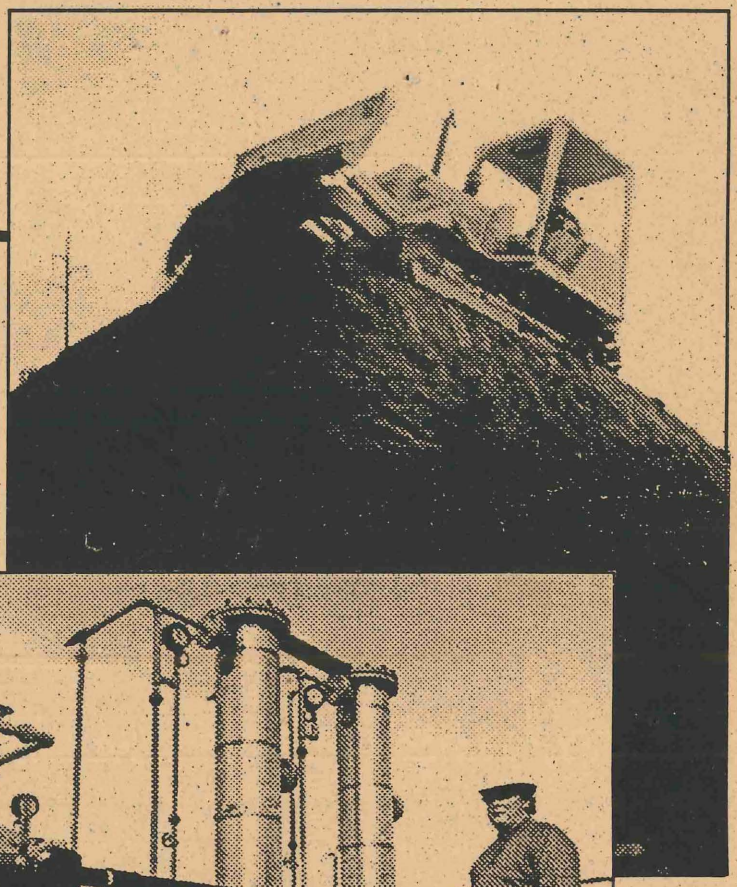
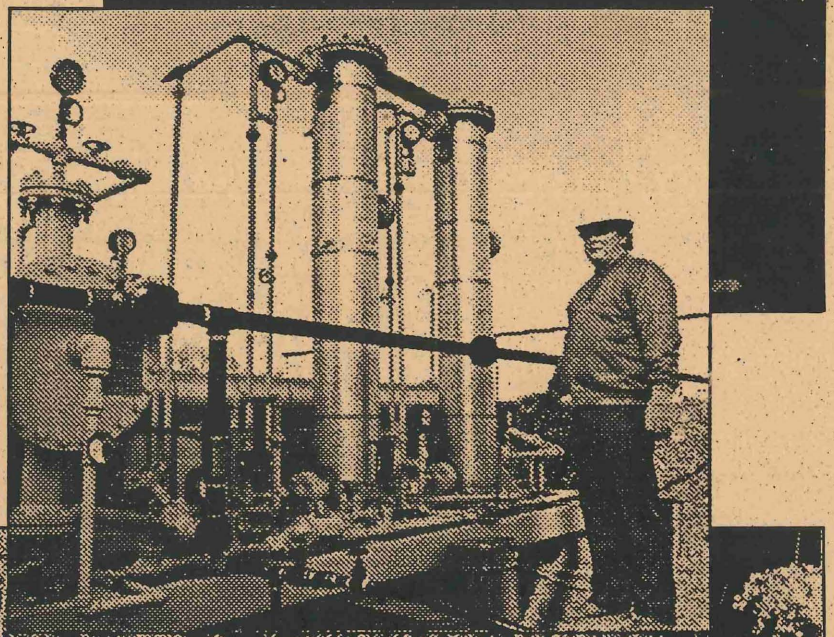
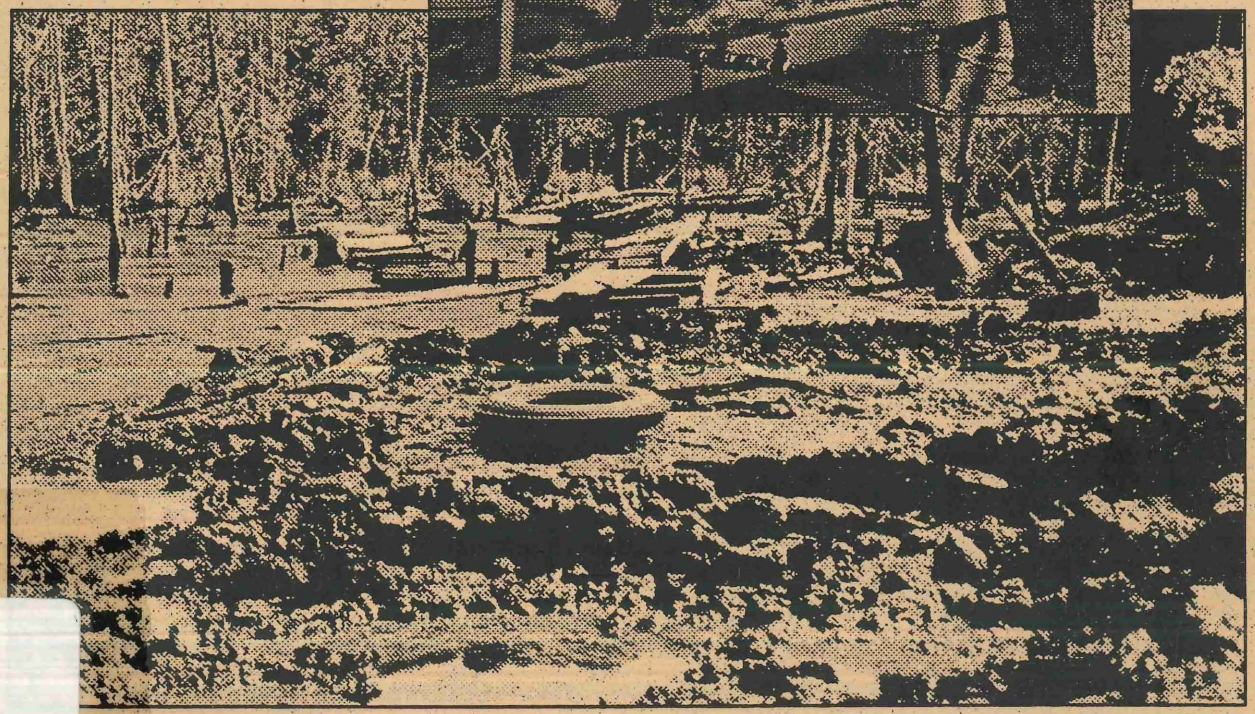
Minnesota Superfund

A Report on Use of the Minnesota Environmental Response, Compensation and Compliance Fund during Fiscal Year 1992







MINNESOTA SUPERFUND

A Report on use of the Minnesota Environmental Response, Compensation and Compliance Fund during Fiscal Year 1992 and the Status of Superfund Cleanups

November 1992

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A Report on Use of the Minnesota Environmental Response, Compensation and Compliance Fund during Fiscal Year 1992.

November 1992

The term "Superfund" means many things to different people in Minnesota: clean drinking water to suburban residents; emergency action to protect children from lead exposure; drum removals; a landfill cover that reduces ground water contamination; a quick response to a tire fire; and new developments built on properties where the only former tenant was pollution.

In fiscal year 1992, (FY 92) the state and federal programs and laws, collectively called Superfund, responded to 70 emergency spill responses, cleaned up all or part of 21 high priority sites, approved 44 cleanups associated with property transfers, delisted three sites, removed 94 abandoned barrels, and ensured cleanup progress at 144 of the 189 Superfund sites in Minnesota.

The Minnesota Environmental Response and Liability Act (MERLA) of 1983 established the Environmental Response, Compensation and Compliance Fund (Fund) and authorized the Minnesota Pollution Control Agency (MPCA) to spend Fund dollars to investigate and clean up releases of hazardous substances, pollutants, or contaminants. The Minnesota Comprehensive Ground Water Protection Act of 1989 amended MERLA to authorize the Minnesota Department of Agriculture (MDA) to access the Fund to investigate and clean up incidents involving agricultural chemicals.

The directives of MERLA are carried out through the Minnesota Superfund Program. As required by Minn. Stat. § 115B.20, subd. 6, this report details the activities for which Fund dollars have been spent during FY 92 by the MPCA and MDA and puts forth initiatives for the Fund for FY 93.

The MPCA and MDA have been successful in efforts to seek out responsible parties (RPs) to fund and conduct cleanup activities under MPCA/MDA oversight. The MPCA has also succeeded in securing federal dollars to fund cleanup activities. Despite these efforts, the availability of Fund dollars will continue to be critical to pay for staff, secure the cooperation of RPs, provide the State's required 10 percent match for federally funded cleanups, and conduct cleanup of sites not eligible for federal funding where RPs can not or will not do the work.

MPCA/MDA Responsibilities

The MPCA serves as the lead agency for the investigation and cleanup of most federal Superfund sites in Minnesota under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). The MPCA/MDA Superfund program also fulfills functions specified in MERLA (Minn. Stat. Sec. 115B). The MPCA and the U.S. Environmental Protection Agency (EPA) work cooperatively on enforcement and fund-financed activities involving Minnesota's 42 Superfund sites listed on the federal National Priorities List (NPL).

MPCA/MDA Superfund responsibilities consist of six basic components:

- discovering and assessing sites for possible addition to the state or federal Superfund lists;

Executive Summary (continued)

- responding to emergency situations;
- overseeing RPs or their contractors in the investigation and cleanup of RP-financed "traditional" Superfund sites such as old industrial facilities, old dump sites, and sites of spills or other chemical accidents;
- overseeing contractors in the investigation and cleanup of fund-financed Superfund sites;
- investigating and cleaning up permitted sanitary landfills; and
- providing guidance and technical assistance to persons interested in conducting voluntary cleanups of contaminated property.

Under MERLA, the MPCA/MDA staff attempts to identify all parties responsible for contributing to the release or threatened release of hazardous substances, pollutants, or contaminants at identified Superfund sites. RPs are given the opportunity to conduct site investigations and cleanup as requested by the MPCA/MDA. At some sites, no RPs can be identified, or the RPs are unable to take the appropriate action. In these instances, the MPCA/MDA may use the Fund to investigate and, if necessary, clean up the site.

At some sites the RPs may be unwilling to take appropriate actions. In these instances, the MPCA/MDA uses the Fund and then seeks cost recovery.

Recommendations

To ensure the continued success of the Superfund Program, MPCA and MDA staff offer the following recommendations:

Alternatives to Superfund for Landfills

Although the state Superfund program is the best process currently available to address contamination problems at closed landfill sites where RPs can not or will not do the work, a new program more closely tailored to sanitary landfills (SLFs), should be adopted.

A task force of waste management officials agreed in a 1991 report to the Legislative Committee on Waste Management (LCWM) **Alternatives to Superfund for Landfill Cleanup**, that SLFs are a societal problem and should not be addressed under Superfund. In addition, it is clear that the state Superfund is headed for a shortfall and a separate landfill program would take some of the pressure from the Fund. It is recommended that SLFs be removed from the Superfund program and addressed by a new law and program.

Long-term Funding

Without additional dollars, by the end of FY 93 the Minnesota Superfund would show a shortfall. Also, in FY 92 the Hazardous Waste Generator Tax generated $62,000* while approximately $7.5 million were expended or obligated under

* $560,000 was generated. Of this amount, $498,000 reflects a one-time refund to RPs for their reductions in hazardous waste generated. The remaining $62,000 is income to the Fund.

Executive Summary (continued)

Superfund. It is recommended that the Hazardous Waste Generator Tax, which supplies the Superfund, be restructured to provide additional revenue to maintain the state Superfund program. This would provide stable funding to continue Superfund cleanup efforts into the future.

Reauthorization of the Federal Superfund in 1994

The federal Superfund program and CERCLA are being criticized on many fronts. Because of the close linkage between the federal and state Superfund programs, current challenges to CERCLA inevitably will affect the state Superfund program's resources, effectiveness, and future.

It is important to ensure that the federal Superfund remains a "polluter-pays" law using a strict, joint-and-several liability standard because that is the most effective standard at the majority of sites. In addition, all 36,000 sites nationally need to be addressed under a reauthorized federal Superfund law. Finally, there should be one Superfund effort with the states as primary implementors.

Property Transfer/Voluntary Cleanup Program

The MPCA has developed a unique program to provide guidance and technical assistance to persons interested in conducting voluntary investigations and cleanups of contaminated property. Additional funds and resources are required to meet the increasing requests for file information and technical assistance for property transfer and voluntary cleanup efforts.

MDA Agricultural Chemical Sites

MDA requests that funding be maintained at the current level for activities involving Superfund. Current workloads are considerable, however, and MDA will look at improving efficiencies of certain procedures before requesting additional staff.

Executive Summary (continued)

The following is a summary of expenditures and income of the Superfund program with a review of Fund accomplishments.

Superfund Program Expenditures and Income

Balance Forward , 7-1-91	$12,285,000	
Expenditures from the Fund	**FY 92**	**FY 83 - FY 92**
MERLA Fund Expenditures	$ 6,584,641	$36,621,098
Unliquidated Obligations	$ 872,359	$ 815,550
Total Expenditures and Obligations*	$ 7,457,000	$37,436,648
Income to the Fund	**FY 92**	**FY 83 - FY 92**
Appropriations	$1,000,000	$17,400,000
Fines and Reimbursements Paid by RPs	$3,004,000	$14,156,839
Hazardous Waste Generator Tax	$ 62,000	$ 7,800,323
Interest	$ 842,000	$ 7,815,486
Total Income to the Fund	$4,908,000	$47,172,648
MERLA Fund Balance, 6-30-92	**$9,736,000**	
Federal Superfund Dollars	**FY 92**	**FY 83 - FY 92**
Secured	$4,888,426	$48,762,701
Expended*	$6,226,417	$26,406,574

* (figures as of 9-5-92 for FY 92 budgets. Figures will change as expenditures, obligations, fines and reimbursements are obtained or paid out.)

Superfund Program Accomplishments

	FY 92	FY 83 - 92
Sites Added to the State's Permanent List of Priorities	14	189
Sites Deleted from the State's Permanent List of Priorities	3	16
Sites Added to the Federal National Priorities List	0	42
Responsible Party Response Actions Initiated	6	109
MERLA Funded Response Actions Initiated	2	31
Federally Funded Response Actions Initiated	0	24
Records of Decision Executed	5	45
MPCA Involvement in Lawsuits	9	20
Declared Emergencies	3	24
Abandoned Barrels Secured	94	465
MPCA Property Transfer Assistance:		
File Search Requests	1852	7528 (FY 85-92)
Cleanup Assistance Requests	44	214 (FY 89-92)
Cleanups Approved	5	29 (FY 85-92)

Introduction

This report:

- outlines the use of the MERLA Fund during FY 92;
- summarizes the status of the Minnesota Superfund Program;
- puts forth future program and state legislative initiatives; and
- discusses the challenges to the federal Superfund program and 1994 federal Superfund reauthorization.

MERLA established the Environmental Response, Compensation and Compliance Fund (Fund) and authorized the MPCA to spend Fund dollars to investigate suspected releases of hazardous substances, pollutants, or contaminants and to clean up releases.

The Minnesota Comprehensive Ground Water Protection Act of 1989 amended MERLA to authorize the Minnesota Department of Finance (MDF) to administer the Fund, but retained the language regarding appropriation of the money to MPCA and MDA. In 1990, changes were made in the appropriation language to give full administrative authority to the Commissioner of Finance. This reauthorization allows MDA equal access to the Fund to investigate and clean up releases involving agricultural chemicals (pesticides and fertilizers).

MDF, MDA, and the MPCA have completed a Memorandum of Agreement (MOA) to address various concerns involved in this change. This report outlines the use of the MERLA Fund during FY 92, summarizes the status of the Minnesota Superfund program, and puts forth future program and legislative initiatives. In addition, this report discusses the challenges to the federal Superfund program and the 1994 federal Superfund reauthorization, both of which are likely to affect the state's Superfund program.

The Minnesota Environmental Response and Liability Act was established by the Minnesota Legislature in 1983.

Program Overview

The fund is used to:

- respond to emergencies and initial investigations;
- manage the conduct of site investigations and the development of cleanup alternatives;
- prioritize sites to determine the sites' eligibility for state and federal Superfund monies;
- manage the completion of response actions; and
- issue enforcement orders and final cleanup decisions.

The Minnesota Superfund program is composed of the following functions:

1. to discover and conduct preliminary investigations of potential hazardous substance, pollutant, or contaminant releases from abandoned hazardous waste sites, solid waste sites, or agricultural chemical sites, and to identify responsible parties (RPs);

2. to respond to emergency situations, such as a contaminated drinking water supply, drum removal, or other situations that have been determined to be imminent health hazards by the Minnesota Department of Health (MDH);

3. to oversee RPs or their contractors in the conduct of remedial investigations and feasibility studies (RI/FS) at identified sites;

4. to develop Records of Decision (RODs) identifying the remedial designs and response actions (RD/RA) to be implemented, and to oversee RP development and implementation of the RD/RA Plans for the cleanup of sites;

5. to conduct the administrative activities for the management of response action contractors, the MERLA Fund, and federal Superfund money secured under Cooperative Agreements with the EPA. These activities include developing standards and guidelines, assuring technology transfer, data validation, training, etc.;

6. to conduct public information and community relations activities;

7. to provide assistance to buyers, sellers, bankers, insurers, and others in the transfer of property where potential or real contamination problems and liability issues exist; and

8. to oversee voluntary cleanup actions where RPs can and are willing to do the work.

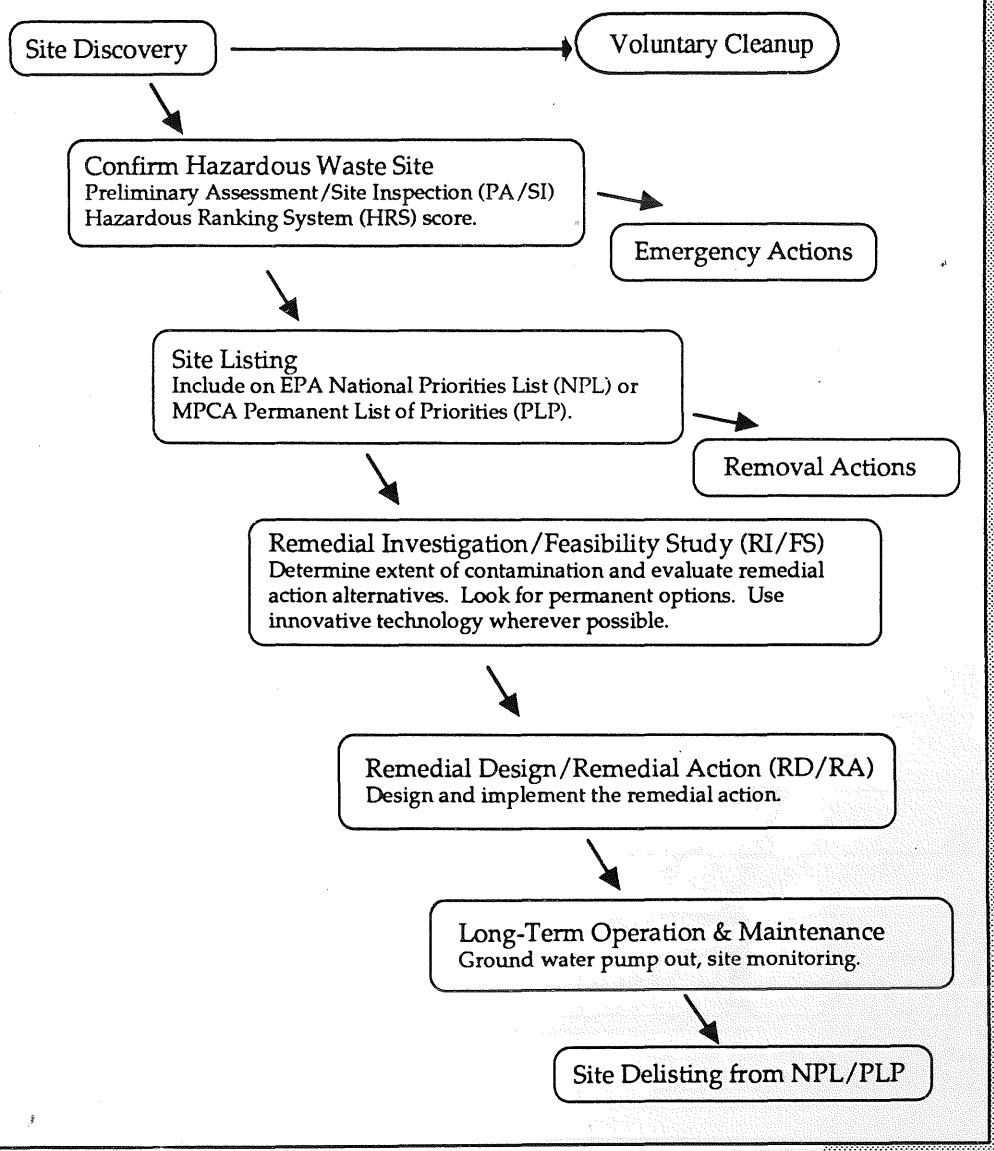
The Superfund program continually responds to new information on emerging technologies, changes in federal law, and more accurate health and ecological risk information. The program also remains flexible to accommodate a broader range of sites.

Public awareness and interest in Superfund is increasing as concerns over the environment and cleanup efforts become vital in the everyday lives of Minnesota citizens. Correcting and preventing further environmental damage is a primary focus of the Superfund Program. The money in the

Fund protects resources and maintains Minnesota's natural heritage.

The Minnesota Superfund process for hazardous waste site cleanups is diagramed in Figure 1 (right). If parties agree to voluntary cleanup actions, the MPCA may forgo the process. Potential Superfund sites are identified by the MPCA and MDA through calls from concerned citizens, routine inspections by agency staff, reports of hazardous substance spills, and analyses of drinking water supplies sampled by MDH.

Figure 1: The Minnesota Superfund Process

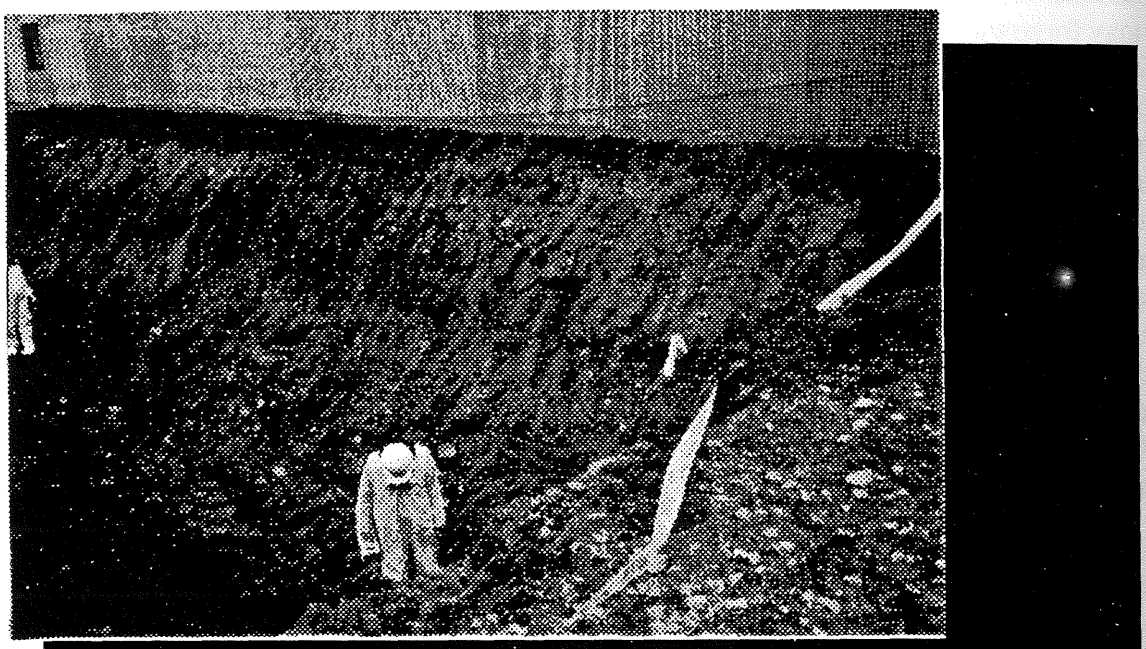


Through a Cooperative Agreement with EPA, the MPCA has established a program to assess potential hazardous waste sites in Minnesota. Initially, a Preliminary Assessment is conducted involving a general review of readily accessible information to characterize a site and to determine if it warrants further action.

If further action is warranted, a Site Investigation is conducted. Data is used to prioritize sites using the Hazard Ranking System II (HRS II). The HRS II scores are used to establish relative priorities among sites and to determine a site's eligibility for federal and/or state Superfund monies for response actions.

