatives had said the pollution exclusion was merely a restatement of the words of the 1966 and 1973 occurrence definitions: "neither expected nor intended from the standpoint of the insured." After a considerable delay, the insurance industry rebutted these allegations but much damage was already done (Daenzer, 1993). Many would reject such conclusions based on exogenous evidence as irrelevant and argue, "The policy says what the policy says." The dispute about exogenous evidence versus strict interpretation of policy language continues to this day, not only as regards pollution coverage disputes. The reader will recall the Love Canal case discussed above.

The Jackson Township matter reported earlier was eventually litigated. The litigation was widely reported and drew much attention. The New Jersey municipality had been found responsible for

an award of \$15.6 million. When the claim was denied, it sued its five former liability insurers over coverage. Conceding that the municipality had negligently selected, designed, and maintained a disposal site that ultimately damaged the water supply, the court concluded that the sudden and accidental language applied only to intentional results. The court also ruled sudden need not be instantaneous. Superior Court Judge James M. Havey ruled that the pollution exclusion was "ambiguous." One ambiguity the judge noted was that the clause could be interpreted to apply only to deliberate polluters, meaning that it would not apply to the township, which was not accused of actual waste dumping. Another ambiguity was the definition of "sudden and accidental." He ruled that only the suddenness of the initial release mattered, not the subsequent gradual migration of the pollutants. Likewise, Allstate was required to cover a CGL policyholder's liability for property damage after an oil tank sprang a leak and gasoline seeped into the ground over an extended period of time. The court ruled that the word sudden did not require "an instantaneous happening"; furthermore, that the loss was "accidental" if the insured didn't intend to cause harm (Anderson, 1984).

With benefit of hindsight, one wonders why put the exclusion in at all. Accident(al) appears in both the definition of occurrence and in the exclusion, so whatever it means, it is redundant. The exclusion includes the word sudden, but the insurance industry and Webster's both see a time dimension in "accident." So perhaps sudden is redundant as well. A Michigan court, in a Dow Chemical case, commented:

The "sudden and accidental" issue and the "expected or intended" issue are the opposite sides of the same coin. The word "accident" has been defined as a result which. . .takes place without the insured's foresight or expectation and without design or intentional causation on his part. . .part of proving that a release was accidental is proving that the release was unexpected and unintended. The court ruled that the policyholder should treat occurrence as synonymous with accidental (Hagglund, 2001).

Thus all that remains is the word "sudden," which is undefined. Possibly the correct approach for the industry would have been to devise a definition for "sudden," but they didn't, and the language will continue to be a problem. More recently, in 1994, a South Caro-

lina court found the words "sudden and accidental" was simply a restatement of "neither expected nor intended" and thus the pollution exclusion is ambiguous (Fidelity, Casualty, and Surety Bulletins, 1996). This will continue indefinitely because the coverage is triggered by an occurrence and written without an effective aggregate.

There have been disputes about what pollution is. Some courts have held that pollution is something to do with industrial processes. The 1973 exclusion lists: smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials, or other irritants, contaminants or pollutants. Most of the things listed are fairly specific but not the word "pollutants." Consider the case where the pollutant was ordinary, clean sand. In Alabama, landowners sued a real estate firm that caused sand and dirt to pass from the property being developed onto adjacent lands. The policyholder prevailed and there was coverage by arguing that the pollution exclusion was meant to preclude coverage only for industrial polluters (*Business Insurance*, various dates). In a California case, the policyholder discharged gasoline into the city's sewer system, causing an explosion and fire that damaged the sewer system. Since the city did not claim their facilities were polluted or contaminated, it was ruled this clear act of pollution was not excluded from coverage. In a Louisiana case, the pollution exclusion was held inapplicable in a suit concerning a workplace injury. The employee contracted silicosis from the discharge of a pollutant. Because the employer failed to provide its employees with adequate protective apparel, the court ruled that failure to be the proximate cause rather than the employer's discharge of pollutants (Anderson, 1984).

Remember that the vast majority of cases involve occurrence coverage. Thus, the fact that the "sudden and accidental" language stopped being used a decade and a half ago does not mean it is no longer litigated. And little consistency has emerged. In a 1994, the Florida Supreme court asserted that there must be a temporal dimension in the words sudden and accidental. Said the judge: "Try as I might I cannot wrench the words sudden and accidental to mean gradual and accidental." However, the same year a South Carolina court found the words to simply be a restatement of "neither expected nor intended" and thus the pollution exclusion to be ambiguous (Fidelity, Casualty, and Surety Bulletins, 1996). These were the same debates as in earlier years.

None too soon, it became clear that a change was necessary. Early drafts included proposed new language designed to repair the exception to the exclusion. Possibilities considered included: 1) using language that excluded *intentional and gradual pollution*; 2) adding the word "emission" in addition to a discharge, dispersal, release or escape; and 3) adding the requirement that a sudden and accidental occurrence must "happen at a definite time and place" and must "result in immediate bodily injury or property damage." However, there was strong opposition from reinsurers, the London market, and some domestic primary companies against any grant of coverage whatsoever (Robertson, 1986). The ultimate result was the 1985 "absolute pollution exclusion" which almost entirely excludes premises and operations pollution liability. But it took a long time. The sudden and accidental exclusion started to break down almost immediately after introduction yet the language remained in use through 1985 and well into 1986 as the new forms were phased in state by state. As the policies were all written on an occurrence basis, claims continue to arise today and claims payments will be made for years to come. One has to wonder why the simple solution of deleting the troublesome words *sudden and accidental* was not adopted instead of waiting for the entire policy to be reformed.

A Note on Products Liability. It was and still is widely accepted by insurers, insureds, and others that products liability claims fall outside the pollution exclusion. For example, suppose a pipe or barrel leaks (non-sudden) or breaks (sudden) causing pollution and bodily injury, property damage and/or requires clean-up costs. The owner or operator of the premises must contend with the pollution exclusion, but the manufacturer of the pipe or barrel, whose negligence is the proximate cause, can expect CGL coverage when subrogation or contribution ensues. That is because the exposure is products liability.

