MINNESOTA

WASTE MANAGEMENT BOARD

SOLID WASTE INSURANCE STUDY

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First Draft

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I. SUMMARY

Minnesota's operating permitted sanitary landfills appear to pose a significant pollution liability threat both in terms of potential remedial action costs and third party damages. Insurance to cover these costs is generally unavailable to most sanitary landfill businesses on a nationwide basis. This study therefore recommends an expansion of financing for the state Superfund program and the establishment of a victim's compensation fund as the most feasible and desirable means of providing indemnification for response action and third party damage costs.

A survey ofthe 110 permitted landfills for mixed municipal solid waste was conducted as part of this study. Of those surveyed, 59 responded to the survey. The vast majority ofthose responding (over 90 percent) do not have insurance for pollution problems such as groundwater contamination.

Environmental Impairment Liability, or EIL, insurance is written to cover gradual or nonsudden pollution releases, such as groundwater contamination. A random survey of other states indicates that Minnesota's situation is not unique, and that few landfills currently have EIL coverage.

Although the Minnesota State Superfund law, or MERLA, has been cited by some as a significant cause for the unavailability of EIL to Minnesota landfill owners/operators, other factors, such as uncertainty about the materials previously deposited, the geology, and monitoring of the site appear to be the most significant barriers to obtaining insurance.

Additionally, EIL insurance, a fairly new and relatively small line of insurance, is currently becoming less available nationwide and the costs of coverage are increasing.

Given that most landfill owners/operators do not have adequate insurance or other forms of indemnification, the state and residents living near landfills are potentially threatened by the inability of landfill owners/operators to pay for remedial action or third party damage costs. This study examined several different ways in which the state could promote the insuring of sanitary landfills and found them unacceptable.

This study recommends that the primary objective of any state initiative be to protect the health and welfare of the public and the environment. Currently, commercial insurance is not a feasible or desirable means of accomplishing this goal. Instead, this study recommends that surcharges be attached to tipping fees to meet two purposes: The collections from one surcharge would be deposited in the state Superfund account and used to help finance future Superfund remedial action projects. The Minnesota Pollution Control Agency (PCA) predicts that within five years most Superfund sites in the state will be old landfill sites. Thus, the users of sanitary landfills would be helping to finance the cleanup of the landfill sites. Collections from the second surcharge would be deposited in a victim's compensation fund, and used to pay for third party damages caused by sanitary landfills.

II. THE STUDY MANDATE

This study was required by the 1984 regular session of the Minnesota Legislature. Laws of Minnesota 1984, chapter 644, section 79, states in its entirety:

> The Waste Management Board shall conduct a study of the feasibility and desirability of providing insurance for the costs of response actions and third party damages resulting from facilities for the disposal of mixed municipal solid waste. The Waste Management Board shall submit findings, conclusions, and recommendations in a report to the Legislative Commission on Waste Management by December 1, 1984.

This statutory provision includes three key terms that have special meanings in Minnesota's waste management laws and rules: mixed municipal solid waste, disposal facility and response action.

Mixed municipal solid waste is one category of solid waste, and is defined in Minnesota Statutes, section 115A.03, subdivision 21. It means the variety of household and commercial waste that is disposed as a mixture. Mixed municipal solid waste does not include hazardous waste or sewage sludge.

Facilities for the disposal of wastes must receive a permit from the PCA. [Solid waste disposal facility permits and operations are governed by Minnesota Rules, parts 7035.1500 to 7035.2500.] The conditions of the permit state what types of waste the facility may receive. The majority of permitted disposal facilities are authorized to receive mixed municipal solid waste. A distinction is made between facilities for the intermediate and final disposal of solid wastes. An intermediate disposal facility may treat or store solid waste prior to final disposal. [See Minnesota Rules, part 7035.0300, items H and Z, and part 7035.1500.] A final disposal facility must be a sanitary landfill.

The term response action is defined under Minnesota's Environmental Response and Liability Act (MERLA, Minn. Stat. ch. 115B) as action to remove a hazardous

substance, or pollutant or contaminant, from the environment, or to remedy the effects of the release of such substances into the environment. Response actions are sometimes referred to under the general term cleanup, but such actions may include monitoring and testing, relocation of affected parties, and provision of alternative water supplies. Liability for response actions under MERLA arises only if there is a release from the landfill of a hazardous substance, or a pollutant or contaminant. However, cleanup and remedial action may also be required under other laws even if no hazardous substance or pollutant or contaminant is involved. There may be statutory liability under Minn. Stat. §115.071 for any discharge of pollutants (as broadly defined in Minn. Stat. ch 115) into surface or groundwater. And cleanup could also be required under legal actions for abatement of a nuisance.

The statute mandating this study also refers to third party damages as a possible subject for insurance coverage. Damages may be recoverable by third parties who suffer personal injury or property loss as a result of release from a landfill. The types of damages recoverable include loss of property value or business income, damage to water supply, medical expenses, and disability. Damages are recoverable by a variety of legal actions including statutory action under MERLA and actions under common law doctrines such as negligence, nuisance, trespass, and strict liability.

III. CHARACTERISTICS OF MINNESOTA LANDFILLS

A. General Characteristics of Permitted Sanitary Landfills

Since the PCA began to issue permits for solid waste disposal facilities in 1969, 131 facilities have been authorized to receive mixed municipal solid waste. Of these, 110 are still open and receiving such waste. Of the remaining 21, some have been closed, and some were never constructed. The emphasis of this study will be on the 110 sanitary landfills that are still open. The information presented in this section is from lists and internal memoranda of the Pollution Control Agency.

Minnesota's landfills fall into two fairly distinct categories: large facilities serving the Twin Cities metropolitan area, and small facilities serving the rest of the state.

The Twin Cities are served by 13 landfills. All but one are privately owned and operated. Although representing only 12% of all landfills by number, these facilities received 56% of the total refuse deposited in landfills in Minnesota in 1982. In other words, the average metro-area landfill handles a volume over ten times greater than the average non-metro landfill.

Of the 97 outstate landfills, 31 are privately owned and 66 are publicly owned. Although several of these are large, most are quite small, both in terms of volume and permitted capacity.

Publicly owned landfills are owned and operated by counties or cities. A few of the privately owned landfills are owned and operated by large national firms, such as Waste Management Inc. and Browning-Ferris Industries. These are among the largest facilities, and are in the Twin Cities area. Most of the remaining private landfill owners are small companies or private individuals with rela-

tively modest resources. It is common for private landfill operators to run collection and transport services to bring waste to their own facilities.

A significant number of the operating landfills are nearing the limits of their permitted capacity. Of the 110 operating permitted landfills, 41 landfills are estimated to have less than five years of capacity remaining (as of March, 1983). Of these, 18 are judged to have capacity to expand beyond their present permitted areas. Five metro-area landfills are among these 41, but four of the five have capacity to expand beyond their present permitted area. If all landfills without expansion capacity close by 1988, and no new facilities are opened, only 87 operating landfills would remain.

The following table summarizes landfill volume [based on 1983 data in most cases; 1982 data if 1983 unavailable].

TABLE III-1

Annual volume in cubic yards	Metro	Outstate	Less than 5 years capacity	
			Exp. potential	No expan.
0 - 10,000	0	17	0	3
10,001 - 30,000	0	39	7	10
30,001 - 50,000	0	14	3	3
50,001 - 100,000	1	14	2	2
100,000 - 500,000	7	10	5	3
500,001 - 2,000,000	5	0	1	0

In addition to these general characteristics, Minnesota's sanitary landfills may be described according to their pollution exposure characteristics. In general, it can be said that currently operating sanitary landfills pose a substantial

pollution hazard or threat. Section IV.B. of this study offers greater detail about the scope and nature of this problem.

B. Unpermitted Landfills or Dumps

The distinguishing features of sanitary landfills are that the sites are prepared or engineered to some extent, and that each day's refuse is compacted and covered. Daily cover prevents blowing, and promotes biological decomposition. Sanitary landfills were considered a substantial improvement over their predecessor, the open-burning dump.

Dumps were the standard method of waste disposal for most of Minnesota's history. Some dumps may have been officially sanctioned by a local government, while others were informal. Some of the current permitted sanitary landfills began as dumps. But most dumps no longer operate, except for a few in remote rural locations. The PCA has surveyed and catalogued over one thousand sites of former dumps.

Although a few dumps continue to receive mixed municipal solid waste, they are not within the scope of this study. The absence of a PCA permit and detailed site information would make their inclusion in the study or in a financing mechanism highly problematic.

C. Trends in the Use of Sanitary Landfills.

Just as sanitary landfills succeeded dumps, sanitary landfills are expected to eventually give way to improved methods of waste disposal. Suggested successors include waste abatement (producing less waste), resource recovery (glass, metal, etc.), energy recovery (burning), and improved landfill technology. The latter includes more careful siting and site construction, adequate monitoring systems, recovery of landfill-generated methane (if present in sufficient amounts), and

careful site closing and post-closure maintenance.

The rate at which landfills will be replaced by other alternatives is unknown. For the purposes of this study it is important to note that the number of landfills and the volume of waste is likely to decline from present levels. The rate of decline is uncertain, but the expectation of decline is important, particularly for financing mechanisms that would rely on tipping fees from open landfills. The pollution liability exposure of a typical landfill is likely to substantially outlast its operational life.

IV. SANITARY LANDFILLS' LIABILITY EXPOSURE

A. Legal Liability Imposed by Environmental Legislation

An owner or operator of a sanitary landfill may be held liable under a variety of statutes and legal doctrines for response costs or third party damages caused by the landfill. Response costs may be recovered under the Federal Superfund law or CERCLA, the Minnesota Superfund law or MERLA, and under several other state laws including Minn. Stat. §§115.071 and 473.845. Third party damages may be recovered under MERLA and under a variety of common law legal remedies. A good general discussion of common law remedies is found in the Federal 301(e) Study Report, which reviewed the adequacy of such remedies as means for compensating victims of hazardous wastes exposure. The following sections review the provisions of the major Federal and state statutory remedies for recovering response costs and third party damages.

1. Federal law

Under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA, or the Federal Superfund) the owner or operator of a sanitary landfill may be held liable for several types of costs associated with the release of hazardous substances from the facility. The owner or operator may be liable for the costs of investigations, surveys, monitoring and testing which identify the existence, source and extent of the release of hazardous substances, pollutants or contaminants. Additionally, he may be held liable for the costs of removal, remedial action and responses deemed necessary to protect "the public health or welfare or the environment."

[CERCLA, Secs. 104 and 107(a), 42 U.S.C. §§ 9604 and 9607(a)]

Several cases interpreting CERCLA have held that those liable for such releases are strictly liable for any damages they cause. That is, it is not necessary to

prove that the responsible person was negligent in order for them to be held liable. In addition to strict liability CERCLA has been interpreted by the Justice Department to impose joint and several liability. This means that if there is more than one defendant in a case, the plaintiff may sue any or all of them and can collect damages from one or more. Each defendant, however, may sue other parties who contributed to the problem and may recover from them a portion of the damages. Federal courts have found joint and several liability applicable in several recent cases.

For the purposes of this discussion it is important to note that liability provisions under federal law apply primarily to cleanup - related costs, not to costs incurred by third parties for property loss or personal injury.

2. State law

The Minnesota Environmental Response and Liability Act of 1983 (MERLA) sets standards for recovery of response costs, natural resource damages, and third party damages caused by the release of a hazardous substance.

Liability for response costs and damages to natural resources is covered in Section 115B.04 of MERLA. Subdivision 1 provides that a person responsible for a release of a hazardous substance is subject to strict, joint and several liability for the following costs and damages:

1. All reasonable and necessary response costs incurred by the state, a political subdivision of the state or the United States;

2. All reasonable and necessary removal costs incurred by any person; and

3. All damages for any injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss.

These liability provisions are similar to those provided under the federal Superfund. Section 115B.05 of MERLA establishes liability for economic loss, death, personal injury and disease caused by a release of hazardous substances. This type of liability is not covered under the federal Superfund. Subdivision 1 establishes strict, joint and several liability for:

1. All damages for actual economic loss including:
   a. Any injury to, destruction of, or loss of any real or personal property, including relocation costs;
   b. Any loss or use of real or personal property;
   c. Any loss of past or future income or profits resulting from injury to, destruction of, or loss of real or personal property without regard to the ownership of the property; and
2. All damages for death, personal injury, or disease including:
   a. Any medical expenses, rehabilitation costs or burial expenses;
   b. Any loss of past or future income; or loss of earning capacity; and
   c. Damages for pain and suffering, including physical impairment.

There is no liability under MERLA for personal injury or property loss if the hazardous substance was deposited in a facility wholly before January 1, 1960 (MN Statutes, section 115B.06).

For those hazardous substances which were deposited after January 1, 1960 but wholly before January 1, 1973, Minnesota Statutes, section 1115B.06, subdivision 2 provides an additional defense to liability:

> ...it is a defense to liability under Section 5 that the activity by which the substance was kept, placed, or came to be located in or on the facility was not an abnormally dangerous activity. The determination of whether the activity was an abnormally dangerous activity shall be made by the court.

For substances deposited after January 1, 1973, the defense in Section 6, subd. 2 does not apply.

Although liability under MERLA for personal injury and economic loss is joint and several, if the defendant can show the proportion of liability that should be allocated to him, then his liability will be limited to two times that proportionate share of the damages. If a defendant is unable to distinguish his own share of liability from that of other defendants, he will be held jointly and severally liable for the aggregate amount of damages recoverable by the plaintiff.

MERLA limits the liability of political subdivisions to $400,000 per claim and $1,200,000 per occurrence. However, Minnesota Statutes, section 466.06 allows a municipality's liability to extend to the limits of its insurance coverage.

MERLA does not apply to all potentially toxic substances. Releases resulting from the application of fertilizers or agricultural or silvicultural chemicals, or disposal of emptied pesticide containers or residues from a pesticide are exempt from MERLA's provisions.