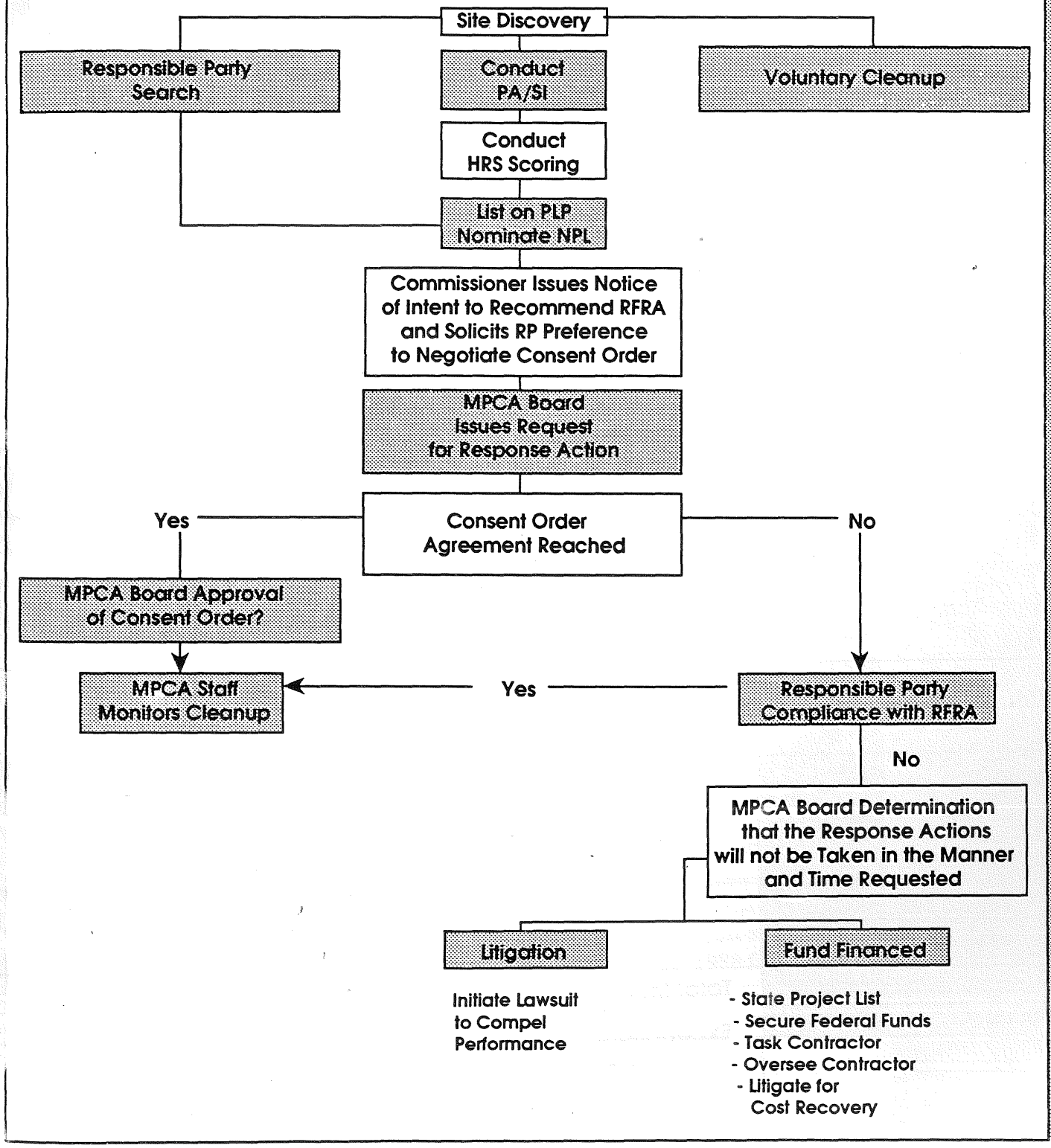
"If parties agree to voluntary cleanup actions, the MPCA may forgo the (administrative /enforcement) process."

After completion of HRS II scoring, the site may then be added to the NPL and/or the PLP, after which an RI/FS is conducted to determine the extent of contamination and to evaluate cleanup alternatives. Next, a RD/RA is developed and implemented and, possibly, followed by long-term operation and maintenance. Finally, after the site cleanup is complete, the site is delisted from the NPL and/or the PLP. At sites where RPs have been identified, MPCA staff undertake an administrative/ enforcement process or voluntary cleanup process. The process (described in Figure 2) provides ample opportunities for RPs to negotiate a Response Order by Consent (Consent Order) or operate under a Request for Response Action (RFRA).



The addition of a voluntary cleanup route to the Superfund process not only allows responsible parties to avoid time-consuming enforcement actions, but speeds actual cleanup.

Figure 2: MPCA Administrative/Enforcement Process under MERLA



Status of the Fund

Facts about the Fund:

- the Fund balance at the end of FY 92 was approximately $9.8 million;
- the MPCA and MDA have recovered more than $14 million in penalties and reimbursements since the Fund was established;
- the Fund supports more than 60 staff; and
- greater than 80% of MPCA administrative costs result in securing cleanup commitments from RPs and overseeing RP cleanup activities.

The status of the Fund as of June 30, 1992, is detailed in Table 1. The Fund balance at the end of FY 92 is $9,736,000. All cumulative income and expenditure figures are approximate.

In 1983, the Fund was established with a $5,000,000 transfer from the General Fund. An additional $4,500,000 in FY 88, and $5,900,000 in FY 89 were appropriated from the Water Pollution Control Fund. One million dollars were transfered from the General Fund in FY 90 and one million dollars were transferred

Table 1: General Ledger Balance of the Environmental Response Fund as of June 30, 1992

Appropriations to Date	
Original (FY 83)	$ 5,000,000
Transfers from Water Pollution Control Fund (FY 88 - FY 89)	$10,400,000
Transfer from General Fund (FY 90)	$ 1,000,000
Transfer from Motor Vehicle Transfer Fund (FY92)	$ 1,000,000
Income to Date (FY 83 - FY 92)	
Interest on Investments	$ 7,815,486
Fines and Reimbursements Paid to the Fund by Responsible Parties	$ 14,156,839
Hazardous Waste Generator Taxes	$ 7,800,323
Total Income	**$47,172,648**
Expenditures and Obligations (FY 83 - FY 92)	**$37,436,648**
Fund Balance as of June 30, 1992	**$ 9,736,000**

Table 2: FY 92 State Superfund Expenditures by MPCA and MDA.

	MPCA	MDA
Superfund Program Administrative Costs	$3,837,675	$129,231
Site-specific Contractual Costs	2,157,903	126,260
Attorney General Costs	112,935	3,789
Site-specific Laboratory Analytical Costs	209,273	7,575
Unliquidated Obligations	869,809	4,550
TOTAL	**$7,187,595**	**$271,405**

from the Motor Vehicle Transfer Account in FY 92.

The Fund investments are managed by the Department of Finance and the Hazardous Waste Generator Tax is collected by the Department of Revenue. MPCA and MDA have recovered $14,156,839 in the form of penalties and reimbursements from RPs since the Fund was established.

A summary of Fund expenditures during FY 92 is presented in Table 2.

The MPCA's administrative costs represent salaries for 55 MPCA staff, as well as travel, equipment, and supply expenditures associated with responding to emergencies and implementing site cleanups. The MPCA staff estimates that greater than eighty percent of the administrative costs are expenditures that result in securing response action commitments from RPs. Administrative costs include salaries, benefits, overhead and travel.

The legal cost of services rendered by the state Attorney General's Office for non-site specific program development makes up a portion of the Superfund administrative cost. A large portion of the site specific laboratory analytical costs are paid to the MDH by the MPCA and MDA.

In FY 92, MDA administrative costs included salaries, benefits, overhead, travel, and program legal costs. Site-specific legal costs involved the Lunds Farmer Seed and Nursery cost-recovery action resulting from the 1988 fire.

Types of Sites in Superfund

The types of Minnesota Superfund sites include:

- six sites listed as Class A emergencies;
- 33 sites where response actions are completed and long-term operation and maintenance are ongoing;
- 155 sites where response actions are necessary or in progress;
- 139 sites where remedial investigations or feasiblity studies are needed or in progress; and
- 16 sites which have been removed from the Superfund list.

the Duluth Former City Dump, Schloff Chemical (St. Louis Park), Valentine Clark (St. Paul); and ground water contamination at Lakeland, St. Paul Park, and Winona.

All sites listed on the PLP have been assigned to one or more response action classes as required by Minn. Stat. Sec. 115B.17, subd. 1. Each of the four response action classes is defined as follows:

Class A - Declared Emergencies. This class includes all sites at which an emergency has been declared by the Commissioner of the MPCA or MDA. An "emergency" means that there has been or is an imminent risk of fire or explosion, that a temporary water supply is needed where an advisory has been issued, or that an advisory has been issued where immediate adverse human health effects may be anticipated due to direct contact or inhalation of hazardous substances, pollutants, or contaminants.

Currently, six sites are listed in Class A. They consist of

Table 3: Sites Deleted from the PLP

Airco Lime Sludge Pit (Minneapolis)

Askov Ground Water Contamination* (Askov)

DNR-Nett Lake/Orr Pesticide Site (St. Louis Co.)

Ecolotech Inc. (Minneapolis)

Former McKay Manufacturing Co. (St. Paul)

43 East Water Street (St. Paul)

Isanti Martin Site* (Isanti Co.)

Lost Lake Dump Site (Mound)

Maple Plain Dump (Maple Plain)

Morris Arsenic Site (Morris)

Northern Twp. Ground Water Contam. (Bemidji)

Polymetals Products, Inc. (St. Paul)

Portec-Pioneer Division (Minneapolis)

Sonford Products (St. Paul Park)

Union Scrap Iron and Metal (Minneapolis)

Wadena Arsenic* (Wadena)

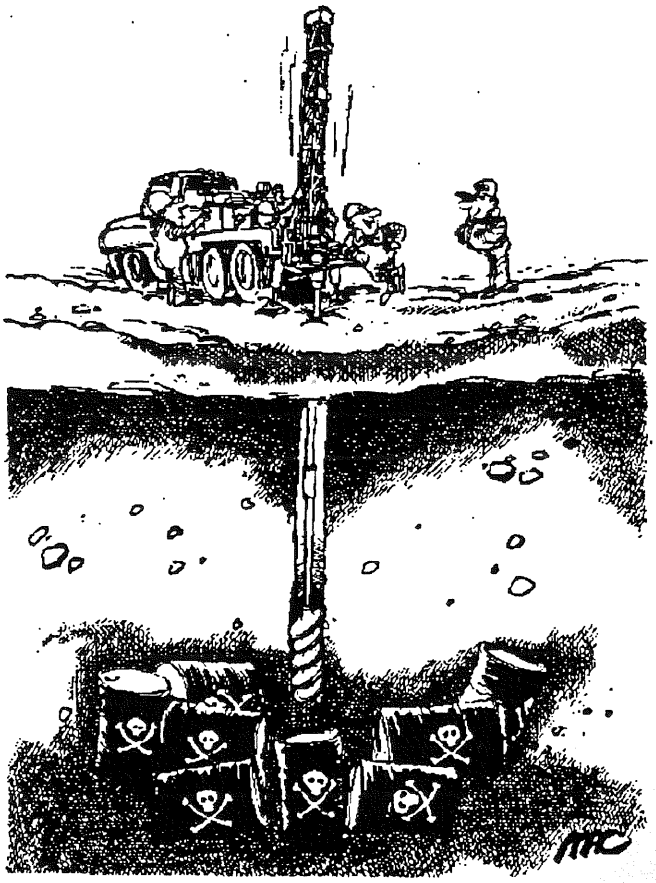
* deleted in FY 92

Class B - Response Actions Completed and Operation and Maintenance/Long-term Monitoring Ongoing. This class includes all sites where response actions have been completed and long-term monitoring of these completed actions is in progress. This class also includes all sites where activities are necessary to operate and maintain response actions that have previously been completed. There are 33 sites listed in Class B. (See Appendix 2.)

Class C - Response Actions Necessary or in Progress or First Year Operation and Maintenance at a Site. This class includes all sites where remedial design and implementation of response actions (other than Class A or B) such as barrel removal, soil decontamination, first year ground water pump out or monitoring are necessary to complete a permanent remedy or cleanup of a site. There are 155 sites listed in Class C. (See Appendix 3.)

Class D - Remedial Investigations and Feasibility Studies (RI/FS) Necessary or in Progress. This class includes all sites which require a remedial investigation (RI) to determine the extent, magnitude, and nature of the release or threatened release, and a feasibility study (FS) to evaluate and select response action(s). There are currently 139 sites listed as Class D. (See Appendix 4.)

Sites may be listed under more than one class depending upon their cleanup status. The totals of Class A, B, C, and D sites is much greater than the total number of sites on the PLP. More than one listing indicates the site may have a number of actions pending.



'Good news. We're about to bring in your new well'

Drinking water contamination sites always receive top priority in the Superfund program's Permanent List of Priorities (PLP)

Deleted Sites. Since the PLP was created, 16 sites have been deleted from the list, 3 of these during FY 92. These sites were deleted because cleanup of known contamination at these sites has been completed and no further action is thought to be necessary or the site was combined with another site or transferred out of the Superfund program.

Use of Federal Fund Dollars

Federal Fund Facts:

- in FY 92, close to $5 million were secured from the federal Fund;
- at federally funded sites, the federal Fund covers 100% of investigation costs and 90% of the cleanup costs; the state Fund covers 10%; and
- in FY 92 federal dollars were used for 12 site-specific cleanup actions, 14 site-specific enforcement/cleanup activities and responsible party searches, and program support.

Minnesota has 42 sites on the NPL that are eligible for federal funding based on priority. So far, the MPCA has secured a total of $48,762,701 in federal Superfund dollars ($4,888,426 secured during FY 92) for:

1. conducting preliminary assessments and preliminary site investigations at Minnesota sites included on the federal inventory (CERCLIS) of potential hazardous waste sites;

2. responding to emergency situations;

3. tasking contractors to conduct RI/FS and RD/RA activities at Minnesota fund-financed sites included on the federal NPL;

4. the Core Program which allocates money for administration of Superfund sites by MPCA employees, including work on innovative treatment technologies, training, etc.; and

5. responsible party searches, RFRA and ROD development and RP cleanup activity oversight under the enforcement cooperative agreement.

The federal dollars secured can be expended over several fiscal years. State money is needed to match 10 percent of the amount secured from federal Superfund for site specific remedial actions and the Core Program.

During FY 92, the MPCA spent $6,226,417 federal Superfund dollars for response action activities at 26 sites. Of this amount $4,402,588 was spent on site specific cleanup actions; $320,229 on enforcement actions at 14 sites; and $1,503,600 on programatic activities. Table 4 details expenditures of federal Superfund dollars by MPCA.

Federal Fund dollars pay for all investigative activities at NPL sites, including sampling after emergencies

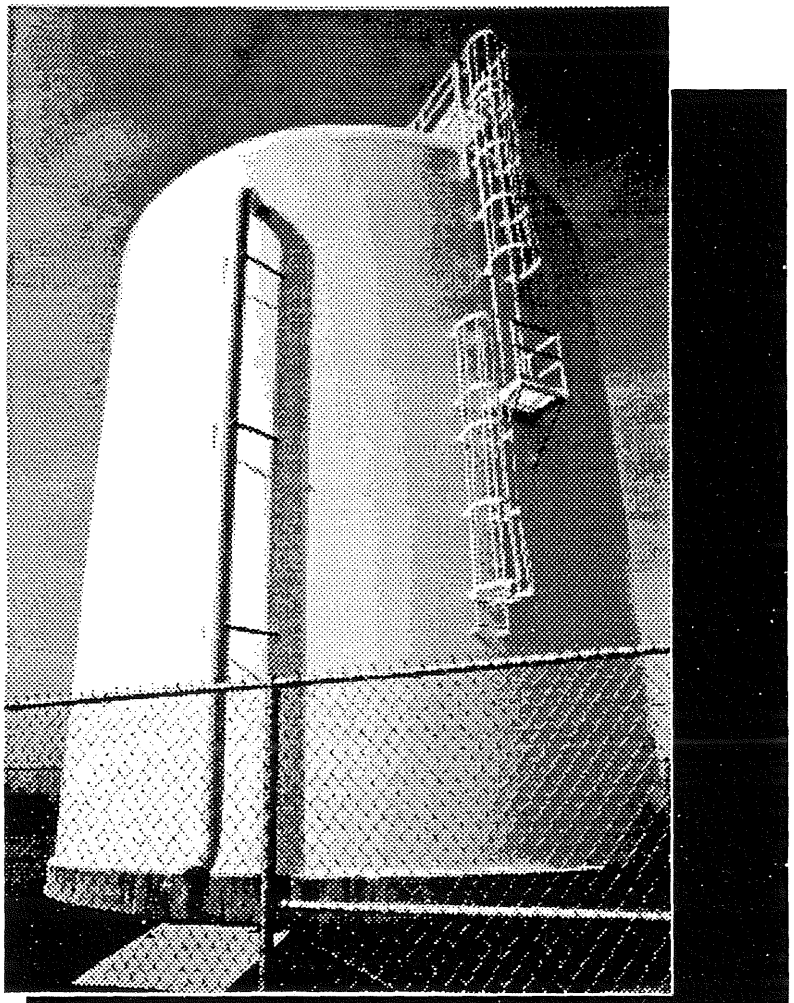
Table 4: FY 92 Expenditures of Federal Superfund Dollars

Site	Amount Spent	Cleanup Action
Dakhue SLF	$ 307,421	RI/FS, RD/ RA
Kummer SLF	$3,083,031	RI/FS, RD/RA, RA State match
LaGrande SLF	$ 120,175	RI/FS
LeHillier	$ 31,284	RA/extended
Long Prairie	$ 35,774	RD/RA
MacGillis & Gibbs	$ 303,011	RI
New Brighton/St. Anthony	$ 13,661	RI/FS, RA
Perham Arsenic	$ 12	RI/FS
Reilly Tar	$ 79,221	RA
Ritari Post and Pole	$ 308,386	RI/FS
South Andover	$ 17,263	RI/FS, RD
St. Louis River/Interlake	$ 103,349	RI/FS, RI/FS oversight
Subtotal	**$4,402,588**	
Enforcement Cooperative Agreement		
Agate Lake	$ 1,409	ROD, Access agreement
Arrowhead	$ 150,431	PRP Search, Federal RD/State RD RD/RA, RD/RA oversight
Baytown	$ 4,636	RI/FS oversight
Burlington Northern/Waite Park	$ 30,064	RI/FS oversight
East Bethel Demo Landfill	$ 626	Comm. Notice, RFRA, CO
Freeway SLF	$ 626	Comm. Notice, RFRA, CO, RA State match
Kurt Manufacturing	$ 213	RI/FS oversight
Oak Grove SLF	$ 47,192	PRP Search, RI/FS oversight RI/FS oversight
Olmsted SLF	$ 9,340	RI/FS oversight
Pigs Eye SLF	$ 5,576	PRP Search, RFRA
Pine Bend/Crosby Amer Demo Landfill	$ 5,418	PRP Search, RFRA
St. Augusta SLF	$ 19,913	RI/FS oversight
Washington County SLF	$ 2,163	PRP Search RD/RA oversight
WDE	$ 42,622	RD/RA oversight
Subtotal	**$ 320,229**	
Program		
Core Program	$ 834,356	Mgmt./Program Development
PA/SI	$ 555,307	PA/SI
PRP Searches	$ 47,067	Enforcement Coop. Agreement
Site-specific Legal Expenses	$ 66,870	
Subtotal	**$1,503,600**	
Total	**$6,226,417**	

MERLA-funded Site Cleanups

In FY 92, over $2.5 million MERLA dollars were used for:

- response actions at 27 sites;
- response to hazardous waste incidents;
- response to abandoned barrel reports; and
- site-specific program costs.



The final payments were made in FY 92 for the state's share of a municipal water supply system for the cities of Lakeland and Lakeland Shores.

During FY 92, $2,617,735 from the MERLA Fund was used by the MPCA and MDA to cover the costs of tasking contractors to respond to releases of hazardous substances, pollutants, or contaminants at 27 sites listed on the PLP; hazardous waste incidents; and numerous reports of abandoned barrels containing hazardous substances. Table 5 details site-specific and program FY 92 expenditures of MERLA dollars. These costs do not include administrative expenditures.

Table 5: FY 92 Expenditures of MERLA dollars

Site	Amount Spent	Cleanup Action
Amdura	$ 22,979	FS/RA
Battle Lake SLF	$ 82,900	RI/FS, Cover RD
Bueckers SLF	$ 22,305	RI, Well installation
Castle Rock (MDA)	$ 1,906	Bottled water
Duluth Dump	$ 608	Bottled drinking water and connection to carbon system
Flying Cloud SLF	$ 3,750	Risk assessment
Garbers Farm (MDA)	$ 2,015	Sampling, Emergency response
Howe Soil Contamination Site (MDA)	$ 106,976	RI-Phase I remediation
Isanti-Chisago SLF	$ 43,600	Risk Assessment
Jackson Munic. Well Field	$ 1,483	O & M, Well abandoned
Kummer SLF	$ 238,577	Cover RA-State match
Kummer Operable Unit 3	$ 5,200	Bioremediation study
Lake Elmo Airport/Baytown	$ 104,992	RI - Well installation
Lakeland	$ 18,038	RD/RA, Municipal water supply system
LeHillier	$ 6,000	O & M
Lunds Farmer Seed (MDA)	$ 498	Sample disposal
MacGillis & Gibbs	$ 50,000	RA-State match, Test burn
McGuire Wire	$ 132,530	RA activities
Perron Road	$ 302	Drinking water
Pine Bend/Crosby Amer. Demo Landfill	$ 67,674	Risk assessment, Cover FS
Red Hansen	$ 1,292	Emergency
Rice Munic. Well #2	$ 100,871	RI/FS
Sauk Centre SLF	$ 14,227	Risk Assessment
Schloff Chemical and Supply	$ 93,401	RI/FS, GW pump-out system, O & M
St. Paul Park	$ 188,940	RA/Soil removal
Valentine Clark	$ 37,646	Install culvert
Winona	$ 62,242	RI/FS, IRA
Site-specific Program		
Abandoned barrel program	$ 253,762	Addressed, cleaned up abandoned barrels
Arsenic	$ 12,933	Investigation/cleanup below ground
Arsenic (MDA)	$ 14,865	Collection/above ground
Hazardous waste spills	$ 496,654	Responses to spills and emergencies
Innovative treatment technology	$ 11,496	Analysis of alternative treatment technologies
PA/SI state lead	$ 16,117	Pre RI/FS
Site-specific laboratory analytical services	$ 209,273	Lab services/MDH
Site-specific laboratory analytical services (MDA)	$ 7,575	Lab services
Site specific legal expenses	$ 112,935	Attorney General support
Site specific legal expenses (MDA)	$ 3,789	Attorney General support
Solid waste investigations	$ 67,384	
Total	**$2,616,170**	

MPCA Significant Cleanup Actions

During FY 92:

- 70 emergency spill actions received response;
- three emergencies were declared;
- cleanups and partial cleanups were completed at 23 sites;
- Requests for Response Actions were issued at six sites;
- one determination that actions were not taken in the time and manner requested was issued; and
- Records of Decision were developed at five sites.

Currently, there are 189 sites listed on the state's PLP for investigation and cleanup, 14 of which were added during FY 92. Forty-two of the 189 sites also are included on the federal NPL. Cleanup actions at those 42 sites are eligible for federal funding if the responsible parties are unknown, unwilling or unable to do the work.

As of September 15, 1992, there were 144 sites in the cleanup process "pipeline" (i.e., in some stage of investigation or cleanup). Activities at 109 of these sites are being conducted by RPs. MERLA Fund or federal dollars have been spent at the remainder of the sites

Below-ground Arsenic

During the summer of 1991, MPCA staff conducted investigations at 52 sites alleged to be arsenic burial locations. After evaluating these sites, staff recommended no further action at 35 sites. Four sites are awaiting test results, one site will have continued oversight to assure good communication with a city developing the property, five sites are being further investigated, and seven sites are being cleaned up.

In the past, the MPCA has conducted removal actions at below-ground arsenic sites, sending the contaminated soils to hazardous waste facilities out-of-state. However, EPA's land ban and MPCA's emphasis on treatment of wastes at state Superfund sites led the MPCA to conduct a pilot project with a firm specializing in separating arsenic from soils.

Emergency Spill Response

The Spills Unit of the Hazardous Waste Division responds to reports of acute environmental emergencies. These include truck and train accidents, pipeline breaks, oil slicks, chemical fires, abandoned or dumped barrels of unknown chemical contents, unknown substances and odors, discovery of explosives, and fish and waterfowl kills. One member of the Spills staff is "on-call" during all non-working hours of the year.

Most spill cases are handled by the RP stabilizing and cleaning up the

A fire at the MacGillis and Gibbs Site in March1992 involved both Superfund and Hazardous Waste Division's Tanks and Spills emergency response team.

problem under MPCA Spills staff guidance and oversight. Often this is done with the assistance of local fire and police and MPCA regional staff. For some incidents, the RP is unknown or unavailable, or is unwilling to immediately commit to doing an adequate cleanup. Spills staff have access to MERLA emergency funds and have a standing contract with a cleanup firm. If the spill or incident is creating an immediate danger to the public or environment, the state's contractor will be activated to stablilize or clean up the site.

In FY 92, approximately $496,654 in MERLA funds were used at 70 sites for emergency spill response actions. These sites included responses to a March 1992, fire at the MacGillis and Gibbs Site in New Brighton; the Madelia dump fire in May 1992; and one potential Superfund site where drinking water emergencies exist.