The Insurance Rating Board endorsements became boilerplate in the 1973 CGL. The exclusion includes the words: "discharge, dispersal, release or escape. . . into or upon 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." That the exclusion does not apply to products liability is not explicit. It can be inferred, however, from the fact the manufacturer of the pipe or barrel is only indirectly involved in the discharge, dispersal,

release, or escape of the pollutants. However, it is instructive to consider the case of Anti-Hydro Waterproofing Inc., a New Jersey-based chemical manufacturer. Their product was a chemical additive for concrete. Fumes from the concrete, which included and arose from Anti-Hydro's product, were inhaled by a woman working nearby, not an employee of Anti-Hydro. She later sued Anti-Hydro alleging vapors from the chemical caused her physical injury. The insurer denied the claim on the basis of the pollution exclusion because the fumes were released over time and were thus not sudden and accidental. Thus, it became clear that the pollution exclusion could be used to deny legitimate product liability claims when such claims involved the gradual emission of toxic fumes or vapors from a finished product when the fumes or vapors were the cause of injury. "A literal reading of the pollution exclusion would eliminate a number of product liability claims and could leave manufacturers whose products have toxic vapors or fumes without coverage," said an attorney for several chemical and petrochemical companies. Moreover, if literally interpreted, the language could be applied to asbestos, a substance that causes bodily injury through the release of irritants into the atmosphere. As a result, in 1983, *Business Insurance* reported that insurers started to add clarifying endorsements to their CGL policies for some of their insureds, such as:

In consideration of the policy premium, it is hereby agreed and understood that Exclusion I (gradual pollution) shall not be interpreted by this Company as applying to any product liability claim made against any insured under this policy.

The need for the endorsement was obviated in the 1985 forms. The 1985 forms clearly lists by source (from the premises, from disposal sites, and so on) what pollution is excluded. Arising from products and completed operations is not listed. Just to be certain, ISO issued a memorandum in 1985 that made the point explicit: "The revised pollution exclusion does not apply to damages arising out of the insured's products or completed operations" (Malecki, 1994).

Triggers and the 1985 CGL. For a CGL to respond, the policy must be "triggered." The trigger fixes the loss to a policy period. This is obvious in the simple case of someone falling down the stairs. The occurrence (the fall), the injury, and generally the claim are near each

other in time. It is not so obvious in latent injuries that might trigger coverage in multiple policies if the time of injury or damage is difficult to determine. Is the trigger the date of injurious contact, the date injury first becomes manifest, the date the full scope of the injury becomes known, or the end of the injury? Such questions lead to courtroom debates such as exposure versus manifestation, triple trigger, injury in fact, and continuous trigger theories, a thorough discussion of which is beyond the scope of this paper. The interested reader is referred to McGuire (2002).

The continuous trigger essentially means that all policies between exposure and manifestation are triggered. This leads to what is called "stacking" meaning all policies are stacked upon each other and made available for claims. For example, suppose a single consumer is exposed to a condition in 1975 and the ill effects from the exposure manifest in 1984. With either an exposure or a manifestation theory, the loss is covered under one policy, the 1975 or 1984, respectively. Suppose the insured had a \$1 million CGL liability limit in each year 1975 to 1984. The exposure theory would call for the 1975 policy to pay up to \$1 million and the manifestation theory would call for the 1984 policy to pay \$1 million. Only one policy is triggered and one pays. The situation changes with continuous triggers. There, more than one policy is triggered and the maximum insurance recovery can approach \$10 million. So in this example, insurance industry potential payout has been increased from \$1 to \$10 million.

During the last two decades, trigger debates played out most conspicuously in products liability for medicines like DES and for asbestos. An asbestos case, *Keene v. INA*, proved expensive for the insurance industry by establishing a continuous trigger. Legal activity was proceeding on a parallel basis in the environmental area. Jackson Township was an example of the same problems that can arise from occurrence-based insurance. The Township argued that the initial exposure to the pollutant by each resident was a separate occurrence. Likewise, they argued that the initial seepage onto each piece of property was a separate occurrence. And finally, they argued that the injury was continuous and thus a continuous trigger was called for. Ironically, two excess insurers whose liability would be reduced if there were many occurrences all falling within the primary layer joined the township. Ultimately, the Jackson court followed *Keene* and ruled that each policy on the risk at any time be-

tween exposure and manifestation should be triggered. Moreover, it ruled each is triggered on a cumulative basis so that a given policy can be liable for more than the claims identified to be in the policy period (*Business Insurance*, various dates).

This observer is puzzled by the industry continued use of occurrence CGL insurance. Alternatives exist. One is claims-made coverage. Another is occurrence first reported coverage. A third is coverage that excludes bodily injury or property damage known to exist before the policy period, such as is included in the proposed new CGL (Joudrey, 2002). Insurance companies have been worried about the possible ambiguity of the term occurrence for some time. And there has been discussion about new ways to deliver liability insurance. In 1982, it was reported two leading Lloyd's syndicates would no longer insure long-tail latent injury claims under umbrella policies. The syndicate underwriters presciently pointed out that the estimated \$1 billion paid for asbestosis claims was just the "tip of the iceberg" of latent injury claims. It was also reported, however, that other Lloyd's underwriters responded: "in this soft insurance market, it is absurd to throw away premiums. And besides, Lloyd's reputation is built on insuring all risks, no matter how dangerous future losses may be." Such comments preclude the financial problems caused by latent injury claims that were to confront Lloyd's ten years later.

About the same time, insureds were becoming aware of the need for high limits. It was reported that Fortune 500 companies and others, especially in the oil and energy fields, were seeking liability insurance layers of up to \$400 million. In 1981, *Business Insurance* readers began to read of a new CGL. In December, industry spokespersons observed that the occurrence language in current policy forms has prompted "substantial disagreement over its application to delayed emergence-type injuries resulting from long-term exposures to harmful conditions." Further, that the ISO would offer a "manifestation of first discovery" trigger in place of an occurrence trigger. This trigger would prevent stacking by placing all occurrences from the same general causative factor into the same policy period, generally known as "occurrence aggregation." This leads to approximately the same outcome as claims-made insurance. Observers commenting in the last week of the year noted that, with the exception of the professional liability area, claims-made insurance had not been accepted in America.

