



"Two Cats Have Died,
and I'm Not Feeling
So Good Myself"*

ORIGINS OF MINNESOTA'S STATE SUPERFUND LAW

Stephen J. Lee

In 1962, Rachel Carson's groundbreaking book *Silent Spring* exposed the devastating effects of the pesticide DDT on birds and began to raise the public's environmental consciousness. By the 1970s and 1980s, hazardous chemical waste sites were being discovered across the nation at an alarming rate. Public awareness of the threats to life and health they caused grew as the disasters at places such as Love Canal in Niagara Falls, New York;

Valley of the Drums near Louisville, Kentucky; and Times Beach, Missouri, hit the national news.¹

In Minnesota, a dramatic example took place on July 4, 1973, when 3,000 barrels of chemical wastes burned at the Pollution Controls Inc. site in Shakopee, rocketing flaming barrels into the night sky to compete with area fireworks. Contaminated former waste disposal sites were discovered in Minnesota throughout the 1970s: gooey drums removed from the Ironwood landfill near Spring Valley; creosote found in

St. Louis Park wells from the Reilly Tar and Chemical plant; solvents found in Woodbury wells; birds mired in tar pits at an abandoned Duluth refinery. These and scores of other landfills, dumps, and industrial sites were the subject of frequent news stories and public meetings attended by vocal, angry, and scared neighbors. News stories at the time featured sensational photos of dead cows and a bald child as new problem sites kept being discovered.²

Existing state and federal laws did not adequately define who should pay to investigate and clean up toxic sites;

*The article title and pull quotes are taken from a few of the 400 tips called in to the Minnesota Pollution Control Agency (MPCA) Strike Force hotline by the end of 1982, many from current or former MPCA employees.

ABOVE: Barrels of hazardous waste buried in the Waste Disposal Engineering (WDE) landfill in Andover, October 1975.



Some 3,000 barrels of chemical wastes burned at Shakopee's Pollution Controls Inc. site, July 1973.

for victims' medical treatment and illness compensation; for loss of property value; or for other consequences of hazardous waste disposal: the polluting companies, the victims, or the general public? In the early 1980s, the nation and many states, including Minnesota, enacted laws to address the growing problem, but no one foresaw the extent of the crisis or the time it would take to deal with past disposal of hazardous wastes.

The problem develops

Before the mid-twentieth century, most refuse was food waste and other organic garbage, wood, fabric, metal, or glass. The League of Minnesota Municipalities advised members in 1922 that they had "four methods of disposing of garbage: dumping in landfills or in deep waters, feeding to hogs, incineration, and reduction." Dumps were the most common method, but they attracted vermin, smelled bad, and posed fire hazards. Consequently, in the 1960s, the state's

1,500 dumps began to be replaced with "sanitary landfills"—low spots, trenches, or swamps in which garbage was collected and compacted, then covered with a layer of ash, inert debris, or soil. Layer upon layer kept being added. Early landfills were not lined or constructed to control gases or leachate; hence, when precipitation fell it percolated through the layers, leaching out decaying soluble components. The leachate often carried harmful elements, and eventually it seeped down into the groundwater. Groundwater moving away from a dump or unlined landfill carried those contaminants away and became unusable or unhealthy as a water supply.³

Where did the contaminants come from? As the twentieth century progressed, industrial and household waste began to include solvents, petrochemicals, and other synthetic materials more hazardous and toxic than previous kinds of garbage. While useful, these chemical products typically biodegrade slowly if at

all, yet they were introduced without thought of their potential hazards or of their eventual disposal.

One example of a popular chemical that later caused issues was trichloroethylene, a synthetic solvent used to degrease metal parts. Its use, along with similar chemicals containing chlorine, began to rise sharply in the 1940s. Concern grew among workers over illness caused by workplace toxicity and among the general public, as it learned about how these chemicals were used in products they consumed, such as decaffeinated coffee, which had traces or more of the solvent. In the 1970s, most uses of trichloroethylene began to be phased out, but its lingering effects, as well as effects of many other synthetic chemicals, were just beginning to play out.⁴

As cases of contaminated water supplies cropped up around the country, they discredited beliefs in long-held truisms such as "out of sight, out of mind," "underlying soil will filter out anything harmful," "burning will take care of wastes."

The need for special handling of hazardous waste had become apparent. Federal and state rules were proposed to require careful handling of hazardous wastes from their generation to their permanent destruction or isolation.

In 1977, allegations of illness and death, not yet proven, began to mount in Minnesota. Sandra Gardebring, executive director of the Minnesota Pollution Control Agency (MPCA), wrote in the formal document that initiated Minnesota's procedures to create rules for managing future hazardous waste that "The need to adopt the hazardous waste regulation arises because of the . . . human death and illness, contaminated wells and groundwater, . . . contaminated soil, polluted surface water and polluted air."⁵

A 1979 study commissioned by the state estimated that 128,000 tons of potentially hazardous wastes were generated each year in Minnesota. A disposal method was documented for only 46 percent of that waste. Categories included explosives, solvents, oil, halogenated hydrocarbons (containing chlorine), metals, acids, caustics, and miscellaneous sludges. That same year, the MPCA finalized its state rules for hazardous waste management. In 1980, the legislature formed a Waste Management Board and directed it to work toward finding sites suitable for future hazardous waste processing and disposal facilities in Minnesota.⁶

At the federal level, the Environmental Protection Agency (EPA) issued hazardous waste rules, effective in 1980. The federal rules provided for uniform national waste identification and management while allowing states to establish more specific local rules. Both the federal and the Minnesota hazardous waste rules were designed to ensure future hazardous waste was properly tracked



As executive director of the Minnesota Pollution Control Agency, Sandra Gardebring initiated procedures to manage future hazardous waste.

"...trucks are dumping hundreds of gallons of oil...seeping into the ground."

and disposed of. The new laws, however, did not establish responsibility for fixing current and future pollution caused by past disposal of those same hazardous wastes.