MERLA also was used to reimburse local governments for their environmental emergency response costs. The cities of St. Cloud, New Hope and Madelia will be refunded money they spent responding to fires involving hazardous substances.

Drinking Water

Since 1983, the MPCA has responded to 41 MERLA-funded emergencies involving contaminated drinking water supplies and has taken action to provide affected residences with alternate drinking water. The MPCA continues to supply safe drinking water to affected residences. Permanent supplies are planned for each site and action toward that end has begun.

Sites where alternate drinking water supplies were provided in FY 92 include Arrowhead Refining, Baytown, Duluth Former City Dump, Isanti-Chisago SLF, Lansing, Pine Bend/Crosby American Demo Landfill, Red Hansen Well, Red Rock SLF, St. Augusta SLF, St. Paul Park, Twin Cities Army Ammunition Plant, U of M Rosemount, and Washington County SLF.

Declared Emergencies

In FY 92, there were three emergencies declared by the MPCA Commissioner. The MPCA Commissioner declared these emergencies in order to make MERLA funds available to the MPCA for the conduct of response actions. These sites include: Red Hansen drinking water emergency; an interruption of the interim ground water contaminant system at the Schloff Chemical Company; and the Valentine-Clark site duck-kill in St. Paul.

Major RP Cleanups and Partial Cleanups Undertaken in FY 92

Table 6 is a list of cleanup actions taken by the RPs under the direction of the Minnesota Superfund program between July 1, 1991, and June 30, 1992.

Table 6: RP Cleanup Actions in FY 92

Site	Location	Cleanup Action
Ashland Oil-Pine Co.	Pine County	Ground water aeration/infiltration system
Ashland Park Penta	St. Paul Park, Washington County	50,000 lbs. debris and 18,700 gal. sludge cleanup
Ashland Refinery	St. Paul Park, Washington County	Free product IRA
Anoka Municipal SLF	Ramsey , Anoka County	Ground water pump-out
Bell Lumber and Pole	New Brighton, Ramsey County	Completed injection pilot test, incinerated 10,000 cu.yd. soil
Burlington Northern	Brainerd, Crow Wing County	Heavy metal IRA, petroleum pump-out
Burlington Northern	Waite Park, Stearns County	Health Advisory-consolidation of lead contaminated soils
Duluth Air Force Base	Duluth, St. Louis County	Ground water and soil IRA
East Bethel Demo Landfill	East Bethel, Anoka County	Ground water IRA
Flying Cloud SLF	Eden Prairie, Hennepin County	Ground water IRA. Began cover system RA
General Mills	Minneapolis, Hennepin County	Ground water pump-out expanded
Interplastic Corp.	Minneapolis, Hennepin County	80 drums removed
Koch Refining/N-ReN Corp.	Rosemount, Dakota County	Began soil and ground water RA
Minnegasco	Minneapolis, Hennepin County	Preparation of 13,000 cu. yards of spent oxide box filler for disposal. Ground water RA
Rochester Gas Mfg.	Rochester, Olmsted County	Coal tar soils RA
Spring Grove	Spring Grove, Houston County	Ground water RA
Superior Plating	Minneapolis, Hennepin County	Ground water IRA
Twin Cities Air Force Reserve Base	Minneapolis, Hennepin County	Soil and refuse IRA
Union Scrap	Minneapolis, Hennepin County	EPA Soil cleanup
U.S. NIROP	Fridley, Anoka County	Ground water IRA. 31 drums removed
USX	Duluth, St. Louis County	Barrel and amonium sulfate removal (ongoing RA)

Requests for Response Actions

A RFRA is a formal request to responsible parties to undertake investigation and cleanup actions at a Minnesota Superfund site. Each RFRA is issued by the MPCA Citizens Board. Table 7 is a listing of RFRAs issued in FY 92.

Determinations that Actions Will Not Be taken in the Time and Manner Requested (Determination)

A Determination reflects the MPCA's decision that an RP is either unable or unwilling to undertake cleanup actions requested by the agency. Two Determinations were issued in FY 92, to the Metropolitan Airports Commission for the Baytown Site and Bueckers SLF for failure to respond to the RFRA.

Table 7: RFRAs Issued in FY 92

Site	Location	Responsible Party/Purpose
Baytown Township	Baytown Township, Washington County	Metropolitan Airports Comm./ Ground water cleanup
Bueckers SLF #1	Millwood Township, Stearns County	Erv Bueckers and Melrose Landfill, Inc./ Ground water cleanup
Houston County SLF	Houston Township, Houston County	Houston County and former SLF property owners/Ground water cleanup
Interplastic Corporation	Minneapolis, Hennepin County	Interplastic Corp/Soil and ground water cleanup
Koch Refining/N-ReN Corp.	Rosemount, Dakota County	Koch Refining/RD/RA soil and ground water cleanup
Red Rock SLF	Red Rock Township, Mower County	Frank Downey, Melron, Inc. and Waste System Corp./Ground water cleanup
St. Augusta SLF/Engen Dump	St. Cloud, Stearns County	Multiple responsible parties/ Ground water cleanup

"A ROD is the formal decision document that details a final cleanup decision by either the MPCA or U.S. EPA ..."

Records of Decision (ROD)

A ROD is the formal decision document that details a final cleanup decision developed by either the MPCA and/or U.S. EPA. Table 8 lists RODs issued in FY 92.

Table 8: RODs Issued in FY 92

Site	Location	ROD Action
Ashland Oil Co.	Pine County	Soil and ground water cleanup
Koch Refining/N-ReN Corp.	Rosemount, Dakota County	Soil and ground water cleanup
MacGillis & Gibbs Co.	New Brighton, Ramsey County	Soil and disposal pit cleanup
Pine Bend/Crosby Amer. Demo Landfill	Inver Grove Heights, Dakota County	Drinking water supply
South Andover	Andover, Anoka County	Soil and ground water cleanup

MPCA Abandoned Barrel Program

In FY 92, the MPCA Abandoned Barrel Program:

- responded to 72 complaints of abandoned barrels;
- disposed of 94 drums and 185 various-sized waste containers; and
- addressed 13 different types of hazardous waste streams.

During FY 92, there were 72 complaints of abandoned barrels. Fifty-nine of these cases dealt with the disposal of hazardous waste or non-regulated wastes that were treated as hazardous. Table 9 shows the number of cases for the various types of hazardous wastes dealt with by the Abandoned Barrel Program.

The program was responsible for the disposal of 94 drums and 185 various sized waste containers in FY 92. Thirteen different types of hazardous waste streams were handled.

Table 9: FY 92 Abandoned Barrel Program

Type of Hazardous Waste	No. of Cases
Used/Waste Oil	28
Paint Wastes	9
Solvents	8
Various (multiple waste streams)	4
Pesticides/Herbicides	3
Non-regulated Waste	3
Corrosives/Cleaners	3
Resin Waste	2
Tar/Sludges	2
Unknowns*	2
Total cases in which waste from abandoned barrels was handled	64

* Unknowns indicates the waste analysis was not completed at the time of this report or the waste containers were smaller and handled by the contractor as a labpack, in which case no analysis was required.

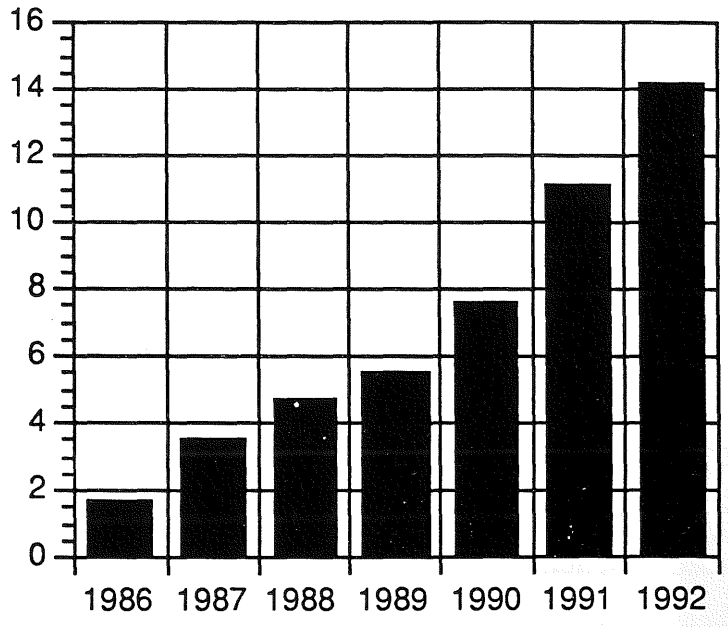
MPCA Reimbursements to the Fund

Since the passage of MERLA, RPs have committed nearly $250 million to the investigation and cleanup of hazardous waste sites and have paid penalties and made reimbursements to the Fund of $14,156,839 to cover costs incurred by MPCA in administering and overseeing the site cleanup activities. During FY 92, reimbursements totalling $3,004,000 were made to the Fund.

In FY 92, over $3 million was returned to the Fund :

- by RP reimbursements to cover administrative and oversight of cleanup costs;
- through Stipulation Agreement penalties; and
- through Administrative Penalty Orders.

Figure 3: Reimbursements to the Fund



Of this amount $206,459 was reimbursed to the Fund from penalties imposed by Stipulation Agreements and Administrative Penalty Orders. These penalties include $46,000 from Crown, Cork and Seal; $40,000 from Rainbow Inc.; and $25,000 from Kotula Iron. Some of the penalties have been paid to the Fund in full while others are on a payment plan. The cumulative amount of money being reimbursed to the Fund through RP actions is shown in Figure 3.

MPCA Legal Actions and Superfund

In FY 92, the MPCA was involved in:

- lawsuits to recover state cleanup costs at two sites;
- insurance litigation;
- four bankruptcy proceedings to recover cleanup costs at five sites; and
- a lawsuit challenging EPA's Superfund rules.

During FY 92, MPCA was a party, amicus or claimant in a number of cases involving the Superfund Program, including three cases before the Minnesota Court of Appeals, a lawsuit against U.S. EPA, two lawsuits, and four bankruptcy proceedings to recover MPCA cleanup costs. Recovery of cleanup costs and the implications of insurance and bankruptcy law on cost recovery continue to be the primary focus of this litigation.

Recovering MPCA's Cleanup Costs

Actions in Minnesota District Court

The MPCA is a party to two lawsuits in Minnesota District Courts to recover state Superfund money spent for emergency cleanup action and agency oversight expenses from site owners and operators. These cases are: State v. R.B. McGowan Co., Inc., et al. (MPCA spent approximately $160,000 on investigative and oversight activities at this municipal landfill Superfund site); and State v. LaPanta et al., (MPCA Spent approximately $115,000 to control a fire at a tire dump in the City of Andover in 1989). These cases are proceeding toward trial, with settlement possible in the McGowan case.

Insurance Litigation

The MPCA filed an amicus brief in the case of Sylvester Brothers Development Company v. Great Central Insurance Company, et al. which raised the question of whether pollution from a permitted SLF was a "sudden and accidental" occurrence under the landfill owners' insurance policies. The opinion of the Minnesota Court of Appeals issued in January 1992, agreed with the MPCA that the "sudden and accidental" language must be applied to ground water contamination escaping from their landfill, not to the disposal of waste in the landfill as the District Court had decided.

The Court of Appeals also found, for the first time in any environmental pollution case in Minnesota, that the term "sudden" as used in the insurance policies is not ambiguous and must be understood as a reference to the speed or abruptness of the occurrence, not simply to whether it was unexpected.

The Court sent the case back to the District Court for a determination of whether the escape of pollutants from the landfill was sudden and accidental. In August 1992, the District Court decided that the ground water pollution from the landfill was not sudden and accidental. This case will probably be appealed again and may reach the State Supreme Court.

The MPCA is following the progress of a number of other cases involving insurance coverage for environmental pollution under the "sudden and accidental" standard where the pollution has occurred as part of a commercial or industrial operation rather than a landfill. These cases will be important in determining the likelihood of success for the MPCA in a number of cost recovery matters involving commercial or industrial sources of pollution.

"The MPCA is following the progress of a number of ...cases involving insurance coverage for environmental pollution..."

Bankruptcy Cases

The MPCA has made bankruptcy claims against a number of corporations identified as responsible for Superfund cleanup costs. These include the Wasteco and Dakhue Landfill bankruptcies in Minnesota and the Amdura bankruptcy in Colorado. Negotiations are continuing on a potential settlement with Evans Products Asset Holding Company, a Delaware company authorized to pay bankruptcy claims against several Minnesota companies who disposed of hazardous waste at several Minnesota Superfund sites.

Other Cases

Challenges to U.S. EPA's Superfund Implementation Rules

The MPCA and eight other states continue to challenge the EPA's rules implementing the federal Superfund program in the case entitled State of Ohio et al. v. U.S. EPA in the U.S. Court of Appeals for the District of Columbia. The states and EPA have filed their opening briefs on the issues in the lawsuit, and the states will file their reply brief in November 1992. Oral argument is scheduled for February 1993.

In March 1992, fourteen additional states filed an amicus brief in support of the positions taken by Minnesota and the eight petitioning states. Key issues in this case continue to be EPA's limits on state participation in the federal Superfund program; cost-sharing provisions of the rules for federally assisted cleanups (imposing 100% of long term operation and maintenance costs on states); and remedy selection provisions that downplay permanent remedies and strict compliance with water quality standards.

Appeals of MPCA Superfund Actions

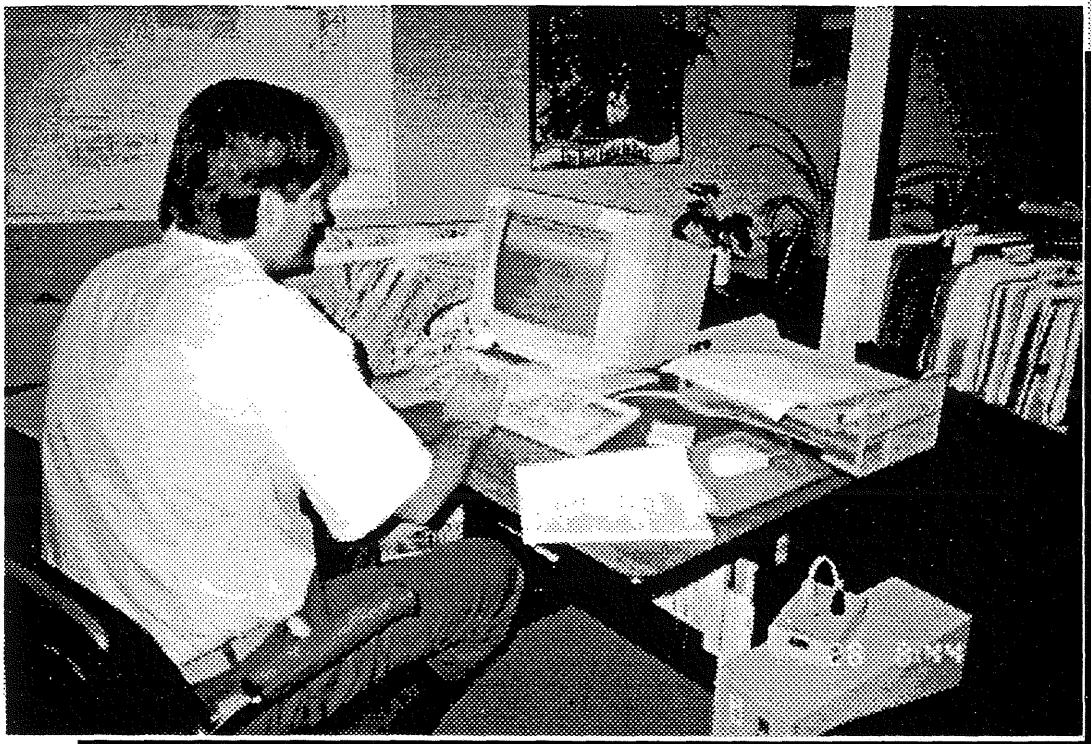
In FY 92, the MPCA successfully defended two cases in the Minnesota Court of Appeals involving the Superfund Program.

In the first case, Waste Systems Corporation v. MPCA, the recipient of a Request For Response Action (RFRA) challenged the MPCA's issuance of the RFRA. The Court of Appeals dismissed the case on the grounds that issuance of a RFRA does not constitute final agency action by the MPCA and is therefore not ripe for appeal.

Federal courts have consistently decided that RPs may not seek judicial review of cleanup actions selected by EPA unless and until EPA brings a cost recovery action or enforcement action against the responsible party. In the Waste Systems case, the Minnesota Court of Appeals has reached a similar result under the Minnesota Superfund law.

The second case (In the Matter of the Washington County Landfill; Proceedings Under the Response Order by Consent) two counties appealed an order of the MPCA Commissioner resolving a dispute under a Superfund administrative Consent Order. The appeal was dismissed for lack of jurisdiction because the Commissioner had terminated the Consent Order as requested by the Counties.

"Key issues in this case continue to be the limits on state participation in the federal Superfund program under EPA's rules ..."



The Attorney General's Office assists in recovering oversight costs, including in cases of bankruptcy.

MPCA Property Transfer/

Program accomplishments include:

- 1,852 file evaluations completed in FY 92;
- rapid site cleanup through technical assistance/voluntary cleanup;
- 9 interim and 29 final cleanup plans approved to date;
- 750 acres of industrial and commercial property put back into service over the life of the program;
- 97% of state costs reimbursed by individuals requesting file evaluations and almost 93% by individuals requesting technical assistance;
- 214 investigations overseen to date; and
- the Land Recycling Act initiated in 1992.

Background

The MPCA Property Transfer Program was created by the Legislature as part of the 1988 Waste Management Act Amendments. The Property Transfer Program is a response to requests for information and technical assistance from the MPCA by business and industry concerning the environmental liability associated with real estate transactions. MERLA imposes liability on parties who knew or reasonably should have known that a hazardous substance, pollutant, or contaminant was located on the property at the time that right, title, or interest in the property was acquired.

Prior to the legislative action that created the Property Transfer Program, it was difficult for a voluntary party to get assistance from the MPCA staff within the short time period required for property transactions. Since most of the contaminated sites of interest were only recently discovered and were sometimes only marginally contaminated, they were not a priority for MPCA staff time, which, by law, was dedicated to sites on existing Superfund lists. The 1988 legislation created the Property Transfer Program under the Superfund law, allowing MPCA staff to respond far more quickly to requests for file information and technical assistance.

Staff in two sections of the MPCA's Ground Water and Solid Waste Division are involved in providing property transfer information and assistance. Staff in the Program Development Section conduct file evaluations and staff in the Site Response Section's Property Transfer/ Voluntary Cleanup Program (PT/VC) provide technical assistance.

While cleanup standards for this program and the rest of Superfund are the same, the voluntary process can more quickly move a site to cleanup primarily due to the cooperation exhibited by voluntary parties. The MPCA staff has found that, when a

Voluntary Cleanup Program

The aim of the new Land Recycling Act is to clean up contaminated properties and put them back into productive use.

voluntary party is motivated to clean up property for purposes of refinancing or resale, a clean up can happen quickly. It is important to note that the Property Transfer Program offers assistance to any person who may wish to request it, not only parties involved in a property transaction.

Land Recycling Act

To further encourage voluntary action to investigate and clean up contaminated property, the Land Recycling Act was passed by the 1992 Legislature. The Land Recycling Act of 1992, offers powerful incentives to owners, prospective buyers and lending institutions to use the MPCA staff resources available to them on request. The PT/VC Program is expected to continue to grow as more persons avail themselves of this service.

Technical Assistance Effort

The key function of the technical assistance portion of the PT/VC Program is to set the standards for an adequate site investigation, to provide MPCA review of the completeness of such investigations and to approve cleanup plans to address the identified pollution. By obtaining MPCA approval of investigation and cleanup plans, landowners, lenders, and

potential developers can be confident that they know the extent of any environmental problem on the property and can calculate the costs of cleanup measures needed to satisfy MPCA requirements.

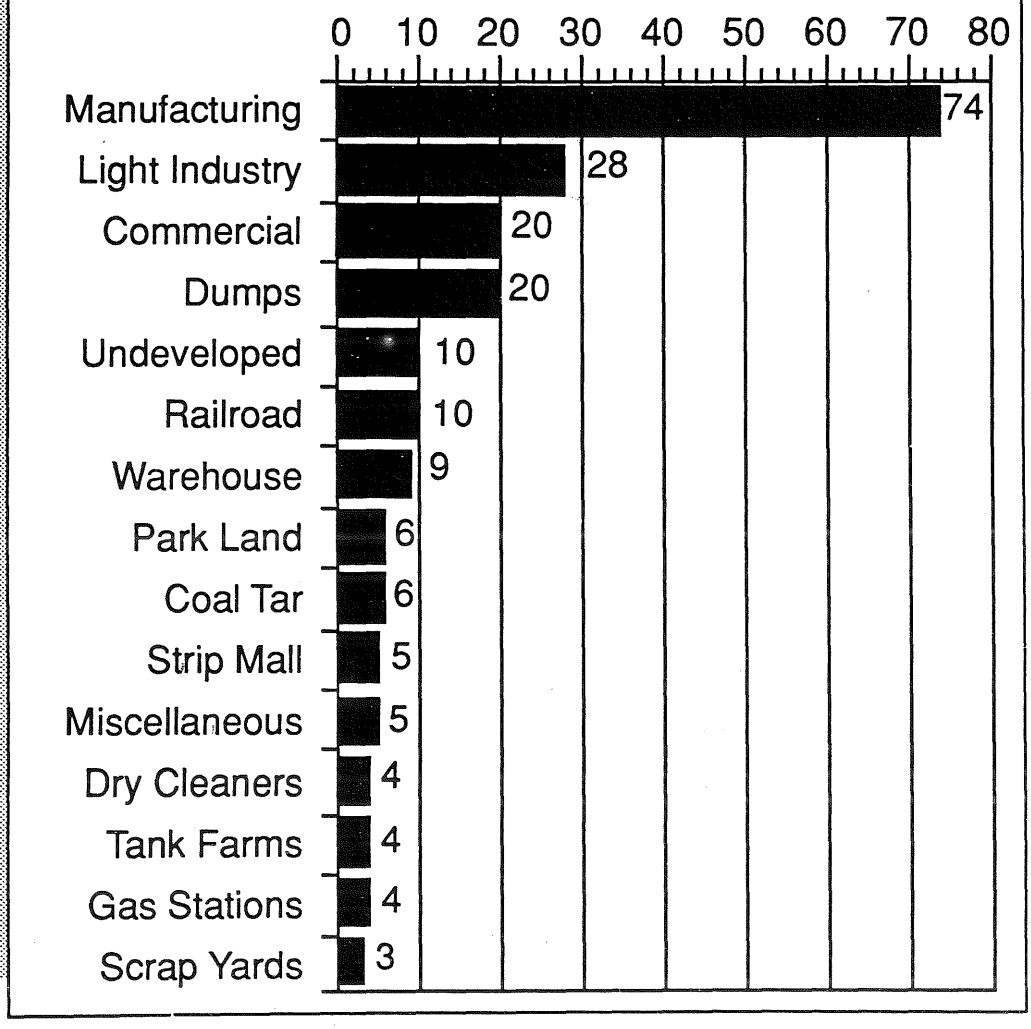
Figure 4 depicts the types of sites in the PT/VC Program. Manufacturing sites lead the list.

Figure 5 (next page) shows the status of all sites in the PT/VC Program. In addition, a more detailed status report on each site can be found in Appendix 5 to this report.

Major Accomplishments (Cumulative)

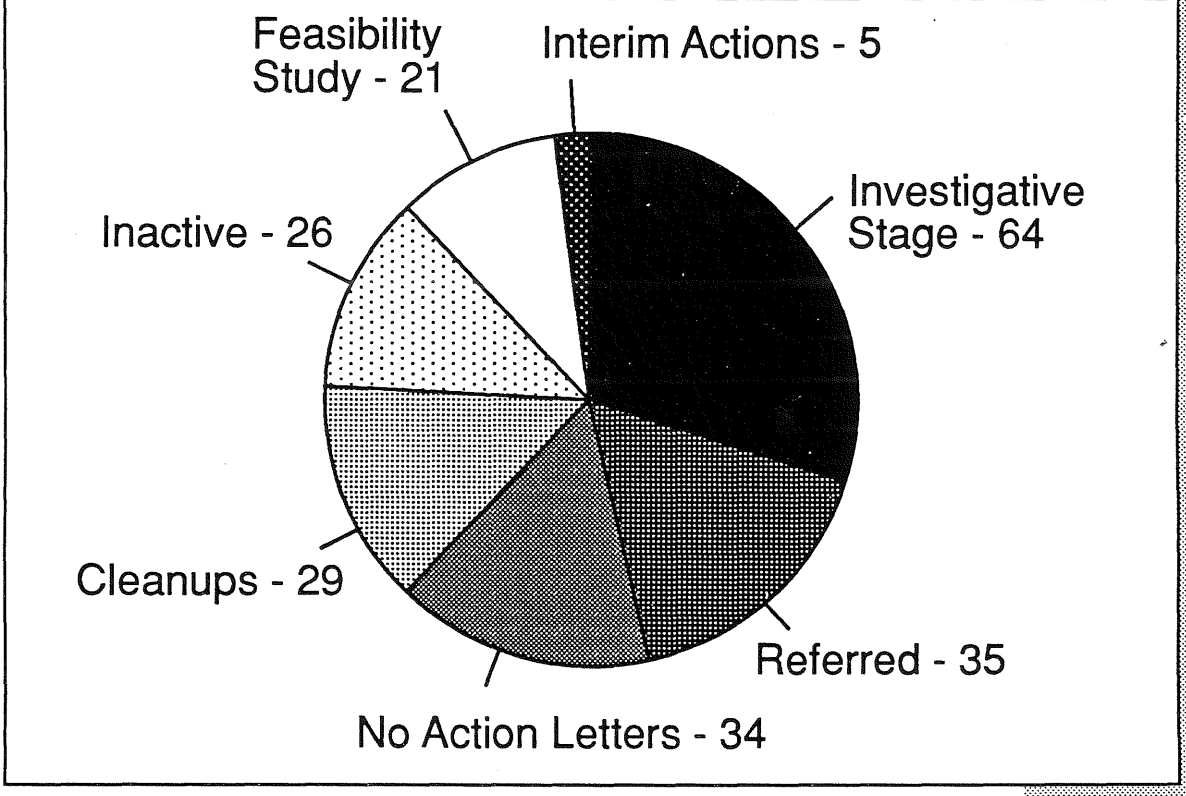
The PT/VC Program has to date achieved the following: prepared and distributed a series of written guidance documents to assist users of the service; provided oversight for 214 investigations; reviewed 21 feasibility studies; approved 9 interim cleanup plans; approved 29 final cleanup

Figure 4: Types of Sites in PT/VC



"To date, 92.7% of the money requested (to cover MPCA Property Transfer oversight costs) has been recovered..."

