

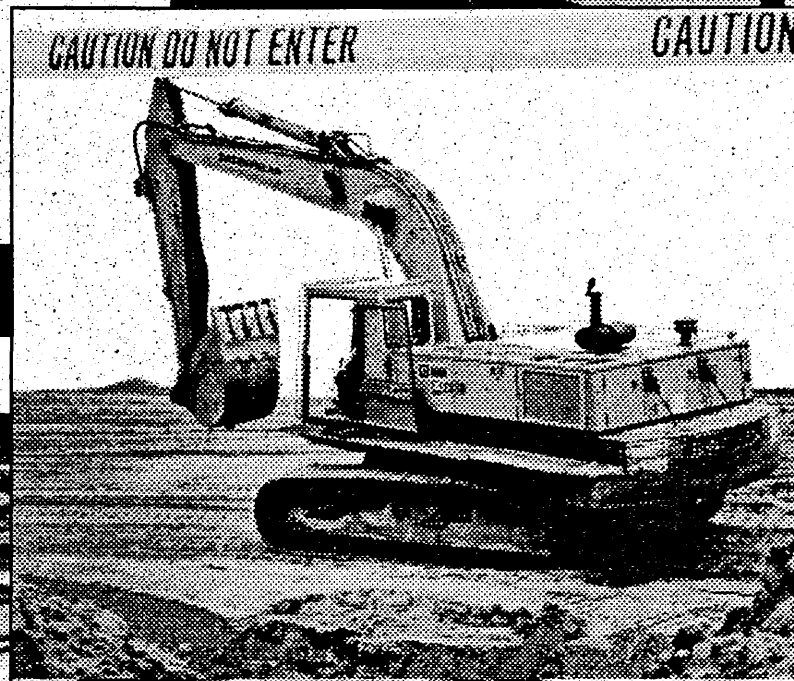
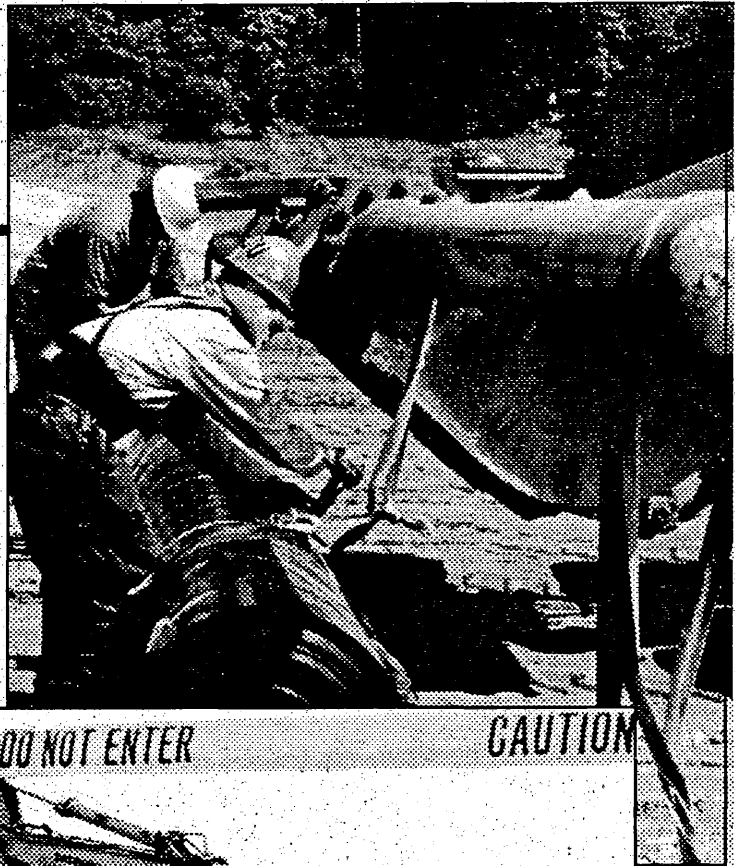
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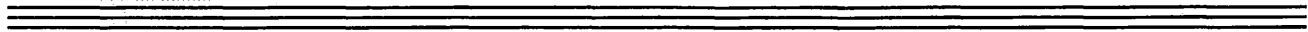
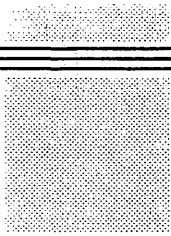
# Minnesota Superfund

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

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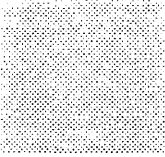
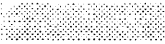


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# Table of Contents

<b>Executive Summary</b>	1
<b>Introduction</b>	6
<b>Program Overview</b>	7
• Types of Sites in Superfund	11
• Status of the Fund	14
• Use of Federal Fund Dollars	17
• Use of MERLA Dollars	19
• Cleanup by RPs Using Private Dollars	19
• Future Challenges	23
<b>Minnesota Pollution Control Agency</b>	
• MPCA Significant Superfund Activities Undertaken in FY 93	31
• Legislative Summary	36
• Further Program Accomplishments	37
• Reimbursement to the Fund	40
• Legal Actions and Superfund	41
• Voluntary Investigation and Cleanup (VIC) Program	47
• Property Transfer File Evaluation Program	52
• Actions at Sanitary Landfills	54
• Community Relations in Superfund	58
<b>Minnesota Department of Agriculture</b>	
• Cleanup Program	60
• MDA Actions Using Fund Dollars	62
• Further MDA Program Accomplishments	64
• MDA Legal Actions	64
• MDA Voluntary Cleanup Technical Assistance Program	65
<b>Conclusions and Recommendations</b>	66
<b>Appendix 1: Acronyms</b>	69
<b>Appendix 2: VIC Status Report</b>	71
<b>Appendix 3: Minnesota Hazardous Waste Site Status Report</b>	83



Minnesota  
**Superfund**



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# Executive Summary

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 the ability to put new developments on former polluted properties.

In Fiscal Year 1993 (FY 93), [See Appendix 1 for Acronyms] the state and federal programs and laws, collectively called Superfund, responded to 60 environmental emergencies such as spills, fires, and accidents involving hazardous substances, cleaned up all or part of 16 high priority sites, approved 102 actions associated with voluntary investigations and cleanups, delisted ten sites, addressed 96 abandonment instances (including 204 barrels), and ensured cleanup progress at 148 of the 184 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 Minnesota Statute Section 115B.20, subd. 6, this report details the activities for which Fund dollars have been spent during FY 93 by the MPCA and MDA and puts forth initiatives for the Fund for FY 94.

MPCA and MDA have been successful in efforts to seek out responsible parties (RPs) to fund and conduct cleanup activities with MPCA/MDA oversight. 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 ten percent match for federally funded cleanups, and conduct cleanup of sites not eligible for federal funding, where RPs are unable or unwilling to 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

(Minnesota Statute Section 115B). The MPCA and the U.S. Environmental Protection Agency (EPA) work cooperatively on enforcement and fund-financed activities involving Minnesota's 43 Superfund sites listed on the federal National Priorities List (NPL).

MPCA/MDA Superfund responsibilities consist of six basic components:

1. Responding to emergency situations;
2. Discovering and assessing sites for possible addition to the state or federal Superfund lists;
3. 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;
4. Overseeing contractors in the investigation and cleanup of fund-financed Superfund sites;
5. Investigating and cleaning up permitted sanitary landfills (SLFs); and
6. Providing technical assistance and liability protection assurances to persons conducting voluntary investigations and cleanups of contaminated property.

Under MERLA, the MPCA/MDA staff attempts to identify parties responsible for contributing to a release or threatened release of hazardous substances, pollutants, or contaminants at identified Superfund sites. RPs are given the opportunity to conduct site investigations and cleanups 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 sites. At some sites the RPs may be unwilling to take appropriate actions. In these instances, the MPCA/MDA uses the Fund and then may seek 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 only process currently available to address contamination problems at closed landfill sites where RPs are unable or unwilling to do the work, a new program more closely tailored to SLFs, should be adopted.

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**"There should be one Superfund effort with the states as primary implementors."**

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 that they should not be addressed under Superfund. A separate cleanup program for landfills will allow for more prompt and cost-effective cleanups, as well as eliminate the legal and other transaction costs associated with these sites. It is recommended that SLFs be removed from the Superfund program and be addressed in a new law and program.

**Reauthorization of Federal Superfund Law 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. All 10,000 - 20,000 sites, nationally, need to be addressed under a reauthorized federal Superfund law. National cleanup standards would improve both consistency and speed of cleanup decisions, and should be adopted by EPA. Finally, there should be one Superfund effort with the states as primary implementors.

**Voluntary Investigation and Cleanup (VIC) Program.** The MPCA has developed a unique program to provide technical assistance and liability protection assurances to persons conducting voluntary investigations and cleanups of contaminated property. Recently, the MDA has developed a complementary program to provide the same services at agricultural chemical incident sites. More education and outreach to promote the VIC Program and assist private parties and local governments to clean up contaminated sites should be undertaken.

**MDA Agricultural Chemical Sites.** MDA requests that funding be maintained at the current level for MDA activities involving Superfund. MDA is staffing positions that were vacated during FY 93.

The following tables summarize expenditures and income of the Superfund program with a review of Fund accomplishments.