Legal and practical problems

Doing something about old disposal sites wasn't easy. Minnesota officials had to determine the scale of problems caused by previously dumped industrial wastes. Documentation about sites and wastes was scanty. Much past disposal had been legal, or at least not clearly illegal, and may have been considered an appropriate disposal method at the time. Many dumps contained waste from a wide variety of sources. Many of the companies or individuals that had dumped the wastes were defunct or dead.⁷

Links from a specific waste, in a particular dump, to a contaminated well, to a resultant disease were difficult to prove without extensive study. Contaminant behavior in groundwater was not well understood. Groundwater may exist in several layers underneath a site and may flow in unexpected directions. Toxicology of many contaminants and/or their breakdown products was not well known, especially at low levels, and especially over long periods or lifetime exposure.

Furthermore, remediation (cleanup) methods were not fully developed. Would it be sensible or fair to dig up contaminants from a dump just to bury them somewhere else? People could wish for permanent, in-place destruction of contamination, but the technology to do so did

not exist. Beyond determining the magnitude of cleanup and the process for remediation, perhaps the most contentious issue was who should pay to clean up current problems from past disposal: The companies that had profited from making the products that led to the waste? The victims of the waste? Society as a whole, using general taxes, since presumably all had benefited from the products that had created the waste?

The common law of torts (generally, a wrongful act that results in injury to another person, property, or the like) governs liability for damage to property and bodily injury. In the absence of a specific law, a person alleging sickness or other loss due to toxic waste exposure would need to prove that the wrongdoer acted negligently or carelessly in disposing of waste, that the waste then trav-

TYPES OF LIABILITY, DEFINED

RETROACTIVE LIABILITY means a person or company is responsible for the current or future consequences of their past actions, even if those past actions complied with the laws and practices at the time.

STRICT LIABILITY means a person or company is responsible for the costs of cleanup or damages even if they hadn't acted negligently or carelessly. Good intentions or compliance with general practices or legal requirements do not shield a party from strict liability if harm is caused later.

JOINT AND SEVERAL LIABILITY means each of the persons or companies that generated or disposed of waste are responsible for all costs of cleanup or damages, regardless of their share of the disposing. This enables a plaintiff to collect the full damages from any one disposer, thereby often targeting a

large company with deep pockets, which may later attempt to recover its cost from the other disposers.

CLEANUP LIABILITY means a person or company is responsible for the cost of cleaning up the contamination.

NATURAL RESOURCE DAMAGE LIABILITY means a person or company is responsible for the costs of restoring a natural resource or for paying the public for the diminished value of resources such as rivers and wildlife.

PERSONAL INJURY LIABILITY AND PROPERTY DAMAGE LIABILITY mean a person or company is responsible for the costs of the illnesses, death, property value loss, and other economic losses of the victims of contamination.

eled from disposal site to the person, and that this waste the person was exposed to had caused the alleged problems. Proving this chain of events would be difficult, especially in cases with defunct or successor company owners or landowners and in cases from long-ago disposal, or from multiple waste generators, or from mixtures of wastes, or with uncertain soil and groundwater conditions.

Nationally, lawmakers were discussing a different approach for this new category of cases due to hazardous waste disposal. New laws were needed to establish what liabilities a generator, transporter, or disposer of waste would face; whether that liability would be retroactive; and whether liability should be different for cleanup versus for injuries to people, property, and natural resources.

The federal Superfund

In December 1980, President Jimmy Carter—a Democrat who had been defeated the month before by Republican opponent Ronald Reagan—

signed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), better known as the federal Superfund law. Superfund passed in the last days of a lame-duck Senate and House. The Senate as well as the presidency was about to switch from Democratic to Republican control. In the House, the Democratic majority was about to shrink.

Federal Superfund implementation began in January 1981, under the administration of the new president. Superfund had two main concepts. First, “the polluter pays.” Companies that generated, transported, or disposed of wastes that later caused problems were now obligated to pay to fix the problems. Before Superfund, the victims of a site either had to pay for new wells or treatment or live with the problem. An innocent new landowner of a dump site might need to clean up the old dump if they wanted to use the property. Nor would cleanup be up to neighbors whose well was contaminated or whose children got sick, other victims of the waste, or the general public. The second Superfund

concept was “clean up now, litigate later.” If companies failed to clean up, the government could clean up the site and then litigate against the companies to recover the government's costs plus penalties.⁸

Federal Superfund imposed several types of liability on waste generators and disposers: retroactive, strict, “joint and several,” cleanup, and natural resource damage (see sidebar for definitions). Not included was liability for personal injuries. These liabilities were meant to compel companies to do the cleanup themselves, under oversight of the EPA. The federal Superfund also authorized EPA to do cleanups, using the \$1.6 billion Superfund, with states paying 10 percent of the EPA cleanup cost. Federal Superfund dollars and staffing, however, were only enough to handle the highest-risk sites across the nation.

MPCA Strike Force formed

While federal Superfund was getting established, MPCA staff in solid waste, water, and spills programs

continued to receive tips from citizens and former workers about polluted sites. At its October 1980 meeting, the MPCA board heard testimony about sites in Oakdale used by 3M, the Ironwood landfill near Spring Valley, a wood-preserved site in Fridley, and tire and barrel dumps in Andover. Several board members criticized MPCA staff for "failure to act quickly" and said the "staff and the public should feel the same sense of urgency." The MPCA board authorized staff to go to court to compel companies to act in the Fridley and Andover cases.⁹

But with no legal precedents, the question remained: Who is responsible, the present landowner or the

"Company did some borings in old solvent disposal area, will be doing some digging with a backhoe on Saturday so the State won't find out."

polluter? Special Assistant Attorney General Eldon Kaul noted that court decisions could establish liabilities: "This is uncharted legal water we are entering. . . . Bring it to the courts and sort it out." A *St. Paul Pioneer Press* editorial, "Goody Legal Problems," summed up the conundrum: "So now who's going to pick up the mammoth tabs associated with the expensive job of cleaning up these chemical

dumps? Present owners or original polluters?"¹⁰

In November 1980, MPCA executive director Terry Hoffman assigned 10 staff members from several programs to a Strike Force responsible for investigating the 20 then-known hazardous waste disposal sites and getting cleanups started. Hoffman's expectation and hope was to reduce public pressures created by the rapidly expanding site list and to quickly fix the contamination problems of the sites. The Strike Force's ability to act, however, was hampered: it lacked specific legal authority to compel cleanups; it had no money for technical investigations; and it had limited expertise in this new endeavor. Yet Strike Force efforts benefited from the legitimate fear many companies had of costly and lengthy litigation and of being vilified and subjected to a public thrashing if they were identified as failing to act on former disposal sites. Companies also had concerns that a referral to federal Superfund authorities might result if they failed to act.¹¹

Strike Force tools included tips from the public and inside information from former workers; eyeballing reported sites; poking sticks into the ground, sludges, or wetlands; examining scanty records; using witching (dowsing) rods to locate buried wastes; and historical aerial photographs. Staff from the MPCA solid waste, spill, and water programs provided information and technical assistance. County and local solid



Excavation of drums at Ironwood landfill near Spring Valley, 1970s.