B. Estimates of Pollution Damage Probabilities Resulting From Landfills

To begin to analyze the potential for pollution damage from Minnesota's permitted mixed municipal landfills, this study refers to the most recent data available from the PCA regarding the status of groundwater at those facilities. As of October, 1984, the PCA had drawn the following conclusions:

- Few, if any, have adequate monitoring systems based on the criteria of PCA's current monitoring manual, and less than one-third have groundwater monitoring systems that could be considered marginally adequate;

- Over 35% have some documented groundwater pollution, including 13 of 15 metro area permitted sanitary landfills.

- All landfill leachates that have been tested, which is water that percolated through the landfill, contained volatile organic chemicals, many of which are considered carcinogenic or mutagenic;

- Over two-thirds of all landfill monitoring wells tested contained volatile organic chemicals apparently due to the landfill;

- One-fifth of all landfills are known or believed to have accepted hazardous wastes, and many more may have;

- At least 28%, and probably many more, have nearby well users; and

- At least 49% are underlain by sand or karst geology, and many more can be presumed to have less obviously unsuitable hydrogeologic conditions. Groundwater travels quickly through sand and karst (fractured limestone).

1. Remedial action costs

Throughout this study the terms "remedial action," "cleanup" and "response action" will be used synonymously. They denote the projects undertaken to remedy unanticipated adverse occurrences at sanitary landfills.

The PCA also conducted a study of some of the state's permitted mixed municipal refuse landfills in December, 1983 to estimate the costs of remedial actions at those sites (see Table IV-1). These figures are very speculative and may vary within an order of magnitude. Although they are based on huge assumptions, they are, however, the best estimates currently available from the PCA for these types of costs.

TABLE IV-1

Estimated Total Capital Costs for Remedial Action at 131 Permitted Mixed Municipal Refuse Landfills

Base-level remedial actions (investigation and additional monitoring of groundwater pollution and methane migration)	$7,179,000
Corrective remedial actions (Does not assume groundwater pumping at all sites, which could triple the maximum figure indicated. Actions considered include provision of alternative water supplies, groundwater containment and treatment, methane ventilation and collection.)	$13,887,000 - $65,548,000 (These expenses are outside of the costs covered by current permit requirements.)
Annual operating and maintenance costs:	
Base-level remedial actions	$1,328,000 - $1,453,000
Corrective remedial actions (These figures represent the costs of on-going operation, monitoring and maintenance after the initial capital costs indicated above.)	$1,569,000 - $4,968,000
Total remedial action costs:	$23,963,000 - $79,148,000

(Source: PCA 12/83)

The accuracy of these figures is dependent on a number of variables. For example, current information regarding soil and groundwater conditions is limited. Detailed, site specific studies for each landfill have not been developed. Additional site-specific information could alter the figures.

Performance of remedial actions is a relatively new practice which will probably change as new technologies are developed to deal with these problems. The costs of these technologies may very well raise the cost of remedial actions as they become more sophisticated.

The time frame over which these costs may be incurred is highly uncertain. The figures given have not been adjusted for inflation and reflect a December 1983 dollar value. The actual costs of future remedial may be higher due to inflation.

Well monitoring technologies are expected to improve in the future. Some of the existing monitoring systems suffer from various deficiencies and the results of their sample collections are no longer of value. For example, some may have been installed too deep or too far from the refuse. Others may not have been kept in good repair. This study assumes that, as well monitoring improves and is applied to more sites, the probability of detecting groundwater contamination will increase. Thus, the pollution liability exposure of owners and operators of these facilities is also likely to increase.

Related to the improvements in monitoring wells, additional substances may be added to the list of hazardous substances requiring regulatory control. Substances once thought to be safe may be discovered to be a threat to health and require detection, monitoring and/or removal from landfills. These changes in scientific knowledge and scope of regulation could increase exposure to pollution liability for landfills.

Another factor which could alter the estimated remedial action costs is the location of the landfills requiring remedial action. The PCA employs varying degrees of remedial action depending on a number of factors related to the landfill. Some of these factors include proximity to population or valuable natural resources, rate of groundwater flow, proximity to alternative water supply sources and potential for contaminating other aquifers or aquifer pockets. Should major factors such as these be negatively impacted on a large scale, there would be enormous potential for a rise in the estimated remedial action costs, and, in

turn, pollution liability exposure.

2. Third party damages

As mentioned in section IV.A., owners and operators of sanitary landfills are potentially liable for third party damages caused by their facility.

It is difficult to estimate the probability of third party liability exposure. In A Study of Compensation for Victims of Hazardous Substance Exposure the conclusion is drawn that "existing site data is inadequate to make reliable estimates of injury since there are too many variables which cannot be presently quantified."[1] Despite the lack of current information about exposure of third parties, there are numerous indications that third party damages may result from sanitary landfills.

The PCA believes that highly contaminated leachate will be produced at all Minnesota landfills.[2] The PCA also claims that few landfills, if any, have totally adequate monitoring systems. In the metropolitan area, where the monitoring is better than in other areas of the state, 87 percent of municipal solid waste facilities have documented groundwater contamination. Of those that have been tested, the quality of leachate does not vary significantly between urban landfills and rural landfills.

The extent of this problem has not been accurately measured, in large part due to the lack or inadequacy of monitoring systems. It is therefore difficult to say at this time how many people are or will be affected by groundwater contamination due to landfills. However, given the existing evidence, it is reasonable to assume that the threat will increase rather than decline in the near future. Therefore this study suggests that there is a reasonable possibility sanitary landfill owners and operators will be exposed to liability for third

party damages.

V. CURRENT FINANCIAL PROTECTION FOR LIABILITY

A. Basic Financial Requirements of Landfills

1. Closure, post-closure

Current PCA financial assurance requirements require an owner/operator of a permitted sanitary landfill to secure financial assurances (e.g. bonds, savings certificates, letters of credit, insurance) for selected operations, usually closure and post-closure care. This requirement has existed for slightly less than two years. Specific levels of assurances are not stipulated in the PCA Solid Waste Rules. Requirements have varied greatly and have been negotiated on a site by site basis for each permit.

There are currently 31 sanitary landfills that are required to post financial assurances for closure/post-closure costs as a condition of their permits. These conditions were added to the permits of owners/operators seeking to expand their facilities or to whom compliance permits were issued because they needed, for example, to upgrade their engineering plans or do additional hydrogeological work.

Although 31 sanitary landfills are currently required to post financial assurances for closure/post closure costs, only a few have actually done so. One large metropolitan area landfill has posted a $300,000 bond with the PCA and the city in which it operates to meet this requirement. A large rural Minnesota landfill pays $7,500/year into a savings certificate as part of an agreement to meet closure/post-closure financial assurance requirements. A small rural landfill pays $2,500/year into a savings certificate for the same purpose.

2. Remedial action

There are no general requirements for facilities to post financial assurances to

cover remedial action costs, although it will be part of new PCA rules scheduled for public hearings in May, 1985.

3. Third party damages

There are no financial assurance requirements to cover potential costs of third party damages, nor are there any rules proposed to address this liability exposure.

B. The Transition from Old to New Requirements

Measured in terms of the requirements that have been written into the PCA's Solid Waste Rules, monitoring requirements have not changed over the past eleven years. However, the way in which they have been enforced has changed. Owners and operators who did not comply with those requirements may be strongly affected now that such requirements are being more consistently enforced and additional requirements are being proposed for closure/post-closure and remedial action costs.

An issue which is frequently raised is how the PCA will enforce future new requirements for financial assurances of closure/post-closure and remedial action costs. Some owners/operators argue that the PCA should allow them a longer transition period to meet new financial assurance requirements. They feel that without a grace period of at least several years they will not have the financial capacity to meet the new requirements.

The PCA has tentatively scheduled July, 1985 as the date for adoption of new rules that would specify levels of financial assurance for closure/post-closure and remedial action costs in sanitary landfill permits. It seems likely that these new rules will be enforced soon after they are effective. This may be due in large part to the fact that, as of March 1983, the PCA estimated that 39

operating sanitary landfills had less than five years of capacity remaining. It is obviously not in the interests of the state to delay enforcement of these requirements when there may be very few years in which to collect all of the monies needed for closure/post-closure costs.

C. Role of Federal and State Environmental "Funds"

1. Remedial Action

a. Federal Superfund (CERCLA)

The federal government does not provide money to clean up landfills unless the landfill is ranked on the Superfund National Priority List (NPL). If the site is ranked on the NPL it is eligible for 90 percent Federal matching funds if it is on private property and 50 percent matching funds if it was owned at the time of disposal by the state or local government unit.[3]

These funds may be applied to the design and implementation of remedial action projects. Sites ranked on the NPL are eligible for funds to cover 100 percent of the remedial investigations and feasibility studies which define the extent of the problem and recommend a cost-effective remedy.

To qualify a site for listing on the NPL the PCA must submit a detailed analysis of the site to the EPA for its consideration. The EPA uses a numerical formula (Hazard Ranking System) to generate a "score" for each site. The site is then ranked on the NPL according to that score. The NPL has been revised on an annual basis. The latest NPL was issued November,1984 and contains 748 sites, 34 of them from Minnesota. Of the 34 sites, six are former permitted sanitary landfills. (These six are among the 131 permitted sanitary landfills.) Minnesota has received or is guarenteed to receive federal matching funds for 14 of the 34 sites on the NPL. As long as the state can supply matching funds and the staff necessary to perform the work, it is expected to receive

money for all 34 sites.

The PCA generally relies on CERCLA and MERLA monies only as a last resort. Of the 40 PCA staff people devoted to work on Federal Superfund sites in Minnesota, 20 of them are primarily charged with negotiating with responsible parties to pay for remedial action projects so that state or Federal Superfund monies will not have to be used. Federal and/or state Superfund monies are used only when a responsible party will not or cannot pay for remedial actions or when responsible parties cannot be identified. In such cases the government retains the right to sue responsible parties for expenses incurred for remedial action.

b. State Superfund (MERLA)

MERLA authorizes the PCA to perform remedial action projects at a any site, including a sanitary landfill, when any pollutant or contaminant presents an imminent and substantial danger to the public health or welfare or the environment, or whenever a hazardous substance is released or there is a threatened release of a hazardous substance from the site. (MN Statutes, section 115B.17, subd. 1.)

The PCA may spend money from the State Response Fund for remedial action projects and sue responsible parties for expenses incurred. As mentioned above, money in this fund may also be used to provide the matching funds needed to obtain money from the Federal Superfund.

The State fund provides no money to compensate third parties for damages or injuries (except for a very limited provision for reimbursement of expenses incurred to install alternative water supplies).

c. Surcharges imposed or authorized under the amended 1984 Waste Management Act (WMA)

The Metropolitan Landfill Abatement Act which became law in 1984 requires a fee of 50¢/cu.yd. to be levied on the disposal of mixed municipal refuse within the seven county metropolitan area starting January 1, 1985. Half of this fee (25¢/cu. yd.) goes into a Metropolitan Landfill Contingency Action Fund. This fund may be used for any of the three following purposes:

1) Up to 10% to the State Department of Health for monitoring of public water supply wells that may be affected by mixed municipal solid waste disposal facilities.

2) Costs of closure and post-closure actions for twenty years after closure, if the owner/operator will not take the necessary actions requested by the PCA in the manner and within the time requested.

3) Reasonable and necessary response and post-closure costs at a sanitary landfill that has been closed for 20 years in compliance with the closure and post-closure rules of the agency.

Also, the 1984 amendments to the WMA allow any non-metro county the option of imposing a (MN Statutes 473.845) surcharge of any amount on mixed municipal refuse disposed at sanitary landfills. Revenue from this surcharge is put into a fund which can be expended for closure, post-closure and response costs, landfill abatement, mitigation and compensation for local risks, and other adverse effects of mixed municipal solid waste disposal facilities.

In addition, the 1984 WMA amendments allow any city or township the option of charging a maximum of 15¢/cu. yd. which can be spent on mitigation and compensation for local risks, costs, and other adverse effects of mixed municipal solid waste disposal facilities.

It should be stressed that the statewide county fee and 15¢/cu. yd. city/township fee are optional.

2. Closure/Post-closure

a. Federal

There are no Federal Funds established to address closure/post-closure costs at sanitary landfills. CERCLA does contain a Post Closure Liability Fund, but it applies to permitted hazardous waste disposal facilities, not sanitary landfills.

b. State

There is no state fund established to cover the costs of closure/post-closure at sanitary landfills. As mentioned earlier, new PCA rules will require owners and operators to cover these costs by posting financial assurances.

c. Funds from fees collected under 1984 amended waste management legislation

The previous discussion in Section V B. 1.c detailed the fees that will be imposed in the Twin Cities metro area and which may be imposed by counties, cities and townships for closure/post-closure costs. The important point to note is that even if all of the fees authorized under the 1984 WMA are levied, it is doubtful that all of the potential closure/post-closure costs will be covered.

3. Other Funds

a. Proposed federal victim's compensation fund

The Report of the §301(e) Federal Superfund Study Group (published in August, 1982) concluded that a private litigant faces major substantive and procedural barriers in any legal action to recover damages for personal injury or property

damages due to exposure form hazardous wastes.[4] As one means of addressing this and other problems faced by victims of hazardous waste exposures, the study group recommended the establishment of an administrative victim compensation scheme to be established under federal law and operated largely by the states. This fund would be designed to meet certain minimum economic and medical needs of persons injured by exposure to hazardous waste.[5]

Several bills were introduced into Congress in the 1983-84 session that attempted to establish a fund similar to that recommended in the §301(e) study. None of the bills passed. Therefore, no federal victim compensation fund currently exists.

b. Potential state victim's compensation fund

MERLA directs the Legislative Commission on Waste Management (LCWM) to "conduct a study and make recommendations to the Legislature on the creation of a compensation fund to compensate persons who are injured as the result of a release of a hazardous substance and who would not otherwise be adequately compensated for their injuries" (Laws of Minnesota 1983, section 30). The LCWM commissioned the William Mitchell Center for Applied Research to prepare a report and suggested recommendations. That report, entitled A Study of Compensation for Victims of Hazardous Substance Exposure, has been submitted to the LCWM. The report recommends how a victim's compensation fund should be established but says that one should not be established now. It should be noted, however, that neither the study nor the testimony presented to the LCWM on the study specifically described the potential threat posed by sanitary landfills.