<b>Superfund Program Expenditures and Income</b>		
Balance Forward 7-1-92	\$9,736,000	
Less Prior Year Adjustment*	323,000	
Adjusted Balance Forward	\$9,413,000	
<b>Expenditures from the Fund</b>	<b>FY 93</b>	<b>FY 83 - 93</b>
MERLA Fund Expenditures	\$6,995,000	\$43,763,000
Unliquidated Obligations	1,456,000	1,987,000
Total Expenditures and Obligations**	\$8,451,000	\$45,750,000
<b>Income to the Fund</b>	<b>FY 93</b>	<b>FY 83 - 93</b>
Appropriations	\$1,000,000	\$18,400,000
Fines and Reimbursements Paid by RPs	2,398,000	17,208,000
Hazardous Waste Generator Tax	401,000	8,655,000
Interest	494,000	8,109,000
Less Revenue Refund	(3,000)	(1,370,000)*
Total Income to the Fund	\$4,290,000	\$51,002,000
MERLA Fund Balance 6-30-93	\$5,252,000	
<b>Federal Superfund Dollars</b>	<b>FY 93</b>	<b>FY 83 - 93</b>
Secured (Deobligated)	(3,965,078)	44,797,623
Expended**	4,962,502	31,369,076

\* Prior year adjustment was due to FY 91 expenditures reflecting costs paid through 9-1-91 and not reflecting outstanding obligations, and to revenue refunds due in large part to duplicate payments received or for receipt of Hazardous Waste Generator Taxes in excess of actual amount due.

\*\* Figures as of 8-31-93 for FY 93 budgets. Figures will change as expenditures, obligations, fines, and reimbursements are obtained or paid out.



Superfund Program Accomplishments		
	FY 93	FY 83 - 93
Sites Added to State's Permanent List of Priorities	5	210
Sites Delisted from the Permanent List of Priorities	10	26
Sites Added to the Federal National Priority List	1	43
Responsible Party Response Actions Initiated	17	126
MERLA Funded Response Actions Initiated	1	32
Federally Funded Response Actions Initiated	1	25
Records of Decision Executed	10	55
MPCA Involvement in Lawsuits	11	31
Declared Emergencies	2	26
Abandoned Barrels and Drums Secured	204	669
MPCA Property Transfer File Evaluation Requests	1,946	*9,474
Voluntary Investigation and Cleanup Requests	82	**296
VIC Cleanups Approved (Final and Interim)	21	**60

\* FY 85 - 93  
 \*\* FY 89 - 93

# Introduction

MERLA established the 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 allowed MDA equal access to the Fund to investigate and clean up releases involving agricultural chemicals (pesticides and fertilizers). In 1993, changes were made in the appropriation language to give full administrative authority to the Commissioners of MPCA and MDA. The two Commissioners will jointly submit an annual spending plan to the Commissioner of Finance at the beginning of each Fiscal Year.

MDF, MDA, and MPCA have a Memorandum of Agreement to address various concerns involved in this change. This report outlines the use of the MERLA Fund during FY 93, 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 federal Superfund reauthorization, both of which are likely to affect the state's Superfund program.

## Key Points • • • • •

### This report:

- summarizes the status of the Minnesota Superfund program;
- outlines the use of the MERLA and CERCLA funds to clean up sites during FY 93;
- discusses cleanups at RP-funded sites during FY 93;
- discusses cleanups at voluntary party sites during FY 93;
- puts forth future program and state legislative initiatives; and
- discusses the challenges to the federal Superfund program and the 1994 federal Superfund reauthorization process.



Warning signs at the Waste Disposal Engineering Landfill

# Program Overview

The Minnesota Superfund program is composed of the following functions:

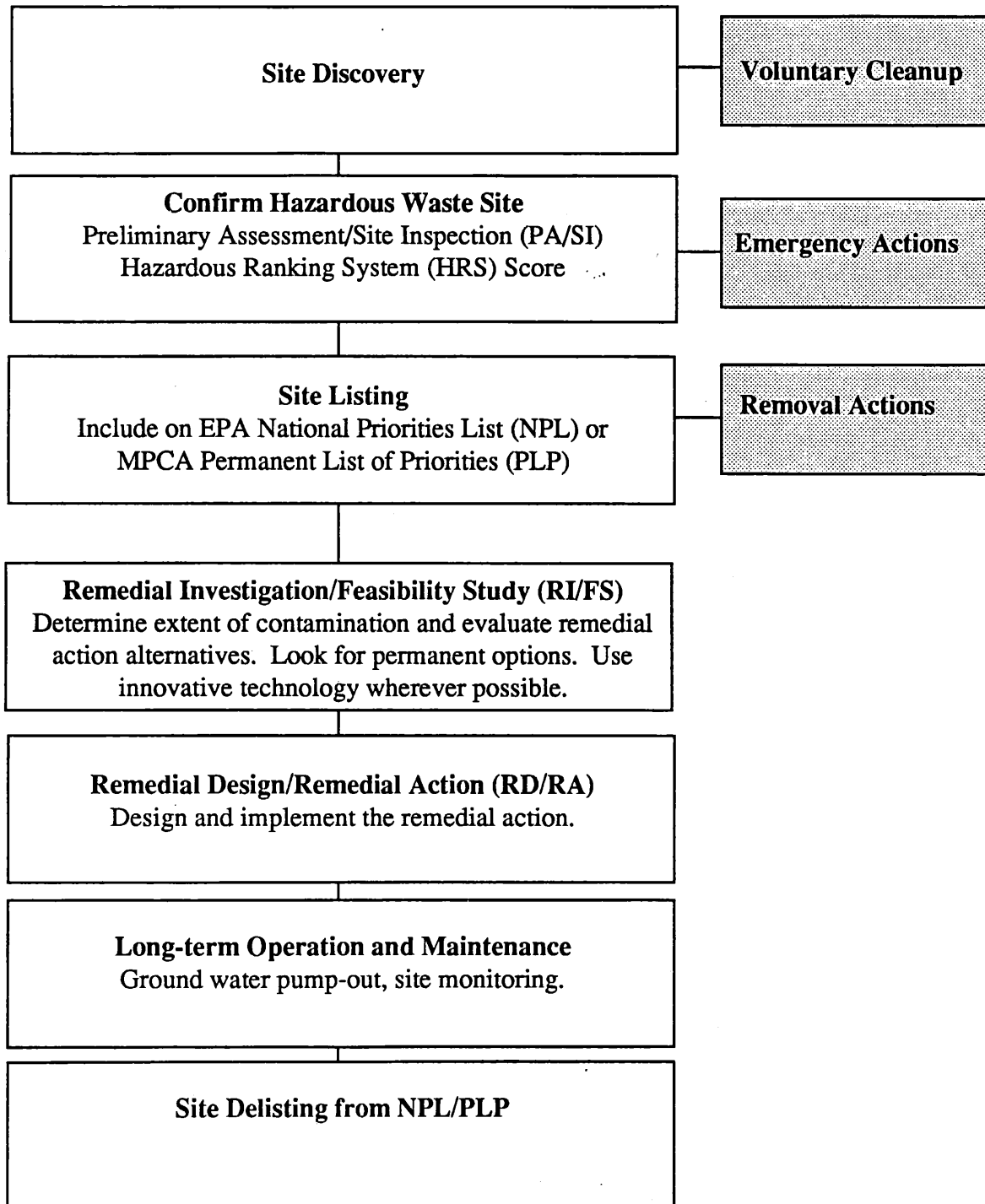
1. To respond to emergency situations, such as a contaminated drinking water supply, drum removal, or other situations that have been determined to be imminent health hazards by the Minnesota Department of Health (MDH);
2. To discover and conduct preliminary investigations of potential hazardous substance, pollutant, or contaminant releases from abandoned hazardous waste sites, solid waste sites, or agricultural chemical sites, and to identify RPs;
3. To oversee RPs or their contractors in the conduct of Remedial Investigations and Feasibility Studies (RI/FS) at all sites;
4. To develop Records of Decision (RODs) and Minnesota Decision Documents identifying the remedial designs (RD) and response actions (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 and with the U.S. Department of Defense. 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 investigations and cleanup actions where parties can and are willing to do the work.

## Key Points • • • • •

**The Fund is used to:**

- **prioritize sites to determine their eligibility for state and federal Superfund monies;**
- **respond to emergencies and conduct initial investigations;**
- **pay for site investigations and the development of cleanup alternatives;**
- **oversee the completion of response actions;**
- **issue enforcement documents and final cleanup decisions; and**
- **assist voluntary parties to conduct investigation and cleanup activities.**

**Figure 1A: The Minnesota Superfund Process**



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 diagrammed in Figures 1A and 1B. If parties agree to voluntary investigation and cleanup actions, the MPCA may use a different process. Potential Superfund sites are identified by the MPCA and MDA through calls from concerned citizens, routine inspections by MPCA/MDA staff, reports of hazardous substance spills, and analyses of public drinking water supplies sampled by MDH.