SITES ON MINNESOTA POLLUTION CONTROL AGENCY HAZARDOUS WASTE LOG, MARCH 1981

Andover, Waste Disposal Engineering (WDE)

Anoka County, various sites in Andover

Bemidji, Cedar Services

Brainerd/Baxter, Burlington Northern Railroad

Brooklyn Center, Joslyn Manufacturing

Cass Lake, St. Regis Wheeler

Cottage Grove, Ashland Oil

Detroit Lakes, US Fish and Wildlife Service

Duluth, Arrowhead Refining

Fridley, FMC Northern Ordnance

Fridley, Medtronic

Fridley, Onan Corporation

Hibbing, Irathane Systems

Isanti County, various sites

Kanabec County, Consolidated Container Corp.

Kerrick, 3M disposal site

Minneapolis, Airco lime pit

Minneapolis, Hopkins Agricultural Chemical

Minneapolis, Metals Reduction

Minneapolis, Union Scrap

Morris, Morris arsenic site

New Brighton, MacGillis and Gibbs/Bell Lumber and Pole

New Brighton, Old Northwest Refinery

Oakdale, Oakdale dump*

Perham, Perham arsenic site

Pine County, Ashland Oil Company

Sebeka, Ritari Post and Pole

Shakopee, Pollutions Controls Inc. (PCI)

Spring Valley, Ironwood landfill

St. Louis Park, National Lead/Teracorp

St. Louis Park, Reilly Tar and Chemical

St. Paul, Industrial Steel Container Corp.

St. Paul, Koppers Coke

Wadena, Wadena arsenic site

Waseca, Clarence Sampson (landowner)

Winona, Weisman and Sons

*One of the disposal sites used by 3M for disposal of PFC chemicals.

waste officers had knowledge of the sites and parties involved. The attorney general's staff provided legal and strategy advice and negotiation. The Minnesota Department of Health's lab rapidly developed testing methods for contaminants in soil, mud, surface water, and groundwater.¹²

By March 1981, the number of sites the Strike Force had identified had grown from 20 to 36 (above). The sites were varied: landfills, wood-treatment plants, refineries, manufacturing, waste recycling or processing, scrapyards, arsenic grasshopper-bait sites, and other dumps, pits, and ponds. The federal Superfund program could take on only a handful of Minnesota sites. Several large Minnesota companies responded positively to state or federal investigations. 3M agreed to investigate dumps in Oakdale that contained waste from 3M and other companies. Boise Cascade paid for an investigation of a former creosote wood-treatment plant in Fridley.¹³

Between January and March of 1981, the *St. Paul Dispatch and Pioneer*

Press published at least 28 stories about Minnesota hazardous waste sites. Drums dripping chemical sludge were common openings on the evening news. The Strike Force maintained a three-ring binder of hotline calls, logging 400 calls and letters by the end of 1982. Most callers wanted their identities shielded (identification is confidential under state law). Many were employees, or recently laid-off employees of the companies that they were reporting about.¹⁴

The path to the Minnesota Superfund law

Minnesota's legislature was active on environmental issues in the 1970s and early 1980s. The 1971 legislature passed the Minnesota Environmental Rights Act (MERA), followed in 1973 by the Minnesota Environmental Policy Act (MEPA). These laws allowed any person to sue to protect the environment, "thereby establishing the principle that the natural world should be valued equally with the economy," and set up a system for

reviewing projects' environmental impacts before construction began. In 1980, the legislature passed the Waste Management Act, which encouraged recycling, discouraged landfilling, and formed the Waste Management Board to identify suitable locations for future hazardous waste treatment and disposal facilities.¹⁵

In addition, the act created the Legislative Commission on Waste Management. Michael Robertson, staff director of the commission, recalls being asked in the fall of 1980 by Democratic-Farmer-Labor (DFL) state senator Gene Merriam to draft a state version of the federal Superfund in time for the 1981 legislative session. Echoing the principles of the federal Superfund, Merriam noted, "Clean up first, litigate later, became my mantra on what needed to be done."¹⁶

In 1981 and 1982, the Minnesota house and senate were under DFL control. Governor Al Quie was a member of the Independent Republican (IR) party. Senator Merriam and DFL representative Dee Long were chief authors of Superfund bills in



State senator Gene Merriam.

their respective chambers. The bills included retroactive, strict, and joint and several liability for cleanup. The same liabilities applied to personal injury and property damage. The bills also authorized the MPCA to clean up sites if companies failed to do so and provided funding for state cleanups and for the required share of federal cleanups. Merriam's bill got a hostile reception in the senate Agriculture and Natural Resources Committee, and he withdrew the bill until the next legislative session. No house action was taken in 1981.¹⁷

Merriam and Long tried again during the 1982 legislative session. Before the session began, members of several house and senate committees had held hearings, conducted site visits, and heard many opinions. Industry representatives objected to liability provisions, to new authorities for the MPCA, and to effects on insurance. Environmental groups and neighbors of contaminated sites urged passage of the Superfund law. The senate Agriculture and Natural Resources Committee declined 26 business-friendly changes to remove or weaken liability provisions and MPCA cleanup authority. The senate Judiciary, Tax, and



State representative Dee Long.