In summer of 1982, the full draft CGL was circulated for discussion. The entire document appeared in *Business Insurance* in August. The new policy wording provided coverage either at the time an injured party "first discovers" an injury or at the time a claim is made to the insurer. By October a *Business Insurance* headline read: "Buyers, Brokers Object to Proposed CGL Policy." A buyer group "demanded" that CGL policies continue to be written on an occurrence basis and not on the proposed claims-made or "first-discovery" basis. They also observed that the draft CGL forms would limit coverage for sudden and accidental pollution to cases where the resultant injury or damage is 'immediate.' "How soon is immediate? Most releases into the air or water have to travel to someone's person or property in order to generate a claim. It isn't instantaneous or immediate. Sudden and accidental coverage, therefore, is virtually eliminated," they opined. The first *Business Insurance* of 1983 headlined: "First-discovery Trigger No Longer in CGL Draft." The ISO spokesman said the emerging consensus was that the basic occurrence form, modernized and simplified would continue to be offered. At the same time, a new pure claims-made form would be developed. History has shown that this was surrender by the industry. Claims-made CGL insurance has been rare indeed in the last fifteen years according to anecdotal evidence collected by the writer. Unfortunately, CGL is subsumed into the "other insurance" category by A. M. Best and others. This writer has found further evidence elusive.

It continued to be observed that the courts had eroded the "sudden and accidental" language. Some predicted that the courts might do the same to any new language. The obvious solution was to provide no coverage for the pollution exposure rather than repairing the 1973 language. This is basically what happened in the full passage of time. Just what the post 1985 forms cover is discussed in some detail later in this paper. The new policies had a projected 1985 effective date. The insurance market was starting to turn hard by 1984 and this was reflected in emerging terms and conditions. For the first time the policy would include an aggregate limiting the insurer's total liability in a policy period. Early (soft market) drafts of the claims-made form had no retroactive date, meaning that losses occurring before the policy's inception date would be covered if the claim were first presented during the policy period. This changed and continues today. The early drafts included an extended reporting

period (tail) provision allowing indefinite extension of the reporting period for claims, as long as the loss occurred before the policy's expiration. The final included a one-time additional premium of 200 percent although there had been proposals by Hartford and others that there be no price cap. Of course the 1985 forms included the "absolute pollution exclusion."

When the new forms finally came on line, the insurance markets were hard and getting harder. ISO offered both an occurrence and a claims-made form. Virtually nothing was done to fix the definition of occurrence, but it was widely feared among buyers that most insureds would be forced to buy claims-made insurance. As the market softened it became apparent that the claims-made CGL form would be little used as it is to this day. The 1985 CGL forms represented a major change in style and length. The old CGL was one page that fit inside a "jacket" that was also used for other coverage, for example, automobile. The new policy, still in use except for modest changes, is 13 pages long and entirely self-contained. Instead of the third party reference, the new policies are written in first and second person. The absolute pollution exclusion was an important development. It paved the way for the environmental impairment insurance market that today is providing a broad range of coverage to meet the needs of the modern economy. This subject is developed later.

EIL Insurance Before the New Forms. The environmental impairment insurance market came into existence before the new CGLs started to appear in 1985. Not all insureds were fortunate enough to have CGL coverage that included the leaking pollution exclusion. In particular, the oil and gas industry including pipelines and offshore operations, were offered more restrictive CGL cover, generally with no giveback. In the early 1970s, an environmental impairment liability (EIL) market developed, largely in London. Coverage was on a claims-made basis for personal injury, property damage, and environmental impairment arising from gradual pollution incidents but not intentional ones. *Business Insurance* reported in late 1983 that the typical policy exclusions were:

1. sudden & accidental pollution,
2. workers compensation & worker-related risks,
3. clean-up on insured's property or property in its care, custody or control,

4. willful acts,
5. nuclear risks,
6. fines & penalties, and
7. genetic damage.

Various surplus and standard lines carriers wrote coverage. More sophisticated underwriting was beginning to appear including engineering and underwriting judgment. Such items as generation, treatment, storage, disposal methods; the type and volume of material involved; the topography of the land; the proximity of the insured site to water, population centers, farms; and plans for site security became elements of the underwriting process. Underwriters were naturally concerned about potential unanticipated past liability, the magnitude of potential pollution liability, the ever-changing technology used to dispose and clean-up toxic and hazardous substances, and, of course, the seeming inability to prepare contract language that would limit insurers' exposure.

A boost for the EIL market came in August 1983, when Michigan became the first state to mandate that service stations with underground gasoline storage tanks purchase pollution coverage. Other states required service stations to buy permits for such tanks, but none required they purchase insurance before being granted a permit. The bill also mandated higher coverage requirements for landfills and treatment, storage and disposal facilities. The Michigan Department of Natural Resources estimated that hazardous wastes were seeping from about 450 underground sites in the state. Stewart Smith Mid-America in Chicago commented to *Business Insurance* that it could offer gasoline stations coverage that would comply with the proposed law for as little as \$299 annually, if the stations banded together in groups of 1,000 or more. In dramatic contrast, it was reported the minimum premium Shand, Morahan could offer for a policy covering only gradual exposures was \$5,000 (with a \$10,000 deductible). This illustrates a problem identified by D'Arcy and Herricks: the inability to price pollution insurance in a credible way. They suggest that in the past, insurance companies did not or could not make the actuarial input necessary to successfully deliver the insurance product (D'Arcy, 1989). This is no longer the case, as will be discussed later in this paper.