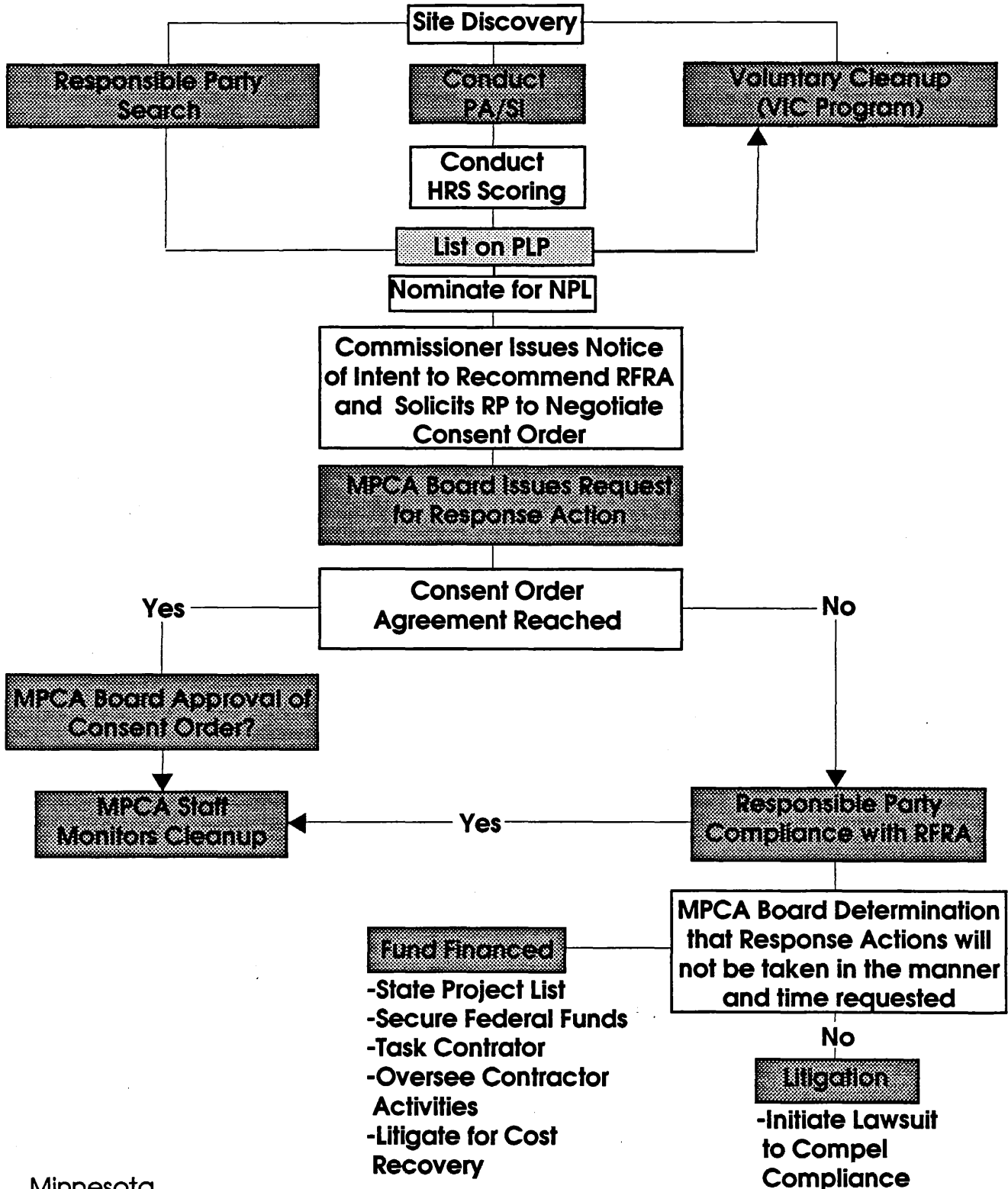
**"Superfund ... responds to new information on emerging technologies, changes in federal law, and more accurate health and ecological risk information."**

Through a Cooperative Agreement with EPA, the Site Assessment Unit assesses potential hazardous waste sites in Minnesota. Initially, a Preliminary Assessment (PA) is conducted involving a general review of readily accessible information to characterize a site and to determine if it warrants further investigation.

When the PA indicates further investigation is warranted, the site enters the Site Investigation (SI) phase, which is followed by the Expanded Site Investigation (ESI) phase, if necessary. Data from the SI and ESI 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.

After completion of HRS II scoring, the site may then be added to the Permanent List of Priorities (PLP) and the NPL, depending on the score and nomination, 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, at some sites, is followed by long-term monitoring and maintenance. Finally, after the site cleanup is complete, the site is delisted from the PLP. At sites where RPs have been identified, staff undertakes an administrative/enforcement process, providing opportunities for RPs to negotiate a Response Order by Consent (Consent Order) or operate under a Request for Response Action (RFRA).

**Figure 1B: MPCA Administrative/Enforcement Process under MERLA**



# Types of Sites in Superfund

All sites listed on the PLP have been assigned to one or more response action classes as required by Minnesota Statute Section 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 MDH drinking water advisory has been issued, or that an advisory has been issued where immediate adverse human or animal 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 the Duluth Former City Dump, Schloff Chemical in St. Louis Park, and Valentine Clark in St. Paul; and ground water contamination at Lakeland, St. Paul Park, and Winona.

**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 34 sites listed in Class B.

**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 soil decontamination, first year ground water pump out or monitoring are necessary to complete a permanent remedy or cleanup of a site. There are 148 sites listed in Class C.

## Key Points •••••

**There are 184 sites currently on the PLP. The types of sites in Minnesota include:**

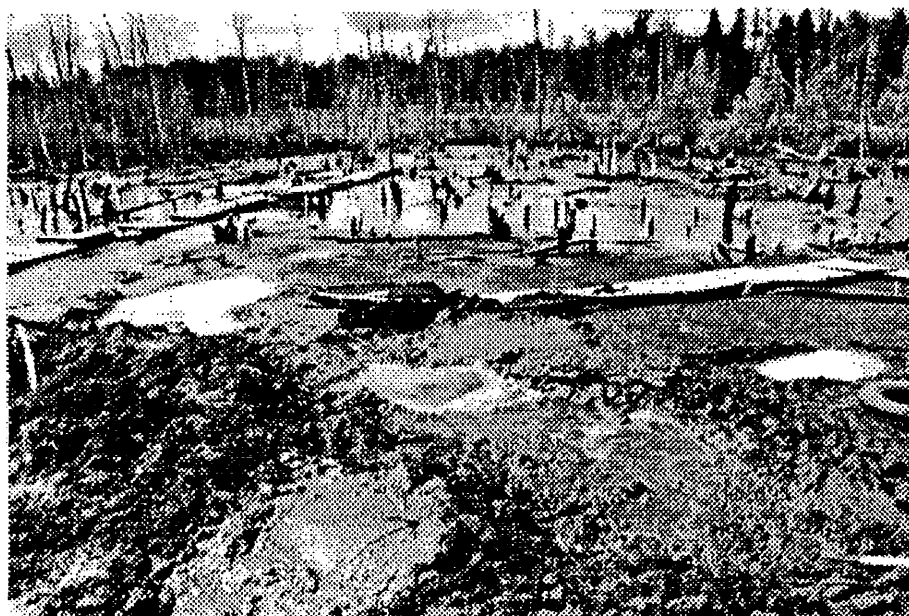
- six sites listed as emergencies (Class A);
- 34 sites where response actions are completed and long-term operation and maintenance are ongoing (Class B);
- 148 sites where response actions are necessary or in progress (Class C);
- 133 sites where remedial investigations or feasibility studies are needed or in progress (Class D);
- 26 sites which have been removed from the PLP; and
- 296 sites where the VIC Program has provided oversight.

**Class D - RI/FS Necessary or in Progress.** This class includes all sites which require a RI to determine the extent, magnitude, and nature of the release or threatened release, and a FS to evaluate and select response action(s). There are currently 133 sites listed as Class D.

Since 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. See the Site Status Report in Appendix 3 for specific sites included in the specific classes.

**Delisted Sites.** Since the PLP was created, 26 sites have been delisted, and ten of these sites were delisted during FY 93. These sites were delisted because cleanup of known contamination at these sites has been completed and no further action is thought to be necessary, the site was combined with another site, or the site was transferred out of the Superfund program. (See Table 1 for delisted sites.)

**Voluntary Sites.** Since the VIC Program was created, 296 voluntary parties have requested assistance.



The second part of a three-part cleanup plan for the Arrowhead Refinery Site was completed in FY 93.



**Table 1: Delisted Superfund Sites**

Site	County
Adrian Municipal Well Field*	Nobles
Airco Lime Sludge Pit	Hennepin
Askov Ground Water Contamination	Pine
Atwater Municipal Well Field*	Kandiyohi
DM & IR Car Shops*	St. Louis
DNR Duxbury Pesticide Site*	Pine
DNR Nett Lake/Orr Pesticide Site	St. Louis
Ecolotech Inc.	Hennepin
Ford Twin Cities Assembly Site*	Ramsey
Former McKay Manufacturing Company	Ramsey
43 East Water Street	Ramsey
Fritz Craig Salvage Operation*	Hubbard
HWK/Meeker/Design Classics/Litchfield Site*	Meeker
Isanti Martin Site	Isanti
Jackson Municipal Well Field*	Jackson
Lost Lake Dump Site	Hennepin
Lund's Farmer Seed and Nursery*	Stearns
Maple Plain Dump Site	Hennepin
Morris Arsenic Site	Stevens
Northern Twp. Ground Water Contamination	Beltrami
Owatonna Dump Site*	Steele
Polymetal Products, Inc.	Ramsey
Portec-Pioneer Division	Hennepin
Sonford Products	Washington
Union Scrap Iron and Metal	Hennepin
Wadena Arsenic	Wadena/Ottertail

\* Delisted in FY 93

# Status of the Fund

The status of the Fund as of June 30, 1993, is detailed in Table 2. The Fund balance at the end of FY 93 is \$5,252,000. 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 transferred from the General Fund in FY 90, and in both FY 92 and FY 93, \$1,000,000 were transferred from the Motor Vehicle Transfer Account.

The Fund investments are managed by the MDF, and a Hazardous Waste Generator Tax is collected by the Department of Revenue. MPCA and MDA have recovered approximately \$17,208,000 in the form of penalties and reimbursements from RPs since the Fund was established. A summary of Fund expenditures during FY 93 is presented in Table 3.