D. Current Financial Arrangements for Cleanup and Third Party Liability Exposures at Solid Waste Landfills

1. Comprehensive General Liability (CGL) policies

a. Coverage

Most businesses and governmental entities carry CGL coverage to insure themselves against a wide variety of liabilities. For sanitary landfills. this coverage may include bodily injuries or property damages incurred on-site. However, since 1973, CGL policies have covered pollution liability only if the liability arose from a "sudden and accidental" occurrence.

By changing CGL policies to cover only sudden and accidental occurrences, insurance companies meant to exclude coverage for events considered "non-sudden" or "gradual". These changes were clearly intended to exclude coverage for accidents such as landfill leachate seeping into aquifers and contaminating groundwater supplies. In the past, the cost of coverage for "sudden" pollution accidents was added to CGL policies for little or no additional cost.

CGL policies are usually written on an occurrence-based form. This means that an insurance company may be obliged to honor claims filed against an insured as long as the occurrence causing damages happened while the policy was in force and such an occurrence was not specifically excluded from coverage. For example, assume that a "sudden" accident at a landfill, such as an explosion, damaged the health of Joe, who was hauling refuse to the landfill. The insurance company who insured the landfill owner terminates that owner's policy one month later. Six months thereafter Joe files a claim against the landfill owner for the cost of injuries and income loss during Joe's recovery period. The insurance company that provided CGL coverage when the accident took place may still have to pay damages even though they are not insuring the owner at the time the claim is filed. As long as the occurrence occurs during the policy period, an insurance company may have to honor a claim, even if it is filed after the policy expires.

b. Trends

Courts in recent years have interpreted the "sudden and accidental" language broadly.[6] Insurance companies now fear that they will be forced to pay for potentially catastrophic events that were meant to be excluded from coverage under the "sudden and accidental" language used in the exclusion section. Therefore companies may be particularly apprehensive about future losses because most of the CGL policies were written on occurrence-based forms.

In response to these concerns, some insurance companies are excluding all pollution liability coverage from their CGL policies.

Some insurance companies are scheduling this exclusion for implementation in January, 1986. At least one Minnesota county has had its pollution liability coverage deleted from its CGL policy after one of its landfills was found to be causing groundwater contamination.

In summary, landfills currently insured by CGL policies may or may not be covered for gradual pollution incidents such as groundwater contamination. Further, it is likely that no pollution liability coverage will be available in CGL policies in the near future.

2. Environmental Impairment Liability (EIL) policies

a. Coverage and costs

EIL coverage was first developed and offered by a handful of insurance companies in 1981 to address the gap in coverage defined by the CGL "sudden and accidental" language. EIL policies were written to cover pollution liabilities which were "nonsudden" or "gradual" accidents. EIL policies generally cover bodily injury, property damage, and damage to natural resources. EIL policies exclude coverage for on-site cleanup. This represents a serious gap in coverage. Since CGL policies are increasingly excluding all pollution coverage

and EIL offers only off-site damage coverages, there soon may be no insurance coverage available for on-site remedial action costs.

EIL policies have only been written on "claims-made" forms, as opposed to the "occurrence-based" form used for most CGL policies. "Claims-made" forms require that any claim against the insured must be made while the policy is in effect.

For example, assume that a "non-sudden" occurrence such as contamination of groundwater from sanitary landfill leachate, impairs the health of Jane, who lives near the landfill. Jane must file any claim for injuries while the landfill owner/operator's EIL policy is in effect in order for the insurer to have any obligation to honor her claim. If Jane files a claim after the landfill owner/operator's policy has expired or has been cancelled, the former EIL insurer has no obligation to honor her claim.

EIL policies are priced on a site-specific basis. Facilities such as sanitary landfills are generally considered for coverage only after an engineering risk survey or assessment has been done at the landfill. In the past a few companies may have offered coverage based only on the results of a detailed questionnaire and excellent history of regulatory compliance. Insurance companies are making tests for coverage more rigorous, however, and it is unlikely that landfill owners/operators will obtain EIL coverage in the future without an engineering risk assessment.

The costs of coverage vary dramatically depending on the results of the risk assessment, the deductible level, and limits of coverage purchased. Premiums for insuring sanitary landfills may range from around $10,000 to $45,000/yr. These figures are offered to give "ball park" ranges only and do not suggest that premiums may fall outside of these ranges.

b. Trends

According to some representatives of the insurance industry, EIL coverage is becoming less available and its cost will rise markedly. Fewer companies may be offering EIL coverage and the ones that do may be more selective about which risks they want to insure. The following points briefly discuss a number of reasons for these trends:

- Cyclical nature of the insurance industry. During periods of high investment return, insurance industry underwriters are under heavy pressure to write coverage for new risks in order to increase premium volume. The new premium volumes are used to finance expanded investments by insurance companies. During periods when investment return is low or when high losses are suffered on policies, insurance companies tend to curtail their offers of coverage, especially in more risky lines. The lower investment returns mean that insurance and reinsurance companies have reduced assets available to back their coverage. This situation is referred to as one of reduced or tightened capacity.

  The pollution insurance market is currently in a phase of the underwriting cycle when capacity is tightening. Therefore, EIL coverage, which is both a relatively new product and one which usually entails a relatively high degree of risk, has been severely curtailed.

  EIL insurers have not received enough premium volume to cover their losses. This is because some premiums have not been priced to adequately cover losses. Additionally, many business do not recognize the need for EIL and the demand for this coverage has not been great.

  There is sparse historical data on which to base premium estimates.

There is little case law developed in this area. Insurance companies are hesitant to forge ahead in this area when they are uncertain as to how the courts will rule on cases relating to hazardous substance exposure.

- Insurers feel that EIL policies often involve the potential for huge losses. They generally curtail coverage for such risks in periods of reduced capacity.
- Some representatives of the insurance industry feel that in Minnesota some provisions of MERLA impose excessive risk to the insurers. Whether insurers are or are not overexposed because of MERLA is not certain. No test cases have been concluded to date, so there is no objective data on this question. However, concern over the potential impacts of the law have caused several companies to withdraw from the EIL insurance market in Minnesota.

In summary, due to a number of factors, EIL coverage will probably not be available in the near future to owners/operators of landfills in Minnesota who have not already obtained coverage. Insurance industry representatives indicate that this condition will persist on a nationwide basis for the foreseeable future.

3. "Self-Insurance"

The term "self-insurance"may cover a variety of arrangements. The following discussion defines what can be meant by that term.

a. Blind

Self-insuring blindly basically indicates that an owner/operator has taken no precautions to insure him/herself against potential liabilities. In some cases they may not even be aware of their exposures or that insurance coverage is

available for those exposures. They are simply hoping that they will not be held liable for any damages caused by their landfill or that they will be able to survive financially if they are forced to pay out any legal claims against them.

b. Planned

Planned self-insurance usually means one of two things. Either a company is setting aside some funds (perhaps through internal bookkeeping entries) to cover potential insurance needs or they are buying excess insurance coverage and assuming a high deductible amount up to the level where the excess coverage becomes available.

If a company is using the first method, they have recognized that they have a potential risk and have probably made the determination that it is more economical to set aside monies within the company to cover these exposures than to pay it out. It is generally only the larger companies that can afford to do this.

Those who use the second method, purchasing excess coverage, may do it in the following way: Company A feels it needs EIL coverage of $3 million per occurrence, $6 million annual aggregate. In shopping for coverage it buys an EIL policy with a $1 million deductible. Company A can be said to be self-insured for $1 million.

4. Reliance on Parent Corporations or Political Subdivisions

There are a few landfills in the metropolitan area that are owned by, and thus rely on, large parent corporations to cover their liability exposures through the purchase of insurance and planned self-insurance.

Some people who operate or are involved in the operations of county landfills felt that they would cover their liability exposures simply by levying taxes or issuing bonds if they were sued.

This might be considered a form of blind self-insurance since the operator has made no assessment of liability exposure and has made no arrangement to pay claims that may arise.

E. Solid Waste Insurance Study Survey

1. Purpose

Before any recommendations can be made regarding the feasibility or desirability of the state providing insurance coverage for permitted sanitary landfills, it is necessary to determine what the current status of insurance coverage is for landfills in the state. In response to this need, a survey was sent to each one of the state's 110 operating permitted sanitary landfills.

2. Raw Score Responses

Of the 110 potential respondents, 59 actually responded to the survey. This represents a return percentage of 54 percent.

Appendix A (refer to the Appendices section at the end of this study) lists the questions which appeared on the Solid Waste Insurance Study Survey with a tabulation of the responses given for each answer. Next to the tabulation number is a percentage figure. The percentage figure describes what percentage the tabulation number is of the total responses to the survey.

Question twelve asks what measures, if any, have been taken to financially protect against losses from nonsudden accidents if they do not have insurance coverage.

- Two respondents thought that their CGL policies would cover them for nonsudden accidents. One of them said that he thought the courts would rule that groundwater contamination would be considered a "sudden accident."

- Several respondents said that some measures were currently "under con-

sideration."

- Several respondents said they were relying on the county's authority to levy taxes if losses are incurred.

- One county had done extensive shopping for EIL coverage and concluded that their liability exposure from the landfill was not enough to merit purchasing EIL because it was too expensive and too limited in coverage.

- One county has decided to self-insure by setting aside $200,000 in Revenue Sharing Funds. Money can be withdrawn from this fund to cover response action costs and/or third party damages. The county made the decision to self-insure after investigating the possibility of purchasing EIL insurance and deciding that the premium and deductible levels were too high.

- One private operator was considering establishing a trust fund financed by a 10¢/cu.yd. tipping fee surcharge. After 35 years the fund would total around $10 million. The operator and county would be joint trustees of the fund. Interest on the fund's monies would revolve in and out of the fund as any expenditures were needed. The fund could be used for closure/post-closure costs and remedial action projects. The fund could be used to pay damages suffered by third parties if both of the fund's trustees agreed on such use of the money in the fund.

  The operator delayed any action on establishing this fund when he learned that the county wanted to apply a 75¢/cu.yd. surcharge on waste deposited at his facility in order to fund some of the same contingencies that were to be financed through the trust fund.

- One respondent said that his landfill was too small for him "to do much about financing a liability for nonsudden accidents".

- One county indicated it was considering closing the landfill.

Question 13 of the survey asked the respondents to make any additional comments related to the subject of the survey. The text below quotes or summarizes comments made.

- "The parent corporation carries a large deductible amount on its insurance coverage and, to that extent, self-insures."

- "I feel the State of Minnesota should take measures to protect counties and independent operators from this liability, especially since these facilities have been monitored and permitted by MPCA."

- Small landfills won't be able to afford EIL insurance coverage. A state fund financed by a yardage surcharge is needed with participation by all operating landfills. The fund could be used to purchase insurance or left in trust.

- One respondent thought that the taxing authority contained in the 1984 amended Waste Management Act was supposed to take the place of, or do as much as an insurance policy "as far as landfill cleanup or liability is concerned."

- "At the time we searched the EIL insurance market, the premium was approximately $53,000/yr. Coverage was not retroactive to the opening of the site."

- Another respondent thought that owners and operators of sanitary landfills

needed two things:

1) A dollar cap on the liability imposed on private owners/operators.

2) A pool for all the state's operating sanitary landfills with a reasonable deductible for which money can be escrowed.

- "We cannot afford to give the insurance industry another area or cause to rip us off." This respondent also thought that the liability of private owners/operators should be capped due to the necessary service they provide for society.

- Another respondent thought that by meeting MPCA requirements and carrying a CGL policy their liabilities were covered.

- "The risk (for nonsudden accidents) is one we had not thought about until recently."

- One respondent thought that the 70 foot clay liner under their landfill was sufficient insurance.

3. Significant results

a. Raw Scores

There are several raw scores which are particularly noteworthy. The following points briefly highlight these responses.

- Almost two thirds of the respondents (64%) indicated that they have not seriously reviewed their pollution liability insurance needs within the last three years. (Question #4)

- By a ratio greater than 2:1, publicly owned landfills have not reviewed

their pollution liability insurance needs within the last three years.

- Over half of the respondents (56%) indicated that prior to receiving the Solid Waste Insurance Study Survey they had not heard about the difference between CGL and EIL policies.

- 14 percent of the respondents indicated that they do not even have a CGL policy.

- The vast majority (92%) of the respondents do not have EIL coverage for their landfills.

- Over three-fourths of the respondents (78%) have never been contacted by a representative of an insurance company about purchasing EIL coverage.

- Almost two thirds (63%) of the respondents have not attempted to purchase EIL coverage.

- Of the respondents who did inquire about purchasing EIL coverage but did not do so, the cost of the premium was mentioned most often as the factor which swayed their decision not to purchase an EIL policy.

- The vast majority of those who have not purchased EIL coverage have also not taken alternative measures to protect themselves financially from losses caused by nonsudden accidents at the landfill.

b. Relationships between important variables

Questions numbered one and two on the survey ask whether the sanitary landfill is privately or publicly owned and operated. Combining the results of the answers to these two questions reveals the following pattern of ownership and

operation of the survey respondents:

Private ownership/operation :	12 (20%)
Private ownership/public operation:	1 (2%)
Public ownership/operation:	31 (53%)
Public ownership/private operation:	14 (23%)
(one invalid response):	1
Total	59

The following chart reveals the relationship between waste volumes received at sanitary landfills and whether or not there has been a review within the last three years of pollution liability insurance needs for the facility. These results lend credibility to the comment made by representatives of the insurance industry that it is generally the owners/operators of larger landfills who are more aware of their insurance needs.