Figure 5: Status of Sites in PT/VC



plans; approved 10 long term monitoring plans; wrote 34 "no action" letters; issued 14 "good neighbor" determinations regarding an off-site source of contamination; assisted in putting back into service an estimated 750 acres of industrial and commercial property; and identified and referred as appropriate 35 contaminated sites to other MPCA programs and staff for follow-up.

Reimbursements for Technical Assistance

Figure 6 (next page) shows the technical assistance reimbursements to the Fund at six month intervals since the inception of the program in 1988.

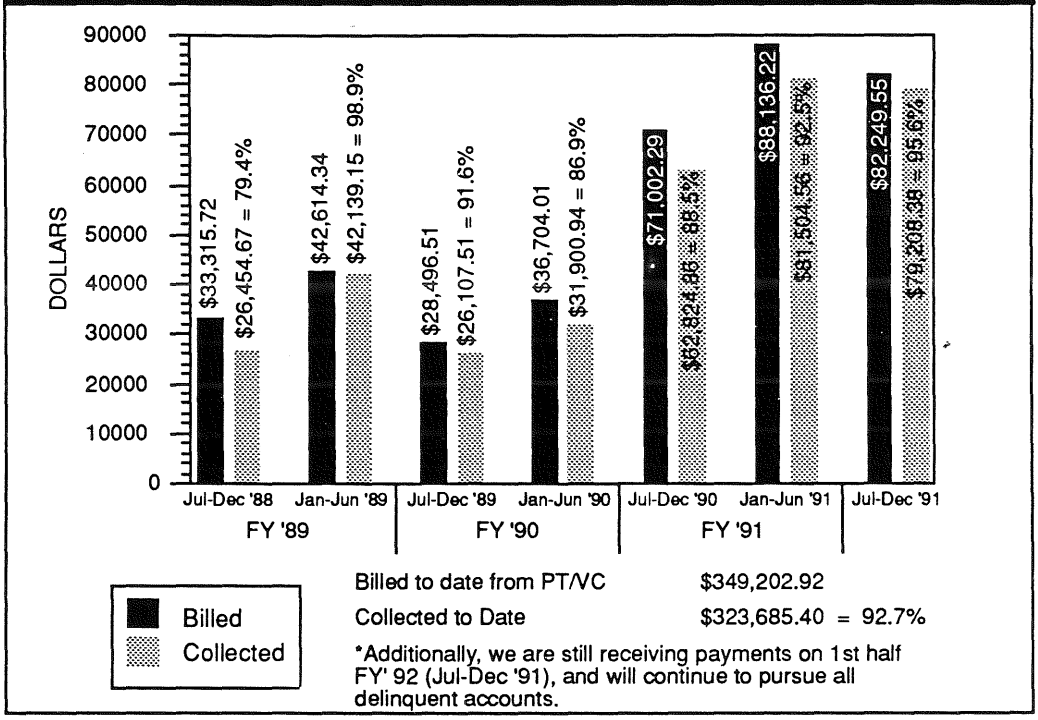
To date, 92.7 percent or $323,685 of the money requested has been recovered from the users while 7.3 percent or $25,518 remains unpaid. This amount is owed by various individuals and businesses, many of whom either subsequently went bankrupt or were potential buyers and developers who can not be located.

File Evaluation Effort

A routine File Evaluation includes a review of various lists, maps or data bases that identify sites at or within one mile of the property being investigated. These include the PLP, CERCLIS, RCRA Enforcement Log,

"... many of the people using the service are repeat users, such as attorneys, bankers, and consultants acting on behalf of their clients."

Figure 6: Reimbursements for PT/VC



RCRA Permits List, 1980 Metropolitan Area Waste Disposal Site Inventory, Underground Storage Tank Information System Data and Property Transfer sites.

Figure 7 (next page) shows the yearly increase in the number of requests for File Evaluations received by the MPCA staff. In 1986, Congress passed SARA, which stimulated a jump in the number of file search requests conducted by the MPCA. As depicted in Figure 7, File Evaluations conducted in FY 92 approximate the number conducted in FY 91, which is the peak year for such requests. The slight downturn in the numbers probably reflects the status of the economy during this period.

Reimbursements for File Evaluations

Figure 8 shows the reimbursement amounts collected by the File Evaluation staff since the beginning of the program. Reimbursement rates approximate 97 percent. Such a high reimbursement rate reflects the fact that many of the people using the service are repeat users such as attorneys, bankers and consultants acting on behalf of their clients.

Toward the Future

The MPCA staff expects the number of requests for file evaluations and technical assistance to continue to increase during the next year. In addition, on a national level, the EPA has begun to recognize the many benefits of voluntary cleanup efforts and may become a partial source of future funding.

Figure 7: Increases in File Evaluation Requests

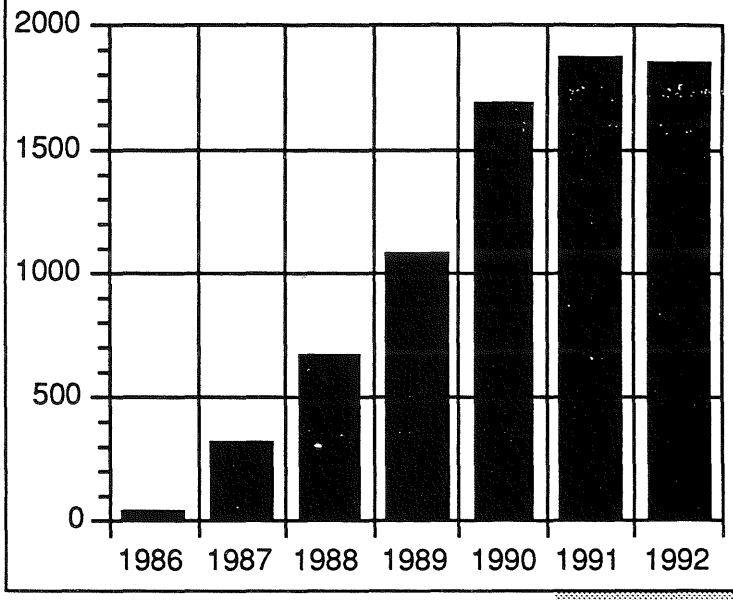
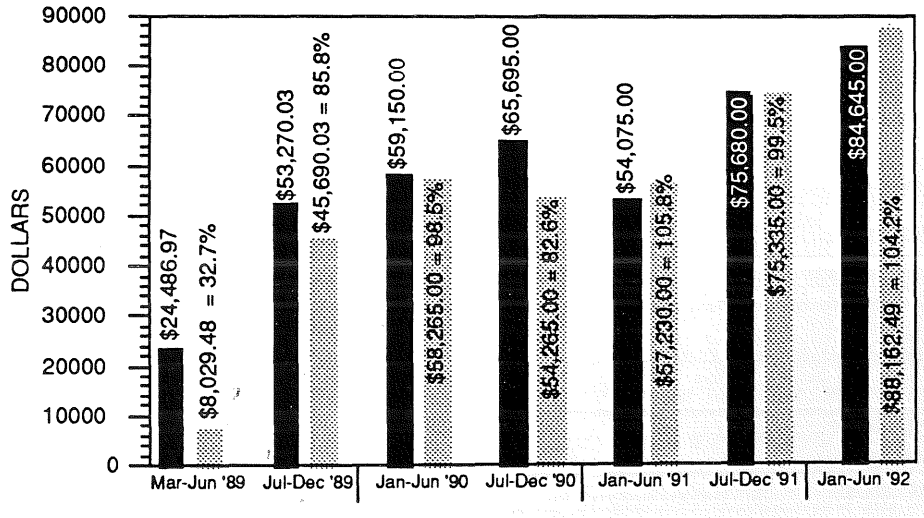


Figure 8: Reimbursements for File Evaluations



Billed to date from PT file eval $417,002.00

Collected to Date $386,997.00 = 96.5%

Actions at Sanitary Landfills

To address Minnesota's sanitary landfills:

- the MPCA recommends a new law and program;
- there is not enough money in the Fund to address SLFs; and
- the Legislature appropriated $1.2 million for an assessment of closed permitted landfills, to begin in FY 93.

Although MPCA Superfund staff working on landfills successfully completed work at several sites in FY 92, the consensus among regulators is that the landfill cleanups should not be conducted under MERLA. The state Superfund program is the best tool available to address contamination problems at closed landfill sites, where RPs can not or will not do the work, but support is strong for a new program more closely tailored to SLFs.

MERLA does not fit with SLFs primarily because of the strict, joint-and-several liability standard that is so effective in addressing traditional industrial Superfund sites. Under strict, joint-and-several liability, liability is retroactive and forever. It is joint-and-several in that any party found responsible for a site could be liable for the whole cleanup, even though other RPs may exist. The law does not apportion liability, which means that RPs must determine who pays how much for a site. At SLFs, where the number of RPs can be in the hundreds, resolution of the legal issues can be very expensive.

It has become apparent both that MERLA is not a good fit for landfills, and also that the state Superfund is headed for a shortfall. A separate landfill program would alleviate financial pressure on the Fund.

Lawmakers, during the last legislative session, asked for a study of alternatives to Superfund for landfill sites. The resulting report, **Alternatives to Superfund for Landfill Cleanup**, suggested that landfills are a societal problem and they should be removed from the Superfund program and addressed in a new law and program. The report also recommended an assessment of all the closed permitted landfills in the state that would otherwise be investigated or cleaned up under Superfund. This would not only give legislators and regulators an idea of the scope of the problem of landfill contamination, but also would give the MPCA base information on all of the closed landfills for which data is lacking. The Minnesota Legislature appropriated $1.2 million dollars in FY 93 for this assessment effort.

Staff "Mini-investigations" in FY 92

The landfill assessment effort was preceded by efforts of Superfund staff to conduct investigations of some closed sites not having adequate monitoring systems or test data. The funding for these investigations included state dollars saved from other projects using cost-effective measures. (These investigations will be folded into the larger landfill assessment process that began in July 1992).

Planning the Statewide Closed Landfill Assessment

The effort to assess closed landfills will take in more than 80 closed landfills statewide. Well installation, ground water and surface water sampling, soil borings, and surveys are planned for every closed landfill where current or adequate information is lacking. By Fall 1993, most data should be available for review and assessment of every closed landfill in the state. The primary focus of the assessment is to identify those sites which pose a threat to public health and the environment. The data would also assist Superfund staff to decide on appropriate remedies and estimated costs.

Solid Waste Section Reorganized

In 1992, the Solid Waste Section was reorganized to reflect the primary functions of staff and to clarify the distinct differences between open and closed landfill sites. The new structure will improve efficiency in Solid Waste activities. It also will be workable under either the Superfund program or another landfill cleanup program.

Closure at currently operating sanitary landfills, many of which are lined facilities with leachate collection systems, will be addressed under current operating permits, not Superfund.

Community Relations in Superfund

In FY 92, MPCA's public information efforts:

- provided information and opportunities for community participation to 189 Superfund sites with 2 staff positions;
- responded to an estimated 300 phone calls and 50 information requests per month; and
- assisted program managers in planning communication on the reauthorization of the federal Superfund law.

Recently, a new national poll indicated that 80 percent of all Americans believe environmental protection should be a major priority for government. This finding is consistent with the strong interest statewide in Minnesota Superfund sites and the state and federal Superfund programs. The MPCA's Superfund community relations efforts operate at a brisk pace keeping communities informed of site-specific developments and supporting public participation in cleanup decisions. Two full-time staff (one of whom is funded by the federal Superfund program) respond to questions and requests for information for the 189 PLP sites, and two additional staff members have partial responsibilities for Superfund sites. Staff respond to an estimated 300 calls and 50 information requests, coordinate 3 public meetings, and mail several update letters, fact sheets, or news releases each month.

In addition to site-specific responsibilities, MPCA staff receive an increasing number of calls for state and federal Superfund program information. The lobbying activities of the American International Group (AIG), an insurance industry group, to change the federal Superfund's strict, joint-and-several liability standard heated up in FY 92. The MPCA's Public Information Office staff not only provided interpretation of the federal program for interested elected representatives, media and citizens, but also provided data and site history to the lobbyists themselves.

Among the routine activities employed to assure communities a voice in the investigation and cleanup process are phone calls, informal meetings, news releases, site-specific fact sheets, update letters, public meetings, cable television appearances, radio interviews, and site tours. MPCA staff emphasizes a day-to-day approach to community relations, with a focus on local officials and media as important information sources for residents.

Among the developments in the community relations process during FY 92 are greater coordination of site-specific activity with health risk assessment staff at the MDH including meetings cosponsored by both state

Site tours, such as this one of the Kummer Landfill cover, provide community members with a measure of cleanup progress.

agencies; fact sheets covering areas including several Superfund sites, allowing citizens to take a 'big picture' approach to environmental issues affecting quality of life and development aspects in their communities; staff training on community relations; greater efforts to reach community and neighborhood groups, especially in the Twin Cities metro area; and targeting communications to the affected neighborhoods only, helping communities avoid the 'contaminated community' labeling that comes with unnecessary statewide coverage of local issues.

Other activities have included publication of the **Minnesota Superfund Quarterly;** fact sheets on general Superfund issues; assisting university students studying Superfund issues; developing and establishing information repositories or Administrative Records so that communities have convenient access to important documents on nearby sites; helping prepare the yearly legislative report; providing communications assistance during environmental emergencies; and assisting national organizations (such as the Association of State and Territorial Solid Waste Management Officials) in presenting alternative viewpoints on national Superfund issues.

MDA Cleanup Program

The MDA Cleanup Program:

- is authorized by the 1989 Ground Water Protection Act;
- cleans up sites under ACRRA and MERLA; and
- addressed 7 PLP sites, 91 facility incidents, and 250 "sudden incident" emergencies.

The Minnesota Comprehensive Ground Water Protection Act (1989 Laws of Minnesota, Chapter 326, Article 8 and 1990 Laws of Minnesota, Chapter 597, Sections 52, 53 and 54) authorized MDA to access the Fund for sites contaminated with agricultural chemicals (pesticides and fertilizers). MDA is the lead state agency for these types of investigations and cleanups.

In 1989, the Agricultural Chemical Response and Reimbursement Law (Minnesota Statutes, Chapter 18E) established an account which, in certain circumstances, provides partial reimbursement to eligible persons for the costs of investigation and cleanup of an agrichemical incident, if the incident was properly reported to the MDA.

This Account, called the Agricultural Chemical Response and Reimbursement Account (ACRRA), reimburses a portion of corrective action costs. However, ACRRA does not cover the costs of providing alternative sources of drinking water. At sites which require alternative drinking water and in situations where a responsible party is unwilling to pay for cleanup costs, or can not be identified, Superfund will need to be accessed.

The MDA Incident Response Program has two basic components: cleanup of agrichemicals using authority under the Agricultural Chemical Liability, Incidents, and Enforcement Law (Minnesota Statutes Chapter 18D), and under MERLA (Minnesota Statutes Chapter 115B).

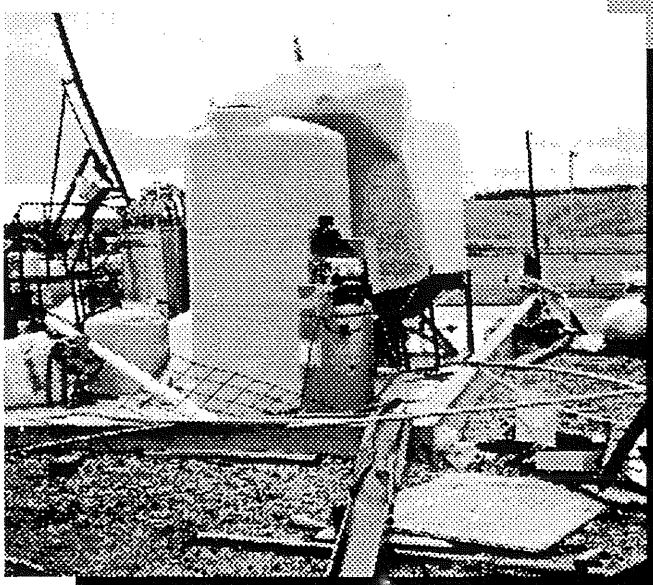
Under Chapter 18D, MDA staff will first request RPs for incidents to voluntarily perform necessary investigations and cleanups. RPs who conduct investigations and cleanups according to MDA guidance will be eligible to apply to the ACRRA Board for reimbursement of their costs.

If these requests for corrective actions prove unsuccessful, the department is prepared to order such actions. Alternatively, where the RP is unknown, unwilling, or unable to perform the necessary corrective actions, the MDA may perform the work itself using Superfund monies. The MDA has authority to seek recovery of its costs in these instances.

The MDA will also be using state Superfund authorities and resources for certain MDA initiated actions, such as for emergency responses, for agricultural chemical contaminated

sites where there is no responsible party, or where alternative sources of public drinking water need to be provided.

MDA has a total of seven staff positions working in the Incident Response Program. There are currently 91 facility incident sites (including seven PLP sites) where agricultural chemical contamination has been documented. These sites typically are businesses that store, handle and distribute agricultural chemicals at the retail and wholesale level. The MDA has identified ground water contamination at approximately twenty of these sites.



The MDA follows up on approximately 250 "sudden incident" sites per year, including this tank collapse following a tornado touchdown.

In addition to the longer-term facility incident sites, there are approximately 250 "sudden incident" (emergency) sites which are annually reported to the MDA for followup. Sudden incidents generally occur as a result of spills during the storage, handling and distribution of agricultural chemicals by facilities and other end users of the products. As additional information is learned, some of these will become long-term facility incident sites. MDA expects a majority of the RPs to cooperatively conduct cleanup and receive reimbursement of eligible cleanup costs from ACRRA. However, as stated above, some will require monies from state Superfund.

For FY 92, MDA has two positions funded from Superfund. MDA Superfund activities include overseeing investigation and cleanup activities at five PLP sites; scoring and listing new sites for the PLP; reviewing and overseeing investigation and cleanup activities at property transfer sites; responding to property transfer file search requests identifying sites which have agrichemical contamination; preparation of amendments to the MPCA's Preliminary Assessment/Site Investigation Cooperative Agreement with U.S. EPA; community relations activities; work on the MPCA/MDA Superfund/Site Response Memorandum of Agreement; contract administration and work on the annual Superfund Report to the Legislature.

MDA Actions Using Fund Dollars

In FY 92, the MDA:

- listed one new Superfund site;
- collected 3,100 pounds of arsenic from 17 sites;
- provided drinking water to five households;
- completed an investigation and part of a cleanup at one site; and
- conducted work with RPs voluntarily cleaning up sites.

New Site Listed

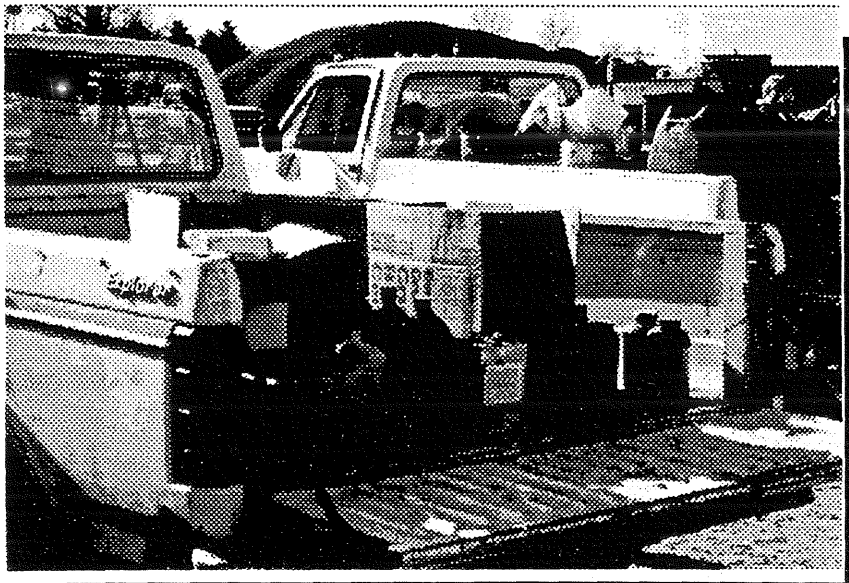
In FY 92, MDA added the Perham Municipal Airfield to the PLP. This airport appears to be affected by several spills of dinoseb, a banned pesticide that is classified as a hazardous waste. MDA is currently conducting an RP search to determine who will be asked to begin an investigation and cleanup.

Above-ground Arsenic

MERLA funds enabled MDA to target above-ground quantities of arsenic for collection and disposal. The 3,100 pounds of arsenic collected in FY 91-92 augmented on-going waste pesticide collection efforts that have netted nearly 100,000 pounds of banned, canceled, and unusable pesticides.

Products with calcium arsenate, calcium arsenite, sodium arsenate, and lead arsenate were collected from 17 sites in central and northern Minnesota. Most of these products had been stored for decades. Participants generally expressed relief at "finally being rid of it."

Labpack (small) quantities of arsenic were incinerated at high temperature. Incineration ash and bulk (large) quantities of arsenic were stabilized to prevent leaching before disposal in a hazardous waste landfill.



MDA collected 3,100 pounds of arsenic in FY 91 - 92.

Phase one of a two-part cleanup was completed at the Howe Chemical Site

Site Investigation and Cleanup Actions

MDA continues to provide drinking water to five residences in the Castle Rock community. An RI/FS is planned for one of the potential sites during FY 93 using MERLA funds.

MDA staff has completed an RI/FS at the Howe Chemical Soil Contamination site in Martin County. The first phase of a two-phased response action successfully remediated the original contamination area and is now supporting plant growth. The second phase of the response action is planned for FY 93. This project is being performed with MERLA funds.

Three agricultural chemical dealers in Lewiston are voluntarily performing investigation and cleanups so that they may be eligible for reimbursement through ACRRA. The dealers that will continue to handle bulk chemicals have constructed new containment facilities and have completed written plans detailing emergency spill procedures. The pesticide detection in local wells appears to be decreasing and is below MDH RALs.

An agricultural chemical dealer in Medford has voluntarily performed remedial actions for soils. Monitoring of test wells will continue. If further ground water contamination is detected, investigation may be reopened at the site.

MDA Legal Actions

In FY 92, the MDA:

- was involved in litigation to recover costs at one site;
- issued Corrective Action orders at one site;
- prosecuted a criminal case; and
- represented the state's interests in bankruptcy proceedings.

During FY 92, staff from MDA and the Attorney General's Office were involved in litigation to recover MERLA funds spent in 1988-89 to clean up and dispose of fire debris from the Lunds Farmers Seed and Nursery, Inc. In March 1990, the MDA initiated litigation against the Lunds and the site landowner. A settlement was reached with the site landowner. Negotiations continue for final cost recovery from the Lunds.

Two former operators of an abandoned pesticide formulation facility in Mallory, Minnesota, have responded to Corrective Action Orders issued to them in 1991. Their response has kept them eligible for reimbursement through the ACRRA program. The formulation facility is located on land owned by a railroad, and once an agreement is reached by the two former operators and the railroad, response action should begin. Unless the parties involved become uncooperative, this site will not utilize Superfund.

In Lincoln County, MDA and the Attorney General's Office successfully prosecuted a criminal case against a farmer who attempted to hide three barrels of soil and debris contaminated with phorate, a hazardous waste. The barrels were safely disposed of through a state contractor using MERLA funds.

The owner of a former pesticide dump site in Fulda is in the process of going through bankruptcy. MDA and the Attorney General's Office are attempting to secure funds for cleanup through the bankruptcy proceedings.

MDA Property Transfer

Requests for MDA property transfer assistance:

- increased in FY 92;
- involved working with farm lenders on their inventory of farms;
- will be assisted by a data base of agricultural chemical incidents and sites back to 1977; and
- will will be facilitated by an MDA guidance document.