The MPCA's administrative costs represent salaries for 66 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 80 percent of the administrative costs are expenditures that result in securing response action commitments from RPs. These costs are reimbursed by RPs. Administrative costs include salaries, benefits, overhead, equipment, supplies, and travel. The legal cost of services provided by the state Attorney General's Office for non-site specific program development makes up a portion of the Superfund administrative cost.

In FY 93, MDA administrative costs include salaries, benefits, overhead, travel, and program legal costs. Site-specific legal costs included a successful cost recovery action for Lund's Farmers Seed and Nursery.

## Key Points • • • • •

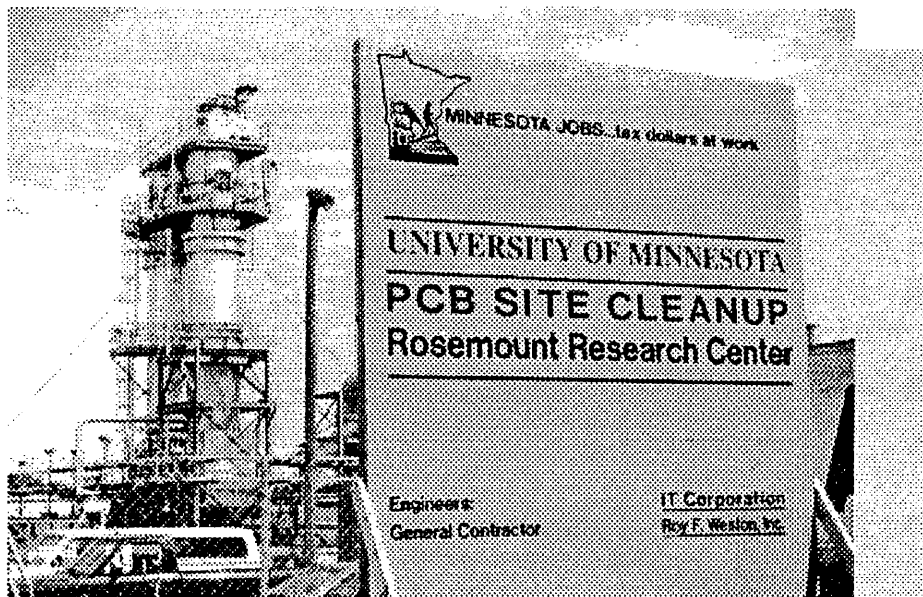
- the Fund balance at the end of FY 93 was approximately \$5.3 million;
- the MPCA and MDA have collected over \$17 million in penalties and reimbursements since the Fund was established;
- the Fund supports 66 staff; and
- greater than 80 percent of the MPCA administrative costs result in securing cleanup commitments from RPs and overseeing RP cleanup activities.

**Table 2: General Ledger Balance of the Fund as of 6-30-93**

<b>Appropriations to Date</b>	<b>Dollars</b>
Original (FY 83)	\$5,000,000
Transfers from Water Pollution Control Fund (FY 88-89)	10,400,000
Transfer from General Fund (FY 90)	1,000,000
Transfer from Motor Vehicle Transfer Fund (FY 92-93)	2,000,000
<b>Subtotal</b>	<b>\$18,400,000</b>
<b>Income to Date (FY 83 - 93)</b>	
Interest on Investments	\$8,109,000
Fines and Reimbursements Paid by Responsible Parties	17,208,000
Hazardous Waste Generator Taxes	8,655,000
Less Revenue Refunds	(1,370,000)
<b>Subtotal</b>	<b>\$32,602,000</b>
<b>Total Appropriation and Income</b>	<b>\$51,002,000</b>
<b>Expenditures and Obligations (FY 83 - 93)</b>	<b>(\$45,750,000)</b>
<b>Fund Balance as of 6-30-93</b>	<b>\$5,252,000</b>

**Table 3: FY 93 State Superfund Expenditures by MPCA and MDA**

	MPCA	MDA
Superfund Program Administrative Costs	\$4,349,084	\$130,036
Site-specific Contractual Costs	2,055,460	182,330
Attorney General Costs	116,489	5,646
Site-specific Laboratory Analytical Costs	144,742	11,325
Unliquidated Obligations	\$1,447,804	7,698
<b>Total</b>	<b>\$8,113,579</b>	<b>\$337,035</b>
<b>Combined Total</b>	<b>\$8,450,614</b>	



Substantial amounts of PCB-contaminated soils were cleaned up at the U of M Rosemount Site in FY 93.

# Use of Federal Fund Dollars

Minnesota has 43 sites on the NPL that are eligible for federal funding based on priority. So far, the MPCA has secured a cumulative total of \$44,797,623 in federal Superfund dollars. This amount is a decrease from previous years' accumulation, as it reflects not only \$1,338,261 in additional funds secured during FY 93, but \$5,303,339 returned to the federal fund by the MPCA from two federal sites. One site, Kummer SLF, was previously funded for RA activities and the excess (\$5,099,297) was returned to EPA. The other site, Perham Arsenic Site, was designated as a federal lead site and previous funding to the state (\$204,042) to act as lead agency was returned.

The federal Superfund monies were secured for:

1. Responding to emergency situations;
2. Conducting preliminary assessments and preliminary site investigations at Minnesota sites included on a federal inventory, the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), of potential hazardous waste sites;
3. Tasking contractors to conduct RI/FS and RD/RA activities at Minnesota fund-financed sites included on the NPL;
4. Administration of Superfund sites by MPCA employees, including work on innovative technologies, pilot studies, training, etc.; and
5. RP 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 ten percent of the amount secured from federal Superfund for site-specific remedial actions and administrative and development activities.

During FY 93, the MPCA spent \$4,962,502 federal Superfund dollars for response action activities at 27 sites. Of this amount, \$3,143,429 was spent on site-specific cleanup actions at 12 sites; \$430,364 on enforcement cleanup actions at 15 sites; and \$1,388,709 on programmatic activities. Table 4 details expenditures of federal dollars by MPCA.

## Key Points • • • • •

- in the history of Superfund, close to \$45 million have been secured from the federal Fund;

- at federally funded remedial action sites, the Fund covers 90 percent of remediation costs, the state Fund covers 10 percent; and

- in FY 93 federal dollars were used for 12 site-specific cleanup actions, 15 site-specific enforcement/cleanup activities and RP searches, and program support.

**Table 4: Expenditures of Federal Superfund Dollars**

Site	Amount Spent	Cleanup Action
South Andover	\$19,725	RI/FS, MA, RD
Arrowhead	12,003	RD, MA, State Lead RD
Ritari	85,343	RI/FS
LaGrand SLF	28,781	RI/FS, RD, Federal RA
LeHillier/Mankato	31,484	RA
MacGillis & Gibbs	72,845	RI/FS, MA
Kummer SLF Cover	69,088	RA
Perham Arsenic Site	3,074	RI/FS, MA
Long Prairie	115,665	RA/R&I, RD
Reilly Tar	69,044	RD/RA, RI/FS
New Brighton	127,410	RA, IRM
Dakhue SLF	2,508,967	RI/FS, RD, Federal RA
<b>Subtotal</b>	<b>\$3,143,429</b>	
<b>Enforcement Cooperative Agreement</b>		
St. Augusta SLF	\$41,613	RI/FS Oversight, Negot.
Agate Lake	4,002	RI/FS Oversight
Olmsted County SLF	17,615	RI/FS Oversight
Oak Grove SLF	24,934	RD/RA Oversight
Arrowhead	42,416	RD/RA Oversight
Baytown	20,018	RI/FS Oversight
Pigs Eye Dump	14,344	RI/FS Negot., PRP Search
Pine Bend SLF	15,229	RI/FS Negot., PRP Search
St. Louis River	95,008	RI/FS Negot., Oversight
St. Louis River	7,619	RD/RA Negot., Oversight
WDE SLF	66,608	RD/RA Oversight
Washington County SLF	29,183	RD/RA Negot., PRP Search
East Bethel SLF	12,807	PRP Search
Freeway SLF	12,635	PRP Search
Dakhue SLF	5,624	RI/FS Negot.
PRP Searches	20,709	Several Sites
<b>Subtotal</b>	<b>430,364</b>	
<b>Program</b>		
Core Program	\$816,952	Mgmt./Prog. Development
PA/SI Cooperative Agreement	571,757	Conduct PA/SI
<b>Subtotal</b>	<b>\$1,388,709</b>	
<b>Total</b>	<b>\$4,962,502</b>	

## Use of MERLA Dollars

During FY 93, \$2,515,992 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 22 sites listed on the PLP, to emergency incidents, and to numerous reports of abandoned barrels containing hazardous substances. Table 5 details site-specific and programmatic FY 93 expenditures of MERLA dollars. These costs do not include administrative expenditures.

### Key Points •••••

**In FY 93, over \$2.5 million in MERLA funds were used for the following site-specific activities:**

- response to hazardous waste emergencies;
- response actions at 22 sites;
- oversight of voluntary investigation and cleanup actions;
- response to abandoned barrel reports; and
- program support costs.

## Cleanups by RPs Using Private Dollars

The vast majority of cleanups at Minnesota sites are implemented using private dollars. RPs have been approached to provide information on their past waste disposal practices. The MPCA receives information about potential site contamination through RP duty-to-notify information, industrial practices surveys, or searches of old records uncovered by MPCA staff.

If a financially viable RP is found, the RP becomes involved in the cleanup process through agreements such as the Consent Order, a RFRA, or voluntary participation in the remedial process. RPs pay for the necessary investigations and cleanups, as well as reimburse the state for its administrative oversight and contractual expenses.