	"Have you seriously studied and/or reviewed your pollution liability insurance needs within the last three years?"	
The Landfill receives approximately:	YES	NO
less than 20,000 cu. yds./yr.	6	15
20,000 - 99,999 cu. yds./yr.	7	16
100,000 - 249,999 cu. yds./yr	3	6
250,000 - 349,999 cu. yds./yr	1	0
over 350,000 cu. yds./yr.	4	1

The results of question number nine, "Is your landfill covered by an EIL policy?" indicates that only approximately five percent of the respondents have EIL coverage. Of the three respondents who have EIL coverage, one is publicly owned, privately operated and receives over 350,000 cu.yds./yr. Another is

privately owned and operated and receives over 350,000 cu.yds./yr., The third is publicly owned and operated and receives less than 20,000 cu. yds./yr.

The response to question number ten, "Have you ever been contacted by an insurance company who wanted to talk to you about selling you an EIL policy?" indicates that eleven respondents, or 19 percent, have been approached by a representative from an insurance company who wanted to talk about selling them an EIL policy. The survey results did not indicate any significant pattern between public/private ownership or operation, or waste volume in response to this question.

VI. EXTERNAL ISSUES INFLUENCING FINANCIAL PLANNING FOR LANDFILLS

The owners/operators of sanitary landfills contacted during the preparation of this study expressed concerns about other financial matters in addition to those of potential liability costs. Since any state initiative to deal with liability exposure would add to other costs incurred at a landfill, this section presents some of the other important cost concerns of landfill owners/operators.

A. Monitoring requirements

Since 1973 operators of sanitary landfills in Minnesota have been required to "construct and operate" a water monitoring program "to determine whether or not solid waste or leachate therefrom is causing pollution of underground or surface waters." (Minnesota Rules, 7035.0700)

Although this requirement was made in 1973, it was not given high priority for enforcement by the PCA until around 1981. During that interval the state primarily concerned itself with enforcement of such operational matters as blowing refuse, daily cover, rodent control and other aesthetic matters. Since 1981 the PCA has made groundwater monitoring a higher priority and has been requiring compliance with this rule for facilities permitted or repermitted since 1981. Still, most of the state's sanitary landfills are not yet in compliance with this rule. The operators of those landfills may soon be facing expenses of $10,000 to $20,000 per well for installation of a monitoring program if they want to be repermitted.

B. Changing Technology

Some owners and operators of sanitary landfills have mentioned that they felt they either were, or soon would be, adversely affected by changing waste disposal technologies. Much pessimism was expressed about the future of sanitary

landfills as a viable waste disposal technology of the future. Anticipation of technological/engineering methods that can improve the safety and security of landfills is accompanied by increasing costs to run a landfill business. Some owners/operators expressed doubt regarding their ability to afford the required technological improvements for their landfill.

C. Changing Regulations and Public Policies

Some owners/operators have voiced concern over the pace and nature with which government regulations and public policies relevant to sanitary landfills have been and are changing.

Many are concerned about what levels of financial assurance are going to be required of them to meet closure/post-closure and remedial action costs. They are concerned about how much time they will have to meet the requirements and how they will be able to afford them.

Some also say they are hesitant to make financial plans because they look at how public policy has changed overall towards sanitary landfills (which some of them feel is drastic) and wonder if the same degree of change can be expected with regard to financial assurance requirements. Some claim that this uncertainty has contributed to a delay in making plans to finance their potential liability costs.

D. Tipping Fee Surcharges

Concern has been expressed from both public and private owners of sanitary landfills that relate to the capacity of the industry to endure surcharges on tipping fees without suffering some adverse consequences.

Some have expressed the concern that tipping fees may rise to the point where there will be an increase of illegal dumping of solid waste. These people

suggest that any fee charged to insure and/or indemnify against pollution liability exposures be phased in and increased at a gradual pace so that illegal dumping does not occur.

Another concern owners of private facilities have expressed is that waste volume will decrease as surcharges are applied to tipping fees (to cover EIL insurance costs, for example). Decreased waste volume will probably reduce owners' profits. Ironically, decreased waste volume also increases pressure to raise the surcharge in order to finance the insurance program. While decreased disposal volume is viewed by some parties as a "problem," it is consistent with the state and Metropolitan Council's landfill abatement policy goals.

VII. OTHER STATE'S INITIATIVES

This study conducted an informal random telephone survey of several states to determine whether landfills in states without MERLA-style statutes (laws with a statutory cause of action for personal injury) were generally insured with EIL coverage. This study found that, in every case, the vast majority of sanitary landfills in states without MERLA-style statutes do not have EIL insurance. Therefore, it appears that other factors beyond MERLA-style statutes influence the availability of insurance to landfills.

This study also surveyed the statutes of other states to see what actions have been taken outside of Minnesota for financing costs of response actions and third party damages caused by sanitary landfills.

The study found that relatively few states have statutory requirements for proof of financial responsibility for response action costs. Of the ones that do have requirements in place, the required amounts vary greatly, although most are for relatively small amounts and are eligible for use in covering closure/post-closure costs in addition to response actions.

This study also found that New Jersey taxes solid waste deposited at sanitary landfills to finance an administrative victim compensation fund available for third parties suffering bodily injury or property damage caused by sanitary landfills.

Hawaii

Hawaii law provides that: "The Director (of Health) may require operators and owners of (solid waste disposal facilities) to provide a trust fund, surety bond, or letter of credit to assure proper closure, post-closure, and compen-

sation for injuries to people or property. [§342-51(F)] To date, no such requirement has been implemented to compensate people for injuries or property damage.

Illinois

Under Illinois law, if the Illinois Pollution Control Board determines that a solid waste disposal facility has violated the Illinois Environmental Protection Act," and that corrective action is required and such action will involve a delay," the Board may require the posting of a performance bond or other security to insure correction of the violation within a prescribed time.

Officials from the Illinois Environmental Protection Agency report that new rules are being drafted to require all owners/operators of solid waste disposal facilities to demonstrate proof of financial responsibility for closure, post-closure and remedial action costs.

Iowa

Iowa requires that when an agreement is entered into between a city or county with a private agency for collection of solid waste and establishment and operation of sanitary disposal projects, the private agency must post a sufficient surety bond conditioned on faithful performance of the agreement. [§445B.302]

Kansas

Kansas' Solid Waste Rules state that "(a) Persons operating solid waste facilities within the State of Kansas, shall secure and maintain liability insurance for claims arising from injuries to other parties including bodily injury or damage to property of others including coverage against non-sudden occurrences... (d) The department shall review the permit application and all other factors to determine an appropriate amount of insurance coverage, with limits of liability

of three hundred thousand dollars ($300,000) bodily injury and one hundred thousand dollars ($100,000) property damage and with not more than a five hundred dollar ($500) deductible for each occurrence..."[7]

Kansas' Solid Waste Rules apply this requirement only to privately owned solid waste disposal facilities, which comprise a small portion of the state's operating sanitary landfills (15 of 138). Of the fifteen privately owned landfills, a state official remarked that most of them have been able to procure EIL insurance, although the smaller facilities are having more difficulty than the very large ones. Kansas officials note that they would like to see this requirement applied to publicly owned sanitary landfills as well. They say that a bill may be introduced in the 1985 legislative session to close this loophole. Additionally, they are giving some thought to establishing a state fund financed through tipping fee surcharges to cover closure/post-closure and remedial action costs. There are currently no plans to make this fund cover third party damages. Officials say this is due to political obstacles, not lack of a need for such a fund.

Kansas' officials also say that they have delayed enforcing a requirement that sanitary landfills have EIL insurance because of shrinking availability and high cost of EIL coverage there. One state spokesman said that approximately one year ago there were about a dozen insurance companies willing to write EIL insurance in Kansas. Now there are only two.

There is no statutory cause of action for personal injury claims derived from hazardous substance exposure under Kansas law.

Kentucky

Kentucky requires that the operator of a solid waste disposal facility post a $10,000 performance bond to guarantee compliance with rules and regulations. [§224.846(1)]

Michigan

Michigan requires licensees of solid waste disposal facilities to post surety bonds between $10,000 and $500,000 as assurance of maintenance for a period up to five years after the landfill is closed. The amount of the bond is based on the acreage of the facility. Bond amounts are calculated at $4,000 per acre. The bond can then be used to cover closure/post-closure and/or remedial action costs.

In November of 1983 a bill was introduced in the Michigan Legislature which would have required EIL insurance of all permittees of hazardous waste, water discharge, underground petroleum tank storage (except residential heating fuel tanks smaller than 1,100 gallons), and solid waste facilities, including all sanitary landfill owners/operators.[8]

The proposal was amended to delete the applicability of the requirement for solid waste facilities after negotiations with the insurance industry. The insurance industry's position during these negotiations was that there was not sufficient capacity in the market to underwrite coverage for the number and kinds of facilities in the bill.

The House author of the above-mentioned bill, Representative John Cherry, believes that, given the difficulty in obtaining EIL coverage, the state should develop its own funding mechanism to at least finance remedial action costs. Rep. Cherry reported that Michigan has estimated the cost of groundwater cleanup

at 1,000 identified contaminated sites at over $3 billion. Due to the size of that figure, no plan to fund victim compensation costs is currently being considered. Rep. Cherry indicated that, in addition to the aforementioned bill, some legislators are considering a bill which would make the state an insurer for remedial action costs at solid and hazardous waste facilities. All such facilities would be required to have insurance for remedial action costs and have the option of self-insuring or procuring private insurance if they can obtain the required limits. Facilities unable to self-insure or purchase private insurance (probably the vast majority) would then be required to purchase such insurance from the state, which would bill the permittee for insurance premiums and otherwise act as an insurer. Michigan has a state-run worker's compensation insurance fund (the Michigan Accident Fund) which could serve as a model for such an insurance plan. Again, due to the huge pricetag for cleaning up known contaminated sites ($3 billion), the state insurance plan would not include coverage for third party damages.

Spokespersons from the Michigan Department of Natural Resources said that, based on their best information, the vast majority of the sanitary landfills in Michigan do not have EIL coverage.

Mississippi

Mississippi law states that "those involved in the collection and disposal of solid waste must post a performance bond satisfactory to the municipal body within whose boundaries the solid waste facility or site is located. [§17-17-23]

Nebraska

Applicants for licenses to operate a solid waste disposal area in Nebraska must file a performance bond of $500 per acre of disposal area and not less than $2,500 with the Director of Environmental Control. The bond terminates one year

after the last day of the license period. Cities, counties, and villages are exempt from this requirement. [§81-1518 (3)]

New Jersey

The state of New Jersey is the only state discovered by this study to tax solid waste in order to establish a fund that can be used to pay for third party damages caused by sanitary landfills. Money in this fund, the Sanitary Landfill Contingency Fund (SLCF), is administered by the state Department of Environmental Protection (DEP).

Solid waste deposited at sanitary landfills in New Jersey is taxed at the rate of 15¢/cu. yd. to fund the SLCF. This tax was implemented in February, 1982. As of Nov. 1, 1984, the SLCF fund balance was about $16 million. Eight claims have been paid out of the fund, amounting to $220,000. All of the claims have been paid to cover property damages incurred by residential property owners. There is currently no limit on the amount that can be paid out for an individual claim, although there is currently an effort being made by DEP officials to legislate such a rule.

Claims can be paid out of the fund to victims of improper operation or closure practices at a sanitary landfill. If a person seeks to claim compensation from the SLCF, he/she must first notify the owner and operator of the landfill of the intent to file a claim. The person then may file a claim with the DEP, detailing the specifics of the claim. After investigating and reviewing the claim, the SLCF Director may offer the claimant an award. The claimant may accept it, or, if dissatisfied, appeal the claim to the Commissioner of the DEP, who makes a final judgment. To date, no claims have been paid for personal injury claims, although several are being considered. If a claim is paid out of

the SLCF the DEP has the right to sue the owner/operator of the responsible facility to recover the claim amount. As of Jan. 8, 1985 the DEP had not exercised that right. The tax of 15¢/cu. yard is not changed in response to claims at a facility.

Claimants are allowed to pursue a civil action as well, and are not precluded from receiving awards from the SLCF in doing so. However, no person who receives compensation for damage pursuant to other state or federal laws may receive compensation for the same damages or cleanup costs from the SLCF.

If the SLCF encounters a negative balance due to total award amounts exceeding fund collections, payments made out of the SLCF will be prorated to allow the fund a chance to replenish itself.

The SLCF is invested by the state to earn a return for the fund. These investments have been earning returns at the rate of approximately 11 percent.

The possibility of purchasing EIL insurance with some of the fund's monies was investigated by the DEP. However, a decision not to purchase EIL was made due to the high premium costs and the fact that fewer insurers were offering EIL insurance in New Jersey. New Jersey does not have a statutory cause of action for personal injury claims caused by exposure to hazardous substances.

Regarding a related matter, some legislators in New Jersey are planning to introduce a bill into the 1985 Legislature that would create a broader-based, victim compensation fund. This bill, which is part of a "Tort Compensation Package" would allow victims of hazardous substance exposure to apply to it for compensation if they were denied compensation in a court case. The bill would not call for the elimination of the SLCF. This fund would be administered by the State Department of Health.

New York

New York's Solid Waste Rules allow the New York Department of Environmental Conservation (DEC) to require forms of surety or financial responsibility to cover claims resulting from injuries to persons or property as a result from injuries to persons or property as a result of sudden or nonsudden occurrences. Liability insurance, self-insurance, or other forms of financial responsibility may be used if approved by the DEC. (6 NYCRR Section 360.6 (d))

A spokesperson from the DEC has said that the vast majority of the state's landfills do not have EIL insurance or alternative means of indemnification to cover third party liabilities. This includes approximately 400 publicly owned landfills. Cost was mentioned as the principal reason why most landfills did not have EIL COVERAGE.