Requests for property transfer review and opinion have become an increasingly large responsibility for MDA staff. File search requests, regarding past practices at various properties, and requests to review site investigations conducted as a part of a property transaction have increased over the past year. Staff continue to work with a farm lender to evaluate their inventory of farms for agricultural chemical contamination. Investigation and cleanup also continue at several agricultural chemical wholesale/retail operations as a result of property transactions.

To date, MDA has compiled a data base of all agricultural chemical incidents reported to the MDA dating back to January 1, 1977. MDA intends to enhance this data base to include locations of all licensed and permitted agricultural chemical storage facilities, past and present.

MDA staff has completed a Guidance Document to assist parties in investigating the potential of agricultural chemical contamination as part of property transfer transactions. MDA staff intends to further refine this document as part of the property transfer program within the Department.

Environmental evaluations are becoming more common at rural sites like this.

Further Fund Accomplishments

Other major accomplishments in FY 92 include:

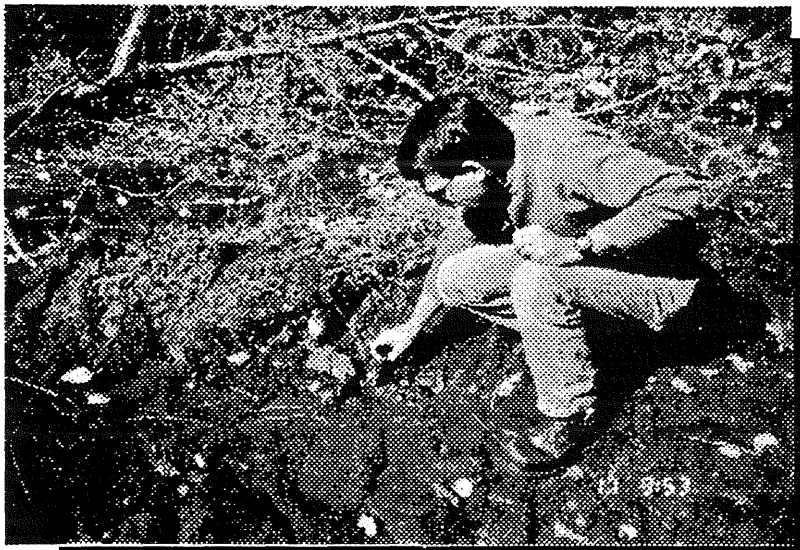
- development of the MPCA soil cleanup model to aid staff in setting cleanup goals;
- staff involvement in innovative technologies;
- joint MDH/MPCA efforts to protect public health;
- joint EPA/MPCA pilot agreement; and
- MDA consultants' survey.

Soil Cleanup Procedures

The MPCA staff completed a soil cleanup model to aid in setting cleanup goals that reduce health and environmental risk at state and federal Superfund sites. This effort to simplify and speed the cleanup process is attracting national attention, since Minnesota is one of the first states to develop such a model.

The procedures establish cleanup levels for soil ingestion, skin contact, inhalation, and soil to ground water. The first three routes of exposure use risk assessment procedures and guidelines from the EPA's 1989 Risk Assessment Guidance for Superfund. The fourth route - soil to ground water - assumes that the ground water immediately beneath the soil is the point of use. This is consistent with the nondegradation of ground water goal established in the Ground Water Protection Act of 1989.

The model is intended to help MPCA staff set site-specific cleanup goals and levels. Used in connection with the MPCA Ground Water Cleanup Guidance, the soil guidelines provide staff and responsible parties with a clear understanding about what is expected in terms of cleanup. This should assure consistency between sites and clear indications regarding the agency's expectations.



MPCA Soil Cleanup Guidelines will help the MPCA to establish consistency among sites.

"The MPCA continues to test new cleanup technologies that promise to lead to more protective cleanups and, often, reduced costs."

Innovative Treatment Technology

The MPCA continues to test new cleanup technologies that promise to lead to more protective cleanups and, often, reduced costs. A staff specialist serves as a liaison between state staff and the U.S. EPA, where innovative technology programs receive strong emphasis. This specialist consults with staff to help select remedies employing some of the more successful treatment technologies.

Among the efforts undertaken in FY 92 to promote innovative technologies were pilot studies of bioremediation technologies with various site contaminants, studies of techniques to remove lead and arsenic from soils, and professional development for staff on innovative technologies.

Cooperative Efforts with the Minnesota Department of Health

Throughout FY 92, MDH staff in the Health Risk Assessment Division has performed health assessments for Superfund sites under contract with the federal Agency for Toxic Substances and Disease Registry (ATSDR). MPCA and MDH staff have worked cooperatively on several sites to provide a realistic overview to the public of health issues involved in both state and federal Superfund sites.

Joint MPCA and MDH public meetings on health and environmental issues, mutual assistance with fact sheets and other communication tools, and exchange of data and information assure the public a complete picture of a site's risks and problems. In addition to providing health assessment at federal sites, MDH consults with the MPCA on health issues at state sites when time permits.

The Art of Cleanup

The MPCA worked with the Walker Art Center and artist Mel Chin in FY 92 on a recent exhibition, Revival Field, that brought together the often separate worlds of art and science. Chin used a section of St. Paul's Pig's Eye Landfill to test "green remediation," a process that may remove heavy metals from soil through introduction of plants which accumulate the metals, particularly cadmium. The fenced and visually interesting work will remain in place for approximately three years, the length of time required to obtain sufficient data about the cleanup method's effects. The project has received statewide and national attention.

EPA/MPCA Enforcement Pilot Agreement

The MPCA and EPA entered into an enforcement pilot agreement for the Koch Refining and Koppers federal Superfund sites. This agreement allows the MPCA the option of selecting and implementing a selected remedy without EPA concurrence.

MDA Guidance Documents

The MDA has updated its series of guidance documents which explain agricultural chemical incident investigation and cleanup procedures. A list of all MDA

Incident Response guidance documents indicates the date of revision for each document. In addition, two new documents have been created which cover contract soil spreading and property transfer site assessments and concerns.

MDA Consultants' Survey

The MDA sent a survey questionnaire to consultants involved in agricultural chemical incident investigation and cleanup. The survey requested input into the MDA Incident Response Program and a good percentage of the consultants replied. Most of the feedback was positive with some constructive suggestions. MDA plans to meet in a roundtable discussion with the consultants to discuss the survey results.

Future Program Initiatives

The MPCA and MDA began in FY 92, and intend to finalize in FY 93, a number of initiatives designed to enhance and/or streamline the Minnesota Superfund Program. A brief discussion of each initiative follows:

Future program initiatives include:

- proposed Superfund Accelerated Cleanup Model pilot project to speed site cleanups;
- development of guidance documents which play an important role in environmental protection;
- ecological risk assessment and natural resource damages; and
- MDA pesticide research project under LCMR grant.

Programmatic Initiative with EPA - Superfund Accelerated Cleanup Model

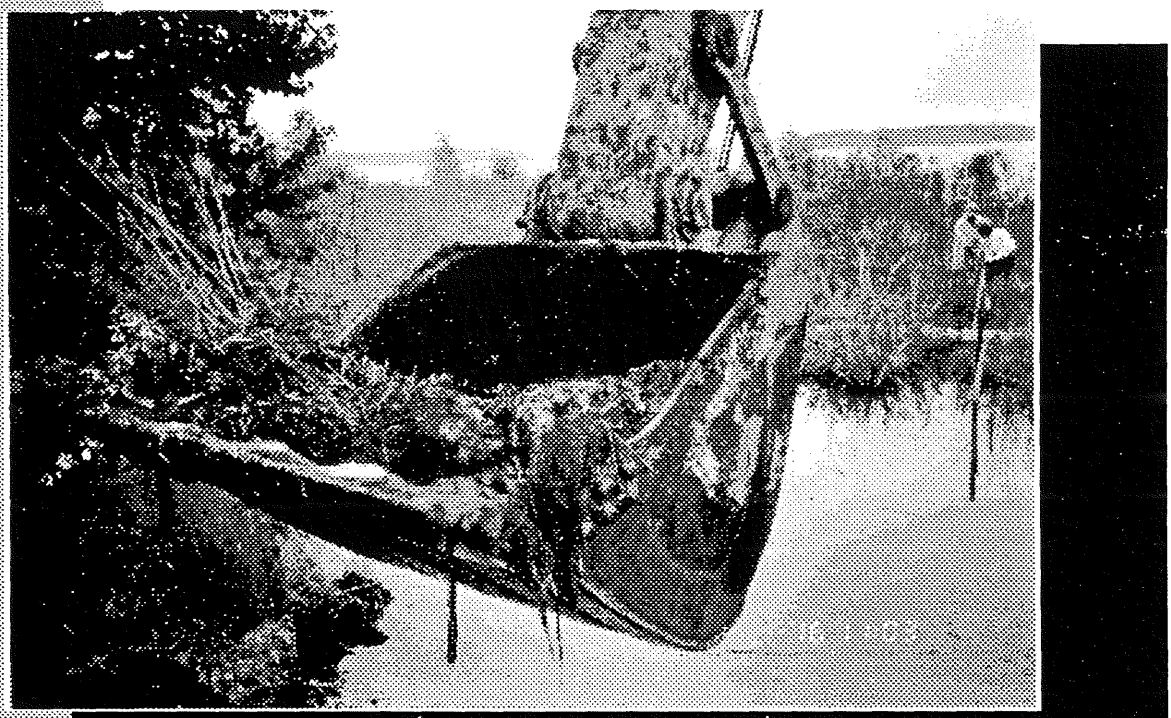
The MPCA has proposed to the EPA that, under a Superfund Accelerated Cleanup Model (SACM) pilot project, EPA fund MPCA staff to oversee voluntary RP cleanup activities at sites subject to CERCLA liability but not necessarily listed on the federal NPL. This would provide the RPs who want to remediate their site, with an opportunity to clean up their site before the site and RPs become fully involved in the Superfund process.

MPCA Ecological Risk Assessment Guidance

In the past, the cleanup work done at Superfund sites was driven primarily by the site's impact on human health. This approach does not ensure that the remedial action is protective of the ecosystem or the environment. The MPCA in early September 1991, requested proposals for the development of an ecological risk assessment guidance document. Currently, the MPCA staff is, through a contractor, defining the issues and the parameters for the development of ecological risk assessments. Ecological risk assessment is a newly emerging area of study and specific ecological risk assessment guidance is unavailable. The guidance document that will be developed will outline specific components of ecological risk assessments for parties required to do such an assessment. One goal of the guidance document is to simplify the ecological risk assessment process as well as expedite MPCA review of the assessment. The guidance document is targeted for completion in May 1993, and will be useful not only in Superfund but also for broader agency application.

MPCA Natural Resource Damage Program

The MPCA is currently evaluating state Superfund sites to determine which sites have the greatest potential for significant natural resource damages and integrating the requirements to conduct Natural Resource Damage Assessments (NRDA) at those sites into the Superfund program. The NRDA will weigh ten factors to



Increasing attention will focus on sites' impacts on the natural environment.

determine the most appropriate plan that will accomplish restoration, rehabilitation, or replacement of the damaged resource.

The NRDA will be conducted during the RI/FS stage, and will be performed in accordance with the U.S. Department of the Interior (DOI) NRDA regulation. The MPCA staff is currently working on compiling the NRDA, Health and Risk Assessment Requirements into one data-gathering assessment process. The use of one assessment process to collect data for all three areas of assessments required will reduce duplication of effort and promote the Superfund streamlining process. To aid in this, the MPCA is building a team. The team includes the consultant hired to prepare guidance for Ecological Risk Assessments (ERA), an ecotoxicologist/ risk assessor to be hired by the MPCA, an ecologist, and a natural resource damages specialist to assist in the planning and scoping of assessments with the site teams. Assistance in this endeavor is being solicited from experts, including EPA.

Prescriptive Guidance Documents

The MPCA is currently developing prescriptive guidance documents to drive cleanup efforts. These documents are being developed to assist RPs or other voluntary parties in a prescriptive approach to cleanup (i.e. cookbook to cleanup). This includes reviewing the current cleanup process and determining how and where to "streamline" the process and then developing a guidance document for the streamlined approach.

"The MPCA will be assessing the issue of consistency among the MPCA cleanup programs."

Setting Cleanup Levels

There are currently 41 Minnesota PLP sites in the RI phase of the cleanup process. In an effort to assist responsible parties in focusing in on specific cleanup technologies, it is important that cleanup goals are conveyed as early in the cleanup process as possible. To accomplish this, the MPCA has set target dates for conveying cleanup objectives, goals and a range of treatment technologies to either RPs or MPCA contractors for 38 identified sites. This, in turn, will reduce RP transaction costs associated with remedial investigations and feasibility studies.

Consistent Cleanup Programs

The MPCA will be assessing the issue of consistency among the MPCA cleanup programs. Media-specific programmatic requirements can and have presented major road blocks to RPs in their attempts to clean up sites. In order to alleviate this problem, the MPCA staff is attempting to organize an interdivisional work group to assess the inconsistency and begin developing a comprehensive guidance/ policy.

MPCA Involvement in National Superfund Issues

The Minnesota Superfund program is recognized nationally as being very effective at ensuring the cleanup of hazardous waste sites. Minnesota's streamlined approach and emphasis on RP involvement early in the response action process is of considerable interest to EPA and other states with developing Superfund programs. MPCA staff are being asked to share their Minnesota Superfund experience to provide direction in the coming federal Superfund law reauthorization debate.

MDA Pesticide Research

MDA has been working with the University of Minnesota on a two-year research project funded by the Legislative Commission on Minnesota Resources (LCMR). The primary objectives of the project are to better understand pesticide movement and degradation processes in soil under high concentration (spill) conditions and to investigate bioremediation technologies for the treatment of pesticide contaminated media. The MDA is conducting a comprehensive literature review on the appplication of bioremediation technologies to agricultural chemicals. University of Minnesota researchers are conducting studies addressing the mineralization (degradation) and movement of atrazine and alachlor, and examining innovative approaches using microbes and plants to affect biodegradation and removal of pesticides at spill sites. The project is due to be completed by the summer of 1993.

MDA Cooperative Agreement with EPA

MDA is currently negotiating with MPCA's site assessment program and EPA for federal funding for a proposed work plan which is designed to identify and assess agricultural chemical incident sites in Minnesota.

MDA Property Transfer Assistance

MDA has developed a database for all reported agricultural chemical incidents dating back to 1977. This was done to provide a service to parties involved in property transfer transactions. MDA is continuing to enhance the database to include locations of all licensed and permitted agricultural chemical storage facilities. MDA is in the process of developing a program to receive requests for file searches and for cleanup oversight assistance on property transfer sites.

MDA Commercial Laboratory Quality Assurance/Quality Control Plans

To ensure consistent and reliable analytical results, MDA developed a format and procedures for reviewing the quality assurance/quality control plans and the proposed analytical methods for commercial laboratories. MDA continues to receive and evaluate proposals and requests from commercial laboratories interested in qualifying for the MDA program.

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Legislative Initiatives

Legislative initiatives for the 1993 Session include:

- an alternative law and program for cleanup of SLFs; and
- long-term funding for Minnesota's Superfund program.

Minnesota's Superfund program is at a crossroads. Without changes to MERLA, the state Superfund will run out of money and cleanups currently planned or going forward will stall. At that time, many RPs may continue their investigation and cleanup activities, but others will not. They will know that the ability of state agencies to use the Fund and sue later for cost recovery will be limited. A strong state Superfund is an incentive to reluctant RPs to keep cleanups moving.

If the Superfund runs out of money, cleanups of traditional industrial sites will suffer, but cleanups of SLF sites will suffer even more. The Minnesota Legislature capped the contribution of municipalities to Superfund cleanup costs, so many landfill sites with no other viable RPs now depend on state funds to finish the job. With a dwindling state Superfund, these cleanups promise to grind to a halt.

The Legislative Commission on Waste Management (LCWM) has examined these issues, commissioning a report on alternatives to Superfund for landfill cleanups and requesting proposals for long-term funding for the Superfund program. These efforts have led to anticipated legislative initiatives for the coming 1993 session.

Alternatives to Superfund for Landfill Cleanups

Is contamination resulting from SLFs a societal problem or a Superfund polluter-pays problem? A task force of waste management officials agreed in a 1991 report to the LCWM, **Alternatives to Superfund for Landfill Cleanup**, that SLFs are a societal problem and should not be addressed under Superfund. The report lists several reasons why Superfund does not work at SLFs.

- very few SLFs received documented hazardous wastes from large industrial generators;

- contamination can result solely from household garbage;

- those who generate and dispose of municipal solid waste don't usually profit by the disposal;

- the legalities required to name responsible parties at SLFs result in excessive transactional costs and the money would be better spent on cleanup;

- the adversarial climate created by naming hundreds of small businesses and political subdivisions in a community as RPs does not foster agreement or speed in

"By the end of FY 93, the Minnesota Superfund would show a shortfall without additional dollars ..."

cleanup; and

- a time lag occurs when the political subdivision reaches its liability cap and the state must take over the work in mid-stream.

Currently, there are 62 permitted landfills on the state Superfund list, and the number may grow. A program addressing SLFs with either an insurance tax, a statewide surcharge, or a per-account surcharge would raise anywhere from $20 - $40 million annually for landfill cleanup.

How would the funds be prioritized? The Minnesota Legislature already has commissioned the MPCA to conduct a statewide preliminary assessment of all SLFs. Under proposed legislation, SLFs would be prioritized and addressed on a regional basis, with the worst sites cleaned up first.

During the 1992 legislative session, a bill that would address landfills under a new program was proposed. Although the bill did not pass, it gathered support and is expected to be reintroduced in 1993. Removing SLFs from the Superfund program would relieve some of the pressure on the Fund. However, it would

Table 10: Fiscal Projection of Obligations

	FY 93
Balance Forward In	**$ 9,736,000**
Receipts	
Penalties/Reimbursements	$ 2,000,000
Interest	$ 900,000
Taxes	$ 560,000
Transfer, Motor Vehicle Fund	$ 1,000,000
Subtotal	$ 4,460,000
Total Available	**$14,196,000**
Expenditures	
MPCA/MDA/PT Administration	$ 4,675,000
MPCA Cleanups	$ 9,041,500
MDA Cleanups	$ 550,000
Total Expenditures	**$14,266,500**
Balance Forward	**$ (70,500)**

Table 11: General Superfund Projections

	FY 93	FY 94	FY 95
Sites on PLP	199	209	219
Sites undergoing Response Action by RP	136	149	162
Sites undergoing Response Action using state or federal Superfund money	40	44	48
Total Response Actions	176	193	210
Hazardous Waste Site Verification per Year	25	25	25
Property Transfer Program per Year			
File Search Requests	1950	2050	2150
Cleanup Assistance	100	100	100

Expenditures under Superfund (Cumulative in Millions)

	FY 93	FY 94	FY 95
Estimated Dollar Amount of RP Actions	255	285	315
Federal Superfund Monies Secured	56	61	68
Reimbursement of Agency Administrative Costs	16.15	18.45	20.75

not take the place of the long-term funding needed to ensure a strong Superfund.

Long-term Funding for the Superfund

By the end of FY 93, the Minnesota Superfund would show a shortfall without additional dollars (See Table 10). According to an October 1991 LCWM staff report, **Report and Recommendations Regarding the Hazardous Waste Generator Tax and the Tax Rates Imposed under Section 115B.22**, the tax which supplies the Superfund generates approximately $560,000 per year currently, and even though it is expected to generate this amount per year in the future, this is still substantially less than the approximately $4 million needed annually to address cleanup costs.

The reasons for this pending shortfall are varied and complex. They have to do with the intent of the law, the nature of the cleanup process, and the success of initiatives to reduce the use and disposal of hazardous wastes.

Both federal and state Superfund laws were designed to address old hazardous waste sites. As the science of detection has improved, and the health and

environmental impacts of pollutants are uncovered, it has become clear that there are more sites than we may have anticipated in 1983.

Since MERLA was established in 1983, many sites have been in the less expensive (investigative) front end of the Superfund process. Now, a number of these sites have reached the expensive part of the process of constructing and operating a cleanup system. The average cost of this phase of the Superfund process per site is $1 -10 million, and many site remedies are ready to be constructed.

Based on the number of sites undergoing preliminary assessment at this time and the number of sites historically discovered each year, the MPCA and MDA project that 219 sites will be on the PLP by the end of FY 95, 30 more sites than in FY 92. (See Table 11.)

Finally, the Hazardous Waste Generator Tax, the only consistent and reliable source of revenue for Superfund, is on the decline. Exemptions in the tax excluded all but 282 of the 7,500 hazardous waste generators in the state. The highest tax category for land disposal of hazardous waste without treatment has been virtually eliminated due to federal RCRA land ban restrictions. Also, tax revenue collected has decreased since the enactment of the tax.

Until long-term funding is secure, the MPCA and MDA will continue to place a high priority on sites where response actions are underway. New site starts will be considered a lower priority and will be initiated as staff resources and funds become available. These priorities are consistent with overall program goals of achieving site cleanups and treatment remedies.

The LCWM staff report recommended that the tax be restructured to provide additional revenue to maintain the state Superfund program, thereby providing stable funding to continue cleanup efforts into the future.

Challenges to the Federal Superfund

Challenges to the federal Superfund require the state to:

- uphold the "polluter pays" standard upon which CERCLA and MERLA are based, because it is effective at the majority of sites in Minnesota;
- emphasize that Superfund is a long-term program, not a quick fix; and
- request that the federal government delegate Superfund processes to states with well-developed state cleanup programs such as Minnesota's.

The federal Superfund program and CERCLA are under siege from many directions. Because of the close linkage between the federal and state Superfund programs, current challenges to CERCLA inevitably will affect the state Superfund program's resources, effectiveness, and future.

Special interests lobbying to change CERCLA include insurance groups, which want to avoid suits by clients claiming reimbursement under old general liability insurance policies; the banking industry, which wants to protect lenders from becoming liable for sites; municipalities, which want to escape liabilities associated with the disposal of municipal solid waste at Superfund sites; and industry groups, which want to avoid any liability for past disposal practices.

The focus of most lobbying efforts is the 1994 reauthorization of CERCLA and elimination of Superfund's strict, joint-and-several liability standard. This is a "polluter-pays" standard, which holds that those who profited from disposal of hazardous substances are responsible for the adverse environmental consequences these substances cause. Since Minnesota's Superfund program is one of the more successful in cleaning up sites using the current standard, it is receiving particular attention from one of the leaders of the lobbying efforts, the American International Group (AIG, an insurance group).

Among the efforts of the anti-Superfund lobby in Minnesota are:

- a study of the Arrowhead Refinery Site by National Strategies, a lobbying group employed by AIG, describing the complications that have hampered cleanup of the site. Arrowhead has the largest third-party suit of any site in the state (more than 400 defendants) and involves cleanup of a substance that presents technical difficulties.

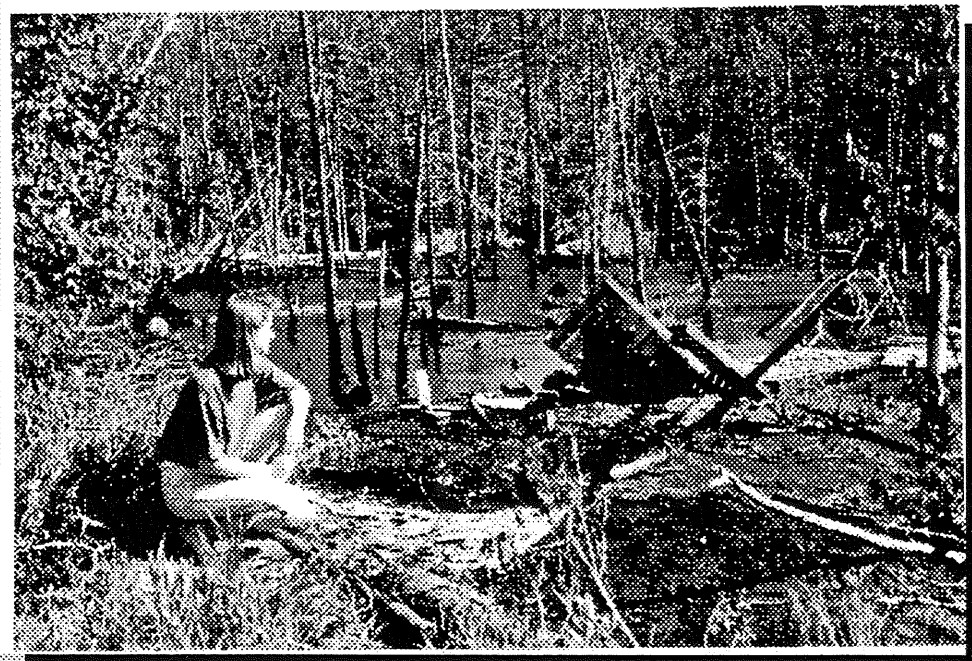
- brief case studies prepared for six other sites where the federal Superfund allegedly failed to achieve its goals. The targeted sites — Agate Lake Scrapyard, East Bethel Demolition Landfill, Freeway Sanitary Landfill, LaGrande Sanitary Landfill, Oak Grove Sanitary Landfill, and Union Scrap were chosen because they are sites which involve multiple generators of waste and/or required Fund-financed activities.

- AIG anti-Superfund fact sheets have been sent to city and county officials in Minnesota.