Markets continued to tighten throughout 1984. In April it was reported in *Business Insurance* that businesses in Minnesota were having trouble obtaining environmental impairment liability insurance at renewal and that some were having their coverage canceled. The market problems reported were strict liability, retroactive liability, and joint and several liability, which originated from CERCLA or Superfund which was enacted in 1980. Insurers were increasingly unwilling to provide coverage. In Katzman's words, "the pollution liability market virtually collapsed by 1984." There had been two-dozen insurers active in the market; by mid-1984 there was but one (Katzman, 1986). It is no coincidence that this was happening just as the court in the Jackson Township matter appeared to throw out the policy language in order to maximize coverage.

With higher prices, a serious risk of adverse selection arose that would only get worse as prices continued to increase. The need for skilled underwriting and actuarial service for these risks was apparent. Meanwhile, Hartford Steam Boiler stopped writing EIL insurance nationwide in January, when the company had about \$2 million in premium volume. The company commented that the market for EIL coverage just had not developed as they had hoped. One observer noted: "This will be a profound impact on the insurance available. There is a very definite tightening of the reinsurance market nationwide-reinsurers just don't want pollution risks." And there were very good reasons. The market for environmental insurance coverage was in disarray. It was reported that there was a general lack of coverage for clean-ups of the policyholder's own property as well as non-owned disposal sites. It was also reported that there were substantial differences and overlaps between coverage provided by EIL coverage, what there remained of it, and that provided under the CGL. Businesses were quoted that they did not know if they had coverage or not or in which policy. The presence of different triggers on EIL and CGL forms was a problem particularly when pollution was covered under both, which increasingly was the case because of the uncertainty about the limited pollution exclusion. To avoid disputes over what constitutes "sudden" and "non-sudden" occurrences, several underwriters encouraged policyholders to add sudden coverage to their EIL policies for additional premium, thus duplicating CGL coverage. *Business Insurance* reported that Swett & Crawford denied a pollution claim under an EIL policy on the basis that occurrence was sudden. This is no surprise as the EIL product was

designed to meet non-sudden claims, but it highlights the confusion in the marketplace and press at the time.

The Market for Environmental Insurance Today

The New Forms and the Absolute Pollution Exclusion

The 1985-generation of forms including successors and revisions includes what is known as the absolute pollution exclusion. The new forms were a major departure from the 1973 approach. This article will include an analysis of the exclusion including changes in the last fifteen years. The absolute pollution exclusion is by no means absolute, although it was nearly so in 1985. Important exceptions (givebacks) to building owners and to off-premises contractors appeared with subsequent editions. These are discussed. Language more restrictive than the absolute pollution exclusion exists including the two versions (with and without the hostile fire exception) of the total pollution exclusion and others. There are also ISO pollution exclusionary endorsements in use. Each one of these will be briefly be discussed.

As a benchmark for analysis, the 1988 CGL (CG 00 01 11 88) pollution exclusion (exclusion f.) is presented below:

f. Pollution

- (1) "Bodily injury" or "property damage" arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of pollutants:
 - (a) At or from any premises, site or location, which is or was at any time owned or occupied by, or rented or loaned to, any insured.
 - (b) At or from any premises, site or location which is or was at any time used by or for any insured or others for the handling, storage, disposal, processing, or treatment of waste;
 - (c) Which are or were at any time transported, handled, stored, treated, disposed of, or processed as waste by or for any insured or any person or organization for whom you may be legally responsible; or
 - (d) At or from any premises, site or location on which any insured or any contractors or subcontractors working di-

rectly or indirectly on any insured's behalf are performing operations:

- (i) if the pollutants are brought on or to the premises, site or location in connection with such operations by such insured, contractor or subcontractor; or
- (ii) if the operations are to test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of pollutants.

Subparagraphs (a) and (d)(i) do not apply to "bodily injury" or "property damage" arising out of heat, smoke or fumes from a hostile fire.

As used in this exclusion, a hostile fire means one that becomes uncontrollable or breaks out from where it was intended to be.

- (2) Any loss, cost or expense arising out of any:
 - (a) Request, demand or order that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of pollutants; or
 - (b) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of pollutants.

Pollutants means any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals and waste. Waste includes materials to be recycled, reconditioned or reclaimed.

A difference between the absolute pollution exclusion and the limited pollution exclusion is that the former is specific rather than general, as was the 1973 exclusion. Recall the 1973 form excludes "pollution arising out 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 water course or body of water. . ." with little specificity as to the source of the pollution. The new forms specifically enumerate the sources of the pollution excluded, that is: (a) from the premises, (b) from any other premises or location involved in processing, treatment, storage or disposal of waste, (c) while it is being transported, stored, treated by someone

the insured is liable for, or (d) off premises from a worksite. The only giveback in 1985 is the exception for the contractor working away from its premises who does not bring the pollutant onto the worksite. For example, the contractor who collides with a storage tank or an underground pipe and causes pollution is afforded coverage as long as he did not bring pollutants to the site. The party who did bring the pollutant to the site is liable as well and has no coverage in the CGL. An important exposure in the pollution area is owners and contractors protective, that is, coverage for the owner or general contractor for vicarious or imputed liability due to the acts of contractors.

There is also an exception for smoke from a "hostile fire." This coverage was not included in the 1985 form. In 1988 there was a major fire in Richmond, CA, that resulted in 11,400 claims ranging from bodily injury from inhalation to damage to vehicles and other property. It took several days to put the fire out and the millions of gallons of water spread contaminants about the area, into storm drains, and into waterways killing fish. Claims exceeded \$100 million. The insured had no hostile fire exception in its CGL and excess policies and ended up paying half the loss in a negotiated settlement (Griffin, 1995). It is important to note that the hostile fire exception appears in the bodily injury and property damage section of the exclusion and thus does not extend to clean-up costs, so, even with the hostile fire giveback, not all the claims would be covered.

The second part of the exclusion specifically addresses the issue of clean-up costs. Recall the earlier discussion about equitable relief (designed to restore the status quo or prevent future injury) as compared to monetary damages. The insurance industry often did not succeed in arguing that only monetary damages were included in the concept of damages and payable, partly because there was no definition of damages (and there still isn't). Insurers maintained that governmental orders for clean-up costs were not damages; such costs were not anticipated when the policy was drafted. When they did not prevail, clean-up costs were included in damages. The second part of the post-1985 exclusion excludes clean-up costs.