### Key Points •••••

- in FY 93, RP costs provided about 85 percent of all funds spent on cleanups;
- since 1983, RPs have committed about \$270 million toward investigations and cleanups; and
- during Calendar Year (CY) 92, the Fund was reimbursed over \$0.8 million by RPs.

<b>Table 5: Use of MERLA Fund Dollars</b>		
<b>Site</b>	<b>Amount</b>	<b>Cleanup Actions</b>
St. Paul Park Ground Water Cont.	\$14,758	RD/RA Soil Removal
McGuire Wire Salvage	70,512	Interim RA
Winona Ground Water Contamination	29,463	Ground Water Pumpout
Kummer Sanitary Landfill	4,064	Cover RA
Kummer Sanitary Landfill, OU 3	79,616	Bioremediation Study RD
Schloff Chemical and Supply	14,264	RI/FS
Perron Road	254	Drinking Water
LeHillier Ground Water Contamination	6,000	Operation and Maintenance
Sauk Centre Sanitary Landfill	11,997	Risk Assessment
Battle Lake Sanitary Landfill	15,622	RI/FS
Amdura	643,557	RD/RA
Isanti-Chisago Sanitary Landfill	6,507	Ground Water RD/RA
Red Hanson	983	Emergency Well Filtration
Baytown/Lake Elmo Airport	171,257	Interim RA
Freeway Sanitary Landfill	53,984	Risk Assessment
Rice Municipal Well #2	222,945	RD/RA Oversight
Superior Plating	21,569	Emergency Action
Castle Rock (MDA)	75,123	Bottled Water and RA
Howe Soil Contamination (MDA)	83,038	RI - Phase II Remediation
ANR Freight - Fridley (MDA)	2,416	Emergency Response
O'Neil Arsenic Release (MDA)	2,010	Emergency Response
Walters Arsenic Release (MDA)	4,776	Emergency Response
<b>Subtotal</b>	<b>\$1,534,705</b>	
<b>Programmatic</b>		
Abandoned Barrel Program	\$369,080	Abandoned barrels
Arsenic	11,816	Investigation, clean up
Arsenic (MDA)	14,967	Collection
Site-specific Legal Expenses	116,489	Attorney General support
Site specific Legal Expenses (MDA)	5,646	Attorney General support
Site-specific Lab Analytical Svcs	144,742	Lab tests
Site-specific Lab Anal. Svcs (MDA)	11,325	Lab tests
Hazardous Waste Spills, Emergencies	205,018	Spill, emergency response
Solid Waste Investigations	25,010	Investigating SW sites
PA/SI	33,292	Assessing sites
Innovative Treatment Technology	43,902	Analysis of new treatments
<b>Subtotal</b>	<b>\$981,287</b>	
<b>Total</b>	<b>\$2,515,992</b>	



How much have the RPs spent in FY 93? Table 6 shows a comparison of RP funds expended at the sites identified in the Site Status Report, (Appendix 3). In the past year, approximately \$21 million was spent on industrial sites and \$17 million on landfills. RPs spent almost 86 percent of the total costs in both cases. For every MERLA dollar, RPs spent \$16.

Since annual variability in expenditures may differ from long-term expenditures, cumulative expenditures are shown in Table 7, based on the totals shown in the Site Status Report. It is evident from Table 7 that, on industrial sites, RPs spent about 88 percent of all the investigation and cleanup expenses to date (\$265 million), and 72 percent on expenditures for landfills (\$ 51 million). Over the period 1983 to 1993, RPs spent about \$21 for each MERLA dollar spent at industrial and landfill sites. The MERLA funds reported in this table refer to incurred cleanup expenses, and do not reflect total programmatic expenses shown in the Executive Summary.

During CY 92, MPCA staff also recovered more than \$ 0.8 million from RPs for both administrative and contractual expenses, shown in Table 8. For RPs associated with landfill cleanups, the reimbursement rate was 83.7 percent. For the industrial program the rate was slightly lower for RPs working under a Consent Order (78.5 percent) or in a voluntary mode (82.3 percent). The reimbursement rate fell below 50 percent under conditions of a RFRA.

Some RPs may not be financially viable entities and could not reimburse the state for its expenses. Thus, the MPCA may need to make use of state Fund sources to undertake cleanup or provide drinking water, which will not be reimbursed. During CY 92, MPCA spent about \$270,000 at two financially troubled sites, providing drinking water to residents in St. Paul Park, and maintaining a water treatment system at the Schloff Chemical site in Minneapolis.

**Table 6: Expenditures for Cleanup in FY 93**

Program	CERCLA Funds (FY93)	MERLA Funds (FY 93)	Responsible Party Funds	Total Funds
<b>Industrial Sites</b>				
Dollars	\$886,165	\$1,917,110	\$18,877,000	\$21,680,295
% of Total	4%	9%	87%	100%
<b>Landfill Sites</b>				
Dollars	\$2,666,899	\$149,651	\$14,387,000	\$17,203,550
% of Total	15%	1%	84%	100%

**Table 7: Superfund Program Expenditures, 1983 - 93**

Program	CERCLA Funds	MERLA Funds	Responsible Party Funds	Total Funds
<b>Industrial Sites</b>				
Dollars	\$21,153,000	\$11,539,000	\$233,009,000	\$265,701,000
% of Total	8%	4%	88%	100%
<b>Landfill Sites</b>				
Dollars	\$12,841,000	\$1,315,000	\$37,358,000	\$51,514,000
% of Total	25%	3%	73%	100%

**Table 8: Reimbursements by Responsible Parties of MPCA Expenses CY 1992**

Enforcement Mechanism	Administrative Expenses	Contract Expenses	Reimbursed Expenses	Percentage Reimbursed
<b>Industrial Program</b>				
Consent Order	\$218,300	\$8,900	\$178,300	78.5%
RFRA	510,500	282,200	388,400	49.0%
Non-RFRA	97,700	7,000	85,900	82.0%
<b>Total</b>	<b>\$826,500</b>	<b>\$298,100</b>	<b>\$652,600</b>	<b>58.0%</b>
<b>Landfill Program</b>				
<b>Total</b>	<b>\$224,100</b>	<b>\$15,700</b>	<b>\$200,700</b>	<b>83.7%</b>

# Future Challenges

The Superfund program will face a number of significant challenges in the near future, and proposed changes in both the state and federal law may have dramatic impacts on how old hazardous waste sites are addressed in Minnesota. Among the most prominent issues:

- The U.S. Congress is in the process of reauthorizing CERCLA and proposals for change are being provided by a wide variety of special interest, environmental, and government groups. Any change in CERCLA will have a direct bearing upon federal and state sites in Minnesota.
- A growing number of businesses and municipalities are calling for change in MERLA, in response to several high-profile third-party lawsuits that have been filed or threatened. Most of the sites generating these large and expensive legal actions are landfill sites, and proposals for removing municipal solid waste landfills from the Superfund program are moving into the legislative arena.
- Cities unable to attract new businesses because available properties are contaminated are becoming increasingly concerned about how best to clean up contaminated land and get it back into productive use. There is a growing need to educate the private and public sectors about the VIC Program. This effort should not add to the VIC Program costs to the detriment of some voluntary parties who then may not be able to afford the assistance provided by the VIC Program staff.
- Major critiques of the Superfund program, especially at the federal level, have led to calls for streamlining the hazardous waste cleanup process and reducing Superfund cleanup and transaction costs, while still providing protective cleanups that will allow for productive re-use of land.

Minnesota's progressive Superfund program has been in the spotlight throughout 1993, as the U.S. Congress and critics of Superfund search for solutions to CERCLA's problems. Minnesota Superfund staff and the Attorney General's Office have been providing testimony at Congressional hearings about the state's approaches to Superfund's major woes. MPCA staff also have been discussing with Minnesota legislators how to improve the Superfund program.

## **Legislative Challenge: Minnesota's Landfill Sites.**

While the Minnesota State Legislature (Legislature) addressed long-term funding for the "traditional" state Superfund program in the '93 session, another weighty problem remains: the large bill for cleaning up old landfill sites. Sixty-three sites on the state's PLP are landfills, and these require cleanup and closure. Currently, operating landfills must have

financial assurance to stay in business, but the landfills of the past operated under no such requirements. Currently, the Superfund law is the only mechanism that the MPCA has to clean up closed landfills. There is a broad-based consensus that Superfund is not the best tool for the job.

Superfund is a polluter-pays law, created to make sure that business or individuals who disposed of hazardous wastes at a site would clean up the contamination. At industrial sites, this makes sense; at landfill sites, where household garbage can be one of the sources of contamination, assessing responsibility is not as simple. The large industrial waste generators, small businesses disposing of waste, and municipalities providing garbage disposal, may all be considered responsible parties for landfill sites.

At several sites in Minnesota, groups of responsible parties who have been named liable for landfill cleanup have filed or threatened to file third-party lawsuits against large numbers of smaller parties who may have contributed wastes to sites. At one site, Oak Grove SLF, the threatened lawsuit may well include as many as 1,000 parties. The burden such a lawsuit places on municipalities and small businesses is immense.

It was conservatively estimated in 1992 that cleaning up the SLFs on the current Superfund list would cost \$250 - \$450 million dollars, an amount well beyond the resources of the current Fund, even with the long-term funding boost provided by the Legislature in 1993. The legal and transaction costs imposed on both the MPCA (for performing RP searches and



More than 1,000 individuals and businesses may eventually be named responsible for the Oak Grove Sanitary Landfill

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**"Since 1983, the federal Superfund program has provided \$44 million for NPL cleanups and state program support."**

issuing enforcement requests to hundreds of parties at landfills) and on other parties may be as much as an additional \$400 million more.