Oregon

Officials from the Oregon Department of Environmental Quality (DEQ) reports that they are aware of only one of 125 sanitary landfills in Oregon carrying EIL coverage. This is a large, recently closed facility (it had received around 1,000 tons/day) owned by a large construction firm. DEQ officials did not believe that any other landfills in Oregon were covered by EIL insurance.

Pennsylvania

Pennsylvania requires operators of solid waste disposal facilities to post a bond with the state to guarantee safe operation of the facility. Bond amounts are set on a per acre basis, up to $5,000/acre depending on what types of wastes are accepted at the facility.

Tennessee

Operators of solid waste disposal facilities must file a performance bond payable to the state or equivalent cash or securities with approved corporate surety. Tennessee statutes state that "...the bond or cash deposit or marketable value of the securities deposited by the operator shall be conditioned upon proper operation and closure of the registered solid waste disposal operations; the amount shall not be less than $1,000/acre affected by the operation. Liability under the bond shall continue until the operation is properly closed and ended." [§53-4343(b)]

Texas

Texas requires that an assurance of financial responsibility be posted with the state by operators of solid waste disposal facilities to ensure satisfactory operation of those facilities. [§4477-7(4)(e)(5)]

Vermont

Vermont law states that "Any person who operates a landfill approved under the rules shall provide evidence of financial responsibility in such form and amount as the Secretary (of the Agency of Environmental Conservation) may determine to insure that, upon abandonment, cessation or interuption of the operation all appropriate measures are taken to prevent present and future damage to the public and environment. [§6611] To date, this has meant setting aside up to $20,000 in an escrow account.

Wisconsin

In 1977 the Wisconsin Legislature established the Waste Management Fund (WMF) to address the problem of long-term care of solid and hazardous waste disposal sites. The following text is excerpted from a document published by the Wisconsin Department of Natural Resources, Bureau of Solid Waste, entitled "The

Waste Management Fund."

Note that the WMF does not address third party damage problems.

The WMF is an environmental protection fund which serves two basic purposes. First, the fund pays for the long-term care of approved facilities after the owners' responsibility ends. Long-term care maintenance includes monitoring and potential site repair as necessary. Owner responsibility extends 20 or 30 years after a facility's closure for solid or hazardous wastes and 30 years for approved mining facilities. (In exceptional cases, the Department may reduce owner responsibility to a minimum of 10 years. The WMF would then continue long-term care for perpetuity.)

Secondly, the WMF provides payment for related costs incurred by an approved facility as the result of an unanticipated occurrence which poses a substantial hazard to public health or welfare. This payment may be made during the facility's operating life or during the period of owner responsibility following closure. Unforeseen problems may arise despite proper facility construction and operation in accordance with the DNR-approved Plan of Operation, this provision is designed to meet this contingency.

Related costs which arise from an unanticipated occurrence are:

1. The costs of repairing a facility or isolating the waste.

2. The costs of repairing environmental damage caused by a facility.

3. The costs of providing temporary or permanent replacement for residential water supplies damaged by a facility.

4. The costs of assessing the potential health effects of an occurrence -- not to exceed $10,000 per occurrence.

All owners or operators of licensed solid waste land disposal facilities must contribute to the Waste Management Fund by law. When the WMF reaches $15 million, facilities which have been paying into the fund for at least five years will no longer be required to contribute. If the balance of the fund drops below $12 million, normal payment schedules would resume.

While all licensed facilities must contribute to the WMF, not all facilities are eligible to draw from the fund. To be eligible, one of the following criteria must be met.

1. The facility has a plan of operation approved by the Department after May 21, 1978.

2. The facility had a plan of operation approved by the Department between May 21, 1975 and May 20, 1978 and had a license issued and commenced operation after May 21, 1978.

3. The facility was initially licensed between May 21, 1975, and May 20, 1978, and prior to May 20, 1980, the owner successfully applied for a DNR determination that the facility's design and plan of operation substantially complies with the approved criteria noted above.

No facilities initially licensed prior to May 21, 1975, are eligible to use the Waste Management Fund unless the special administrative process is completed.

Additionally, in 1983 Wisconsin established an Environmental Repair Fund (ERF). The ERF is to be used to cover unanticipated occurrences for sites that threaten human health or welfare when a financially solvent owner cannot be found. If a financially solvent owner is later found, the state can sue to recoup its expenditures. The ERF is funded through tonnage fees at all operating licensed solid waste disposal facilities.

An amendment to a bill was introduced in the 1983-84 legislative session in Wisconsin which would have created a state-run insurance pool. All solid and hazardous waste facilities operating in Wisconsin would have had to purchase insurance through this pool as a condition of licensing. The insurance would have provided coverage for non-sudden accidents. A Board of Governors would have been created to procure a group insurance policy for the pool. The amendment to create this pool was voted down.

An official with the Wisconsin DNR reports that, as in Minnesota, the vast

majority of sanitary landfills in the state do not have EIL coverage. The official has discovered only "one or two" that have EIL insurance, and these two are operated by a very large waste disposal firm. The other landfills remain uninsured primarily due to the cost of risk assessments and high premium costs, reported the official.

VIII. ISSUES OF THE STATE OR COUNTIES ASSUMING LIABILITY COSTS

It has been suggested by some landfill owners/operators that the state should assume liabilities for pollution damages caused by landfills. However, it appears that there are several constitutional constraints to the state assuming the liability of other parties for damages caused by a sanitary landfill. This subject was studied and summarized in a memo prepared by the Attorney General for the Waste Management Board for use in the Board's Report on Allocation of Liability Among the Owners, Operators, and Users of a Hazardous Waste Disposal Facility.[9] The attorney general has advised that the principles expressed in the memo prepared for that study would apply in the same manner to a solid waste disposal facility.

> "If the legislature determines that the state should assume liability for damage claims arising from a hazardous waste disposal facility, it must do so in a manner which is not violative of the state constitution. Three state constitutional provisions could restrict the state's ability to make payments on such liability claims: Minn. Const. art. 11, §§ 1, 2 and 4. After reviewing the caselaw relevant to these three provisions, it is possible to reach the following conclusions:
>
> (1) The state has three alternatives for financing a liability fund: private funds, public funds or a combination of private and public funds.
>
> (a) Private funds are those revenues derived from sources other than taxes--which are not deposited in the state treasury . Funds may be held by the state treasurer as custodian without being commingled into the state treasury.
>
> (b) Public funds are those revenues raised by taxation, which are deposited in the state treasury as general funds.

(2) If the state chooses to finance a liability fund solely with private funds, it is bound by these restrictions:

(a) The funds must be designated for a particular purpose;

(b) Payments from the funds must be used exclusively for the designated purpose; and

(c) Payments must be limited solely to the funds, without recourse to the general funds of the state.

(3) If, on the other hand, the state chooses to inject public funds into a liability fund, it faces these constitutional restrictions:

(a) Payments from public funds must be preceded by an appropriation;

(b) The purpose for which the funds are appropriated must be primarily public, as opposed to private;

(c) A public purpose may be satisfied on one of two bases: either as a benefit to the public, or as a moral obligation.

(d) The state may use public funds only to a limited extent; it may not pledge its full faith, credit and taxing power for the purpose of meeting claim payments. In other words, the state cannot, constitutionally, guarantee that all liability claims will be paid; it must limit its liability to funds existing in the liability fund.

If the state follows these guidelines, it is likely that it will be able successfully to assume liability for payment of damage claims arising from a hazardous waste disposal facility within the confines of the state constitution."

Another question which has been raised in the context of the subject of state

assumption of liability is how much liability the state has by virtue of its permitting and inspecting activities at landfills. Two recent cases decided by the Minnesota Supreme Court indicate that the state would probably not be held liable for damages caused by a sanitary landfill by virtue of its permitting and inspecting activities. The following analysis is borrowed heavily from a memo of the Minnesota Attorney General's office on "Liability of the State for Various State Activity: Analysis of Cracraft v. City of St. Louis Park, Hage V. Stade and Washington County v. Minnesota Pollution Control Agency."[10] The memo concluded that "Minnesota caselaw indicates that the state, and other governmental bodies, will not be subject to tort liability for performing certain acts as required by law." In one case the court ruled that the state is immune from liability for performing "public", as opposed to "special" duties. In two cases, the court held that inspection for fire code violations were "public" duties. The court recognized, however, that four factors may work to create a "special"duty:

(1) Where the governmental body has actual knowledge of a dangerous condition;

(2) Where there had been specific reliance on the governmental body's representations or conduct;

(3) Where the ordinance or statute creates a mandatory duty to a particular class; and

(4) Where the governmental body's lack of due care has increased the risk of harm.

Another case involved the state's permitting and inspecting activities at a sanitary landfill that caused groundwater contamination and was forced to close. The state district court for the Tenth Judicial District ruled that the state was immune from tort liability because it was performing "discretionary" acts,

as opposed to ministerial acts. In deciding whether an act would be considered "discretionary", the court focused on whether the act called for "the exercise of judgment or discretion or involved "the power or right of acting officially according to what appears best and appropriate under the circumstances."[11]

In applying the discretionary versus ministerial test, the Minnesota Supreme Court also held that decisions made at a planning level, such as promulgation of rules, constitutes a discretionary function. By contrast, a "ministerial" duty was defined by the Minnesota Supreme Court as "one in which nothing is left to discretion...a simple definite duty arising under and because of stated conditions and imposed by law or a duty (that is) absolute, certain and imperative, involving merely the execution of a specific duty arising from fixed and designated facts."[12]

The court ruled that the PCA's issuance of a sanitary landfill permit was "clearly a discretionary function of the MPCA."[13]

Based on these cases it would appear that the state would not have a share of liability incurred at a sanitary landfill by virtue of its permitting and inspection activities. The office of the Minnesota Attorney General advised that these principles would probably apply in the same manner to counties whose only role was permitting and inspecting a privately owned landfill.

However, if a county or city owns and/or operates a sanitary landfill, they are considered a responsible person under MERLA's provisions, and could be held liable under MERLA if there is a release of a hazardous substance from the facility. [14]

IX. ALTERNATIVES FOR FINANCING THE EXPOSURE

A. Key Issues/Questions Relevant to Any State Initiative

The purpose of this section of the study is to identify the key issues which will be affected by any option the Board may recommend.

- Does the option serve to financially protect the operators of sanitary landfills or to compensate potential victims of contamination from sanitary landfills or both?

  Although the state is moving away from reliance on landfills as a waste disposal technology, there are some areas in the state where there may not be a reasonable alternative to landfilling for some time. Additionally, those areas which will make a transition away from landfills for waste disposal will not entirely eliminate all of their dependence on landfills, at least for the foreseeable future. Therefore, a case can be made that the state does have some interest in assuring a certain degree of landfill service to the state, at least for the foreseeable future. In assuring that service the state may have to provide some assistance to the operators of those facilities.

  There is precedent for state support of private business, especially if the business provides a service deemed necessary to the society or the community. There is also precedent for using public financing as a means to shape the behavior of the financial operation. Some landfill owners/operators feel that the state has a responsibility to provide such assistance since it permitted sanitary landfills and set the operational rules for those facilities.

  However, the state may not want to provide assistance to the point

where doing so encourages the establishment of new landfills. The state also needs to encourage safe operation at landfills. Therefore, the state should not adopt a policy that relieves landfill operators of all liability costs.

The state also may want to adopt a policy which provides the victims who have been harmed by exposure to landfill substances the opportunity to be compensated. The state could do this by either promoting the purchase of insurance (EIL), or the development of a fund (such as an administrative victim's compensation fund). A key question raised in this context is whether the state should provide coverage for something that insurance companies will not cover.

Although separate goals, state assistance to landfill operators and victim compensation are not necessarily incompatible.

- How can coverage be assured and still encourage conscientious operation at sanitary landfills?

If operators are assured that there will be coverage provided for damages caused by their operation, there may be a tendency to "cut corners." Although a strict regulatory environment addresses this concern to some extent, concern for potential liability provides even stronger motivation for safe operation. County officials have expressed the concern that the existence of a good regulatory program is not providing enough incentive for safe operation. Pooling schemes concern some operators because they feel that the "safe" operators may pay the costs of operators who are less careful than they.

- What is the state's policy regarding the future of sanitary landfills?

  The state has defined several objectives for the management of solid waste in Minnesota. These include environmental protection, resource conservation through waste abatement(such as encouraging alternatives to landfilling), coordinated solid waste management among political subdivisions, and orderly and deliberate development and financial security of waste facilities. Achievement of these objectives will result in less solid waste to be landfilled. In effect, then, it has become state policy to reduce the practice of landfilling solid waste.

- Who should bear the costs of landfilling solid waste?

  There are several ways in which the costs of landfilling solid waste could be distributed. If a surcharge is imposed on solid waste disposal to finance purchase of insurance or a fund, the users of that service pay for the costs of that insurance or fund. This would be considered internalizing the costs of waste disposal. This already occurs to some extent at the few facilities that have purchased EIL insurance.

  If the state uses general revenue to provide or assist in obtaining insurance coverage or building a fund, all the taxpayers of the state pay.

  If a sanitary landfill owner/operator cannot or does not purchase adequate insurance coverage, and there is a claim against him, one or more parties may pay. If financially solvent, the owner/operator may pay. If the owner/operator cannot pay, state Superfund monies may be used, (for remedial action costs, <u>not</u> third party damages) which means that businesses generating hazardous waste and the consumers of their pro-

ducts pay, since hazardous waste generators are taxed to finance the state Superfund. Victims may also pay in that they may lose their health and/or property value and be left uncompensated.

- Is it possible for the costs of the recommended option to be distributed in an orderly, predictable way?

Insofar as it is possible, any state initiative should strive to make the costs of the initiative predictable. The potential costs of damages due to landfills are very difficult to estimate. Nevertheless, the Board should consider whether the option allows owners/operators and the state to predict and plan for potential costs.

- How should fees be assessed to finance any landfill indemnification plan?

This study examines two ways in which fees might be assessed to finance a landfill indemnification plan (such as an insurance pool or trust fund).