The reason the exclusion is called the absolute pollution exclusion is the exception for sudden and accidental has been eliminated. There were no changes, other than the hostile fire exception, in the absolute pollution exclusion until 1996 when coverage was extended to include the escape of fuels, lubricants or other operating fluids

necessary for the operation of mobile equipment from the part of mobile equipment designed to hold, store or receive such fluids, as long as the escape is not intentional. It is not unreasonable to infer that such losses had occurred and were excluded. Coverage is afforded in (d)(i) of the 1998 form below.

1998 was a year of substantial change for the exclusion. CG 00 01 98 follows:

f. Pollution

- (1) "Bodily injury" or "property damage" arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of "pollutants":
 - (a) At or from any premises, site or location, which is or was at any time owned or occupied by, or rented or loaned to, any insured. However, this subparagraph does not apply to:
 - (i) "Bodily injury" if sustained within a building and caused by smoke, fumes, vapor or soot from equipment used to heat that building.
 - (ii) "Bodily injury" or "property damage" for which you may be held liable, if you are a contractor and the owner or lessee of such premises, site or location has been added to your policy as an additional insured with respect to your ongoing operations performed for that additional insured at that premises, site or location and such premises, site or location is not and never was owned or occupied by, or rented or loaned to, any insured, other than that additional insured; or
 - (iii) "Bodily injury" or "property damage" arising out of heat, smoke or fumes from a "hostile fire."
 - (b) At or from any premises, site or location which is or was at any time used by or for any insured or others for the handling, storage, disposal, processing, or treatment of waste;
 - (c) Which are or were at any time transported, handled, stored, treated, disposed of, or processed as waste by or for any insured or any person or organization for whom you may be legally responsible; or
 - (d) At or from any premises, site or location on which any insured or any contractors or subcontractors working directly or indirectly on any insured's behalf are performing operations if the "pollutants" are brought on or to the

premises, site or location in connection with such operations by such insured, contractor or subcontractor. However, this subparagraph does not apply to:

- (i) "Bodily injury" or "property damage" arising out of the escape of fuels, lubricants or other operating fluids which are needed to perform the normal electrical, hydraulic or mechanical functions necessary for the operation of "mobile equipment" or its parts, if such fuels, lubricants or other operating fluids escape from a vehicle part designed to hold, store or receive them. This exception does not apply if the "bodily injury" or "property damage" arises out of the intentional discharge, dispersal or release of the fuels, lubricants or other operating fluids, or if such fuels, lubricants or other operating fluids are brought on or to the premises, site or location with the intent that they be discharged, dispersed or released as part of the operations being performed by such insured, contractor or subcontractor;
 - (ii) "Bodily injury" or "property damage" sustained within a building and caused by the release of gases, fumes or vapors from materials brought into that building in connection with operations being performed by you or on your behalf by a contractor or subcontractor; or
 - (iii) "Bodily injury" or "property damage" arising out of heat, smoke or fumes from a "hostile fire."
- (c) At or from any premises, site or location on which any insured or any contractors or subcontractors working directly or indirectly on any insured's behalf are performing operations if the operations are to test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants."
- (2) Any loss, cost or expense arising out of any:
- (a) Request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants"; or
 - (b) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of, "pollutants."

However, this paragraph does not apply to liability for damages because of "property damage" that the insured would have in the absence of such request, demand, order or statutory or regulatory requirement, or such claim or "suit" by or on behalf of a governmental authority.

First, in (a)(i) coverage was extended to bodily injury claims arising from smoke, fumes, vapor, or soot from equipment to heat the building. Second, coverage was afforded (a)(ii) to contractor insureds that have named property owners or lessees as additional insureds under their CGL with respect to the contractor's ongoing operations. This does not provide premises pollution liability to the named property owner; what it does is protect the contractor insured. It says that just because the property owner is an additional insured does not eliminate the protection otherwise afforded to contractors who do not bring pollutants to the worksite. There is a further condition that the property must never have been owned by any other insured under the policy.

The third expansion of coverage is also concerned with contractors (d)(ii) but extends coverage to premises owners or lessees. Both bodily injury and property damage caused by the release of gases, fumes, or vapors from materials brought into the building in connection with operations being performed by a contractor are covered. Suppose a flooring contractor uses an adhesive that emits fumes that make people sick or damages property. There is coverage for the owner or lessee in the owner or lessee's CGL because of the exception. In addition to the expansions of coverage, the 1998 form has a coverage restriction. In the clean-up costs section, the words "request, demand or order" were replaced by the words "request, demand, order or statutory or regulatory requirement." One must infer that clean-up cost claims from "statutory or regulatory requirements" were not countenanced in the drafting.

It should be noted the absolute pollution exclusion leaves undisturbed bodily injury and property damage arising out of the products/completed operations exposure even if pollution is involved. The reader will recall the earlier discussion on this issue. The CGL program also provides for so-called laser endorsements designed to exclude specific accident, products, or work to be described on a schedule.

The absolute pollution exclusion has stood up well in court. One case involved a company called CBI Industries, Inc (Insurance En-

vironmental Litigation Association, 1994). CBI worked as a contractor for Marathon Petroleum Company and was engaged in the routine maintenance and cleaning of Marathon's Texas City refinery. Acid was released and formed a cloud that migrated over the Texas City area. The policyholder contended that the underlying claim did not "arise out of" the dispersal of pollutants but rather arose from the negligent spilling of fuel. The court rejected such distinctions asserting that although the theory of liability asserted might change, the occurrence that caused the injury did not. The court found that the exclusions categorically bar coverage for all losses arising out of the discharge of a pollutant, however, caused and regardless of the polluter's intent. In light of plain language, most courts that have addressed the meaning of "absolute" pollution exclusions have concluded that it precludes all coverage for any liability arising out of the release of pollutants. The Maine court came to a finding similar to the Texas case. In the Guilford Industries case, natural events (a flood) caused oil pipes to burst and pollution ensued (Haaglund, 2001). Since there is no longer any reference to "sudden and accidental," causation does not matter. Courts in other jurisdictions have come to the same finding (Insurance Environmental Litigation Association, 1994).