- a mailing to residents near Arrowhead regarding a potential RP named in the Arrowhead third-party suit who was featured in a Pioneer Press/Dispatch business section article critical of the entire Superfund program.

the federal program back on course and proceeding with several other streamlining efforts designed at speeding up cleanup efforts.

- movement to an "enforcement first" approach, which emphasizes bringing responsible parties into the cleanup process early, instead of using the Superfund and working on cost recovery later (an approach initially used in Minnesota).



The atypical Arrowhead Refining Site has been a magnet for critics of the federal Superfund program. The site has the largest third-party lawsuit of any site in the state -- at one time more than 400 defendants.

All of these state-specific efforts supplement a multi-million dollar advertising campaign involving placement of ads touting a national Environmental Trust Fund — essentially a public works approach to Superfund.

Over the last few years, the U.S. EPA has evaluated the federal Superfund program and implemented or proposed changes to address some of the more serious problems. Among the initiatives the EPA has undertaken are:

- completing a **Management Review of the Superfund Program** in 1988 to get

- addressing particular concerns of lenders and municipalities by proposing rule changes that would clarify liability issues without destroying the effectiveness of the strict, joint-and-several liability standard.

- stressing innovative technologies which promise to lead to permanent cleanup remedies and an eventual end to responsible party liability.

"Superfund is not a quick fix, it is a long-term program dealing with a long-term problem -- more than 36,000 hazardous waste sites nationwide..."

- undertaking a total quality management approach to resolving problems which arise between state and federal program staff.

MPCA Superfund staff have supported EPA's attempts to improve the federal Superfund program and to counter lobbying efforts aimed at weakening CERCLA. To assure that regulators and the public are represented in the 1994 reauthorization debate, state programs and legislators may wish to make their voices heard in Washington. The dismantling of CERCLA would have devastating consequences for state programs, not the least of which would be the attack on MERLA, the state Superfund law, that would be certain to follow.

Three points Minnesota Superfund staff will continue to make in discussions with the Minnesota Congressional delegation are:

- Superfund should remain a "polluter-pays" law using a strict, joint-and-several liability standard because that is the most effective standard at the majority of sites.

- Superfund is not a quick-fix, it is a long-term program dealing with a long-term problem — more than 36,000 hazardous waste sites nationwide. One-hundred years of improper hazardous waste disposal cannot be dealt with in ten years, nor can cleanup decisions involving an average of $1-10 million dollars each be made without careful study.

- Superfund processes can and should be delegated to states with well-developed state cleanup programs such as Minnesota's. EPA would serve as guide, quality control, and special resource to state programs.

Conclusions and Recommendations

The Minnesota Superfund Program has been very effective in cleaning up traditional Superfund sites. Response actions are underway at 144 sites. The MPCA and MDA have been successful in their efforts to seek out RPs and the MPCA has also been successful in securing federal dollars to fund cleanup activities.

Despite these efforts, the continued success of the Superfund program is dependent on the availability of Fund dollars to encourage cooperation by RPs, provide the state's required 10 percent match for federally funded cleanups, and conduct cleanups of sites not eligible for federal funding.

To ensure the continued success of the Superfund Program, MPCA and MDA staff offer the following recommendations:

Alternatives to Superfund for Landfills

Although work on several landfills has progressed successfully under the Superfund program during FY 92, the growing consensus among regulators is that MERLA does not fit landfill sites well. The state Superfund program is currently the only tool available to address contamination problems at closed landfill sites, but support is strong for a new program more closely tailored to SLFs.

Such a need stems partly from the strict, joint-and-several liability standards contained in MERLA, which can lead to very expensive legal entanglements at SLFs where the number of RPs can be in the hundreds. The legalities used to name RPs at SLFs require large expenditures or transaction costs which would be better spent on site remediation. Furthermore, the adversarial climate created by naming hundreds of small businesses and political subdivisions as RPs does not foster agreement or speed in cleanup.

A task force of waste management officials agreed in a 1991 report to the LCWM, **Alternatives to Superfund for Landfill Cleanup**, that SLFs are a societal problem that should not be addressed under Superfund. At the same time that it became apparent that MERLA is not a good fit for landfills, it became clear that the state Superfund was headed for a shortfall. A separate landfill program would remove some of the fiscal pressure from the Fund. An initiative to address landfills under a new program is strongly recommended.

Long-term Funding

Although removing SLFs from the Superfund program would relieve some of the pressure on the Fund, it would not take the place of the long term funding needed to ensure a strong Superfund. By the end of FY 93, the Minnesota Superfund would show a shortfall without additional funding.

For a variety of reasons, the Hazardous Waste Generator Tax, the only consistent and reliable source of revenue for the Superfund, is on the decline. The tax currently generates approximately $560,000 per year. This is substantially less than the approximately $4 million needed to address the state's Superfund

cleanup costs. Restructuring the tax to provide additional revenue to maintain the state Superfund program would provide the stable funding necessary to continue the state's cleanup efforts.

Reauthorization of Federal Superfund in 1994

Because of the close linkage between the federal and state Superfund programs, current challenges to CERCLA and the federal Superfund program will likely affect the Minnesota Superfund program's resources, effectiveness, and future. Special interest lobbying on CERCLA is focusing primarily on the 1994 reauthorization of CERCLA and the elimination of Superfund's strict, joint-and-several liability standard.

EPA's attempts to improve the federal Superfund program and to counter lobbying efforts aimed at weakening CERCLA should be supported. The dismantling of CERCLA would have serious consequences for state programs, not the least of which would be the attack on MERLA, the state Superfund law, that would likely follow. The issues of concern include the fact that Superfund should remain a"polluter-pays" law using a strict, joint-and-several liability standard; that the federal law needs to address the entire scope of hazardous waste cleanup problems at 36,000 sites nationally; and that delegating Superfund processes to states with well-developed state cleanup programs such as Minnesota's would be a most efficient use of resources.

MDA Funding

MDA requests that funding be maintained at the current level for agency activities involving Superfund. Current workloads are considerable, however, and MDA will look at improving efficiencies of certain procedures before requesting additional staff.

A strong Superfund is necessarry to bring contaminated land and water back into use.

Appendix 1

Acronyms

ACRRA - Agricultural Chemical Response and Reimbursement Account
AIG - American International Group, an insurance group
ATSDR - Agency for Toxic Substances and Disease Registry
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS - Comprehensive Environmental Response, Compensation, and Liability Information System
Consent Order or CO - Response Order by Consent
Determination - Determinations that the Actions will not be Taken in the Time and Manner Requested.
DOI - Department of the Interior
EPA - Environmental Protection Agency
ERA - Ecological Risk Assessment
Fund - Environmental Response, Compensation and Compliance Fund
FY 92 - Fiscal Year 1992
GW - Ground water
HRS - Hazard Ranking System
IRA - Interim Response Action
LCMR - Legislative Commission on Minnesota Resources
LCWM - Legislative Commission on Waste Management
LRI - Limited Remedial Investigation
MDA - Minnesota Department of Agriculture
MDF - Minnesota Department of Finance
MDH - Minnesota Department of Health
MERLA - Minnesota Environmental Response and Liability Act
MOA - Memorandum of Agreement
MPCA - Minnesota Pollution Control Agency
NPL - National Priorities List
NRDA - Natural Resources Damage Assessment
O&M - Operation and Maintenance
PA/SI - Preliminary Assessment/Site Investigation
PLP - Permanent List of Priorities
PRP - Potentially Responsible Party
PT/VC - Property Transfer/Voluntary Cleanup
RA - Response Action
RCRA - Resource, Conservation and Recovery Act
RD/RA - Remedial Design/Response Action
RFRA - Request for Response Action
RI/FS - Remedial Investigation/Feasibility Study
ROD - Record of Decision
RPs - Responsible Parties
SACM - Superfund Accelerated Cleanup Model
SARA - Superfund Amendments Reauthorization Act
SLF - Sanitary Landfill

Appendix 2

Class B Sites on the 1992 Permanent List of Priorities

Sites	Location
Atwater Municipal Well Field	Atwater
Boise Cascade/Medtronic	Fridley
Boise Cascade/Onan	Fridley
Boise Cascade Paint Waste Dump	Ranier
Burlington Northern	Brainerd
DNR-Duxbury Pesticide Site	Duxbury
Ecolotech, Inc.	St. Paul
Electric Machinery, Waite Park	St. Cloud
Faribault Coal Gasification Plant	Faribault
FMC Corporation	Fridley
General Mills	Minneapolis
Hopkins Agricultural/Allied Chemicals	Minneapolis
Hutchinson Technology, Inc.	Hutchinson
Ironwood Sanitary Landfill	Spring Valley
Jackson Municipal Well Field	Jackson
Kurt Manufacturing	Fridley
Lund's Farmer Seed and Nursery	St. Cloud
McLaughlin Gormely King Company	Minneapolis
Minneapolis Community Development Agency/FMC	Minneapolis
Nutting Truck and Caster	Faribault
Oakdale Dump	Oakdale
PCI, Inc.	Shakopee
Perham Arsenic Site	Ottertail County
Reilly Tar	St. Louis Park
St. Regis Paper	Cass Lake
3M Kerrick Disposal Site	Kerrick
Tonka/Woyke Site	Annandale
Waite Park Ground Water Contamination Site	Waite Park
Weisman Scrap	Winona
West Duluth Industrial Site	Duluth
Whittaker Corporation	Minneapolis
Windom Dump	Windom
Winona County Sanitary Landfill	Winona County

Appendix 3

Class C Sites on the 1992 Permanent List of Priorities

Sites	Location
8701 Concord Boulevard Dump	Inver Grove Heights
ADM/Highway 280	Minneapolis/St. Paul
Adrian Municipal Well Field	Adrian
Agate Lake Scrap Yard	Brainerd
Amdura	St. Paul
Anchor Glass Container	Shakopee
Andersen Corporation	Bayport
Anoka Municipal Sanitary Landfill	Ramsey
Arrowhead Refinery Company	Hermantown
Ashland Oil Company	Pine County
Ashland Oil-Cottage Grove	Cottage Grove
Ashland Oil/Park Penta/Sonford Products Site	St. Paul Park
Ashland Refinery	St. Paul Park
Atwater Municipal Well Field	Atwater
Bassett Creek/Irving Avenue Dump	Minneapolis
Battle Lake Area Sanitary Landfill	Ottertail County
Baytown Township Ground Water Contamination	Washington County
Becker County Sanitary Landfill	Becker County
Bell Lumber and Pole	New Brighton
B.J. Carney Pole Yard	Minneapolis
Brainerd Former City Dump	Brainerd
Brooklyn Park Dump	Brooklyn Park
Bueckers Sanitary Landfill #1	Stearns County
Burlington Northern Car Shops	Brainerd
Burlington Northern Car Shops	Waite Park
Burnsville Sanitary Landfill	Burnsville
Castle Rock Ground Water Contamination	Castle Rock
Cedar Services	Minneapolis
Central Cooperative Oil Association	Medford
Chisago-Isanti County Sanitary Landfill	Chisago-Isanti County
Clay County Sanitary Landfill	Clay County
Conoco, Inc.-Wrenshall Refinery	Wrenshall
Control Data Corporation-Printed Circuits Operation	St. Louis Park
Crow Wing County Sanitary Landfill	Crow Wing County
Dakhue Sanitary Landfill	Dakota County
Dealers Manufacturing Company	Fridley
DM&IR Car and Locomotive Shops	Duluth
Dodge County Sanitary Landfill	Dodge County
Duluth Air Force Base	Duluth
Duluth Former City Dump	Duluth
East Bethel Demolition Landfill	East Bethel
East Mesaba Sanitary Landfill	St. Louis County
Electronic Industries, Inc.	New Hope

Sites	Location
Elk River Sanitary Landfill	Elk River
Elysian Former City Dump	Elysian
Faribault Municipal Well Field	Faribault
Fergus Falls Sanitary Landfill	Fergus Falls
Flying Cloud Sanitary Landfill	Eden Prairie
Foot, S.B. Tanning Sludge Disposal Area	Red Wing
Ford-Twin Cities Assembly Plant	St. Paul
Freeway Sanitary Landfill	Burnsville
Fridley Commons Park Well Field	Fridley
Fritz Craig Salvage Operation	Park Rapids
General Fabrication	Forest Lake
Glidden Company	Minneapolis
Gofer Sanitary Landfill	Martin County
Gopher Oil - Deleware	Minneapolis
Gopher Oil - Thornton	Minneapolis
Grand Rapids Area Sanitary Landfill	Grand Rapids
Greater Morrison Sanitary Landfill	Morrison County
Hansen and Mankato Sanitary Landfill	Blue Earth County
Highway 96 Dump	White Bear Township
Honeywell, Inc.-Golden Valley Plant	Golden Valley
Hopkins Sanitary Landfill	Hopkins
Houston County Sanitary Landfill	Houston County
Howe Chemical Soil Contamination	Martin County
HWK Enterprises/Meeker Mfg./Design Classics/ Litchfield Municipal Well Site	Litchfield
Interplastic Corporation	Minneapolis
Isanti Rumpel	Isanti County
Isanti Solvent Site	Isanti County
Joslyn Manufacturing and Supply Company	Brooklyn Center
Kanabec County (East Central) Sanitary Landfill	Kanabec County
Kandiyohi County Sanitary Landfill	Kandiyohi County
Kaplan, H.S. Scrap Iron and Metal Company	St. Paul
Karlstad Sanitary Landfill	Kittson County
Killian Sanitary Landfill	Motley
Kluver Sanitary Landfill	Douglas County
Koch Refining/N-ReN Corporation	Rosemount
Koochiching County Sanitary Landfill	Koochiching County
Koppers Coke	St. Paul
Korf Brothers Sanitary Landfill	Pine County
Kummer Sanitary Landfill	Beltrami County
LaGrande Sanitary Landfill	Douglas County
Lakeland Ground Water Contamination	Lakeland
Lansing Ground Water Contamination	Lansing
Leech Lake Sanitary Landfill	Cass Lake
LeHillier/Mankato	Lehillier/Mankato
Lewiston Ground Water Contamination	Lewiston
Lindata Sanitary Landfill	Wright County
Long Prairie Ground Water Contamination	Long Prairie

Sites	Location
Oak Grove Sanitary Landfill	Anoka County
Owatonna City Dump	Owatonna
Perham Municipal Airfield	Perham
Pickett Sanitary Landfill	Hubbard County
Pine Bend Sanitary Landfill/Crosby American	Inver Grove Heights
Pine Lane Sanitary Landfill	Chisago County
Pine Street Dump	Hastings
Pipestone County Sanitary Landfill	Pipestone County
Ponderosa Sanitary Landfill	Blue Earth County
Redwood County Sanitary Landfill	Redwood County
Red Rock Sanitary Landfill	Mower County
Reilly Tar	St. Louis Park
Ritari Post and Pole	Wadena County
Robbinsdale Development Site	Robbinsdale
Rochester Gas Manufacturing Site	Rochester
St. Augusta Sanitary Landfill/Engen Dump	Stearns County
St. Louis River/Interlake/Duluth Tar	Duluth
St. Louis River/U.S. Steel	Duluth
St. Paul Levee Property	St. Paul
St. Paul Park Ground Water Contamination	St. Paul Park
Salol Sanitary Landfill	Roseau County
Sauk Centre Sanitary Landfill	Sauk Centre
Schloff Chemical	St. Louis Park
Schnitzer Iron and Metal Company	St. Paul
Shafer Metal Recycling	Minneapolis
Sheldahl	Northfield
Sibley County Sanitary Landfill	Sibley County
South Andover	Andover
Spring Grove Municipal Well Field	Spring Grove
Superior Plating, Inc.	Minneapolis
Tellijohn Sanitary Landfill	LeSueur County
3M Chemolite Disposal Site	Cottage Grove
Tonka Main Plant	Mound
Trio Solvent Site	New Brighton
Twin Cities Air Force Reserve Base	Minneapolis
Twin Cities Army Ammunitions Plant/New Brighton/ Arden Hills/St. Anthony Site	Ramsey County
Union Scrap II and III	Minneapolis
U.S. Naval Industrial Reserve Ordnance Plant	Fridley
University of Minnesota-Rosemount Research Center	Rosemount
Valentine-Clark	St. Paul
Wabasha County Sanitary Landfill	Wabasha County
Wadena Sanitary Landfill	Wadena
Waseca County Sanitary Landfill	Waseca County
Washington County Landfill	Lake Elmo
Waste Disposal Engineering	Andover
West Duluth Industrial Site	Duluth

Sites	Location
Western Lake Superior Sanitary District Landfill/ Duluth Dump	St. Louis County
Westling Manufacturing	Princeton
West River Parkway	Minneapolis
Winona Ground Water Contamination (Clarks Lane/ Gilmore Avenue)	Winona
Winona Municipal Well Field	Winona
Woodlake Sanitary Landfill	Hennepin County
Yonak Sanitary Landfill	Wright County

Appendix 4

Class D Sites on the 1992 Permanent List of Priorities

Sites	Location
8701 Concord Boulevard Dump	Inver Grove Heights
ADM/Highway 280	Minneapolis/St. Paul
Adrian Municipal Well Field	Adrian
Amdura	St. Paul
Anchor Glass Container	Shakopee
Andersen Corporation	Bayport
Ashland Oil-Cottage Grove	Cottage Grove
Ashland Oil/Park Penta/Sonford Products Site	St. Paul Park
Ashland Oil - Pine County	Pine County
Ashland Refinery	St. Paul Park
Bassett Creek/Irving Avenue Dump	Minneapolis
Battle Lake Area Sanitary Landfill	Ottertail County
Baytown Township Ground Water Contamination	Washington County
Becker County Sanitary Landfill	Becker County
Bell Lumber and Pole	New Brighton
B.J. Carney Pole Yard	Minneapolis
Brainerd Former City Dump	Brainerd
Brooklyn Park Dump	Brooklyn Park
Bueckers Sanitary Landfill	Stearns County
Burlington Northern Car Shops	Brainerd
Burlington Northern Car Shops	Waite Park
Burnsville Sanitary Landfill	Burnsville
Castle Rock Ground Water Contamination	Castle Rock
Cedar Services	Minneapolis
Central Cooperative Oil Association	Medford
Chisago-Isanti County Sanitary Landfill	Chisago-Isanti County
City of Rice Municipal Well #2	Rice
Clay County Sanitary Landfill	Clay County
Conoco, Inc.-Wrenshall Refinery	Wrenshall
Control Data Corporation-Printed Circuits Operation	St. Louis Park
Crow Wing County Sanitary Landfill	Crow Wing County
Dakhue Sanitary Landfill	Dakota County
Dealers Manufacturing Company	Fridley
Dodge County Sanitary Landfill	Dodge County
Duluth Air Force Base	Duluth
Duluth Former City Dump	Duluth
East Bethel Demolition Landfill	East Bethel
East Mesaba Sanitary Landfill	St. Louis County
Electronic Industries, Inc.	New Hope
Elk River Sanitary Landfill	Elk River
Elysian Former City Dump	Elysian
Faribault Municipal Well Field	Faribault
Fergus Falls Sanitary Landfill	Fergus Falls

Sites	Location
Foot, S.B. Tanning Sludge Disposal Area	Red Wing
Ford-Twin Cities Assembly Plant	St. Paul
Freeway Sanitary Landfill	Burnsville
Fridley Commons Park Well Field	Fridley
Fritz Craig Salvage Operation	Park Rapids
General Coatings	Eagan
General Fabrication	Forest Lake
Glidden Company	Minneapolis
Gofer Sanitary Landfill	Martin County
Gopher Oil - Deleware	Minneapolis
Gopher Oil - Thornton	Minneapolis
Grand Rapids Area Sanitary Landfill	Grand Rapids
Greater Morrison Sanitary Landfill	Morrison County
Hansen and Mankato Sanitary Landfill	Blue Earth County
Hastings Former City Dump	Hastings
Highway 96 Dump	White Bear Township
Hopkins Sanitary Landfill	Hopkins
Houston County Sanitary Landfill	Houston County
Howe Chemical Soil Contamination	Martin County
HWK Enterprises/Meeker Mfg./Design Classics/ Litchfield Municipal Well Site	Litchfield
Interplastic Corporation	Minneapolis
Isanti Rumpel	Isanti County
Isanti Solvent Site	Isanti County
Kanabec County (East Central) Sanitary Landfill	Kanabec County
Kandiyohi County Sanitary Landfill	Kandiyohi County
Kaplan, H.S. Scrap Iron and Metal Company	St. Paul
Karlstad Sanitary Landfill	Kittson County
Killian Sanitary Landfill	Motley
Kluver Sanitary Landfill	Douglas County
Koochiching County Sanitary Landfill	Koochiching County
Koppers Coke	St. Paul
Korf Brothers Sanitary Landfill	Pine County
Kummer Sanitary Landfill	Beltrami County
LaGrande Sanitary Landfill	Douglas County
Lakeland Ground Water Contamination	Lakeland
Lansing Ground Water Contamination	Lansing
Leech Lake Sanitary Landfill	Cass Lake
Lewiston Ground Water Contamination	Lewiston
Lindata Sanitary Landfill	Wright County
Louisville Sanitary Landfill	Jordan
MacGillis and Gibbs Company	New Brighton
McGuire Wire and Salvage Site	Mora
Meeker County Sanitary Landfill	Meeker County
Metals Reduction	St. Paul
Mibco	Minnetonka
Minnegasco	Minneapolis
Northwoods Sanitary Landfill	St. Louis County

Sites	Location
Oak Grove Sanitary Landfill	Anoka County
Olmsted County Sanitary Landfill	Olmsted County
Owatonna City Dump	Owatonna
Perham Municipal Airfield	Perham
Pickett Sanitary Landfill	Hubbard County
Pig's Eye Landfill	St. Paul
Pine Bend Sanitary Landfill/Crosby American	Inver Grove Heights
Pine Lane Sanitary Landfill	Chisago County
Pine Street Dump	Hastings
Pipestone County Sanitary Landfill	Pipestone County
Ponderosa Sanitary Landfill	Blue Earth County
Redwood County Sanitary Landfill	Redwood County
Red Rock Sanitary Landfill	Mower County
Reilly Tar	St. Louis Park
Ritari Post and Pole	Wadena County
Robbinsdale Development Site	Robbinsdale
Rochester Gas Manufacturing Site	Rochester
St. Augusta Sanitary Landfill/Engen Dump	Stearns County
St. Louis River/Interlake/Duluth Tar	Duluth
St. Paul Levee Property	St. Paul
St. Paul Park Ground Water Contamination	St. Paul Park
Salol Sanitary Landfill	Roseau County
Sauk Centre Sanitary Landfill	Sauk Centre
Schloff Chemical	St. Louis Park
Schnitzer Iron and Metal Company	St. Paul
Shafer Metal Recycling	Minneapolis
Sheldahl	Northfield
Sibley County Sanitary Landfill	Sibley County
South Andover	Andover
Superior Plating, Inc.	Minneapolis
Tellijohn Sanitary Landfill	LeSueur County
Tower Asphalt	West Lakeland
Twin Cities Air Force Reserve Base	Minneapolis
Twin Cities Army Ammunitions Plant/New Brighton/ Arden Hills/St. Anthony Site	Ramsey County
Union Scrap II and III	Minneapolis
U.S. Naval Industrial Reserve Ordnance Plant	Fridley
Valentine-Clark	St. Paul
Wabasha County Sanitary Landfill	Wabasha County
Wadena Sanitary Landfill	Wadena
Waseca County Sanitary Landfill	Waseca County
Western Lake Superior Sanitary District Landfill/ Duluth Dump	St. Louis County
Westling Manufacturing	Princeton
West River Parkway	Minneapolis
Winona Ground Water Contamination (Clarks Lane/ Gilmore Avenue)	Winona
Winona Municipal Well Field	Winona
Woodlake Sanitary Landfill	Hennepin County
Yonak Sanitary Landfill	Wright County

Appendix 5

Property Transfer/Voluntary Cleanup Program Status Report

Minnesota Property Transfer/Voluntary Cleanup Program

Project Summary

September 14, 1992

RI = Remedial Investigation	C = Completed	1-VOC	RAL-Recommended
FS = Feasibility Study	N = Not Applicable	2-Metals	Allowable Limit
IRA = Interim Response Action	I = In Progress	3-Inorganics	GW-Groundwater
RA = Response Action		4-Petroleum/Fuel Oil	SW-Surface Water
M = Groundwater Monitoring		5-PAH	PPM-Parts per million
PC = Project Completed		6-PCB	PO-Pump Out
LI = No Action Letter Issued		7-Pesticides	PPB-Parts per billion
LLI = Limited No Action Letter Issued		8-Dump Debris	