Finance Committees debated personal injury, causation, and apportionment of liability between multiple responsible parties; taxes and fees; and an appropriation to fund the program. Each chamber passed a version of the bill. After conference committee negotiations, the Superfund bill passed 79–45 in the house and 43–15 in the senate. The final bill contained retroactive, strict, and joint and several liability provisions for both environmental cleanup and personal injury. It then went to Governor Quie for his signature.¹⁸

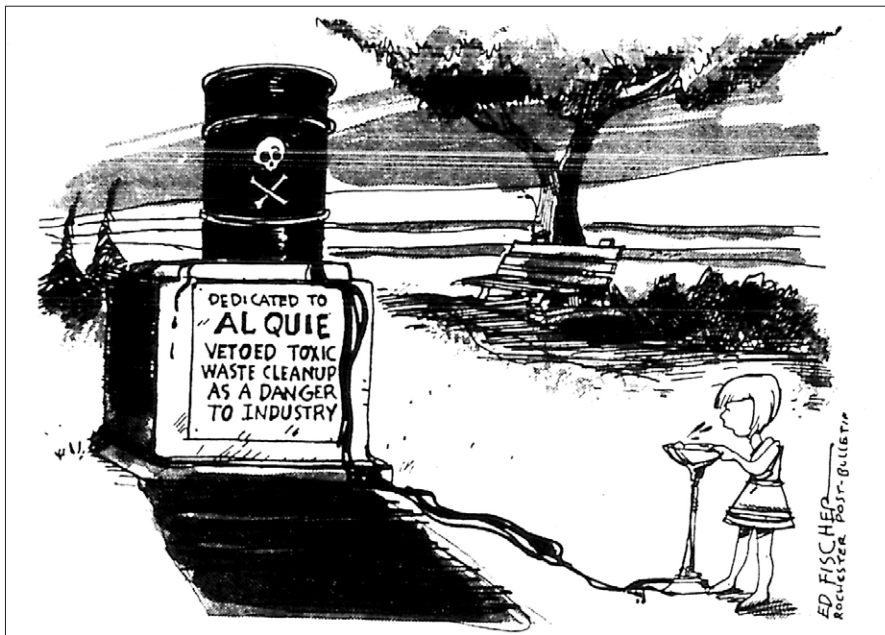
"...10-15 transformers buried in a fenced area...And one of the guys doing the burying at the time died of cancer..."

Amid rumors of a possible gubernatorial veto, MPCA executive director Louis Breimhurst urged the governor to sign, saying, "The loss resulting from injury by hazardous substances should be borne by those who created the risk rather than by the innocent victim." 3M's lobbyist, attorney Bob Johnson, presented

reasons for a veto in a memo. He objected to holding a waste generator liable "even if he was not negligent in any manner." Johnson claimed that insurance to cover the new liabilities would be "virtually nonexistent" and declared the bill antibusiness. He wrote, "The bill points a finger at Minnesota business as the 'bad guy' and refuses to note that hazardous waste is generated as a natural and necessary byproduct of business production of goods and services utilized for and on behalf of Minnesota citizens."¹⁹

Business concerns apparently swayed the governor. Quie vetoed the bill, citing the unfairness of applying strict liability retroactively, the unavailability of hazardous substance cleanup and personal injury insurance, and the lack of support from the business community. Representative Long urged an override of the governor's veto: "Today, Governor Al Quie, on behalf of 3M—MACI [Minnesota Association of Commerce and Industry] has ensured that the people of Minnesota must continue to live under the threat of mishandled hazardous substances." Senator Merriam opined, "Apparently the only way we'll get 3M to act responsibly is when we get a body count."

Merriam recalled receiving "a lot of push-back on that comment." 3M spokesman Lowell Ludford said Quie's veto "showed courage and responsibility in the face of last-minute pressure from all sides." The house veto override failed 82–45, just three votes short of the required two-thirds needed.²⁰



Republican Gov. Al Quie vetoed a Minnesota Superfund bill in 1982 (Rochester Post-Bulletin, March 25, 1982).

Merriam and Long then met privately with Quie aides and industry lobbyists. They drafted a compromise bill for the next day's special session. In the compromise bill, liability for polluters would apply retroactively to cleanup costs, but not to personal injury claims. But house DFLers thought the bill was too weakened and declined to take up the compromise bill, killing hopes for a 1982 Minnesota Superfund law. A *St. Paul Pioneer Press* editorial supported the proposed compromise, saying, "A reasonable approach is better than nothing. But nothing is what the state will have for the next year, thanks to the House DFL's intransigence."²¹

In the November 1982 election, the DFL picked up seven house seats, retaining its majority. In the senate, the DFL held on to a comfortable majority. IR governor Quie had not sought reelection. His successor was DFLer Rudy Perpich, who began his second (nonconsecutive) term as governor in January 1983. As the 1983 legislative session began, house and senate Superfund bills were introduced again, and committees

again debated insurance issues, retroactive liability for personal injury and economic losses, effects on real estate, causation, and tax and fee provisions.²²

The *Minneapolis Star Tribune* published two opinion pieces on April 15, 1983, that summarized the opposing positions of business and environmentalists. Attorney Charles Dayton, lobbyist for the Sierra Club and the Minnesota Trial Lawyers Association, penned an opinion titled "Current system places burden of waste on the victims." The headline for the view from Minneapolis attorney G. Robert Johnson, who represented businesses handling hazardous wastes, was "Radical change in law would hurt Minnesota business."²³

The bill passed the house 97-28. After several revisions were rejected on the floor, the bill passed the senate 65-1. Raised-voice, closed-door private discussions of possible conference committee language took place in the capitol basement. The closed discussion included business lobbyists, but their concerns did not prevail. A state fund of \$5

million was included for cleaning up "orphan" sites that did not have viable companies responsible for the contamination. The house-senate conference committee directed a study to evaluate creating a hazardous waste victims' fund to substitute for personal injury lawsuits. The house passed the negotiated conference committee bill 112-18. A senate floor motion to reject conference committee work failed on a tie vote of 33-33. The senate then passed the bill 57-11. L. W. Lehr, 3M chairman and CEO, subsequently wrote to Governor Perpich, "The bill is a giant step backwards in your efforts to forge a new alliance among government, labor and business interests." He said 3M "might not build or expand plants in Minnesota if Governor Perpich signs the Superfund bill."²⁴

Perpich signed the state Superfund bill on May 10, 1983. Formally known as the Minnesota Environmental Response and Liability Act (MERLA), the new law was added to the 1983 Minnesota Statutes as Chapter 115B. "At Last, a Minnesota Superfund" headlined a *Minneapolis Star Tribune* editorial: "The law is a good one. It will give the state the cash and clout to clean up most of the 61 hazardous waste dumps that dot the Minnesota map. . . . The state finally has the tools it needs to protect Minnesota's water, land and citizens from toxic wastes."²⁵