In the pre-1998 CGL versions, the definition of pollutants was imbedded in the exclusion itself. With the 1998 version, it was moved to the definitions section of the policy. However, the wording has not changed since 1985: "Pollutants means any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals and waste. Waste includes materials to be recycled, reconditioned or reclaimed." Courts have tended to construe "pollutants" narrowly. The tendency is to limit application of the exclusion to industrial wastes. Thus, there are cases where coverage was extended to ordinary garbage and sewage as well as to asbestos, bacteria, carbon dioxide, carbon monoxide, dry cleaning solvents, floor resurfacing coatings, lead paint, pesticides applied in the home, and smoke from a hostile fire (Wollner, 2001). Sick building syndrome, including Legionnaires' disease, is an increasing problematic and litigated coverage issue. Courts have found coverage based on the narrow construction of the word "pollutants." They have also found coverage for sick buildings because there is no "discharge, dispersal, seepage, migration, release or escape" of "pollutants." Another claim area where coverage has been

found is lead paint which has been ruled not a pollutant; thus bodily injury arising from lead paint might be covered (Cohen, 1995).

The ongoing drafting history debate pertains to the pollutant issue. Examination of the drafting history tends to suggest that the absolute pollution exclusion was designed for and targeted environmental damage from industrial pollution, as it probably was. In the mid-1980s when the form changed, industrial pollution was a national focal point, as discussed. The argument runs that, therefore, there should be coverage for any claims that do not involve environmental damage. For example, courts have found that an acid spill that harms only one person is not excluded even though the strict interpretation might suggest the contrary. The insurer will argue strict interpretation, that is, "the policy says what the policy says." Different courts have and will continue to come to diverse conclusions.

Not all insureds are afforded the coverage of the absolute pollution exclusion. CG 21 49 is the total pollution exclusion, as below:

f. Pollution

- (1) "Bodily injury" or "property damage" which would not have occurred in whole or part but for the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of "pollutants" at any time.
- (2) Any loss, cost or expense arising out of any:
 - (a) Request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of "pollutants"; or
 - (b) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of, "pollutants."

The reader should note there are no givebacks, not even for contractors. Recall that contractors enjoy CGL coverage off-premises provided they do not bring pollutants to the worksite. A common giveback found in the total pollution exclusion is to except and thus provide coverage for smoke from a hostile fire.

The Contemporary EIL Market

As the market has become accustomed to the absolute and total pollution exclusions in the CGL, markets and products for environmental exposures have evolved. The ISO developed and maintains a fairly limited range of standard form coverages. Simultaneously, the non-ISO market has developed a wide range of more specialized coverages. The two strains of coverage are discussed below.

ISO Environmental Coverages. The ISO developed and introduced three pollution liability insurance policies. CG 00 39 is a claims made policy that covers BI/PD compensatory (not punitive) damages arising from a pollution incident that causes "environmental damage." The pollution incident must emanate from a scheduled insured site or waste facility in the territory. In a second insuring agreement coverage is afforded for mandated (not voluntary) clean up costs. Exclusions are: (a) prior pollution incidents, (b) expected or intentional injury, (c) contractual liability, (d) workers compensation, (e) employer's liability, (f) damage to owned, rented, occupied, alienated properties as well as waste facilities and personal property in care, custody, and control, (g) clean-up cost except as specifically provided, (h) products and completed operations liability, (i) claims arising from an offshore facility, (j) claims arising from closed waste sites, (k) claims arising from auto, rolling stock, or watercraft exposures, (l) pollution from oil, gas, water, mineral, or geothermal wells, (m) claims contributed to by the failure to comply with environmental laws, and (n) acid rain. CG 00 40 covers only liability, not clean up costs and thus is known as the "limited form." A third ISO policy is CG 00 42, an underground storage tank policy. Coverage A affords coverage for bodily injury and property damage arising from an underground storage tank incident. For coverage, the leak must commence after the retroactive date in the declarations page. Coverage is on a claims-made basis and is triggered by an order from the EPA. Aside from standard CGL exclusions, there is good maintenance exclusion and a failure to comply with governmental environmental laws exclusion. All three ISO policies provide coverage for both sudden and gradual pollution incidents.

There are ISO endorsements that extend pollution coverage. CG 04 22 (Pollution Liability Coverage Extension) removes the first part of the absolute pollution exclusion, that is, bodily injury and prop-

erty damage liability. It has no effect upon the clean-up costs part of the exclusion. CG 04 28 (Pollution Liability-Named Peril Limited Exception) adds exceptions to the exclusion parts (a) and (d) that extends cover for short-term pollution incidents caused by named perils. For example, coverage is afforded if a fire damages the utilities in the building and causes a pollution incident. The incident must begin at a plainly identified time subsequent to the fire and end within 48 hours of beginning. CG 04 29 (Pollution Liability-Limited Exception) is an open perils version of CG 00 28. CG 04 30 (Limited Exception for Designated Pollutants) provides coverage for the discharge, release or escape of scheduled pollutants. A likely policyholder would be a dry cleaner and the schedule would include the chemicals used in the dry cleaning process. There is no coverage when scheduled pollutants are being transported, treated or processed as waste, or stored or transported for others. Finally, there are CG 22 78 (Hazardous Materials Contractors) and CG 24 15 (Limited Pollution Liability Extension). The former extends coverage to contractors working with hazardous products; the latter provides premises liability but does not include underground storage tanks.