In 1992 and 1993, Minnesota legislators proposed bills that would remove landfills from the Superfund program and create a new landfill cleanup program. Although no bill passed either session, legislators plan to continue their efforts in 1994 to solve the landfill problem. By acknowledging that municipal solid waste landfills are a societal problem and dealing with them as such, a new landfill program could sharply reduce unnecessary transaction costs that are crippling minor parties in third-party legal actions and allow MPCA staff to more efficiently address landfill cleanups.

### **The CERCLA Reauthorization Debate and Minnesota's Approach**

For the past two years, many studies, of varying objectivity and point-of-view, have been performed on the successes and failures of the federal Superfund program. The U.S. Congress, currently undertaking hearings on various aspects of CERCLA, will be lobbied strongly by a number of special interest groups to change the law during the 1993 - 1994 CERCLA reauthorization. Some of the proposed changes would drastically reduce the effectiveness of the federal program, others would speed up Superfund cleanups, reduce costs, and provide consistency in the program.

Minnesota's Superfund staff has been key to discussion on the national level, since the state program has undertaken several efforts to improve cleanups under MERLA. Most of the state's input, provided through the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) and other organizations of which Minnesota staff are members, has been received with interest by the EPA and Congressional subcommittees conducting hearings.

Here are some of the impacts that CERCLA has on Minnesota and why Minnesota should involve itself in the national debate:

- Minnesota has 43 sites on the federal Superfund list (National Priority List or NPL), and the state will need to propose future sites where cleanup problems exceed Minnesota's financial resources.
- Since 1983, the federal Superfund Program has provided \$44 million for NPL cleanups and state program support.

- The “polluter pays” liability standard in CERCLA served as a model for MERLA, and court tests of CERCLA have helped define and strengthen MERLA.
- EPA provides scientific and technical expertise which state programs cannot afford.
- EPA provides research and development for innovative treatment technologies that can provide less expensive and more protective cleanups in the future.
- CERCLA can clean up sites that fall on the lines between state or nations. Sites involving Lake Superior are one example.
- CERCLA can provide up to \$2 million per incident for emergency response situations too big for state programs to tackle.
- The federal Superfund law applies to government entities, including all branches of the military, assuring that no public sector entity can escape its cleanup obligations.
- The Superfund liability standard has made environmental assessments a standard part of any property transaction, helping the MPCA find out about contamination problems not yet identified by regulatory staff. This leads to voluntary cleanups at many sites.

Because of CERCLA’s important influence on Minnesota’s Superfund program, the MPCA staff has emphasized the following four points as key to an effective federal Superfund:

1. The polluter-pays liability standard in CERCLA should be retained. Special interests advocate a public works approach to Superfund, involving the establishment of a national Environmental Trust Fund to clean up sites. The results of such a change in CERCLA would be to saddle taxpayers with a financial burden that should be carried by industries or individuals that are responsible for the pollution. The strict, joint-and-several liability standard upon which both CERCLA and MERLA are based is the most effective for cleaning up industrial sites. However, removing landfills from Superfund would solve many of the problems in applying CERCLA.
2. Under CERCLA, Congress should mandate that EPA develop national cleanup standards or policies for soil and ground water. National cleanup models or numerical standards would solve the delays and disputes among parties about how clean is clean enough. Minnesota already has developed such standards for state sites. A national model would give clear and unequivocal cleanup goals for RPs to meet, allowing them to predict their costs more easily. The standards should be devised with the goal of a permanent remedy, one that will eliminate or detoxify chemicals and allow for unlimited land use in the future.

3. The scope of CERCLA should be extended to encompass all sites, not just those 1,200 or so on the NPL. Minnesota has 184 sites on the PLP, of which 43 are federal Superfund sites. But the state also has 296 voluntary cleanup sites, 400 or more sites on CERCLIS, and 1,800 former open dumps. There are an estimated 10,000 - 20,000 sites nationwide that need cleanup. Cleanup goals and standards that apply to one should apply to all.

4. The Congress should delegate the Superfund program to the states. If Congress gave states control over Superfund cleanups, the public would get a lot more for its cleanup dollar. States, through EPA grants, could manage individual sites and avoid duplication of technical and administrative review. It also would alleviate confusion among RPs who now feel that they are serving two masters — the MPCA and the EPA. There is precedent for this delegation, as the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act (RCRA), and Safe Drinking Water Act have all been delegated to the states.

Several national groups, including ASTSWMO, the National Association of Attorneys General, the National Governors' Association, and other groups have advocated these changes, and it is likely that more support for these changes will be forthcoming during the reauthorization debate.

### **Contaminated Land: Major Problem for Minnesota Cities**

As Minnesota cities face budget-tightening in the coming decade, city staff has shown increasing concern about the impacts of old contaminated sites on future development. Many cities, and especially the Minneapolis/St. Paul metropolitan area, have few remaining sites for industrial development that are not burdened with pollution problems. In areas with overlapping ground water plumes, unknown soil contamination problems, and the possibility of underground tanks, development is stalled. Businesses tend to avoid the purchase of sites with unknown pollution impacts, and those willing to undertake the risk cannot find bankers to finance their efforts.

The VIC Program provides an alternative to the traditional Superfund process for cleanup of contaminated sites. The Legislature's 1992 Land Recycling Act, and its amendment of 1993, provided liability protection for voluntary cleanup activities, in an attempt to provide legal reassurance for banks, developers, and purchasers of commercial or industrial property. The Legislature also established a Small Generator Hazardous Waste Remediation Loan Program in 1993 to help small companies in cleaning up contamination.

There is an increasing interest in the metro area in new ways to cleanup contaminated sites and get them back into productive use. The MPCA, already a national

**"The Congress should delegate the Superfund program to the states."**

leader in the area of voluntary cleanups, will continue its efforts to assist businesses that seek help in undertaking voluntary cleanups.

### **Streamlining Superfund: State and Federal Programs Seek Solutions**

In all areas of government operations, efforts are underway to "reinvent" government to make it more efficient and less costly. Such efforts have been underway in Minnesota and at the federal level, and the resulting improvements in the program should make themselves evident in the coming years.

The past 10 - 12 years of Superfund have been a learning process for government to determine how best to clean up contaminated sites. Early optimism about quick cleanup of the nation's old hazardous waste problems has given way to a more realistic view. Experience gained by EPA and MPCA, has led regulators to some conclusions about how to undertake the cleanup of hazardous waste sites.

Some basic conclusions about hazardous waste cleanup include:

- Worst sites should come first. This has been Minnesota's policy from the beginning: that the site or portion of a site cleanup needed to protect public health and the environment from known risk will be addressed first.
- Permanent remedies make sense. A remedy that covers contamination instead of treating it postpones problems instead of solving them. While they may be more expensive in the short term, permanent remedies pay off in the long term by eliminating future liability and cost of long-term monitoring and maintenance, as well as promoting unrestricted use of land.
- Chasing ground water plumes at vast expense when the affected aquifer is not being used for drinking water may be counterproductive. The more practical solution in such cases is removing or treating the source of contamination to prevent further ground water degradation and allow the ground water to clean itself over time.
- Some types of sites are so common that we should be able to devise some "generic" or presumptive remedies to save the time and cost of extensive investigation and feasibility studies which examine remedies that are not successful for cleanups.
- Responsible parties must know "how clean is clean" in order to predict their costs and make decisions about how best to clean up a site. If Superfund staff can tell the responsible party up



front what to expect, it will speed the final result and prevent the technical disputes that delay many cleanups.

- At the majority of sites, voluntary parties will conduct investigations and cleanups. Parties that are not RPs will volunteer to obtain future liability protection and avoid the traditional Superfund process. RPs will enlist in voluntary cleanup efforts in preference to being listed on either the state or federal Superfund lists. If this option is offered at sites proposed for the list, the number of sites on the list should decrease. In the future, it may be only sites with recalcitrant RPs who have failed in the VIC Program or sites where the responsible parties are unknown or bankrupt that are listed.
- At sites where parties refuse to participate in the voluntary program, the goal should be enforcement first. Public funding for a state or federal site should be the last step in the process of bringing a site to cleanup.
- At federal sites where enforcement is underway, a quicker solution to drawn-out lawsuits may be EPA's use of "mixed funding" to defray all or part of the contributions of small responsible parties and a clearer definition of a "de minimus" or small contributor to a Superfund action.

EPA's efforts at streamlining have included the Superfund Accelerated Cleanup Model (SACM), a program which may allow states to propose sites for quick action. Under discussion is a proposal to provide funding for staff of the MPCA's VIC Program to undertake SACM cleanups.

EPA Administrator Carol Browner has proposed administrative changes to the federal Superfund program, some of which include the concepts of "generic" cleanup plans, national cleanup standards or procedures, increased use of mixed funding, and better use of "de minimus" settlements.

However, the state Superfund and VIC Programs already are implementing some of the improvements outlined above. By the end of calendar year 1993, the MPCA will have developed "prescriptive guidance" documents that provide a "cook book" approach to cleanup. The MPCA has used state cleanup standards or procedures to provide responsible parties at state sites with clear objectives for cleanup, as well as numerical goals. Some of these may be provided without need of site-specific risk assessments or extensive feasibility studies, costly steps of the cleanup process.