Fees may be assessed on a "per cubic yard" or "per ton" basis and be the same rate at all landfills. This method would have the least amount of effect on the competitive balance of the marketplace, and therefore seems to be favored by many landfill operators. This method would not necessitate that a "degree of hazard" be determined at each landfill. This method equates degree of hazard with waste volume, which may not be accurate. However, this method is probably the easiest to administer and least controversial.

The second method examined is for assessment based on the degree of hazard posed by each individual landfill. Thus, tipping fee surcharges

might be set at drastically different levels among landfills in the same geographical region.

This second method is most equitable in terms of how it assigns financing responsibility in proportion to the degree of risk posed by each landfill. It therefore also poses the potential for significantly altering the competitive balance of the marketplace. This potential effect is viewed by some as desirable in that it adds financial pressure to close the least safe landfills. However, there is likely to be substantial resistance to this option by many landfill owners/operators, particularly those who own/operate smaller landfills. Administratively, this option is potentially more difficult and costly to administer, as the process of assessing risk at each facility may be time-consuming and controversial.

- Can commercial insurance adequately address needs of landfill operators?

CGL insurance covers on-site "sudden and accidental" pollution accidents. However, CGL policies are starting to exclude all pollution liability coverage. Some insurance industry experts are predicting that by January, 1986, most CGL policies will exclude all pollution liability coverage. CGL coverage should not be depended upon to cover pollution liabilities at a landfill.

Significantly, EIL insurance <u>does not cover damages that occur on-site</u> at a sanitary landfill. This also means that closure/post-closure costs are not covered.

Only if contamination spreads off-site and threatens to cause significant third party damages might the EIL insurer consider covering

cleanup costs.

EIL coverage will continue to rise markedly in price and be less available and/or unavailable to owners/operators of most sanitary landfills. This trend is occurring nationwide and will affect Minnesota at least as much as it affects other states.

EIL policies are written on claims-made forms only. This means that the insurer will only consider honoring claims made while the policy period is in effect. Policy periods are for one year and are thus subject to annual renegotiation. This means that even if EIL coverage becomes available and affordable, it should not be perceived as a long-term reliable tool of indemnification, since it can be revoked on an annual basis.

There is another problem associated with the claims-made forms. Insureds may pay premiums for a number of years and experience claims which total an amount less that the premiums paid to the insurer, however, the balance of the premiums paid will remain with the insurer. For example, a landfill insurance pool may pay out a premium volume of $10 million overa five-year period and experience $5 million in claims. If, at the end of that five-year period the pool's policy is cancelled, the insurer retains $5 million remaining premium volume, plus interest earned on the investment of that money. This contrasts with the use of a trust fund for indemnification, wherein all money collectedin the fund would remain available to the pool.

In order for any landfill insurance pool to be insurable, some of the state's worst landfills will be excluded from coverage. Most EIL poli-

cies exclude coverage for known or expected damages. Since there is already documented groundwater pollution at over 35 percent of the state's landfills, it is relatively safe to assume that at least 35 percent may not be eligible for participation in a state insurance pool. Insurance, then, will probably not be available to those facilities which will need it the most.

In summary, the major gaps in coverage and wavering nature of availability currently cover the needs of landfill owners/operators.

- Is commercial insurance available to Minnesota landfills?

The Minnesota Department of Commerce is currently conducting a study on the availabilty of EIL insurance to Minnesota businesses, and how the degree of availability relates to the existence of the state Superfund law.

Insurance industry experts have mentioned that MERLA causes them problems in writing EIL in Minnesota, however, they have also stated that many landfills would not be insurable even with an amended MERLA. Some insurance industry experts note that the intrinsically high nature of the risk involved in providing EIL coverage for a landfill is the primary reason why most landfills remain uninsured.

- Are there existing financial mechanisms in place to cover the costs of response actions?

The state Superfund program provides an existing financial mechanism to deal with on-site response action costs where responsible parties cannot or will not pay for cleanup costs.

Additionally, as part of the PCA's upcoming proposed rules, owners/operators of sanitary landfills will have to demonstrate proof of financial responsibility for response action costs, as well as clo sure and post-closure costs. Operators who wish to have their facilities repermitted will probably meet these requirements by posting bonds or establishing trust funds.

It should be noted, therefore, that the state will soon have two complementary programs implemented to cover response action costs. This fact, coupled with the nonexistence of private insurance for these costs may suggest that there is not a need to create a state-sponsored insurance program for these costs.

- Should privately owned landfills be treated differently from publicly owned landfills?

Owners and operators of privately owned sanitary landfills must charge for the full costs of operating their facility in the tipping fee. Sanitary landfills which are owned by public entities often subsidize the tipping fees through property taxes, creating artificially low tipping fees that do not accurately reflect the cost of land disposal. This causes great disparities in the tipping fees at various sanitary landfills. Also, publicly owned facilities have taxing and bonding authority which can be used to cover costs.

Owners of some private facilities fear that if a surcharge is implemented to cover EIL insurance costs at all of the state's permitted sanitary landfills, publicly owned sanitary landfills may also want to subsidize these costs through property tax collections. Some owners of

the private sanitary landfills point out that this would aggravate price disparities that already exist in the market for mixed municipal refuse. They also point out that a requirement that only privately owned landfills carry EIL-type coverage would create an unfair economic situation, as they would have to charge for that coverage and publicly owned facilities would not.

- Should existing landfill operations be treated differently than new operations?

During the course of researching this study there was agreement among all concerned parties that existing landfills generally present a greater risk to insurers than new more highly engineered landfills. In the past, engineering requirements for landfills were not as stringent.

Future landfills will also be subject to financial requirements for closure/post-closure and remedial action costs. Additionally, there should be greater knowledge and control over what goes into future landfills than there has been in the past. This will make it easier for insurers to define a risk, and therefore, offer coverage.

However, as these landfills age it will become more difficult, and perhaps impossible to insure them. Even though they may be engineered to the utmost extent, insurers will become increasingly reluctant to insure a risk that constantly increases.

Therefore, from a long-term perspective, new landfills pose similar problems as existing landfills and should thus be considered for participation in any indemnification plan the Board may recommend .

- Should large landfill operations be treated differently from small landfill operations?

It appears that most large landfills already have or can obtain EIL insurance. Representatives of two large waste disposal firms have expressed the opinion that their facilities should not be included in a pool with all or most of the state's other landfills since they do not need the coverage. That position conflicts with the desire expressed by many others that all of the state's permitted operating sanitary landfills be included in a pool. However, due to the high volume of waste received at the few large metro area landfills (about half of the state's total solid waste volume), they may need to be included in a pool to make it financially viable.

- Will landfill owners/operators finance their pollution liability exposure for response action costs if the state does not become involved?

When the PCA enforces the financial responsibility requirement for response action costs, some facilities may choose to close rather than comply with the requirement. Most notably, facilities which are nearing capacity may feel it is more advantageous to close their landfill rather than go through the burden of repermitting. Landfills which were originally poorly sited or ones with identified groundwater problems may also be more likely to close given that their costs for repermitting may be relatively high.

- Will landfill owners/operators finance their pollution liability exposure for third party damage costs if the state does not become involved?

The vast majority of the state's landfill owners/operators will not

finance their pollution liability exposures for third party damages if the state does not become involved. EIL coverage will remain unavailable and/or unaffordable on an individual basis to most sanitary landfill owners/operators at least for the short term future. Also, there has been no appreciable move on the part of landfill owners/operators to use alternative means to finance this liability exposure in the absence of the availability of insurance coverage.

B. Potential State Initiatives

OPTION "A"

STATUS QUO

Under Option "A" the state would not undertake an initiative to promote or provide insurance for landfills.

The status quo option does not serve the interests of potential victims very well. Since most landfill owners/operators do not have insurance or other financial mechanisms to cover their liability exposures, there may be limited access to assets by a victim who wins a lawsuit against a landfill owner/operator.

Option A does not serve to protect the operation of the vast majority of the state's landfills. Most of the state's landfill owners/operators do not have any indemnification plan to cover significant pollution liability exposures. Most of them are thus financially vulnerable should major pollution problems be caused by their landfills.

Commercial insurance is one indemnification tool that is not available or affordable to all but a few of the largest landfills in the state. This would afford some protection to the landfill operation although the level of protection pro-

bably would not reach the levels that would be obtained if insurance were available. Only a few landfills have selected the self-insurance option. In the absence of buying insurance coverage some landfill owners have chosen to try to protect their assets by incorporating their landfill operation separately from all of their other assets. This tactic would probably be subject to scrutiny by a court if the owner were sued for damages resulting from landfill operations. It is questionable what degree of of protection this will provide.

This option does encourage conscientious operation at a landfill by providing a liability incentive. An increasingly strong regulatory environment also encourages this.

This option is consistent with the state's public policy goal of landfill abatement. Lawsuits due to pollution damages caused by landfills may drive some of the uninsured landfills out of business. The costs of meeting regulatory requirements for repermitting may also encourage the closure of some landfills, most likely the small, privately owned ones that do not have a large financial base.

This option does not contain a plan for predicting potential liability costs for third party damages. When the PCA's new rules for financial responsibility for response action costs are adopted, some order and predictability will exist because operators will know what the exact requirements are and should be able to finance these costs through surcharges on tipping fees. Those costs would then be borne by the users of the landfill service.

In the absence of any insurance plan the costs for third party damages will be borne by owners/operators to the extent that they are forced, willing and/or able to pay, and by the third parties themselves to the extent they go uncom-

pensated. Costs for remedial actions are borne by responsible parties to the extent that they are forced, willing, and/or able to pay and by the taxpayers of the State of Minnesota and the consumers of the products of Minnesota businesses that generate hazardous wastes (since general revenues of the state and revenues paid by generators of hazardous waste in Minnesota are used to finance the state Superfund). Thus, this option is not very effective in seeing that the costs of landfilling are internalized to the users of landfills.

Some costs of landfilling are spread among all taxpayers of a county when counties use property taxes to subsidize the costs of operation at a landfill.

OPTION "B"

STATE PROMOTION OF DIRECT PURCHASE OF EIL INSURANCE

If a policy decision is made that the state should promote the purchase of insurance coverage there are several ways in which the state could promote this. This discussion assumes that an adequate amount of EIL insurance will be available.

One way would be to provide an informational, research type of service to parties interested in purchasing EIL coverage. The state could increase and update the information it has on the facilities to be covered by insurance, companies offering coverage, and various types of coverage available. It could continue to serve a research function to keep abreast of changes in the kinds of coverage offered. This type of initiative would only pertain to the early years of the program and would involve the least amount of state involvement of the options presented here.

Another way in which the state could promote the purchase of insurance would be

to tax solid waste in order to buy some excess insurance coverage. For example, the state might require a pool of the state's sanitary landfills to have EIL coverage with limits of $10 million per occurrence/$20 million annual aggregate. The state might then purchase additional limits of, for example, another $10 million. Thus, the pool would be insured to $30 million annual aggregate. Responsibility for damages incurred which would exceed $30 million would revert back to the original responsible parties. The state's role in this type of program is modeled after that mandated for the state if it were ever to have a hazardous waste disposal facility. This initiative is attractive in that it does internalize the costs of solid waste disposal, thereby also meeting landfill abatement objectives.

As mentioned earlier, the key factor in determining whether a landfill is insurable is the probability of whether it will leak and cause damages. The state could therefore choose an option which promoted the engineering upgrading of landfills in order to enable them to become more insurable. The state might provide a grant and/or loan program to operators to help finance landfill improvement projects. Alternatively, the state could pay for some or all of the costs of a risk assessment after an engineering project at the landfill has been completed and paid for by the operator.

Any of these initiatives would serve the state's interest of preserving needed landfill service to the state. Assuming that more landfills obtained EIL insurance, it also serves the interest of victims by making it more likely that some assets will be available for victims to be compensated.

The most serious shortcoming of this option is that it relies on the purchase of commercial insurance to cover owners/operators pollution liability costs. As mentioned earlier, there are serious gaps in such coverage, thus, significant

liability exposures would remain even after coverage were placed. In this respect, the protection provided to owners/operators and victims remains limited. Also, even with state efforts to promote EIL coverage, it may remain unavailable to most of the state's landfills.

OPTION C

AN INSURANCE POOLING OPTION

Most sanitary landfill owners/operators do not have EIL coverage. Due to the costs of such coverage most owners/operators will be unable to purchase EIL coverage on their own. A plan wherein most or all of the state's sanitary landfills were mandated to participate in an insurance pool might alleviate this problem. If the state decides that most or all of the sanitary landfills in the state must obtain EIL coverage, the formation of a pool is the only way this might possibly be accomplished.

In order to form a pool the legislature could pass a bill mandating owners/operators of sanitary landfills to become members in an insurance pool that maintains proof of financial responsibility for third party claims resulting from gradual pollution problems emanating from landfills. The pool program could be administered by the state or a private firm under contract with the state. Failure to participate in the pool as required by legislation could be grounds for permit revocation and/or fines.

The Legislature could require that a fee collecting mechanism be instituted at all operating landfills to cover the costs of engineering risk assessments, premiums, deductible and program administration. In order to achieve the greatest spread of the costs of the plan, fees would probably be assessed on a "per cubic yard" or "per ton" basis and be the same rate at all sanitary landfills.

From an insurance industry viewpoint, the risk should be spread as broadly as possible. Insurers would not want to insure a pool containing only the state's poor to medium risk landfills. If participation were optional it is possible that the best risks would obtain their own coverage rather than participate in a pool, thus leaving a pool of risks which would collectively be uninsurable. In order to avoid an adverse selection of risk it would probably be necessary to make participation mandatory, with the possible exception of eliminating some of the state's poorest risks (such as sites already listed as a "Superfund" site).

Some concern has been expressed by a few owners/operators that participation in a state pool would act as a disincentive for safe operation at the landfills. This may be a legitimate concern. The costs of increased risks would be spread among all operators, thus a poor operation would not pay the full costs of the increased risk.