Beyond the ISO Coverages. What follows is a brief overview of the non-ISO environmental insurance marketplace. A handful of companies are major players in the market: Kemper, Zurich, ECS/XL, and AIG. Other insurers write the coverage as well including United Coastal, Gulf, Environmental Casualty, Safeco, and Swiss Re. The market is characterized as one of the most competitive and fastest growing as new products develop. One is struck by the variety of coverages. The pollution exposure creates insurance needs for many potential insureds. In stark contrast with the insurance unavailability of the mid 1980's, the industry has approached these many exposures with a legion of coverages designed to meet needs. Some are first party coverages; others are liability coverages. It is noteworthy that many are long term with policy periods of up to 10 years or more. In such an arrangement the insurer and the insured become partnered for the long term. Not surprisingly, EIL coverage is a relatively high expense, low-loss line. Like surety bonding, the insurer expects predictable costs but incurs considerable expense in underwriting. The discussion below is based upon product descriptions from Kemper (Kemper, 2001) and AIG (AIG, 1998).

One product is contractors liability which can be written on both a claims-made and an occurrence form. It provides off premises bodily injury and property damage for pollution incidents or pollution conditions arising from operations performed by a contractor. Another is professional liability for acts, errors, or omissions of architects, engineers, construction managers, and contractors. Like most professional liability, this is written on a claims-made basis. Combination liability policies are popular in the EIL market. Kemper offers a combination CGL, professional liability, pollution liability policy for contractors called the CGL Plus. Kemper also offers an occurrence CGL with pollution coverage on a claims-made basis. These policies are marketed to environmental contractors including lead and asbestos abatement contractors.

Insurers have policies targeted for owners and others who are susceptible to economic loss caused by pollution that actually or allegedly originates from property they own or operate. A specialized case is storage tank liability insurance that will pay third parties' claims for bodily injury or property damage or other corrective action should underground storage tanks leak. These plain vanilla coverages are designed to respond to third-party claims including those from government agencies or others for economic loss (damages and clean-up costs) resulting from pollution and to comply with financial responsibility requirements.

The purchase of real property from another can be fraught with risk in the context of RCRA. Environmental insurance for real property transfers can protect the buyer of property against surprises. The coverage protects against BI/PD, contractual, and clean-up costs arising from past and future use of the property. Another innovative coverage is environmental response, compensation and liability insurance which provides environmental premises pollution liability as well as business interruption and extra expense. Yet another is the "brownfields policy." Brownfields refers to efforts sanctioned by the EPA to restore seriously polluted land to use, generally limited use. It will respond to bodily injury, property damage, clean-up costs, or contractual damages triggered by a pollution incident at specific sites with known environmental problems. A related product is remediation stop-loss cover which provides protection against cleanup cost overruns incurred during a remedial action at a project site. Remediation stop-loss is first party coverage and has features that resemble property insurance.

Waste storage facilities are an obvious environmental exposure. Often seriously polluted sites are partially cleaned and then "bottled up" for long periods of time. Long-term guarantees of financial responsibility are required during this process. The closure care coverage offers an insurance alternative to traditional mechanisms such as surety bonds, letters of credit, and trust funds. Yet another is creditor reimbursement for environmental damage coverage. This policy provides protection for secured creditors exposed to economic loss either directly as owners or operators of real estate or as lenders with collateral interests. The policy can also be used to protect lenders as owners of real estate.

The preceding paragraphs sketch a brief outline of major coverages offered in the market today. Many more exist, and many others are manuscripted. Innovative financial solutions to environmental problems are usual in today's environmental insurance marketplace.

Conclusions and Implications

At the end of 1999, the ISO reported that perhaps the ultimate cost of combined asbestos and environmental insurer claims will fall short of its previous estimate of \$200 billion (ISO, 2000). For the insurance industry to have so much in claims in less than forty years, effectively starting from zero, is no mean accomplishment. The events of the last four decades have changed the setting for environmental claims and insurance dramatically. The writer grew up in the small Illinois town and recalls the open, completely unattended town dump where he occasionally played. Periodically the village would bulldoze the piles further back into the swamp. There were no others controls. Such an arrangement is difficult to imagine today and goes toward explaining the \$200 billion in claims.

The pollution exposure presented challenges new to the insurance industry. Many traditional legal defenses were modified or eliminated by legislation and court rulings. Pollution incidents can continue for a long time without being discovered putting them in the "latent injury" category along with asbestos, DES, and other losses that struck the insurance industry in the period. Substances previously thought to be safe can be found to be hazardous at a future time, especially as new regulations and laws are adopted. Likewise, new technology can create new liabilities, for example, more sensi-

tive chemical/analytical testing methods and equipment that can discover previously unknown problems. Closed and forgotten disposal sites can be rediscovered. New phenomena can arise such as acid rain and sulfur dioxide emissions. The insurance industry and the broader society had difficulty dealing with this new set of exposures.

A good portion of the cost of cleaning up after America has fallen upon the insurance industry. This outcome is the consequence of various social, economic, political, and legal factors, some of which are related above. During the mid-1980s a court system developed where sometimes claims settlement appeared to become independent of the insurance contract, no doubt in part as a consequence of the passage of RCRA and CERCLA. In particular these laws enacted retroactive liability. Perhaps the *ex post facto* elements of these laws set off a corollary that "someone must pay" and that turned out to be the insurance industry. It is sad that so much of the money has been consumed in legal costs rather than devoted to cleaning up the environment.

Much of the blame for the insurance industry's losses must be attributed to the industry's lack of vision. To allow the flawed 1970 approach to coverage to remain in use so long was a monumental blunder that could have been corrected much sooner than it was. Apparently the missteps began earlier. In June 2000, *Business Insurance* reported that the Rhode Island Supreme Court declared the limited pollution exclusion ambiguous in part because "insurers misled regulators" during the form approval process for the then-new limited pollution exclusion. In 1992 West Virginia came to the same conclusion; likewise New Jersey in 1993 "far more caustically" did the same. Rhode Island considered letters from Travelers, INA, and the Insurance Rating Bureau that suggested insurers intended to bar pollution coverage only for policyholders who were reckless or intentionally polluted. Another recent (January 2001) case in Washington concluded that the 1973 policy covered gradual pollution as long as the policyholder neither intended nor expected damage.