Early implementation of Minnesota Superfund

Within a month, the MPCA had expanded the program from the original 10 staffers to 28. A temporary list of priorities included 61 sites. The MPCA board approved a \$6 million plan from FMC Corporation to clean up chemical wastes at its Fridley naval gun plant, including excavating 58,000 cubic yards of soil and

entombing it in a huge lined containment vault. FMC would pay costs for both the cleanup and the state oversight. This site was once listed first on the EPA's national list because of leakage into Minneapolis's water supply.²⁶

In July 1983, the MPCA board approved other large cleanups. One was 3M's \$6 million plan to remove chemical wastes from Oakdale dumps, to prevent wastes from seeping into deep aquifers, and to monitor the area for 20 to 30 years. 3M would pay cleanup and related state oversight costs. The board told 10 companies to clean up 38,000 gallons of wastes they had sent to the subsequently defunct Ecolotech waste treatment sites in Minneapolis and St. Paul.²⁷

In 1985, the MPCA reported on the first 18 months of Superfund activity. The program, now titled the Site Response Section, confirmed 87 contaminated sites. The MPCA board had issued cleanup demands to 130 companies potentially responsible for 29 sites. Settlements had been reached for 16 sites, with companies spending approximately \$24.2 million for removal of 94,500 cubic yards of waste and 6,700 drums of waste. The MPCA, using the state fund, had spent \$1.9 million to regain safe water for eight communities and to clean up many arsenic bait sites. The federal EPA had taken the lead on several sites, including the very expensive and complicated Reilly Tar site in St. Louis Park.²⁸

Business concerns remain unsatisfied

The state Superfund's retroactive personal injury liability section had been the most controversial provision when it was enacted in 1983. Business interests had strongly opposed these provisions. The 1984 election saw the Independent Republicans gain con-

trol of the house of representatives. The senate was not up for election, so the DFL retained control in that body. DFLer Rudy Perpich remained as governor.

As the legislature convened in January 1985, the *Minneapolis Star Tribune* noted: "Business out to make superfund law milder." Environmentalists said they would fight any "radical changes in the law." DFL senator Merriam conceded that IR control of the house, pressure from business, and "increasing eagerness among DFLers to appease business interests" made changes to Superfund likely. Perpich and senate DFL majority leader Roger Moe both supported business-proposed relaxations of Superfund liability.²⁹

The proposed amendments would ease the personal injury provision from "strict, joint and several" to simply "strict." Retroactivity of personal injury liability would be erased. The cleanup liabilities and responsibilities would remain unaltered as retroactive, strict, and joint and several liability. To retain some control, Merriam authored these personal injury amendments with IR house representative Steve Sviggum. Said house

DFL-minority representative Dee Long, "This is not a compromise bill, it is a complete sellout to every one of industry's demands."³⁰

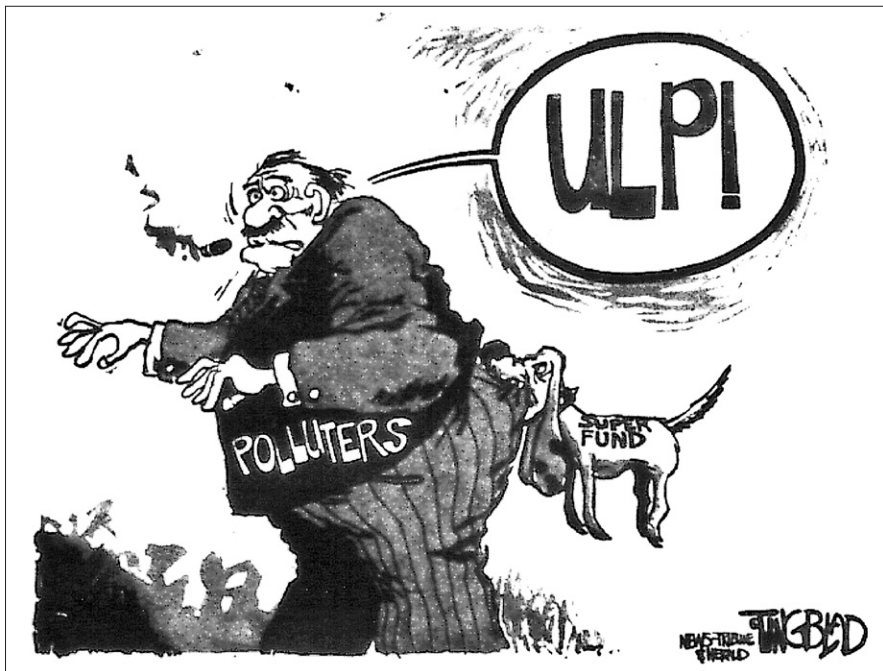
The legislature again debated setting up a victims' compensation fund in lieu of litigation to assist injured people. Business lobbyists rejected the idea of a generous compensation fund partly financed by business. Kris Sigford of the Sierra Club said, "Business has claimed that the Superfund law would invite litigation and a mad rush to the court room, make it impossible to obtain proper insurance, force Minnesota businesses to move and expand out of Minnesota, and prevent new businesses from locating here." Sigford called those complaints "business fiction."³¹

Both chambers passed bills relaxing liabilities, but the bills died in the conference committee. A *Star Tribune* editorial described the stalemate as a "strangely delightful one: the death of the bill to gut the Minnesota superfund."³²

But business concerns did not die at the end of the 1985 regular session. The legislature went into a three-day special session in June 1985 to deal with a budget impasse,



A vote by the DFL house to override Quie's 1982 veto failed (St. Paul Dispatch, April 5, 1982).



DFL governor Rudy Perpich signed the state Superfund bill in May 1983 (Duluth News-Tribune, May 13, 1983).

a convention center, and the Superfund. A special session bill relaxed Superfund personal injury liability as business interests had earlier proposed. In addition, a \$2 million victims' compensation fund would be established in lieu of lawsuits against responsible parties. DFL representative Phyllis Kahn accused IR members of placing "business over people and profits over health." After two hours of bitter debate the house passed the Superfund amendments bill 82-49. Senate passage soon followed, and Governor Perpich signed the 1985 Superfund amendments into law. The cleanup liability provisions were not affected.³³

Superfund amendments expand cleanup laws

In the 37 years since Minnesota Superfund was enacted it has been amended a number of times to expand cleanup laws. As we have seen, the original 1983 Minnesota Superfund law addressed two main topics: site cleanup and claims of

personal injury or property damage. Businesses had primarily resisted the personal injury provisions. The 1985 amendments largely removed the liabilities for personal injury, leaving state Superfund as an environmental cleanup law.