Active	Project Name	City	Status								Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
			RI	FS	IRA	RA	M	PC	LI	LLI					
No	1000 Block Valley Park Drive	Shakopee	C					C	C		Completed	1	Groundwater	Off site source	
No	1144 Seventh Street	Hopkins	C						C		Completed	1	Groundwater	Off site source	
No	15000 Minnetonka Industrial Blvd.	Minnetonka	I								To CERCLIS	1	Soils and GW		
No	15171 Freeland	Hugo						C	C		Completed	1	Surface Soils	To background	Removal
No	1551 Vernon Drive	Golden Valley						C	C		Completed	1	Groundwater	None needed	
No	1716 Hastings Avenue	Newport	I								Inactive	1	Soils and GW		
Yes	1977 West River Road	Minneapolis	I									1, 4	Groundwater		
No	2611-2627 Franklin Ave.	Minneapolis									To Tanks	1, 4	Soils		
No	26611 Fallbrook Ave.	Wyoming	I								Inactive	1	Soil	None needed	
Yes	3009 Third Avenue S	Minneapolis	I									3, 2	Soil		
No	3100 28th Street E	Minneapolis	I									1,5	Soil and GW		
No	345 Main Street	Bayport	I								Inactive-further RI	4, 5	Soil and GW		
Yes	3K Paper	Minneapolis	I		C						Cleanup	1	Soil and GW	Soil - 5ppm on hNu	Landfarm soil-PO GW
Yes	3M Woodbury	Woodbury										1, 2	Soils and GW	RALs	Pump out
No	42 Ave. N and Aldrich Ave.	Minneapolis	C								To CERCLIS	1	Soils		
No	587 First Street SW	New Brighton	I								Inactive-no party	5	Soil and GW		
Yes	650-700 Industry Ave.	Anoka	I									1, 5	Groundwater	None needed	
Yes	7625 Building (Parklawn)	Edina									Retracted App.	2	Groundwater		
No	800 Jefferson Street	Lake City							C		Completed	1	Groundwater	None needed	
No	825 Boone Avenue	Golden Valley						C	C		Completed	1, 2	Soils and GW	GW-RAL,Soil <3.6ppm	Excavate soils
No	89th Avenue Dump	Blaine	I								Inactive	None	Soils and GW		
Yes	Air Quality Vehicle Inspection Site	Roseville									Inactive	Staining	Soils	None needed	
Yes	Albert Lea Gas	Albert Lea	I									4, 5	Soil and GW		
No	All Saints Lutheran Church	Eagan									To Tanks	4	Soils		
Yes	American Can	Minneapolis	C	C	N	I	I					1	Soil and GW		
No	Androc Metals	St. Louis Park						C	C			7	Soils and GW	Non - detect	Excavation and PO
No	Argus Development	Blaine									Inactive	4, 8	Soils and GW		
No	Armour Meat Plant	South St. Paul									Inactive				
	Army Corps Chaska Dump	Chaska	I									8			
No	Bayport Public Works Facility	Bayport	C					C	C		Completed	5	Soil	None needed	

Active	Project Name	City	Status								Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
			RI	FS	IRA	RA	M	PC	LI	LLI					
Yes	Bayport Wildlife Management Area	Bayport	I									1	Groundwater		
No	Bendix Corp.	Bemidji						C				None			
Yes	Bergmeier	White Bear Lk	I									1	Groundwater		
No	Blaine Office Park	Blaine	I				I				Inactive	2	Groundwater		
No	Brandt-Jen-Kluge Building	St. Paul	C					C	C		No Action	4	Soil	10 ppm	Thermal treatment
No	Brockway Glass	Rosemount									To CERCLIS	2	Soil		
No	Brooklyn Park Dump	Brooklyn Park	C					C			To Superfund				
No	Buffalo Cleaners--see PA/SI for file.	Buffalo									To CERCLIS	1	Soils and GW		
No	Buffalo Municipal Parking Lot	Buffalo										1	Soils		
No	Burr Properties	Minneapolis	I								Inactive	5	Soils and GW		
No	Butler Taconite	Naswauk									Terminated				
No	Cabot, Cabot, Forbes	St. Paul							C			1	Groundwater	None needed	
No	Caliber Development Corp.	Plymouth	C			C		C	C		Cleanup	1, 4	Soil	5 ppm on the hNu	Landfarm
No	Capitol Corporation	South St. Paul	I								Inactive-further RI	5	Soil		
Yes	Carpenter's School	St. Paul	I									5	Groundwater		
Yes	Centerville Road Site	White Bear Lk	I		C							1	Soil and GW		
Yes	Chicago Northwestern	St. Paul	C	C		I						1, 5	Soil and GW		
No	Circuit Science	Plymouth				C			C			2	Soils	5 ppm	Excavation
No	City of Foley	Foley									Inactive				
Yes	CSM	St. Paul	I									4	Soil and GW		
Yes	Dakota Business Plaza	Mendota Hghts	I									1	Soil		
Yes	Dana Corporation	Minneapolis	I									1	Soil and GW		
	DBL Labs	St. Joseph	I									1, 2	Soils and GW		
Yes	Diagnostics, Inc.	Minneapolis										5	Soils		
No	Dixie Chemical	Rosemount							C			1	Groundwater	Off site source	
Yes	DNR/Stillwater Prison Dump	Bayport	I									1	Groundwater		
No	Duane's Auto Body	Litchfield									Terminated				
No	Duluth Cement Plant	Duluth	I								To CERCLIS				
No	East River Road	St. Paul									Inactive				
No	Econotherm	Arlington	I								Inactive-further RI	1, 2, 5	Soil		
No	Elliot Avenue Site	Rush City	C					C	C		Completed	1	Soil	10 ppm	Landfarm
No	Elmwood Partners	Caledonia						C			Completed	1	Soils and GW	None needed	
No	Empire Dump	Empire	I								To CERCLIS	2	Soil		
Yes	Energy Park West	St. Paul	C			I						5	Soil	None needed	
No	Excello	St. Paul	I								To CERCLIS	1	Soils and GW		
No	Fina Station	Eagan				C						2	Soil	Above detection	Haz. waste landfill
Yes	Ford Deep Rock	Minneapolis	C	I								1, 4	Soil and GW		
	Former Great Northern RR	St. Paul										1, 5	Soil and GW		
No	Franchise Assoc/Aero Precision	Cottage Grove									To CERCLIS	1	Soils		
Yes	Frost Paint	Minneapolis	C			I					Further RI needed	1	Soil and GW		
Yes	Gateway Foods	Warroad	C								Completed	None			

Active	Project Name	City	Status								Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
			RI	FS	IRA	RA	M	PC	LI	LLI					
No	General Fabrication	Forest Lake	C				C				Further RI needed	1, 2	Soils and GW		
Yes	General Mills, Inc.	Minneapolis	I									1, 4	Soils and GW		
Yes	GL Contracting	Minnetonka	I									1, 4	Soils and GW		
No	Glacier Park	Minneapolis						C			Cleanup	5	Soil	1 ppm on hNu	Landfarm
No	Glenwood Junction	Golden Valley	I								To Tanks	4	Soil and GW		
Yes	GNB	St. Paul	I									1, 2	Soil and GW		
No	Golden Valley HRA	Golden Valley							C		To Tanks				
No	Gopher Shooter Supply	Faribault										1	Groundwater		
Yes	Grace-Lee Products	Minneapolis	C	C	N	I	I					1,4	Soil and GW	No detect on Hnu	Landfill soil-rem.tank
No	Great River Development	Minneapolis									Inactive	5	Soil	Visual non-detect	Use in asphalt
Yes	Greater Huron Development Corp.	St. Paul	I								Further RI needed	1	Soil and GW		
No	Hancock Nelson	Minneapolis										1, 4	Soil and GW	Off site source	
No	Harriet Island	St. Paul	C	C							To CERCLIS	2	Soils	3 ppm Lead	Excavation planned
Yes	Harvest States	St. Paul	I			I						1, 4, 5	Soil and GW		Landfarm on 4 and 5
Yes	Hiawatha Metalcraft	Minneapolis	C	N	N	N	N	C		C	Completed	1	Groundwater		
Yes	Hoffman Corner	Shorview	I									1, 2, 6	Groundwater		Pump out free product
No	Holiday Gas Station	Forest Lake						C	C			Asphalt	Soils		
Yes	Holiday Store, Washington Ave.	Minneapolis	I									1	Soil and GW		
No	Honeywell Columbia Heights	Columbia Hghts	C	C		C			C		Cleanup	2	Soils	<1000 ppm	Excavated
No	Honeywell Minnetonka	Minnetonka	I								Inactive	1	Soil and GW		
No	Honeywell New Hope	New Hope	I								Inactive	1	Groundwater		
Yes	Honeywell Plaza	Minneapolis	I									1, 4	Groundwater		
Yes	Hopkins Tech	Hopkins	I									1, 4	Soil and GW		
No	Huset Park Dump	Columbia Hghts	C					C	C		Completed	2	Soil and GW	None needed	
Yes	Industrial Airsystems	St. Paul	C	I								1	Soil and GW	Below RALs	Proposed airsparging
No	International Square	Golden Valley	C							C	Completed	1	Groundwater	Off site source	
Yes	J & J Casting	Two Harbors										1, 2, 4	Soil and GW		
	Japs Olson	Minneapolis										1	Groundwater		
No	Jaye Truax Co.	Minneapolis	I								Inactive	4, 5	Soil and GW		
Yes	Jae's Precast	Stacy	I									1, 2	Soil	1 ppm on hNu	Excavation
Yes	Jerry Clipper Machine Shop	Bayport	C									1	Soil	1 ppm on hNu	Landfarm
No	John Hancock Properties	Roseville							C		Completed	4	Groundwater	Off site source	
No	Joyners, Inc.	Brooklyn Park	I								Inactive	2, 5	Soil and GW		
No	Kellog Blvd. Post Office	St. Paul	C					C				Asphalt	Soils	To background	Incinerated
No	Kellogg Avenue	St. Paul	I								Inactive	5	Soil and GW		
Yes	Latzke Iron Works	Brooklyn Park	I									1, 2	Soil		
No	Le Loup Site	St. Paul	C								To CERCLIS	2	Soil and GW		
No	Lightning Transfer Station	St. Paul									To RCRA				
No	Lilydale Park Dump	St. Paul						C			Completed	2, 4	Soil	None needed	
Yes	Lindsay Warehouse	Minneapolis				I						1, 4 , 5	Soil	1 ppm on hNu	Landfarm
No	Longyear	Minneapolis									Inactive	4,5	Soils	5 ppm on hNu	Excavate, Landfarm

Active	Project Name	City	Status								Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
			RI	FS	IRA	RA	M	PC	LI	LLI					
Yes	Lyndale Super America	Minneapolis	I									1, 4	Soils and GW		
Yes	Malcolm and 5th Street	Minneapolis	I									1, 2, 4, 5	Soil and GW		
No	Mall Site	Eagan	C					C	C		Completed	None		None needed	
No	Mankato Plating Company	Mankato									To CERCLIS	2	Soils and GW		
Yes	Manufacturing Safety Co.	Wyoming	I								To CERCLIS				
No	Marigold Foods	Rochester	C					C	C		Completed	1	Groundwater	Off site source	
No	Marvin Windows	Warroad	I								To RCRA				
Yes	Mayo/Telex Building	Rochester	I			I	I					1	Soil and GW	Dectection limit	Landfarm soil-mon GW
No	Midway Plaza	St. Paul	I								To CERCLIS	1, 4	Soils		
No	Midwest Book	Lauderdale	I												
No	Midwest Cylinder	Swift Falls	I								To WQ				
Yes	Minneapolis Sculpture Gardens	Minneapolis									To CERCLIS	5	Soil and GW		
No	Minnetonka City Garage	Minnetonka	C						C			5	Soils	<50 ppb	None
No	MnDOT Crooked Lake Pit	Anoka County	C					C			Completed	2	Groundwater	None needed	
Yes	MnDOT Dump	St. Cloud	I	I								5	Soil and GW		Soil used in asphalt
Yes	Motley Bypass	Minneapolis	C	C		C					Lmtd Cleanup	4, 6	Soil and GW	10 ppm	Landfarm
No	Multitech	New Brighton							C			1	Soils	Non-Detect	Excavate, Landfarm
Yes	Nepco - East (Venturian Corp)	Hopkins	I									4	Soil and GW		
Yes	Napco - West	Hopkins	I									4	Soil	No detect on Hnu	Landfarm
Yes	Neal Slate Building	Eden Prairie	I		C	I						1	Soil and GW	10 ppm	Landfarm soil-mon GW
No	New Hope HUD	New Hope									To RCRA				
Yes	Nobles Industries	St. Paul	I												
Yes	Norm McGrew and 3rd	Minneapolis													
No	Norm McGrew Place	Minneapolis	C						C		Completed	5	Soil	None needed	
Yes	North St. Paul Dump	North St. Paul	I												
No	Northern Package Corp.	Bloomington	C								Completed	1	Groundwater	Off site source	
Yes	Northern Star ADM	Minneapolis									To Superfund	1, 2, 5, 6	Soil and GW		
Yes	Northern Star Westgate	St. Paul									To Superfund	1, 2, 5, 6	Soil and GW		
Yes	Northwest Automatic Products	Minneapolis	I									1	Soil		
Yes	NSP High Bridge	St. Paul	C	I	I							3, 4, 5	Soil and GW		
No	NSP/Junkers	Oak Park Hghts									To CERCLIS				
No	Old Highway 8 Site	New Brighton							C		Completed				
Yes	Old Minnetonka Dump	Minnetonka	I	I								1,2,4,5,6	Soil and GW		
No	On the Avenue	St. Louis Park	I	I								1	Groundwater	RALs	Pumpout
Yes	Orient Square	Minneapolis	I	I								5	Groundwater		
Yes	Paper Calmenson	St. Paul										1, 4	Soils		
Yes	Park Nicollet	St. Louis Park	I	I	N		I					1, 6	Groundwater	RALs	Pumpout
No	Pavelicek Property	New Brighton	I								Inactive				
No	Pioneer Portec	Minneapolis	I								Inactive	1	Groundwater	Off site source	
No	Polymer Composites	Goodview						C	C			1, 2	Soils and GW	Off site source	
No	Prairie Center Drive	Eden Prairie	C	N	N	C	N	C		C	Lmtd Cleanup	1	Soil	No detect	Landfarm

Active	Project Name	City	Status								Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
			RI	FS	IRA	RA	M	PC	LI	LLI					
Yes	Red Wing Publishing	Red Wing	I		I							1	Soil and GW	Soil - 5 ppm	Landfarm/Bioventing
No	RES/494	Eagan	C					C	C		Completed				
	Ritter Phase II	St. Paul										1, 4	Soil and GW		
Yes	Rochester Riverfront	Rochester	C			I					Completed	1	Soil	None needed	
Yes	Rochester Sewage Lagoons	Rochester	I								To CERCLIS	1, 2	Soils and GW		
No	Rosemount Die Casting	Rosemount				C					Cleanup	2	Soils	5 ppm on the hNu	Excavate
Yes	Roseville Diesel	New Brighton	I									2, 4, 5	Soils and GW		
No	Rubbish Ranch Dump	Inver Grove Hts.									To CERCLIS	1, 2	Soils		
Yes	Sawmill Run	Minneapolis	I			I						1, 4, 5	Soil and GW	Soil- 2 ppm on hNu	Incinerate soil
No	Schult Automatic	Blaine				C		C			Completed	1	Soils	Non-detect	Landfarm
Yes	Sentinel Building	Edina									Retracted App.	2	Soil and GW		
Yes	Shakopee Dumps	Shakopee	I	I											
Yes	Shepard Road Sites	St. Paul	I												
No	Shopco Site	Hutchinson	I								To CERCLIS	1			
No	SOCS Home Site	Moose Lake							C		Completed	6	Soils	10 ppb	Excavated
No	Soo Line Century Mill	Minneapolis	I								To CERCLIS	1	Soils		
No	Soo Line/Marshalling Yards	Minneapolis									Inactive	1, 5	Soils		
Yes	St. Paul Contingency Plan	St. Paul	N	N	N	N						N/A			
Yes	St. Paul FC Project #2	St. Paul													
No	St. Paul Park Boat Launch	St. Paul Park						C			Completed	None			
No	Standard Solvents	Brooklyn Cntr									To CERCLIS	1	Soil		
Yes	Stearns Rubber	Staples	C		C	I			C			1	Soil and GW	Soil-10ppm, GW-RAL	Landfarm soil-PO GW
Yes	Superior Dairy Fresh	Minneapolis	I									1	Groundwater	Off site source	
Yes	Superwood	Duluth	I									5	Soils and GW		
No	Superwood NuPly	Bemidji									To Superfund	5	SW and GW		
No	Technical Sealants	St. Paul									CERCLIS/NFRAP	1, 2	Soil and GW		
No	Tennant Company	Plymouth	C	C	N	C	N	C	C		Cleanup	5	Soil	10 ppm	Landfarm
No	Terry Brothers Construction	St. Louis Pk							C			5	Groundwater	Off site source	
Yes	The Kondirator	Minneapolis	I									1, 2, 5, 6	Soils		
Yes	The Newport Building	Newport	I									1, 2, 4, 7	Soil and GW		
No	The Restaurant	Minneapolis	I								Inactive				
Yes	Tisdel Properties	Minneapolis	C						I			1	Groundwater	Off site source	
No	Twin City Testing	St. Paul			C					C	Inactive	1, 5, 7	Soil		
No	Union Carbide	Minneapolis						C	C		Completed	1	Groundwater	Off site source	
Yes	Unisys Eagan	Eagan	C	C	N	I	I				Long term PO	1	Soil and GW	RALs	Pumpout to sewer
No	Unisys Jackson	Jackson						C			Completed	1, 2, 3	Groundwater	None needed	Source removed
Yes	Unisys Midway	St. Paul	I			I						1	Groundwater	31 ppm	Pumpout and treat.
No	Unisys Park Defense Plant	Eagan									To RCRA				
No	Unisys Roseville	Roseville									To RCRA				
No	Unisys Shepard Road	St. Paul	I								To RCRA				
Yes	United Properties	Minneapolis	I									1, 4, 5	Soil and GW		

Active	Project Name	City	Status								Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
			RI	FS	IRA	RA	M	PC	LI	LLI					
No	University Corridor	Minneapolis													
Yes	Unocal	St. Paul	I		I							1	Soil and GW		Soil vapor-pilot study
Yes	Unocal Dewater	St. Paul									Terminated	N/A			
Yes	URAP Industrial Park	St. Paul	C			I						4	Soil	10 ppm	Landfarm
Yes	Vinyl Therm	Bloomington										1	Groundwater		
Yes	Vogel Manufacturing	St. Paul	I									2	Soil and GW		
Yes	Vomela Specialty Co.	St. Paul	I									1	Groundwater		
Yes	Wards Midway	St. Paul	C			I			C		No Action	1	Soil and GW	Off site source	
Yes	Warner/Shepard Road	St. Paul	C			C	I			C		5	Soil and GW		
Yes	West River Parkway	Minneapolis	C	C							To Superfund				
Yes	Westgate	St. Paul	I		I							1, 2, 4, 5	Soil and GW		Landfarm soils
No	Whirlpool	St. Paul									Inactive	2, 7	Soil		
No	Whirlpool	St. Paul									Inactive	2, 7	Soil		
No	White Bear Lake Rod & Gun Club	White Bear Lk									Inactive	2	Soils		
No	White House Site	Golden Valley									To CERCLIS	5			
Yes	White Way Cleaners	Minneapolis	I			I						1	Soil and GW		
No	White Way Cleaners Whittier	Minneapolis									Terminated	1	Soil and GW		
No	Zane May	St. Paul	I								Inactive-further RI	1	Soil and GW		

Appendix 6

Status of Minnesota Hazardous Waste Sites

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

OCTOBER 1992

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLA$ (MILLION)	MERLA$ (MILLION)	ESTIMATE OF RESP. PARTY $ (MILLION)	CLEANUP PHASE							
										RI / FS		RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M
ADM / HIGHWAY 280	15																
ADRIAN MUNICIPAL WELL FIELD	34 ***	X				9/30/89	0.590	0.200		XF	XF			XS			
AGATE LAKE SCRAP YARD	30 ***	X	1/28/86						0.600	X	X	O	R			R	R
AMDURA (AMHOIST)	13			2/28/89	8/28/90			0.150	0.250	C	XS				OS		
ANCHOR GLASS CONTAINER, SHAKOPEE	16								0.775	O	O		O				
ANDERSEN WINDOW, BAYPORT	24			1/27/87				0.025	2.000	X	X	X	X		O	O	O
ANOKA MUNICIPAL SANITARY LANDFILL	51			5/30/85					2.700	X	X	X	O		IO	IO	IO
ARROWHEAD REFINERY CO., HERMANTOWN	40	X	11/27/90			9/29/86	2.150	0.025	2.250	XF	XF	R	R	X	R	R	R
ARSENIC SITES - ABOVE GROUND, STATEWIDE * (MN DEP. OF AG.)								0.415		XS			OS				
ARSENIC SITES - BELOW GROUND, STATEWIDE *								0.400		XS			OS				
ASHLAND OIL CO. - COTTAGE GROVE	34		3/26/85						0.075	X	R	R	R			R	R
ASHLAND OIL CO. - PINE COUNTY	22		12/18/84			6/5/92			0.250	X	X	X	O			R	R
ASHLAND OIL/PARK PENTA/SONFORD PROD., ST. PAUL PARK	32								0.420	X	O						
ASHLAND REFINERY, ST. PAUL PARK	32			1/22/91					2.700	X	O	R	R	O	R	R	R
ASKOV GND. WTR. CONTAM. (SENT TO TANKS AND SPILLS)																	
ATWATER MUNICIPAL WELL FIELD	31		12/16/86					0.260		XS	XS	XS	XS	XS		OS	
B.J. CARNEY COMPANY, MINNEAPOLIS	38																
BASSETT CREEK/IRVING AVENUE DUMP, MINNEAPOLIS	10								0.100	O	O						
BATTLE LAKE AREA SAN. LDFL., OTTER TAIL COUNTY	34		4/23/91		4/23/91			0.020		OS							
BAYTOWN TWP. GRND. WTR. CONTAMINATION, WASHINGTON CO.	38		8/27/91		12/17/91		0.050	0.410	0.250	OS	R	R	R	OS		R	R
BECKER COUNTY SANITARY LANDFILL	28													OS			
BELL LUMBER AND POLE CO.	48	X	2/28/84	5/30/85					6.000	X	X	O	R		O	O	R
BOISE CASCADE/MEDTRONIC, FRIDLEY	59	X		1/24/84					2.000	C	C	X	X		IO	O	O
BOISE CASCADE/ONAN, FRIDLEY	59	X		12/28/84					3.800	C	C	X	X		IO	O	O
BOISE CASCADE PAINT WASTE DUMP, RANIER	17		2/26/85	6/25/85					2.000	X	X	X	X			O	O
BRAINERD FORMER CITY DUMP	38																
BROOKLYN PARK DUMP, HENNEPIN CO.	36							0.025	0.160								
BUECKERS SANITARY LANDFILL, STEARNS COUNTY	25		10/11/90		10/11/90					OS							
BURLINGTON NORTHERN, BRAINERD	47	X	11/28/83	3/26/85		6/10/86			2.000	X	X	X	O		IO	O	O
BURLINGTON NORTHERN CAR SHOPS-BRAINERD	38								0.320	O					IO		

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

OCTOBER 1992

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLA$ (MILLION)	MERLA$ (MILLION)	ESTIMATE OF RESP. PARTY $ (MILLION)	CLEANUP PHASE							
										RI / FS		RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M
BURLINGTON NORTHERN CAR SHOP-WAITE PARK	38		10/22/85						1.200	O	O	R	R		R	R	R
BURNSVILLE SANITARY LANDFILL	43		4/28/87						0.800	O	R	R	R		R	R	R
CASTLE ROCK GND. WTR. CONTAM. (REFER TO DEPT. OF AG.)	25							0.017		O			O	OS	O		
CEDAR SERVICE, MINNEAPOLIS (REFER TO DEPT. OF AG.)	17																
CENTRAL COOP. OIL, MEDFORD (REFER TO DEPT.OF AG.)	16									X	X	X	O	O	O	O	
CLAY COUNTY SANITARY LANDFILL	17																
CONOCO INC. - WRENSHALL REFINREY	41		6/23/87						0.800	X	O	R	R		R	R	R
CONTROL DATA CORP. - PRINTED CIRCUITS OPERATION	6			4/26/88		6/12/90			1.620	X	X	X	O		IO	O	O
CROW WING COUNTY SANITARY LANDFILL	14																
DM&IR SHOPS, DULUTH (REFER TO HAZ. WASTE DIV.)	11																
DNR-DUXBURY PESTICIDE SITE	11		12/18/84						0.250	X	X	X	X		X	O	
DAKHUE SANITARY LANDFILL, DAKOTA COUNTY	42	X		6/23/87	9/27/88	6/30/91	0.800	0.030	0.300	OF	OF	OF	OF				
DEALERS MANUFACTORING CO., FRIDLEY	28																
DODGE COUNTY SANITARY LANDFILL	25																
DULUTH AIR FORCE BASE	21		8/28/90						3.500	C	O	R	R		R	R	R
DULUTH FORMER CITY DUMP	28		8/23/88		11/22/88			0.050	0.150	O	R	R	R	OS	R	R	R
EAST BETHEL DEMOLITION LANDFILL, EAST BETHEL	31	X		4/28/87					3.000	X	X	R	R		R	R	R
EAST MESABA SANITARY LANDFILL, ST. LOUIS COUNTY	14																
ECOLOTECH, INC. - ST. PAUL, MPLS	3		8/23/83	3/27/84	2/28/84			0.070	1.500	X	X	X	O		X	O	
8701 CONCORD BLVD. INVER GROVE	28																
ELECTRIC MACHINERY, SAINT CLOUD	38		3/25/86			1/5/89			2.500	X	X	X	X		IO	O	O
ELECTRONIC INDUSTRIES, INC., NEW HOPE (HAZ. WASTE DIV)	26			1/24/84					0.150	O	O	C	O		O	O	O
ELK RIVER SANITARY LANDFILL	25																
ELYSIAN FORMER CITY DUMP	23																
FMC CORP. - FRIDLEY PLANT (VAULT)	66	X		6/08/83		12/3/85			6.000	C	C	X	X			O	O
(GROUND WATER PUMPOUT)				10/28/86					0.750	X	X	X	X		IO	O	O
FARIBAULT COAL GASIFICATION PLANT SITE	46		10/28/86	7/26/88		6/07/88			1.200	X	X	X	X			O	O
FARIBAULT MUNICPAL WELL FIELD	36																
FERGUS FALLS SANITARY LANDFILL, OTTERTAIL CO.	25																
FLYING CLOUD SANITARY LANDFILL, EDEN PRAIRIE	40			9/25/85					5.000	X	X	X	O		R	R	R