The problem with the old occurrence policies is they never go away because they cover injury in the policy period. On September 3, 2001, *Business Insurance* reported a Delaware court settlement between Hercules Inc. and its insurers finding that because the policy promised to pay "all sums" each and every policy must be stacked and the limits paid. "All sums" language remained in use

into the 1980s. The 1985 forms replaced "all sums" with "those sums." The Washington case involved the "all sums" language.

To make matters worse, it is truly remarkable that 1985 was the first time there was an absolute limit on what a particular CGL would pay. The earlier forms had an aggregate that applied only to a limited list of classes of claims not including, conspicuously, bodily injury and property damage from pollution, or, as an aside, bodily injury from products. Thus, the same policy can be bombarded time and again up to the occurrence limit with no aggregate limit. Why did it take so long to put a reasonable aggregate in place? Especially as it was contemporaneously reported that many insurers acknowledged they had no idea what their ultimate involvement in the clean-ups would be and that the EPA estimated 90 percent of hazardous waste being disposed of in the early 1980s would not meet the soon to arrive new regulations. Recall RCRA was enacted in 1976 not very long after the 1973 forms arrived.

One hopes that this paper might help current practitioners and regulators be alert to the many and frequent problems confronting the insurance mechanism. Traditionally insurance regulation has been concerned with insurance company solvency. At least three old-line commercial insurance companies have ceased to exist as independent entities largely because of pollution and asbestos losses (The Home, CIGNA, and Continental), not to mention numerous Lloyd's syndicates (Anderson, 2000). The history of pollution insurance and the 1973 CGL has been a financial calamity for the industry. When the insurance industry is struggling with such a problem, regulators need to be vigilant as well. Perhaps it might have been better to step in before the losses cascaded and the financial health of the insurance industry was jeopardized.

References

- AIG, 1998. *1997-1998 Product Directory: Innovative Environmental & Casualty Coverages*. AIG Environmental, New York, NY.
- Anderson, Dan R., 1989. "Property Damage Liability Coverage for Asbestos Removal and Hazardous Waste Cleanup Costs," *CPCU Journal*, 42(1): 8-28.
- Anderson, Dan R., 2000. "Developing Liability Risks and Insurance—Regulatory Impacts and Responses Over the 20th Century," *Journal of Insurance Regulation*, 19(2): 323-345.
- Anderson, Eugene R. and Abraham C. Moskowitz, 1984. "How Much Does The CGL Pollution Exclusion Really Exclude?," *Risk Management*, 31(4): 28-36.

- Anderson, Eugene R., 1985. "The Proposed ISO Comprehensive General Liability Insurance Policy Revision," *Mealey's Litigation Reports-Insurance*, May: 1-3.
- Becker, Charles F., 1992. "Environmental Liability and the CGL Policy: Why Is there Coverage," *CPCU Journal*, December: 208-213.
- Business Insurance*, in excess of 100 articles by many authors. Detailed bibliography available upon request, contact author at: gbfiani@ilstu.edu
- Business Week*, 1985. "The Insurance Crisis: Now Everyone Is In a Risky Business," May 15: 43.
- Bromrich, G. R., 1971. "Pollution and Insurance," *Risk Management*, April: 36-42.
- Cohen, Sheryl J., 1995. "Watch Out! Absolute Pollution Exclusions Could Mean More Than You Think," *The Risk Management Letter*, 16(8): 5-7.
- Daenzer, Bernard and Edward Zampino, 1993. "Environmental Liability and the Pollution Exclusion: Why Some Courts Find Coverage," *CPCU Journal*, June: 84-98.
- D'Arcy, Stephen P. and Edwin Herricks 1989. "Pricing Insurance for Pollution Damage," *CPCU Journal*, June: 74-85.
- Dybdahl, David, 2001. "Environmental Insurance," Chapter 11, *Commercial Liability Insurance and Risk Management*, Vol. 2, 5th Ed., CPCU4, Malvern, PA: American Institutes.
- FC&S Bulletins*, 1996. "The Pollution Exclusion: A Discussion," *National Underwriter Company*, m.2-1 to m.2-6.
- Griffin, Bud, 1995. "Exceptions to the Umbrella Liability Exclusion," *The Risk Management Letter*, 16 (5): 1-4.
- Insurance Environmental Litigation Association, 1994. Amicus Brief, *National Union Fire Insurance Company of Pittsburgh, PA, et al. v. CBI Industries, Inc*, Supreme Court of Texas, D-4353.
- Insurance Services Office (ISO), 2000. *Property/Casualty Insurance Industry Financial Results*, September: 4
- Joudrey, Paul, 2002. "The New ISO General Liability Form," *Risk Management*, January: 40-47.
- Katzman, Martin T., 1986. "Environmental Impairment Insurance and Regulation of Chemical Pollution," *CPCU Journal*, September: 163-174.
- Kemper, 2001. *Kemper Environmental: The Elements Redefined*. Kemper Environmental, Princeton, New Jersey.
- Kulp, C.A., 1956. *Casualty Insurance*, New York: Ronald Press.
- Leavit, Victor B., 1985. "Toxic Perils and Product Liability: Current Developments," *CPCU Journal*, June: 83-89.
- Malecki, Donald S., 1994. *Malecki on Insurance*, November: 8.
- Malecki, Donald S., 2001. *Malecki on Insurance*, June: 1-3.
- Mcguire, Charles, Kathleen McCullough, and George Flanigan, 2002. "Exposure Triggers and Allocation Methods: More Problems Ahead," a working paper available from the Katie Insurance School, Illinois State University, Normal, IL.
- Rossi, Michael A., 2000. "Environmental Insurance for Mergers, Acquisitions, and Other Transactions," *The Risk Report*, International Risk Management Institute, December: 1-8.
- Robertson, James A., 1986. *ISO Commercial Liability Forms: A Side-by-Side Comparison*. Professional Insurance Publications, Irvine CA.
- Winkleman, Bruce H., 1988. "Insurance Coverage Issues in Environmental Pollution and Toxic Tort Litigation," *CPCU Journal*, June: 93-105.
- Wollner, Kenneth S., 2001. "Sick Building Syndrome and Liability Insurance," *The Risk Report*, International Risk Management Institute, November: 1-8.