"Three Mile Island nuclear waste is coming here in trucks."

In the decades before Superfund, hundreds of waste generators—including small businesses, schools, and cities—had dumped chemical wastes into many municipal landfills. Since almost everyone in the state had contributed small amounts of waste to those landfills, the legislature deemed it appropriate for the state to take over responsibility for landfill cleanups. In 1984, the "closed landfill" amendments to Superfund allowed owners of 112 landfills to turn the responsibility and often the site ownership over to the state for cleanup. The state attorney general negotiated more than \$100 million in payments from

insurance companies to recover some of the costs. As of 2019, remediation of 109 landfills had been completed. That summer, thousands of barrels were finally excavated from the closed Waste Disposal Engineering (WDE) landfill in Andover.³⁴

In 1987, a companion law was passed to address Superfund's lack of coverage for petroleum leaks and spills. The "Petrofund" law handles leaks from service stations and other petroleum storage tanks. Owners of leaking tanks can get most of their cleanup costs reimbursed if they report and clean up their leaks. As of 2019, owners have been reimbursed \$450 million for cleaning up more than 19,000 storage tank leaks. In addition, the Department of Agriculture administers a similar reimbursement program for pesticide and fertilizer spills and leaks.³⁵

Prospective property buyers' fears of contamination and liabilities left the state with thousands of blighted properties that nobody would develop. These languishing hazardous waste sites are referred

to as *brownfields*. The regular Superfund process would not get to these properties for many years. Starting in the late 1980s, amendments to state Superfund provided incentives and legal protections to persons who were not legally responsible for the contamination if they volunteered to clean up and develop such properties. Since then, redevelopment projects have cleaned up some 5,600 chemical sites and 4,100 petroleum sites, returning approximately 91,000 acres to productive use.³⁶

Brownfield redevelopment examples include the Energy Park area of St. Paul arising from the Koppers

WDE LANDFILL HAZARDOUS WASTE PIT REMOVAL PROJECT

The 122-acre Waste Disposal Engineering (WDE) landfill in Andover operated from 1962 to 1983. About 6,600 barrels of hazardous waste were buried in a clay- and asphalt-lined pit in one portion of the landfill between November 1972 and January 1974. Waste leaked from this area and contaminated the groundwater beneath. Among closed landfills in Minnesota, WDE posed the greatest risks to human health and the environment.

In the summer of 2019, contractors for the Minnesota Pollution Control Agency removed chemical waste drums and contaminated soil from the hazardous waste pit in the closed WDE landfill.



LEFT COLUMN: 1970s disposal of chemical waste into the hazardous waste pit. RIGHT COLUMN, TOP TO BOTTOM: 2019 views: formerly remote landfill now surrounded by development; defining the pit excavation area with shelter tent to protect excavation from weather; excavated drums were placed into the oversized drums seen next to the tent and shipped off-site.

Coke moonscape, offices and apartments on the former Reilly Tar and Chemical site in St. Louis Park, and the Northern Stacks development on Fridley's Naval Industrial Reserve Ordnance Plant (NIROP) site. The Twin Cities Army Ammunition Plant in Arden Hills and the Ford Motor Plant in St. Paul are in the brownfield redevelopment process.

In 2018, the state reached a settlement on its largest natural resource damage lawsuit to date, in which 3M Company agreed to pay \$850 million to settle claims of contamination of groundwater in the east Twin Cities metro area. The money will go toward providing safe drinking water and restoring surface water and other natural resources in the east metro area.³⁷

By early 2020, the Superfund program had completed 295 priority list site cleanups. The priority list now details 95 sites undergoing investigation and cleanup, with another 162 sites being cleaned up by the responsible companies under MPCA or Minnesota Department of Agriculture oversight. In addition, companies responsible for contamination have completed investigations and cleanups at more than 2,000 sites without going through the formal listing process. Thus, the companies responsible for the contamination—not the government—have funded the great majority of cleanups.³⁸

THE EARLY THINKING—or wishing—that contamination could be fully destroyed or removed to somewhere else in order to achieve a pristine site was not realistic. “Cleanups” most commonly isolate the hazardous substances from exposure to people or environment; they seldom achieve full removal or destruction of hazardous substances at a site. Groundwater containment and treatment, soil caps, containment vaults, site-use restric-

tions, and other ways to prevent exposure to hazardous substances have gone on for 35 years at many sites. Final closure of many cleanups may be merely theoretical—perpetual care will be needed.

Meanwhile, current waste management practices have reduced but not eliminated the risk of creating newly contaminated sites. No one involved in the early 1980s discoveries of contaminated sites in Minnesota foresaw that the program would last this long or include so many sites. The inability to achieve permanent destruction of these materials means that the twentieth century's legacy of chemical wastes will require future generations to deal with residual contamination far into the future. But the good news is that Superfund liabilities and hazardous waste rules have spurred many industries to reduce or eliminate hazardous wastes and ensure that disposal sites they do use are safe into the future. □

Notes

The author is grateful for the assistance of Alan Williams, Al Gebhard, Jim Payne, Gene Merriam, and Michael Robertson.

1. Jordan Kleiman, “Love Canal, A Brief History,” State University of New York Geneseo, https://www.geneseo.edu/history/love_canal_history; “Valley of Drums, Kentucky,” Historic Photos of Louisville Kentucky and Environs, <https://historiclouisville.weebly.com/valley-of-the-drums.html>; William Powell, “Remember Times Beach: The Dioxin Disaster 30 Years Later,” *St. Louis* magazine, <https://www.stlmag.com/Remember-Times-Beach-The-Dioxin-Disaster-30-Years-Later/>.

2. James Kinsey testimony at hearing for hazardous waste rules, Sept. 1977, Vol. II, in Hazardous Waste Rule Hearing Transcripts, Attorney General, Pollution Control Division, Administrative Rules Proceedings Files, MNHS Collections. The reason for the boy's lack of hair was never established.