Although the MPCA's cost-recovery figures are good as compared with EPA's, the MPCA has undertaken several measures to improve cost recovery. Other efforts have involved keeping costs under multi-site contracts low, maximizing use of technical staff to perform tasks previously let to contractors (see Actions at Sanitary Landfills section), and studying whether some costs at responsible party sites are being unnecessarily defrayed by the state Fund.



A shorter time between discovery and cleanup is the goal of a streamlined Superfund. Delays postponed cleanup at WDE for several years.

# MPCA Significant Superfund Activities Undertaken in FY 93

Currently, there are 184 sites listed on the state's PLP for investigation and cleanup, five of which were added during FY 93 and ten delisted due to cleanup completion. Forty-three of the 184 sites also are included on the federal NPL. Cleanup actions at those 43 sites are eligible for federal funding if the responsible parties are unknown, unwilling or unable to do the work.

As of September 10, 1993, there were 148 sites in the cleanup process "pipeline" (i.e., in some stage of investigation or cleanup). Cleanup activities at 111 of these sites are being conducted by RPs. MERLA Fund or federal dollars have or are being spent at the other 36 sites. The sites where significant cleanup activities were undertaken is shown in Table 9.

## Site Assessment/VIC

A new procedure for entering sites onto CERCLIS has been adopted by Site Assessment. New site discoveries are reviewed by Site Assessment staff to determine if the site RP could be eligible for the VIC Program. If the RP appears capable of entering the VIC Program, a letter is sent giving the RP 90 days to volunteer. If no response or a negative response is received, the site is listed on CERCLIS and the Site Assessment process is initiated. Previously, the RP site was automatically listed on CERCLIS without an opportunity to volunteer.

## Below-Ground Arsenic

In October 1992, the MPCA removed and disposed of 800 pounds of solid arsenic and 55-gallons of liquid arsenic which was the successful result of the Larson Farm pilot treatability study. MPCA staff also conducted investigations at seven sites for buried arsenic. One of the sites located in Isanti County was not found to have arsenic in the soil above background levels. No further action is planned for this site.

## Key Points • • • • •

### During FY 93:

- close to 60 hazardous waste spills and emergency spill actions received response;
- two emergencies were declared;
- the MPCA performed 35 cleanups or partial cleanups at all sites;
- Requests for Response Actions were issued at four sites;
- one Determination that Actions Were Not Taken In The Time And Manner Requested was issued;
- Records of Decision were developed at 10 sites; and
- 10 sites were delisted from the PLP due to cleanup completion.

Table 9: Cleanup Actions Taken in FY 93

Site	County	Cleanup Action
Agate Lake Scrap Yard	Cass	Removal of soils with lead and PCBs (IRA)
Amdura (formerly Amhoist)	Ramsey	Excavation of petroleum contaminated soils (RA)
Amdura/Crosby American	Dakota	Cap/closure action (RA)
Anoka Municipal SLF	Anoka	Final cap, ground water pump and treat (RA)
Arrowhead Refinery	St. Louis	Ground water collection and treatment system (RA)
Bassett Creek/Irving Avenue Dump	Hennepin	Capping (IRA)
Bell Pole and Lumber Company	Ramsey	Thermal soil treatment (IRA), LNAPL extraction study
Brooklyn Park Dump	Hennepin	Removal of PCB-contaminated soil and sludge
BN Car Shops	Crow Wing	Stabilization of heavy metals, petroleum LNAPL pumpout
Dakhue Sanitary Landfill	Dakota	Final cap (RA)
Duluth AFB	St. Louis	Transformer, tank removals (IRA)
General Mills	Hennepin	Ground water pumpout (RA)
Gopher Oil - Thornton	Hennepin	Building removal (IRA)
Highway 96 Dump	Ramsey	Drum removal (IRA)
Hutchinson Technology	McLeod	Soils remediation, ground water pumpout (IRAs)

(Table 9 continued next page)

Table 9: Cleanup Actions in FY 93

Site	County	Cleanup Action
Interplastic Corporation	Hennepin	Ground water pumpout (IRA)
Isanti-Chisago SLF	Isanti	Cap/closure action (RA)
Isanti Rumpel	Isanti	Ground water pumpout (RA)
Joslyn Mfg. & Supply	Hennepin	Final PCP, PAH soils excavation (RA)
Koch Refining/N-ReN	Dakota	Vacuum extraction pilot (RA)
Koppers Coke	Ramsey	Soil cleanup (RA)
Kummer SLF	Beltrami	Install gas vents (RA)
LaGrande SLF	Douglas	Closure action start (RA)
LeHillier/Mankato	Blue Earth	Ground water pumpout (RA)
Oak Grove SLF	Anoka	Cap/closure action (RA)
Oakdale Dump	Washington	Recovery of free product from ground water (RA)
Pine Bend SLF	Dakota	Provided drinking water (RA)
St. Louis River/InterlakeIron/Duluth Tar	St. Louis	Thermal destruction of tar seeps
Schloff Chemical	Hennepin	Ground water pump and treat (IRA)
Spring Grove Municipal Well Field	Houston	Ground water pump and treat (RA)
Superior Plating	Hennepin	Ground water pump and treat for metals, acids, VOCs (RA)
Trio Solvent Site	Ramsey	Ground water pumpout (RA)
University of Minnesota - Rosemount	Dakota	Detoxification of PCB-contaminated soils (RA)
Waste Disposal Engineering Landfill	Anoka	Slurry wall installation, ground water extraction (RA)
Winona Ground Water Contamination	Winona	Ground water pump and treat (RA)

The MPCA has retained a remediation contractor to delineate the extent of arsenic contamination at the other six sites in Northwest Minnesota. Following the surveys to determine the amount of arsenic contaminated soils at each site, a remediation plan will be developed to dispose of the contaminated soils.

### Emergency Spill Response/Emergency Actions

The Spills Unit of the Hazardous Waste Division deals with a wide variety of unexpected hazardous waste events. The Spills Team is on call 24 hours, to deal with spills and emergency incidents such as pipeline ruptures, chemical fires, train wrecks, and other unplanned chemical releases. Approximately 1,500 such emergency reports are received each year.

The Spills Team staff generally work with local public safety officials to stabilize immediate threats of a release. They also oversee the cleanups done by the parties responsible for a spill or incident. If an RP is unable or unwilling to respond, or if they are unknown, the Spills Team staff are authorized to spend MERLA or "Petrofund" resources to respond.

During FY 93, the Spills Team handled 129 cases which required either MERLA or Petrofund expenditures ( Table 10). The 96 waste abandonment cases throughout the state involved 204 barrels and 520 other containers and packages, which involved the dumping of hazardous substances such as used/waste oils, paint wastes, solvents or other unknown chemical substances. In the majority of cases, no RPs were discovered although efforts are underway to improve identification of RPs. Major roadways and large cities are the sites of most of those cases.

<b>Table 10: Emergency and Spill Incidents Requiring MPCA Expenditures in FY 93</b>	
96	Abandoned potentially hazardous waste barrels and drums
6	Contaminated public drinking water wells
8	Discovery of petroleum product in sewer systems
6	Explosive or potentially toxic vapors in sewers or buildings
4	Truck or vehicle accidents where the owner fails to act
9	Miscellaneous (hazardous storage, tank overfills, etc.)
<b>129</b>	<b>Total Incidents</b>

The other instances where the Spills Team staff were involved included situations where either petroleum or other toxic vapors seep into sewers, buildings or wells. Included were 33 situations where emergency actions were undertaken, which involved using mostly Petrofund resources. If the spills or incidents had created an immediate threat to public health or the environment, the emergency contractor would have been tasked to address the situation.

In FY 93, \$574,098 in MERLA funds were used at 129 sites for hazardous waste spills and emergency spill response actions. Among these sites were responses to the numerous abandoned barrel situations, the Sandstone acid spill, the Lakeville Gas spill and an asbestos site.

MERLA also was used to reimburse local governments for their environmental emergency response costs. The city of Anoka will be refunded money they spent responding to an emergency fire situation.

### **Drinking Water**

Since 1983, the MPCA has responded to 43 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 93 include Pickett Sanitary Landfill, Perron Road, Red Hansen Well, and Baytown Township Ground Water Contamination.

### **Declared Emergencies**

In FY 93, there were two emergencies declared by the MPCA Commissioner. The MPCA Commissioner declared these emergencies in order to make MERLA funds available to the MPCA staff for the conduct of response actions. These sites include: Superior Plating to correct a back flush of leachate emanating from a Superfund site into the Mississippi River; and the Pickett SLF water emergency.

# Legislative Summary

Superfund site cleanup by the state of Minnesota has resulted in significant expenditures from the state Superfund. Projections in early FY 93 showed that current and anticipated cleanup expenditures threatened to exhaust the Fund by the end of FY 94. Governor Carlson proposed a legislative initiative this past session to restructure the hazardous waste generator tax. This tax, in FY 93, raised \$401,000 for the Superfund program, much less than the \$4,250,000 needed annually to fund the current level of cleanup.

The proposed initiative was substantially revised during the legislative session. The new law restructures the tax, and changes are effective January 1, 1994, which should result in an estimated \$3,700,000 tax revenue annually for Superfund. The revenue increase is the result of raising the tax rate, as the rate had not increased since the inception of the tax in 1983. Also, less than ten percent of the state's hazardous waste generators were paying a generator tax. To ensure that exemptions do not result in a few generators continuing to pay all of the tax, the Legislature created a base tax on all generators producing more than 100 pounds of hazardous waste per year.