One difficulty with this option is that it relies solely on insurance coverage to protect landfill operators and cover third party damages. The state cannot rely on the availability of EIL coverage. Even if it is available, the major gaps in EIL coverage do not offer full protection for pollution liability exposures. (See discussion, p. 27) Also, since EIL policies are written on a claims-made basis only, it is conceivable that one poor year of claims experience could result in the pool's policy being cancelled and leave the pool uninsurable. Another difficulty considered here is the cost of EIL coverage. EIL insurance is very expensive and is rapidly getting more expensive. The state must consider if the cost of this type of coverage is economically justifiable or if better alternatives exist for financing the liability.

It should also be emphasized that forming a pool of most of the state's landfills does not guarantee that insurance will be available to the pool. It is

very possible that the state could mandate the formation of a pool to procure EIL insurance and find that no insurer may be willing to write the coverage needed. During the course of preparing this study most insurance industry representatives were very pessimistic about the potential for insuring a pool of sanitary landfills in any state, including Minnesota. For this reason, if most or all of the states sanitary landfills were grouped into a pool for the purpose of indemnification, it may be wise to allow the pool options other than insurance, such as trust funds, for indemnifying themselves.

OPTION D

CORROON & BLACK'S INDEMNIFICATION/INSURANCE PROPOSAL

The Waste Management Board has received a proposal from Corroon and Black of Minnesota, Inc., (C&B) an insurance brokerage firm, for how the state should finance liability for third party damages caused by sanitary landfills. C&B proposes the creation of an administrative victim compensation fund that would be administered by C&B under contract with the State of Minnesota. The basics of the C&B proposal are as follows:

1. Legislation would create a Board of Governors.
2. Corroon and Black of Minnesota would be appointed administrators to:
   A. Perform the necessary statistical analysis through their advanced Risk Management services to develop specific financial criteria for the fund.
   B. Issue policies, collect premiums, administer claims.
   C. Negotiate and place excess coverage as is practical.
   D. Keep, develop and trend the fund's statistical data.
3. Primary risk retention levels would be set at between $5,000,000 - $10,000,000.

4. Tonnage taxes would fund this retention level over a 3-5 year period, would pay for administrative costs and pay for any excess coverage purchased.
5. Coverage format should resemble conventional EIL coverage as closely as possible in at least the early stages of development, to minimize potential strain from catastrophic loss.
6. Strategy should be developed to direct obviously uninsurable sites into a program of closure, with proper monitoring procedures.

C&B is suggesting that an administrative victim compensation fund of between $5 million and $10 million be established. Should EIL coverage become available, C&B would be able to negotiate and place excess EIL coverage and the $5 million or $ 10 million fund would then become the retention, or deductible level.

A major benefit of this proposal is that it does not rely on the availability of commercial insurance to finance pollution liability exposures. Nevertheless it does allow the flexibility of purchasing such coverage if it becomes available and, presumably, the Board of Governors approves of that decision.

An advantage to establishing this type of fund rather than adopting no state initiative until EIL coverage becomes more available is that a claims history, data upon which future potential insurers could rely, would be established. In this way the option promotes the future availability of private pollution liability insurance in Minnesota.

There is precedent in another state, New Jersey, for this type of option (See Section VII.), although the state administers the program rather than a private insurance brokerage firm.

There are several difficulties with this option, however, and several important

questions that have not yet been adequately addressed.

One difficulty with this option is that the protection afforded would be limited to the size of the fund. It is conceivable that one huge claim could exhaust the fund's limits.

There has also been some concern expressed about the size of the retention level should the "fund" serve as a deductible below excess EIL coverage. Some concerned parties feel that $5 million to $10 million is too high.

There have been opinions expressed that this option would serve as a disincentive for private insurers to write EIL coverage for landfills, that the existence of a "state monopoly fund" would discourage insurers from providing EIL coverage. However, currently, in the absence of such a fund, there appears to be little interest by private insurers to provide EIL coverage.

OPTION "E"

A RISK ASSIGNMENT PLAN FOR SANITARY LANDFILLS

A risk assignment plan is one developed for a group of risks that are individually uninsurable but requires insurance. These risks are grouped and assigned to an insurance company which must offer them coverage. Insurance companies are assigned these risks in proportion to their share of the market for that coverage.

A good example of a risk assignment plan is the grouping of drivers who can't buy automobile insurance on their own because of poor driving records, and are thus placed in a risk assignment plan created by statute. All of the insurance companies who offer automobile insurance are assigned to insure a percentage of these bad risks in proportion to their market share.

There are two operating philosophies which are the bases for the creation of this kind of a risk assignment plan. First, as long as those poor risks have a valid license, they pose an unacceptable threat to society driving uninsured. Second, as applies to the insurance companies, there is both a privilege and a responsibility for doing business in the state, and insurance companies must bear some of the responsibility for doing this business by accepting their proportional share of bad risks. In exchange, they have the privilege of profiting by insuring better risks.

There are several factors that contribute to a well-run risk assignment pool. First, there is a great number of risks who need this type of coverage. Second, the number of bad risks is small relative to the total number of risks requiring coverage. Third, there are numerous companies competing with each other for a share of the market.

Unfortunately, none of the above factors applies to the situation in Minnesota regarding sanitary landfills. 110 facilities represents a relatively small number of risks to insure. It is probably not true that the number of bad risks is small relative to the total number of risks requiring coverage. Lastly, although significantly, there are very few companies who offer this coverage.

For these reasons, a risk assignment plan would not be a good option for insuring the state's landfills. Any proposal to implement such a plan would probably be strongly opposed by the insurance industry. Such a plan would probably require all of the property/casualty liability insurers in Minnesota to participate. They would undoubtedly strongly resist an attempt to force them to offer coverage which they currently do not offer and for which there is little or no economic incentive.

There appears to be virtually nothing that the state could do to make this an attractive option. The state does not want to create more risks in order to spread the risk. The state could improve the safety of some landfills to a limited degree, but there will probably continue to be a large number of bad risks relative to good risks for the foreseeable future. Lastly, the state would probably not want to force property/casualty insurers to write a line of coverage that they currently do not write, especially when the state cannot provide an economic incentive to do so and some of the insurance companies who did provide such coverage are withdrawing from the market.

OPTION F

SURCHARGES TO FINANCE SUPERFUND RESPONSE ACTIONS

Option F focuses on the need to guarantee financing of response actions at sanitary landfills and to make the generators of solid waste responsible for the costs of those response actions. Option F suggests that surcharges be added to tipping fees and the funds accumulated from these surcharges be deposited in the state Superfund account.

This suggestion follows from the PCA's preciction that most of the state's future Superfund sites will be former landfills. Due to that, this option proposes that those who use the landfills should be contributing to the costs of cleaning them up.

This option helps to assure that there will be funds available to clean up contaminated sites and will share the costs among the users of the landfills.

This option does not serve particularly well to protect the owners/operators of sanitary landfills. In order for a landfill to be declared a Superfund site it

probably will be closed and not reopened to receive waste. Therefore, the financing of the remedial action project is not something which will serve to ensure the operation of landfills or protect the owners/operators of sanitary landfills. Even if Superfund monies are used to finance a remedial action project the state has the right to sue the owner/operator to recover the costs of cleanup. Thus, this option gives little, if any, protection to the owners/operators of sanitary landfills.

One problem with this option is that it may be difficult to coordinate with the new PCA program of requiring financial responsibility for response action costs. Owners/operators may want to know how this option would be coordinated with the PCA program, and/or protest the need for both programs. Indeed, it may be argued that it is not good public policy to establish separate programs for financing remedial action when it might be done more efficiently with one program. However, although the timing of this study and the PCA Rules planning process may preclude the possibility of this option being implemented in the near future, there remains a possibility that the PCA could adopt an initiative like the one suggested here as a later modification of their program.

Another difficulty with this option is that it does not serve very well to compensate victims. This option does not provide for an insurance or funding mechanism that would address the need for financing victim compensation. In this respect this option is the same as option "A", the status quo. The only assurance this option offers victims is to offer a means to clean up contaminated sanitary landfill sites, thus preventing the spread of groundwater contamination.

There is a possibility that this option could be modified and/or combined with another option that more fully addresses the need to compensate victims.

OPTION G

CONTRIBUTION TO A BROAD-BASED VICTIM COMPENSATION FUND

Option G's primary objective is to see that victims of hazardous waste, pollution for contaminant exposure released from landfills receive just compensation for their health and/or property losses. This option would require the development of a broad-based victim compensation fund, as is outlined in A Study of Compensation for Victims of Hazardous Substance Exposure, mentioned previously. This option recommends that surcharges be added to landfill tipping fees and collections from those fees be deposited in the victim's compensation fund.

This option relies on an administrative victim compensation fund rather than insurance as the indemnification tool for victims. Therefore, the problem of the unavailability of insurance for landfills is circumvented. This option serves well to address the need for victim compensation.

There has been much disagreement on the question of whether there are, or will be many "victims" due to exposure from landfill leachate. The recent study, A Study of Compensation for Victims of Hazardous Substance Exposure concluded that existing site data is so inadequate as to make it impossible to predict the number of injuries that will be caused by various kinds of sites releasing hazardous substances.[15] (It should be noted, however, that this study did not make an attempt to address the potential problems specifically posed by most sanitary landfills. It did not try to provide new data, but rather, relied on existing data, of which there was little about landfills.)

Even though existing site data is too inadequate to predict numbers of victims, it can be concluded that sanitary landfills may be threatening the health of people living near them now or in the future. For example, the state has at

least 110 permitted sanitary landfills and that many people live near them. The PCA has predicted that all of these landfills will leak contaminated leachate, and some already are leaking. This evidence suggests that there is a reasonable possibility that damages may be incurred by third parties due to leaking landfills.

This option offers several important advantages over the choice of procuring EIL insurance. First, all of the state's landfills can be covered by this plan. Second, the problem of the claims-made nature of insurance policy forms is avoided. Third, the high cost of litigation is greatly reduced.

There are several difficulties with this option, too. First, this option depends on the establishment of a statewide broad-based victim compensation fund. Second, the amount in the state fund probably would not reach the level that might be purchased if EIL insurance were available. In this regard, the fund option might not serve victims' interest as well as insurance.

This option could serve to protect the owners/operators of sanitary landfills to a certain degree, depending on the rules governing the fund's administration. Even if the state fund had the right of subrogating against an owner/operator, it probably wouldn't be economical to do for small claims. For larger claims the owners/operators would not be protected if the state had the right of subrogation, which it probably would.

This option succeeds in trying to establish some degree of predictability for liability costs, as a known fee would be collected to pay for those costs.

This option is not meant to address the need for response actions. However, this option may be modified and/or combined with an option that does in order to address both response action and victim compensation concerns.

OPTION H

A COMPETITIVE STATE EIL INSURANCE FUND

Option H suggests that the state establish a competitive state insurance fund which would offer EIL - type coverage. The suggested option presented here is based on the model provided by the Minnesota State Worker's Compensation Mutual Insurance Company, otherwise known as "the State Fund", which provides worker's compensation insurance to Minnesota employers. This option may be altered where appropriate to better meet the needs of the state in seeing that landfills are satisfactorily insured. One way this option could be implemented is as follows:

The state could provide a loan to establish the "Minnesota State EIL Mutual Insurance Company", or "the EIL Fund". The loan would be repaid to the state over a specified period. Aside from the initial loan, no tax dollars would be used to finance the operation of the EIL Fund. The state would retain some control over the EIL Fund through a Board of Directors. It would also be subject to regulatory controls through the Department of Commerce and the Department of Labor and Industry, just as are other insurance companies operating within the state.

The EIL Fund would operate as any other insurance company in terms of those functions common to most insurance companies such as marketing, underwriting, claims adjusting, actuarial functions and payment of dividends. The EIL Fund would sell conventional-style EIL coverage. The EIL Fund would have to be able to sell EIL coverage to businesses other than landfills in order for it to be a viable operation. No businesses would be forced to purchase coverage from the EIL Fund.

If the EIL Fund were successful it would offer some protection to owners/

operators by covering them for third party damages to specified limits. Victims would be protected to a certain extent if owners/operators purchased coverage from the EIL Fund.

There are several significant problems with this option. Generally, a competitive state insurance fund is established because there is a perception that the state can do a better job, or create new competition in the marketplace. In the case of EIL insurance, however, there are very few insurance companies offering coverage, so competition is almost nonexistent. In order to justify establishing a competitive state insurance fund, then, there should be some reason to believe that the state insurance fund could do a better job insuring sanitary landfills than the private insurance industry. This study cannot identify such reasons.

A competitive state insurance fund would face the same problems that private insurers do. Sanitary landfills will generally remain a very high risk to insure, regardless of whether the insurer is a public or private entity. The need for costly risk assessments, high premium and deductible levels, lack of loss ratio data and buyer demand, claims-made policy forms, and on-site cleanup exclusions are all factors that will not be obviated simply because a state fund offers the coverage. Thus, it is possible that the EIL Fund would be established and be unable to insure most of the state's landfills.

Another important reason given for establishing a competitive state insurance fund might be broadly termed "social responsibility", in this case, the need to offer some level of protection to landfill owners/operators and victims of hazardous substance exposure. While these are both reasonable and justifiable objectives, the EIL Fund option may not be the most efficient means of reaching the goals.

X. RECOMMENDATIONS

This study recommends that the highest priority goal of any state initiative be to protect the health and property of people adversely affected by landfills. With this primary objective in mind, this study makes the following recommendations:

A. Response Actions

Insurance is not recommended as the most feasible or desirable tool to cover response action costs. Insurance has been available to cover on-site cleanup for sudden releases but on-site cleanup costs due to gradual releases have generally not been covered by commercial insurance. Further, the current trend is to exclude all pollution coverage from CGL insurance and currently on-site cleanup is not covered by EIL. Therefore, it may be that insurance for response actions may simply not be available in the near future.