3. James W. Routh, Consulting Engineer, “The Collection and Disposal of Garbage,” *Minnesota Municipalities* 7, no. 3 (June 1922), published by the League of Minnesota Municipalities. “Land-

fill” in the 1920s meant dumping into low or swampy areas. Martin V. Melosi, *Garbage in the Cities* (Pittsburgh, PA: University of Pittsburgh Press, 2005); Mike Bull and Karen Baker, “Minnesota Solid Waste History: Major Milestones,” information brief (Jan. 2002), Minnesota House of Representatives Research Dept. Early garbage incineration was low temperature, expensive, and odorous. “Reduction” is processing food waste under pressure to yield animal feed, fertilizer, and an oil; it is labor intensive and very odorous. With proper sorting it took about 75 pigs to consume a ton of garbage. Concerns for spread of disease, problems of hauling and sorting fresh garbage, and the declining percentage of garbage that was edible ended pig feeding.

4. Richard E. Doherty, “A History of the Production and Use of Carbon Tetrachloride, Tetrachloroethylene, Trichloroethylene and 1,1,1-Trichloroethane in the United States: Part 2: Trichloroethylene and 1,1,1-Trichloroethane,” *Journal of Environmental Forensics* 1 (2000): 83–93. In 2019, the Minnesota Legislature considered outlawing use of trichloroethylene for vapor degreasing.

5. Sandra Gardebring, “Statement of Need and Reasonableness for Adoption of Hazardous Waste Rules” (Sept. 29, 1977), 1, Hazardous Waste Rules 1976–80, MNHS Collections. The rules had been authorized by the legislature in 1974: 1974 Minnesota Laws, Ch. 346, 582.

Regarding Gardebring's title, the head of the staff of the MPCA was termed “executive director” until 1987, when the state legislature standardized the title of the heads of a number of departments, using the term “commissioner.”

6. Barr Engineering Company, Tenec Consultants, Noble and Associates, Peat Marwick Mitchell, Dayton Herman Graham, *Hazardous Waste Management Minnesota's Issuues/Options Interim Report* (Jan. 1979), Minnesota Legislative Reference Library; 1980 Minnesota Laws, Ch. 564, 786.

7. James Hulbert, chart in untitled survey, n.d. (circa 1977), Minnesota Pollution Control Agency. The Hulbert survey cataloged disposal practices from hundreds of mines, slaughterhouses, dairies, mills, wood treaters, chemical depots, refineries, asphalt companies, plastic product companies, foundries and smelters, platers, manufacturers, petroleum terminals utilities, and more. Many wastes were organic or mineral or wastewaters. Some wastes were clearly chemical and hazardous. Disposal descriptions included many wastes sent to local landfill or sewer; much put into rubbish and hauled off by contractor “probably to landfill” or “unknown location”; some sent to facilities in Illinois or Wisconsin, recycled, spread on fields, or taken away by hauler.

8. Alexandra B. Klass, “From Reservoirs to Remediation: The Impact of CERCLA on Common Law Strict Liability Environmental Claims,” *Wake Forest Law Review* 39 (2004): 924.

9. “MPCA Plans Legal Action at 2 Dump Sites,” *Minneapolis Star Tribune*, Oct. 29, 1980, 3B.

10. "PCA Votes to Sue Owners of Dump Sites," *St. Paul Pioneer Press*, Oct. 29, 1980, 19; "Goopy Legal Problems," *St. Paul Pioneer Press*, Oct. 30, 1980, 16.

11. The Strike Force members were Tim Scherkenbach (an assistant director), Michael Kanner, John Aho, Mike Ayers, Rick Ferguson, Myrna Halbach, Mike Hansel, Terry Kasen, Steve Lee, and Lisa Thorvig. Diane Czaia provided clerical support.

12. Also known as "water dowsing," the term refers in general to the practice of using a forked stick, rod, pendulum, or similar device to locate underground water, minerals, or other hidden or lost substances. According to US Geological Survey, dowsing "has been a subject of discussion and controversy for hundreds, if not thousands, of years": see <https://www.usgs.gov/special-topic/water-science-school/science/water-dowsing>. Much to the consternation of MPCA geohydrologists, the author used bent brass wires to witch out locations of buried barrels, sludge ponds, wells, trenches, and a pistol.

Air photos back into the 1930s revealed land use at many sites. The army contracted for a review of historic air photos of the area around the Twin Cities Army Ammunition Plant (TCAAP) site in Arden Hills, hoping to show that the contamination might have come from a factory somewhere other than at TCAAP. Follow-up investigations of the identified sites showed them to not be possible sources, including young Davy Yepma's tree fort and a pig farm site later used by the Minnesota State Highway Patrol for training.

13. Michael Robertson, Legislative Commission on Waste Management, "Sites on PCA Hazardous Waste Log (March)," attached to "Comment on SF 1031 and HF 1176 Environmental Response and Liability Act," in personal files of Michael Robertson (hereafter, Robertson files); "Pollution Agency Accepts 3M Offer to Pay for Probe of Dumps," *Minneapolis Star Tribune*, Dec. 2, 1980, 19.

14. *Index to the St. Paul Dispatch and St. Paul Pioneer Press, 1981* (St. Paul: St. Paul Public Library, 1982).

15. Stephanie Hemphill, "Protecting Minnesota's Natural Resources in Law," *Minnesota History* 66, no. 4 (Winter 2018-19): 165; 1980 Minnesota Laws, Ch. 564, 786.

16. Michael Robertson, personal communication, Feb. 25, 2019; Gene Merriam, personal communication, Mar. 11, 2019; Alan C. Williams, "A Legislative History of the Minnesota 'Superfund' Act," *William Mitchell Law Review* 10, no. 4 (1984): 851-99. Williams was the legal counsel for the senate committee. This source is recommended for readers seeking an exhaustive review of early state Superfund legislative history.

17. Williams, "A Legislative History," 865; Merriam personal communication; Minnesota House Journal, Mar. 30, 1981.

18. Williams, "A Legislative History," 865-72.

19. Louis Breimhurst, MPCA Executive Director, to Governor Albert H. Quie, memorandum, Mar. 16, 1982, and "Reasons Supporting

Veto of SF1031/HF1176," memorandum prepared by Bob Johnson, 3M attorney, n.d.—both Robertson files.