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

OCTOBER 1992

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										RI / FS		RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M
FOOT, S.B. TANNING SLUDGE DISPOSAL AREA, RED WING	25																
FORD - TWIN CITIES ASSEMBLY PLANT, ST. PAUL	8		6/26/90						0.755	O	R	R	R		R	R	R
FREEWAY SANITARY LANDFILL, BURNSVILLE	46	X	2/25/86					0.228	1.000	O	R	R	R		R	R	R
FRIDLEY COMMONS PK. WELL FIELD, FRIDLEY	42																
FRITZ CRAIG SALVAGE OPERATION, PARK RAPIDS	8																
GENERAL COATINGS	10									O							
GENERAL FABRICATION, FOREST LAKE	34																
GENERAL MILLS, MINNEAPOLIS	39	X		10/23/84					1.533	C	C	X	X		IO	O	O
GLIDDEN, MINNEAPOLIS	11									O							
GOFER SANITARY LANDFILL, MARTIN COUNTY	26																
GOPHER OIL-DELAWARE, MINNEAPOLIS	3																
GOPHER OIL-THORNTON, MINNEAPOLIS	3		8/28/90						1.800	O	O	R	R		R	R	R
GRAND RAPIDS AREA SANITARY LANDFILL	34																
GREATER MORRISON SANITARY LANDFILL, MORRISON COUNTY	29																
HWK ENT./MEEKER MFG./DSG. CLS./LITCHFIELD MWS	24																
HANSEN AND MANKATO SANITARY LANDFILL,BLUE EARTH CO.	19																
HASTINGS FORMER CITY DUMP	31								0.125	O						O	
HIGHWAY 96 DUMP	31		7/22/86						0.600	X	O	R	R		IO	R	R
HONEYWELL, INC.- GOLDEN VALLEY PLANT	31		5/30/85	11/19/85		6/19/90			3.015	C	C	C	X		IO	O	O
HOPKINS AGRICULTURAL CHEM./ALLIED CHEM., MINNEAPOLIS	3		6/25/85						1.000	X	X	X	X			O	X
HOPKINS SANITARY LANDFILL	15			6/30/88					2.500								
HOUSTON COUNTY SANITARY LANDFILL	25		6/28/92						0.600	O				X			
HOWE CHEMICAL SOIL CONTAM. (DEPT. OF AG)	12								0.115	X	X	X	O			R	
HUTCHINSON TECHNOLOGY, INC., HUTCHINSON	9								0.550	C	C	C	O		IO	O	
INTERPLASTIC CORP., MINNEAPOLIS	18		7/23/91						0.100	O	R	R	R	R	R	R	R
IRONWOOD SAN. LDFL. (ADV. TRANSFMR.), SPRING VALLEY	34			8/26/86					1.350	X	X	X	X	X	IO	O	O
ISANTI-CHISAGO SANITARY LANDFILL	34		6/16/88					0.050	0.500	X	X	R	R	X	R	R	R
ISANTI RUMPEL, ISANTI COUNTY	13		7/1/83	11/12/87		3/15/91		0.020	0.404	X	X	X	R		R	R	R
ISANTI SOLVENT SITE, ISANTI COUNTY	30		7/17/83	11/12/87	9/28/83	6/15/90	1.250	0.030	0.982	X	X	R	R	O	R	R	R
JACKSON MUNICIPAL WELL FIELD	26							0.020		XS						O	

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

OCTOBER 1992

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLA$ (MILLION)	MERLA$ (MILLION)	ESTIMATE OF RESP. PARTY $ (MILLION)	CLEANUP PHASE							
										RI / FS		RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M
JOSLYN MFG. & SUPPLY CO., BROOKLYN CENTER	44	X	9/27/83	5/30/85		7/31/89			8.000	X	X	X	O		IO	O	O
KANABEC CO. SANITARY LANDFILL, ARTHUR TWP.	21													O			
KANDIYOHI COUNTY SANITARY LANDFILL	41																
KAPLAN, H.S. SCRAP IRON AND METAL CO., ST. PAUL	4								0.200	X	X						
KARLSTAD SANITARY LANDFILL, KITTSON COUNTY	10																
KILLIAN SANITARY LANDFILL, TODD COUNTY	19							0.020									
KLUVER SANITARY LANDFILL, DOUGLAS COUNTY	39																
KOCH REFINING/N-ReN CORP., ROSEMOUNT	31	X	1/22/85	10/22/85		9/21/91			1.000	X	X	O	O		IO	R	R
KOOCHICHING COUNTY SANITARY LANDFILL	27																
KOPPERS COKE, ST.PAUL	55	X	3/25/86						0.834	X	O	R	R		R	R	R
KORF BROS. SANITARY LANDFILL, PINE COUNTY	25							0.025									
KUMMER SANITARY LANDFILL, BELTRAMI CO.-DRINKING WTR.	42 ***	X	6/26/84		8/28/84	6/12/85	2.033	0.067	0.245		XF	XF	XF	IO			O
-COVER						9/30/88	3.320	0.270		XF	XF	XF	XSF			OSF	OSF
-GND. WATER						8/28/90	1.990	0.061		XF	XF	OSF					
KURT MANUFACTURING, FRIDLEY	31 ***	X	4/24/84	8/24/84		5/13/86			0.550	X	X	O	O		IO	O	O
La GRANDE SANITARY LANDFILL, DOUGLAS COUNTY	34	X	7/28/87		9/22/87		0.452			XF	XF						
LAKELAND GROUND WATER CONTAMINATION	38					4/21/91		2.200		XS	XS	XS	XS	XS		XS	XS
LANSING GROUND WATER CONTAMINATION	17		4/21/89					0.455	0.800	X	X	R	O	X	R	R	R
LEECH LAKE SANITARY LANDFILL, HUBBARD CO.	25							0.030		XS							
LeHILLIER/MANKATO	42 ***	X				9/30/85	2.950	0.163		XF	XF	XSF	XSF	XS	XSF	OSF	OSF
LEWISTON GROUNDWATER CONTAM. (REFER TO DEPT. OF AG.)	34							0.002	0.080	O	O	O	O				
LINDALA SANITARY LANDFILL, WRIGHT COUNTY	29																
LONG PRAIRIE GROUND WATER CONTAMINATION	32 ***	X				6/27/88	0.750	0.300		XF	XF	OF		XS			
LOUISVILLE SANITARY LANDFILL, JORDAN	29		9/23/86						0.300	X	XO	R	R		R	R	R
LUND'S FARMER SEED AND NURSERY, ST. CLOUD (DEPT. OF AG)	14							0.500	0.020	XS	XS	XS	XS			OS	
MacGILLIS & GIBBS CO., NEW BRIGHTON -OPERABLE UNIT #1	48 ***	X	2/28/84		11/28/89		0.452	0.310	0.030	XF	OF	OF					
-OPERABLE UNIT #2	***					9/30/91				XF	XF	OF					
-OPERABLE UNIT #3	*									OF	OF						
McGUIRE WIRE SALVAGE SITE, MORA	20		8/28/90		8/28/90			0.229		XS	XS	OS					
McLAUGHLIN GORMLEY KING, MINNEAPOLIS	4		1/22/85	11/19/85		9/28/87			0.511	X	X	X	X		IO	O	O

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

OCTOBER 1992

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLA$ (MILLION)	MERLA$ (MILLION)	ESTIMATE OF RESP. PARTY $ (MILLION)	CLEANUP PHASE						
										RI / FS	RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M
MEEKER COUNTY SANITARY LANDFILL	15															
METALS REDUCTION, ST.PAUL	2															
MIBCO, MINNEAPOLIS	40															
MINNEAPOLIS COMM. DEV. AGENCY/FMC, MINNEAPOLIS	1			11/26/85					1.000	X	X	X	O			O
MINNEGASCO, MINNEAPOLIS	42		6/24/86						2.500	X	X	O	O		R	R
NL INDUSTRIES/TARACORP/GOLDEN AUTO, ST.LOUIS PARK	40	X	1/11/84	2/26/85		9/23/88			0.975	X	X	X	X			O
NORTHWEST REFINERY, FORMER, NEW BRIGHTON	9		4/22/86						0.100	O	R	R	R			R
NORTHWOODS SANITARY LANDFILL, ST.LOUIS COUNTY	18															
NUTTING TRUCK & CASTER CO., FARIBAULT	38	X	9/22/83	4/26/84					0.140	X	X	X	X		IO	O
OAK GROVE SANITARY LANDFILL-GROUND WATER	43 ***	X	8/28/84		9/27/84	12/21/90	1.277			XF	XF	O	O			
-FINAL COVER						9/30/88	0.256	0.078			XF	XF	O			
OAKDALE DUMP	59	X		7/26/83					16.000	C	C	X	X	X	IO	O
OLMSTED COUNTY SANITARY LANDFILL	34	X	7/25/89	12/19/89			0.037		1.616	O	R					
OWATONNA CITY DUMP	23							0.020								
PCI, INC., SHAKOPEE	52			6/25/85				0.020	0.250	C	C	C	X			O
PERHAM AIRPORT, PERHAM	23															
PERHAM ARSENIC SITE -GROUND WATER	38 *	X	7/26/83		9/22/83		0.015	0.225		OF	OF					
PICKETT SANITARY LANDFILL, HUBBARD COUNTY	34		4/26/88						0.410	O	R	R	R		R	R
PIG'S EYE LANDFILL	43						0.003									
PINE BEND/CROSBY AMERICAN SLF, INVER GROVE HEIGHTS	52	X	10/22/84	10/23/90		9/30/91		0.150	3.200	X	O	R	R	O	R	R
PINE LANE SANITARY LANDFILL, CHISAGO COUNTY	25															
PINE STREET DUMP, DAKOTA COUNTY	32															
PIPESTONE COUNTY SANITARY LANDFILL	27															
PONDEROSA SANITARY LANDFILL, BLUE EARTH COUNTY	25															
RED ROCK SANITARY LANDFILL MOWER COUNTY	29		12/17/91							R	R	R	R	O		
REDWOOD COUNTY SANITARY LANDFILL	15															
REILLY TAR, ST. LOUIS PARK	59 *	X	12/18/84	9/22/86			1.504		5.000							
-PRAIRIE DU CHIEN-JOR. AQUIFER																
-SLP # 10 & #15 GAC. ROD						6/6/84				X	X	X	X	O	IO	O
-SLP #4-GRAD. CONT.										X	X	X	X	O	IO	O

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										RI / FS		RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M
-SLP #23 SOURCE CONT.										X	X	X	X		IO	O	O
-DRIFT-PLATTEVILLE AQUIFER	59 *					5/15/86											
-GRADIENT CONT. -S.L.P. #422												X	X		IO	O	O
-SOURCE CONT. -S.L.P. #421												X	X		IO	O	O
-NORTHERN AREA:																	
-DRIFT AQUIFER										X	X	R	R		R	R	R
-PLATTEVILLE AQUIFER										O	R	R	R		R	R	R
-ST. PETER AQUIFER	59 *					9/28/90				X	X	X	X		IO	O	O
-MT. SIMON-HINCKLEY AQUIFER	59 *															O	
-IRONTON-GAILSVILLE AQUIFER	59 *									X	X	X	X				
-LEAKING MULTI-AQUIFER WELLS	59 *																
-OPEN TO MT. S-H, I-G, P.D.CH										O	O	R	R				
-OPEN TO ST. PETER										O	O	R	R				
-NEAR SURFACE CONTAMINATION	59 *									X	X	X	X				
-BIOREMEDIATION-SOURCE -UNIV. OF MINNESOTA STUDY	59 ***						0.070										
-EPA SITE-FUNDED BIO-VENTING STUDY											OF						
RICE MUNICIPAL WELL #2	22		5/21/91		5/21/91			0.120		XS	XS	OS					
RITARI POST AND POLE, WADENA COUNTY	30	X	2/25/86		4/22/86		0.893			OF	OF						
ROBINSDALE DEVELOPMENT SITE, ROBINSDALE	36								0.200	OS							
ROCHESTER GAS MFG. -ZUMBROW RIVER WASTES	37								0.750	X			X				
-RIPARIAN WASTES									0.050	O							
ST. AUGUSTA SAN. LDFL./ENGEN DUMP, STEARNS COUNTY	34	X	7/23/91				0.060		0.300	O	R	R	R	R	R	R	R
ST. LOUIS RIVER/INTERLAKE, DULUTH	32 ***	X	3/26/91			9/14/90	1.140			O	O	O					
ST. LOUIS RIVER/U.S. STEEL, DULUTH	32	X	9/27/83	3/26/85		2/17/89			2.000	X	X	O	O		R	R	R
ST PAUL LEVEE PROPERTY, ST. PAUL	20																
ST. PAUL PARK GROUND WATER CONTAMINATION	36		6/27/89					0.503		XS	XS	OS	OS	XS	OS	OS	
ST. REGIS PAPER, CASS LAKE	53	X	4/24/84	2/26/85					10.000	X	X	X	X		IO	O	O
SALOL SANITARY LANDFILL, ROSEAU CO.	22																
SAUK CENTRE SANITARY LANDFILL	38		9/27/88					0.030	0.400	OS	R	R	R	X	R	R	R
SCHLOFF CHEMICAL, ST. LOUIS PARK	7		3/27/90					0.160	0.100	OS	OS						

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

OCTOBER 1992

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										RI / FS		RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M
SCHNITZER IRON & METAL CO., ST. PAUL	10			7/28/87					0.550	X	O	R	R		R	R	R
SHAFER METAL RECYCLING, MINNEAPOLIS	41		6/26/91						0.050	O	O						
SHELDAHL, NORTHFIELD	21								0.445								
SIBLEY COUNTY SANITARY LANDFILL	9																
SOUTH ANDOVER, ANDOVER -OPERABLE UNIT #1	35 *	X	6/26/84			6/9/92	0.128	0.100		XF	XF	OF					
-OPERABLE UNIT #2						12/24/91				XF	XF	OF					
SPRING GROVE MUNICIPAL WELL FIELD	28			3/23/88		2/23/88			0.600	C	C	X	X	IO	IO	O	O
SUPERIOR PLATING, INC., MINNEAPOLIS	6		1/27/91						0.365	O	O	R	R		R	R	R
3M CHEMOLITE DISPOSAL SITE, COTTAGE GROVE	33		1/22/85	5/30/85					0.500	X	X	X	X		IO	O	O
3M KERRICK DISPOSAL SITE, KERRICK	9			1/25/84					0.200	X	X				O	O	O
TELLIJOHN SANITARY LANDFILL	17																
TONKA MAIN PLANT, MOUND	31		7/22/86						0.650	X	X	X	X			O	O
TONKA/WOYKE SITE, ANNANDALE	9		5/30/85	11/25/86					0.500	X	X	X	X			O	O
TOWER ASPHALT, LAKELAND	40								0.040	O							
TRIO SOLVENT SITE, NEW BRIGHTON	21		8/26/86		1/24/89			0.033	0.550	X	X	X	X		O	O	O
TWIN CITIES AIR FORCE RESERVE BASE, MINNEAPOLIS	34	X	11/28/89						3.550	O	O	R	R		IO	R	R
TCAAP/NEW BRIGHTON/ARDEN HILLS/ST. ANTHONY SITE	59	X		12/31/87				0.041	55.000								
OFF TCAAP: -GROUND WATER	- **						2.884			XF	R	R	R		R	R	R
-SEWER	- *						0.050			XF	R	R	R				
-ARDEN MANOR														X			
-NEW BRIGHTON WELL #7	- *					6/86, 4/89	0.431				XF	XF					
-NEW BRIGHTON CARBON (TEMPORARY 1983)	- *										XF	XF	XF	XF			
-ARDEN HILLS PIPELINE	- **						0.237	0.024			XF	XF	XSF	XSF			
-YEPMA CONNECTION								0.004					XS	XS			
-ST. ANTHONY INTERCONNECTION	- **						0.140	0.014			XF	XF	XSF	XSF			
-NEW BRIGHTON PERMANENT CARBON									7.900					XSF			
-ST. ANTHONY CARBON	- **						3.000	0.332	3.000	XF	XF	XF	XSF	XSF			OF
ON TCAAP:			6/28/83	12/31/87		9/25/87				X	O/R	O/R	O/R	O	O/R	R	R
			8/26/86														
-SITE D						6/27/89				X	X	X	X				

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

OCTOBER 1992

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLA$ (MILLION)	MERLA$ (MILLION)	ESTIMATE OF RESP. PARTY $ (MILLION)	CLEANUP PHASE							
										RI / FS		RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M
-EMPLOYEES														X			
U.S. NAVAL INDUS. RES. ORD. PLT. (NIROP), FRIDLEY	63	X	5/22/84	2/26/91		9/28/90			6.728	X	X	O	R		R	R	R
U OF MINNESOTA - ROSEMOUNT RESEARCH CENTER	46	X	9/25/84	5/30/85		6/29/90			10.600	X	X	X	R	X	X	R	X
UNION SCRAP II & III, MINNEAPOLIS	12																
VALENTINE-CLARK, ST. PAUL	4							0.050		OS							
WABASHA COUNTY SANITARY LANDFILL	22																
WADENA SANITARY LANDFILL	25																
WAITE PARK GROUND WATER CONTAMINATION	32	X	10/22/85		11/25/86			0.200	3.000	X	X	X	X	IO	O	O	O
WASECA COUNTY SANITARY LANDFILL	13																
WASHINGTON COUNTY LANDFILL, LAKE ELMO	42	X		10/24/84		9/27/90			2.700	C	C	X	X	X	IO	O	O
WASTE DISPOSAL ENGINEERING	51	X	9/24/91	3/21/84	3/22/88	12/31/87			4.000	X	X	X	O		R	R	R
WEISMAN SCRAP, WINONA	25		3/25/86						0.500	X	X	X	X			O	
WEST DULUTH INDUSTRIAL SITE	11		1/28/86	9/08/86	3/26/86			1.100	0.810	X	X	XS	XS		X	O	O
W. LAKE SUPERIOR SANITARY DISTRICT LDFL./DULUTH DUMP	34																
WESTLING MANUFACTURING, PRINCETON	32								0.100	O	O						
WEST RIVER PARKWAY, MINNEAPOLIS	10																
WHITTAKER CORPORATION, MINNEAPOLIS	40 ***	X	4/23/85						1.505	X	X	X	X		IO	O	O
WINDOM DUMP	38	X	6/24/86			4/7/89			1.000	X	X	X	X		IO	O	R
WINONA COUNTY SANITARY LANDFILL	34		3/26/85						0.400	X	X	X	X				
WINONA GROUND WATER CONTAMINATION	25		2/26/91		5/21/91			0.200		OS	OS	OS	OS	OS			
WINONA MUNICIPAL WELL FIELD, WINONA	42																
WOODLAKE SANITARY LANDFILL, MEDINA	16																
YONAK SANITARY LANDFILL, WRIGHT COUNTY	28																

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

OCTOBER 1992

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										RI / FS	RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M

SITES ADDED TO THE PLP IN MAY 1992

- 8701 CONCORD BLVD. INVER GROVE---HRS @ 28
- FRIDLEY COMMONS PARK WELL FIELD, FRIDLEY---HRS @ 42
- GENERAL FABRICATION, FOREST LAKE---HRS @ 34
- MIBCO,MINNEAPOLIS---HRS @ 40
- PERHAM AIRPORT, PERHAM (MN DEPT. OF AG.)---HRS @ 23
- ST. PAUL LEVEE PROPERTY, ST. PAUL---HRS @ 20
- UNION SCRAP II & III, MINNEAPOLIS---HRS @ 12
- WEST RIVER PARKWAY, MINNEAPOLIS---HRS @10
- WINONA MUNICIPAL WELL FIELD, WINONA---HRS @ 42

SITE ADDED TO THE PLP IN JUNE 1992

- ADM / HIGHWAY 280---HRS @ 15

PLP SANITARY LANDFILLS UNDERGOING SW RULE/ENFORCEMENT/PERMIT ACTIONS

BECKER COUNTY	KLUVER
CLAY COUNTY	KOOCHICHING
CROW WING COUNTY	NORTHWOODS
DODGE COUNTY	PINE LANE
EAST MESABA	PIPESTONE
ELK RIVER	PONDEROSA
FERGUS FALLS	SALOL-ROSEAU
GRAND RAPIDS AREA	SIBLEY COUNTY
GREATER MORRISON	TELLIJOHN
HANSEN-MANKATO	WASECA COUNTY
HOPKINS	W. LAKE SUP. SAN. DIST. LDFL.
KANABEC	WOODLAKE
KANDIYOHI COUNTY	YONAK
MEEKER	

SITES DELETED FROM THE PLP

- AIRCO LIME MFG. COMPANY
- ASKOV GROUNDWATER CONTAM., PINE COUNTY
- DNR NETT LAKE/ORR PESTICIDE SITE
- ECOLOTECH INC., MINNEAPOLIS
- FORMER MCKAY MFG. COMPANY
- 43 E. WATER STREET
- ISANTI MARTIN, ISANTI COUNTY
- LOST LAKE DUMP SITE
- MAPLE PLAIN DUMP
- MORRIS ARSENIC SITE
- NORTHERN TOWNSHIP GROUND WATER CONTAM.
- POLYMETALS PRODUCTS INC.
- PORTEC - PIONEER DIVISION
- SONFORD PRODUCTS ABANDONED TRAILER SITE
- UNION SCRAP IRON AND METAL CO., MINNEAPOLIS
- WADENA ARSENIC SITE, WADENA COUNTY

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

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										RI / FS		RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	RA O&M
NUMBER OF SITES THAT HAVE INITIATED "RI'S"	128								O	31	21	14	24	9	9	49	40
NUMBER OF SITES THAT HAVE INITIATED "FS'S"	113								X	66	57	50	40	12	4	0	2
NUMBER OF SITES THAT HAVE INITIATED "RD'S"	101								C	12	10	4	0	0	0	0	0
NUMBER OF SITES THAT HAVE INITIATED "RA'S"	102								OS	8	2	4	3	3	1	3	0
NUMBER OF SITES INITIATING A DRINKING WATER "RA"	34								OF	6	5	5	1	0	0	0	1
NUMBER OF SITES INITIATING A GROUND WATER "RA"	74								XS	9	6	4	6	6	0	0	0
NUMBER OF SITES WITH INITIATED"RA" MONITORING	92								XF	10	15	8	4	2	1	0	0
NUMBER OF SITES INITIATING "RA" OPER. AND MAINT.	82								XSF	1	0	1	4	2	1	0	0
									OSF	0	0	1	0	0	0	2	2
NOTE: THESE TOTALS INCLUDE ALL "R" DESIGNATIONS FOR EACH ACTIVITY AT EACH SITE. ("R"=REQUIRED)									R	1	18	37	39	2	35	43	46
									IO	0	0	0	0	4	22	1	1
TOTAL NUMBER OF SCORED SITES	189	44	82	50	21	43	28.912	10.481	237.103	144	134	128	121	40	73	98	92

LEGEND

LIST OF ACRONYMS

HRS = HAZARD RANKING SYSTEM
NPL = NATIONAL PRIORITIES LIST
RFRA = REQUEST FOR RESPONSE ACTION
DIR = DETERMINATION OF INADEQUATE RESPONSE
CERCLA = COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT
MERLA = MINNESOTA ENVIRONMENTAL RESPONSE AND LIABILITY ACT
RI = REMEDIAL INVESTIGATION
FS = FEASIBILITY STUDY
RD = REMEDIAL DESIGN
RA = REMEDIAL ACTION
O&M = OPERATION & MAINTENANCE

*= EPA LEAD
**= STATE LEAD
^ = OFFICIALLY NOT ON THE STATE PLP

RESPONSIBLE PARTY CODES

X = COMPLETED
O = ON GOING
C = COMPLETED PRIOR TO CONSENT ORDER
R = REQUIRED UNDER CONSENT ORDER, STIPULATION AGREEMENT OR RFRA
IO = INSTALLED AND OPERATING

GOVERNMENT-FINANCED CODES

OS = ON GOING-USING STATE SUPERFUND MONIES
OF = ON GOING-USING FEDERAL SUPERFUND MONIES
XS = COMPLETED-USING STATE SUPERFUND MONIES
XF = COMPLETED-USING FEDERAL SUPERFUND MONIES
XSF = COMPLETED-USING STATE AND FEDERAL SUPERFUND MONIES
OSF = ON GOING-USING STATE AND FEDERAL SUPERFUND MONIES

Notes

Minnesota Superfund

A Report on Use of the Minnesota Environmental Response, Compensation and Compliance Fund during Fiscal Year 1992

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the Minnesota Department of Agriculture

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