This study finds that the handling of response actions is of prime importance for meeting the goal of protecting the health and property of people living near landfills. Additional measures should be taken to ensure that prompt response actions are performed in order to prevent the spread of contamination from sanitary landfills. Timely execution of such action should serve to minimize most cases of third party damages off-site.

On-site cleanup may be accomplished by the owner of the landfill or, if the owner and other responsible parties are not available to clean the site, by the state Superfund.

It is preferred that landfill owners run their operations so that on-site cleanup needs are minimized. If on-site cleanup is needed, those costs should be borne by the owner of the landfill. In light of that, this study supports

more stringent enforcement of state regulations and new rules to require financial assurances to meet response and closure costs. Landfills that do not meet applicable rules should be required to do so or not be permitted.

The PCA has predicted that landfills will account for most of the future Superfund sites. Currently, 17 sanitary landfills are on the State Superfund list and of these, remedial action projects are being pursued at four. Therefore, the state's Superfund is currently assuming some of the costs of cleaning up these landfill sites while the users and owners of landfills are not contributing to the fund. This study finds that those who have generated or will generate solid waste should help to bear the costs of the Superfund.

This study recommends that surcharges be added to landfill tipping fees and collections from these surcharges be deposited in the state Superfund. These surcharges should be based on waste volume and charged at the same rate for all landfills.

This recommendation helps to internalize the costs of waste generation and is consistent with landfill abatement objectives. This program is not intended to preclude adoption and implementation of the new PCA rule requiring financial responsibility for response actions. Rather, this program will provide financial assurances for the state in case the local financial assurances established to comply with PCA rules are inadequate and the owner/operator is insolvent or unable to pay for response actions.

B. Third Party Damages Off-site

Insurance is currently not a feasible or desirable means of covering third party damages.

Because of the high degree of risk posed by most existing sanitary landfills,

most will probably remain uninsurable on an individual or group basis in the foreseeable future. A pooling option is probably not feasible because insurers will not be able to achieve an adequate spread of risk to make a pool plan affordable. Extensive interviews and meetings conducted for this study with insurance industry representatives resulted in no other feasible plan from the insurance industry for insuring the state's sanitary landfills. Even if EIL insurance were available, it may not be the best way to address the problem of compensating people for third party damages (see discussion, pp. 61, 62).

While victims can turn to the court system to attempt to recover damages, recovery may be severely hampered or impossible if the responsible parties are unknown or insolvent. Due to this situation, this study looked to alternatives to see that victims with valid claims may receive compensation.

This study finds that there may be a need for a special fund to provide a source of compensation. There is currently not a large body of conclusive evidence that there are many people being victimized by sanitary landfills in Minnesota. However, we do know that a large number of landfills are leaking and all existing sanitary landfills are predicted to leak contaminated leachate. We also know that a large number of people live near landfills. Thus, it appears likely that there may be a problem. (See discussion, pages 12 & 13). Strong response actions should help to reduce the number of people who are actually victimized but the evidence presented in this study suggests that the risk might justify the establishment of a victim's compensation fund.

If the Legislature decides there is a need to establish a broader victim's compensation fund to cover victims of all hazardous materials, this study suggests that victims of said waste landfills should be considered for inclusion. Such an arrangement may be easier to administer than separate victim compensation

funds with different classes of eligible claimants. The Legislature, however, could also consider establishing a separate solid waste victim compensation fund.

Whether part of a broader fund or a specialized solid waste landfill victim's compensation fund, the fund should be financed by landfill tipping fee surcharges, although general revenues could be used to supplement the fund. With over one third of the state's landfills estimated to have less than five years of capacity remaining, an important revenue source may not be available if the state delays establishment of a victim's compensation fund.

New landfills should also be required to collect surcharges to finance a victim's compensation fund. Even though they may procure EIL insurance for the early years of their operation, they will find it more difficult or impossible to do so as they age, and should thus be included in the financing of this option.

C. Discussion

This recommendation addresses the concern that private landfill owners/operators may be able to avoid liability costs by filing bankruptcy or dissolving the landfill corporation. Even if landfill owners/operators become unwilling or unable to pay, some money will be collected to pay for future needs.

This recommendation does contain some incentive for safe operation at a landfill in that owners would remain financially responsible for costs of on-site response and third party damages. The recommended funds would be used only when the owners were not able to pay these costs (and in both cases the state could try to recover from the owner the costs paid out of the fund).

This recommendation also treats public and private landfills in the same manner.

While publicly owned landfills have caps on their liability set by law, the threat to the public does not change by virtue of whether the landfill is publicly or privately owned. This study notes however, that the cap on the liability of publicly owned landfills may affect the ability of victims to recover damages from the landfill owner/operator and the ability of any victim's compensation fund to reimburse itself. These and other possible inequities associated with caps suggest that it might be appropriate to study the question of capping the liability of public entities.

This option subsidizes the operation of landfill businesses to the extent that general revenues may be used to finance a victim's compensation fund.

This study recommends that the previously-mentioned study, A Study of Compensation for Victims of Hazardous Substance Exposure, be referred to as a model for the particulars concerning other aspects of how a victim's compensation fund should be established and function. That study represents the most comprehensive work done on the subject and should be used as a guideline after the decision is made to establish such a fund.

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1. Stage One Preliminary Report, A Study of Compensation for Victims of Hazardous Substance Exposure, prepared by the Applied Research Center of William Mitchell College of law for the Minnesota Legislative Commission on Waste Management, August, 1984, p. 19.

2. Id.

3. Comprehensive Environmental Response and Liability Act (CERCLA) §104(e)(3)(c).

4. See supra, note 1, p. 27.

5. Id.

6. See id. at p.29

7. See id. at p.46

8. See id. at p.47

9. Report on Allocation of Liability Among the Owners, Operators, and Users of a Hazardous Waste Disposal Facility, Minnesota Waste Management Board, Feb. 1984.

10. "Liability of the State for various State Activity: Analysis of Cracraft v. City of St. Louis Park, Hage v. Stade and Washington County v. Minnesota Pollution Control Agency," Office of Minnesota Attorney General.

11. "Memorandum in support of Minnesota Pollution Control Agency's to dismiss, or, in the alternative, for summary judgment," District Court, Tenth Judicial District, Court File No. 53416, p. 15.

12. Id. p. 16

13. Id. p. 19

14. Minnesota Statutes Chapter 115B.02.

15. See supra, note 1, pp. 14, 15, 80.

APPENDIX "A"

MINNESOTA WASTE MANAGEMENT BOARD
Solid Waste Insurance Study Survey

If you own or operate more than one landfill, please fill out this questionnaire only for the landfill to to which this was addressed. Again, if you have any questions, please ask for Kurt Meyer at (612) 536-0816, or toll free from outside the metro area at 1-800-652-9747.

1. The landfill is

   14 (24%) privately owned 45 (76%) publicly owned

2. The landfill is

   27 (46%) privately operated 32 (54%) publicly operated

3. The landfill receives approximately

   21 (36%) less than 20,000 cu. yds./yr.
   23 (39%) 20,000 - 99,999 cu. yds./yr.
   9 (15%) 100,000 - 249,999 cu. yds./yr.
   1 (2%) 250,000 - 349,999 cu. yds./yr.
   5 (8%) over 350,000 cu. yds./yr.

4. Have you seriously studied and/or reviewed your pollution liability insurance needs within the last three years?

   21 (36%) Yes 38 (64%) No

The insurance industry currently offers two types of policies to cover problems of environmental impairment. One type, Comprehensive General Liability (CGL) policies usually cover sudden and accidental problems, such as an explosion. CGL policies also usually cover a variety of liabilities other than those resulting from environmental impairment.

Another type, Environmental Impairment Liability (EIL) insurance, has only been available for several years and covers nonsudden occurrences such as groundwater contamination from landfill leachate. The following questions pertain to these types of insurance. PLEASE refer to your insurance policies to answer questions #6 - 9.

5. This is the first time I have heard about the difference between CGL and EIL policies.

   33 (56%) Yes 26 (44%) No

6. Is your landfill covered by a Comprehensive General Liability (CGL) policy?

   49 (83%) Yes 8 (14%) No 2 (3%) No reply

7. The landfill has been covered by a CGL policy for approximately how many years?

   25 (42%) 10 or more years
   17 (29%) 5 - 8 years
   3 (5%) 1 - 4 years
   9 (15%) doesn't apply (no CGL coverage)
   5 (8%) no reply

8. Does your CGL policy provide coverage for nonsudden accidents which cause environmental impairment? (Please refer to the Exclusions section of your policy to see if nonsudden accidents are excluded from coverage.)

   3 (5%) Yes 47 (80%) No 9 (15%) No reply

9. Is your landfill covered by an Environmental Impairment Liability (EIL) policy?

   3 (5%) Yes 54 (92%) No 2 (3%) No reply

10. Have you ever been contacted by an insurance company who wanted to talk to you about selling you an EIL policy?

    11 (19%) Yes 46 (78%) No 1 (2%) No reply 1 (2%) Invalid response

11. What were the results, if any, of your attempt to purchase EIL coverage? (Please check each box that may apply to you.)

38 (64%) I have not attempted to purchase an EIL policy.
3 (5%) I was able to obtain and purchase EIL coverage.
11 (19%) The cost of the premium seemed too high, so I decided to delay purchase of coverage.
1 (2%) The deductible amount I was quoted seemed too high, so I decided to delay purchase of coverage.
5 (9%) The cost of the engineering risk assessment survey seemed too high, so I decided to delay purchase of coverage.
6 (11%) In response to my inquiry about purchasing an EIL policy, the insurance company/companies indicated they were not interested in offering coverage. (If you check this item, please indicate below which insurance company/companies gave you this response.)

_____

_____

4 (7%) Other (please elaborate) _____

_____

_____

_____

12. If you do not have insurance coverage for nonsudden accidents, what measures, if any, have you taken to financially protect against such loses?

"None" or no reply: 44 (72%)

Other replies: 17 (28%)

13. Please list below any additional comments you may have related to the subject of this survey. Thank you very much for your cooperation.

18 replies (31% of respondents)

OPTIONAL:

Name 44 respondents provided names (75%) Phone _____

APPENDIX "B"

PERSONS CONTACTED

The comments of the following people, obtained through personal interviews, letters, or public meetings contributed to this study. While this list constitutes a significant share of the number of persons contacted, it may not represent a complete accounting of all persons who had input during the preparation of this study.

David Corum - Research Analyst, Minnesota Department of Commerce

Rey Harp - Deputy Commissioner, Minnesota Department of Commerce

LeRoy Paddock - Attorney, Office of Minnesota Attorney General

Alan Williams - Attorney, Office of Minnesota Attorney General

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Gary Pulford - Program Administrator, Superfund Response Section, Minnesota Pollution Control Agency

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Ralph J. Marlatt - President, Insurance Federation of Minnesota

Robert D. Johnson - Vice President, Insurance Federation of Minnesota

David Havanich - Counsel, Travelers Insurance Company

Dennis Connoly - Counsel, American Insurance Association

Terry Younghanz - Vice President, Athena Division of Atwater McMillian, Inc.

Charles Meldrum - Vice President, Laub Group, Inc.

Kathryn I. Scott - Regional Supervising Underwriter, Atwater McMillian, Inc.

Pat Kennedy - Midwest Consolidated Insurance Agencies, Inc.

Dr. R. Malcolm Aickin - Environmental Risk Analysis Systems (International) Limited (ERAS)

Jeff Redmon - Counsel, American Insurance Association

Larry Laventure - Vice President, American Business Insurance Agencies, Inc.

Brian Colway- Risk Manager, Corporate Risk, Inc.

Earl Barcomb - New York Department of Environmental Conservation

Representative John Cherry - Michigan State House of Representatives

Seth Phillips - Water Quality Specialist, Michigan Department of Natural Resources

Tom Work - Chief of Compliance Unit, Michigan Department of Natural Resources

Howard Geduldig - Supervisor, Office of Regulatory Services, New Jersey Department of Environmental Protection

Fred Pierce - Administrator, New Jersey Department of Environmental Protection

Mark Helmar - Administrator, California Department of Health Services

Joe Schultz - Supervisor, Oregon Department of Environmental Quality

Bob McVety - Administrator, Solid Waste Section, Florida Department of Environmental Regulations

Kathleen Gerofski - Administrator, Pennsylvania Department of Environmental Resources

Richard Valentinetti - Director, Vermont Agency of Environmental Conservation

Chuck Linn - Administrator, Kansas Department of Health and Environment

Paul Didier - Director, Bureau of Solid Waste Management, Wisconsin Department of Natural Resources

John Stolzenberg - Research Analyst, Wisconsin State Legislature

Vera Starch - Adminstrator, Wisconsin Department of Natural Resources

William Child - Deputy Manager, Illinois Environment Protection Agency

Melvin Koizumi - Deputy Director, Hawaii Department of Health

Brian Smith - Solid Waste Office, LeSueur County

Susan Fries - Legislative Liaison, Metropolitan Inter-County Association

George Rindelaub - Solid Waste Officer, Isanti County

Ken McKenna - Supervisor of Purchasing, Western Lake Superior Sanitary District

Warren Shuros - Solid Waste Officer, Martin County

Marcia Bennet - Intergovernmental Coordinator, Anoka County

Jerry Stahnke - Environmental Health Specialist, Dakota County

Michael Ayers - Washington County Environmental Health Department

Tom Golz - Administrator, Region V. Office, U.S. Environmental Protection Agency

Alan Shilepsky - Consultant, Waste Management Inc.

John Hinderaker - Attorney, Faegre & Benson Law Firm

Charles Dayton - Attorney, Pepin, Dayton, Herman, Graham & Getts Law Firm

Tom Tellijohn - Owner/Operator, Tellijohn Landfill Services, Inc.

Joe Pahl - Owner/Operator, Louisville Sanitary Landfill

Cameron Strand - Owner/Operator, Pine Lane Sanitary Landfill

Joel Jamnik - Legislative Counsel, League of Minnesota Cities

Carl Michaud - Planner, Metropolitan Council