20. Governor Quie to Harry Sieben, Speaker of the House of Representatives, Mar. 19, 1982, and Dee Long, "Veto Override Statement," Mar. 19 1982—both Robertson files; "Hazardous-waste 'Superfund' Bill Dies by Quie Veto," *Minneapolis Star Tribune*, Mar. 20, 1982, 4A; Merriam personal communication.

21. "Session Comes to a Bitter Finale," *Minneapolis Star Tribune*, Mar. 31, 1982, 24; "Superfund Plan Dead, 2 Minor Bills Pass," *Minneapolis Star Tribune*, Mar. 31, 1982, 1; "A Perilous Game," *St. Paul Pioneer Press*, Apr. 2, 1982.

22. Williams, "A Legislative History," 882-89.

23. "Opinion," *Minneapolis Star Tribune*, Apr. 15, 1983.

24. Williams, "A Legislative History," 889-95; Michael Robertson, personal communication, Feb. 15, 2019; "3M Tells Perpich that Superfund Law May Keep It from Expanding in State," *Minneapolis Star Tribune*, May 7, 1983, 10. A follow-up article on May 13, 1983, noted that 3M had stopped building manufacturing facilities in Minnesota 12 years before.

25. Williams, "A Legislative History," 866-95; "At Last, a Minnesota Superfund," *Minneapolis Star Tribune*, May 10, 1983, 10.

26. "Request for Authorization to Proceed with Adoption of a Temporary List of Priorities Among Releases or Threatened Releases of Hazardous Substances, Pollutants or Contaminants" and "Discussion of State Superfund Program Implementation," both MPCA board items, June 7, 1983, box 25, Minnesota Pollution Control Agency Papers, MNHS Collections (hereafter, MPCA Papers); Pollution Control Agency, minutes and agenda packets, May-Sept. 1983, and "Request for Approval of an Interim Response Order by Consent with the US Environmental Protection Agency and FMC Corporation for the Purpose of Conducting an Interim Remedial Action at the FMC Northern Ordnance Division Site in Fridley," MPCA board item, June 7, 1983—both box 29, MPCA Papers; "State and U.S. Approve \$6 Million FMC Cleanup Plan," *Minneapolis Star Tribune*, June 9, 1983, 40.

27. "3M Plan to Clean Up Dumps Gets Initial State Approval," *Minneapolis Star Tribune*, July 12, 1983, 1; "MPCA Asks 10 Companies to Clean Hazardous Waste Stored at 2 Sites," *Minneapolis Star Tribune*, July 28, 1983, 28.

28. *A Report to the Legislature on the Implementation of Superfund*, Feb. 1985, MPCA, Minnesota Legislative Reference Library.

29. "Business Proposes 'Superfund' Law Changes to Perpich's Staff," *Minneapolis Star Tribune*, Jan. 17, 1985.

30. Text of HF 268 as introduced, microfilm, Minnesota Legislative Reference Library; "Senate DFLers Introduce Bill to Relax Superfund Liability for State Businesses," *Minneapolis Star Tribune*, Feb. 1, 1985.

31. "Business Says Superfund Law Preferable to Victim-Fund Bill," *Minneapolis Star Tribune*,

May 14, 1985, 9; Minnesota Campaign Against Toxic Hazards, "Environmentalists Criticize Business Concerns over Superfund Law and Victim Compensation Legislation," undated press release, Minnesota State Planning Agency, Commissioner's Office, subject files of Tom Triplett, Superfund file, box 12, MNHS Collections. Members of the campaign were Clean Water Action Project, Minnesota Audubon Council, Minnesota Public Health Association, Minnesota Public Interest Research Group, and the Sierra Club.

32. "To Settle Minnesota's Superfund Squabble," *Minneapolis Star Tribune*, May 27, 1985.

33. "Legislature Finally Adjourns, Superfund Measure Wins an Easy Victory," *Minneapolis Star Tribune*, June 22, 1985, 1A; House and Senate Journals, First Special Session, 1985.

34. Shawn Ruotsinoja, MPCA, personal communication, May 18, 2019. The attorney general hired national law firm Covington and Burling for the negotiations and lawsuits, netting over \$100 million for landfill cleanup costs.

35. Sarah Larson, MPCA, personal communication, May 16, 2019; Joel Fischer, Director, Petrofund Program, Department of Commerce, personal communication, May 16, 2019.

36. Eric Pederson, MPCA, *Superfund Program Biennial Legislative Report for Fiscal Years 2017 and 2018* (Jan. 2019), <https://www.pca.state.mn.us/sites/default/files/lrc-s-1sy19.pdf>; Minnesota Brownfields, *Benefits of Brownfield Redevelopment in Minnesota* (2018), <https://mnbrownfields.org/wp-content/uploads/2018/08/Brownfield-Benefits-2018-Final.pdf>; Kenneth Haberman, "Commentary: Minnesota's Response to Brownfield Redevelopment Issues," *Environmental Practice* 11, no. 4 (2009): 301-10, doi:10.1017/S1466046609990354.

37. Kevin Faus of MPCA and Marilyn Danks of DNR began the east metro Natural Resource Damage Assessment, the legal process that federal agencies, together with the states and Indian tribes, use to evaluate the impacts of oil spills, hazardous waste sites, and ship groundings on natural resources. Covington and Burling law firm was appointed as special counsel. Hennepin County Court, Court File No. 27-CV-10-28862; MPCA site, "Perfluorochemicals (PFCs)," <https://www.pca.state.mn.us/waste/perfluorochemicals-pfcs>. The sum of the 3M settlement was the third largest natural resource damage settlement in the nation, after the Exxon Valdez tanker wreck and the Gulf of Mexico well blow-out [Deepwater Horizon oil spill?].

38. Eric Pederson, MPCA, personal communication, Jan. 30, 2020; Pedersen, *Superfund Program Biennial Legislative Report* (2019).

Images on p. 30, 40, Minnesota Pollution Control Photos, WDE Landfill album, <https://www.flickr.com/photos/mpcaphotos/albums/72157709162240021/with/48309756832/>; p. 31, *Minneapolis Star and Tribune* news negatives collection, MNHS; p. 32, 35, MNHS Collections; p. 34, courtesy of author.



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