Restructuring the hazardous waste generator tax should result in a stable, long-term base to support the Superfund program for cleanup of traditional, former industrial hazardous waste sites for the next ten years. However, the success of this approach to building a better Superfund hinged on the passage of a bill carving landfills out of the state Superfund program. Legislation creating this new program did not pass during the past session. Fund expenditures to cleanup landfills will exhaust the Fund.

The funding approved by the legislative action provides that state-funded investigations and cleanups at 36 sites will continue that otherwise would have ground to a halt; the MPCA can obtain federal cleanup dollars because the state can raise its ten percent matching share; funds exist to respond to environmental emergencies, leverage RP cleanups, and provide water to those with contaminated drinking water supplies.

A revolving loan program in the amount of \$250,000 per year also was established by the Legislature, using revenue from the hazardous waste generator tax. Low interest loans are available to hazardous waste generators who do not have the financial resources to investigate and clean up minor releases. Timely cleanup of releases will prevent the release from creating a Superfund site in the future.

## Key Points • • • • •

**During the 1993 Legislative Session, the Minnesota Legislature:**

- restructured the Hazardous Waste Generator Tax to assure long-term funding for the Superfund Program; and
- established a revolving loan program to assist small hazardous waste generators to clean up minor releases.



# Further Program Accomplishments

## Role of Human Health and Ecological Risk Assessment

Human health and ecological risk assessment are important tools used to assist decision makers in setting cleanup goals and selecting remedies at Superfund sites. There is an ongoing effort to refine and develop separate procedures for human health and ecological risk assessment to provide additional information about what levels of contaminants and what remedial actions at a given site will be protective of human health and the environment. The focus is to gather information early in the process to enable staff to decide first if cleanup is necessary, and then, if it is, what the cleanup goals should be for the site.

Over the past year, the focus has switched to developing streamlined procedures which provide risk-based values which can be used as tools in the site cleanup decision-making process. The procedures for human health risk assessment are able to take into account both multiple contaminants (carcinogenic and non-carcinogenic) and multiple pathways which could affect human health. In human health risk assessment, there is only one species to consider; for ecological risk assessment there is a wide range of species in the plant and animal kingdoms to consider. Ecological risk assessment is a new field with a relatively small amount of relevant data available to assist in the process when compared to human health. The procedures used for ecological assessment continue to evolve as we learn more and more about contaminant effects in ecosystems. The goal of ecological risk assessment is to identify to what levels contaminants need to be reduced in order to be protective of the environment.

## Treatment Technology

In an effort to promote new cleanup technologies leading to better and less expensive cleanups, MPCA staff join EPA in assessing promising treatment technologies and also promote their development. A staff specialist consults with staff to determine the more successful technologies for specific applications.

### Key Points • • • • •

**Further Superfund accomplishments in FY 93 include:**

- developing capabilities to assess human health and ecological risk;
- developing innovative treatment technologies;
- taking enforcement actions, including RFRAs;
- providing outreach and education on issues involving the Superfund program and the cleanup of contaminated properties; and
- participating in international exchanges with France's cleanup program staff.

Among the new technologies evaluated during FY 93 were acid extraction of lead from soils and sandblast sands, air biofilter for treating volatile organic compounds (VOCs) in an air stream, abiotic dechlorination on VOCs in ground water, use of poplar trees to reduce water flow through a landfill cover, and two patented innovative technologies to enhance oxygen delivery and mixing for in-situ bioremediation of ground water.

### **Enforcement Actions**

The MPCA undertook during the past year administrative enforcement procedures by issuing four RFRA's (Table 12). Additionally, at the Schloff Chemical site, where the owner has no financial viability, MPCA issued a Determination That Action Will Not Be Taken in the Time and Manner Requested, which allows MPCA to access Fund resources to carry out investigations or cleanups.

The MPCA staff also issued ten RODs and Minnesota Decision Documents (MDDs), which formalize in a summary document the remedial decision(s) for any site in the Superfund process. The RODs are either issued by the MPCA staff and/or EPA depending on the type of site (PLP vs. NPL) and those RODs issued in the past year are shown in Table 11.

### **Outreach Efforts and Education**

Because of the extensive debates about cleaning up contaminated land, the MPCA has undertaken efforts to communicate with various interests about how the Superfund and VIC programs work, the interrelationships between the state and federal Superfund programs, and the efforts underway to speed hazardous waste cleanups. Among those groups with which technical and public information office staff have consulted are realtors, small business organizations, business and industry publications, assessors, city council members, county commissioners, neighborhood groups, community health services professionals, development agencies, and individual citizens.

### **The World View: Educational Exchanges**

In 1993, MPCA Superfund staff members arranged an exchange of technical staff between the state and France's hazardous waste cleanup program. Through lectures and internships, the state has developed a positive relationship with the French program and a new perspective on how American efforts to clean up hazardous waste sites compare to such efforts internationally. During the year, the MPCA also hosted German journalists intent on comparing American and German cleanup programs.

Table 11: RODs and MDDs Issued in FY 93

Site Name	County	ROD or MDD Cleanup Decision
East Bethel Demo Landfill	Anoka	Install a pump and treat system to prevent ground water from migrating to nearby residential wells
MacGillis & Gibbs	Ramsey	Soil washing of contaminated soil, followed by bioremediation and solidification
Reilly Tar and Chemical	Hennepin	Add additional wells to prevent movement of contaminated ground water
Twin Cities Army Ammunition Plant	Ramsey/ Hennepin	Remedy for ground water contamination
Ford Twin Cities Assembly Plant	Ramsey	Removal of contaminated soil, long-term ground water monitoring
Hastings Former City Dump	Dakota	Repair of cover, long term monitoring of ground water
Rice Municipal Well	Benton	Construction of water treatment plant, installation of new municipal well
LaGrand SLF	Douglas	Repair of landfill cover and long-term monitoring of methane, ground water
Dakhue SLF	Dakota	Expand ground water monitoring network
Burnsville SLF	Dakota	Recognized ongoing ground water containment, suspended further Superfund actions given landfill's operational status



Table 12: RFRAs Issued in FY 93

Site	Location	RP Named, Purpose of RFRA
Ashland Oil/Park Penta/Sonford Products	Washington	Ashland Oil, Bow Chemical Company, Indianhead Truck Lines, Sonford Products Corp. of Mississippi, Park Penta Corp., and Sonford Products Corp. of Minnesota were requested to complete an RI/FS and response actions
Tower Asphalt	Washington	Steve's Oil Service and Tower Asphalt were requested to clean up a solvent spill
Highway 96 Dump	Ramsey	Helen Krawczewski was requested to clean up the site
St. Louis River/Interlake Iron/Duluth Tar	St. Louis	Beazer East Inc. and Interlake Corp. were requested to investigate and clean up soil contamination

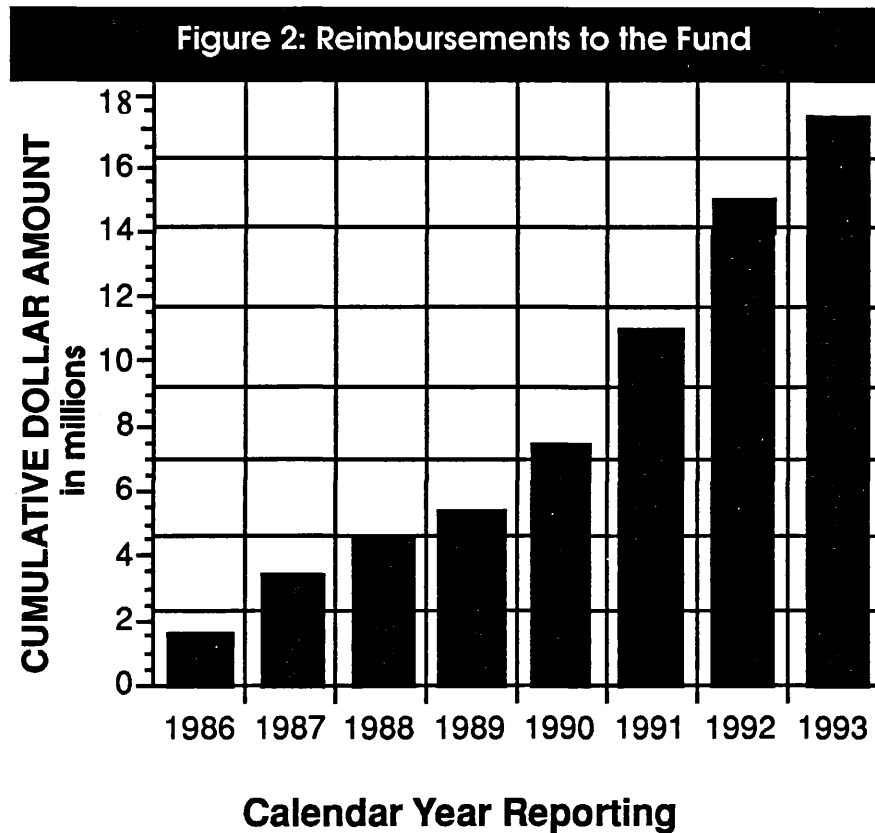
# Reimbursement to the Fund

Since the passage of MERLA, RPs have committed over \$270 million to the investigation and cleanup of hazardous waste sites and have paid penalties and made reimbursements to the Fund of \$17,208,000 to cover costs incurred by the MPCA in administering and overseeing the site cleanup activities. During FY 93, fines and reimbursements totaling \$2,398,000 were made to the Fund. Of this amount \$609,000 was paid to the Fund from penalties imposed by Stipulation Agreements and Administrative Penalty Orders. These penalties include \$560,000 from Woodlake Sanitary Services, Inc., as a legal settlement for the Flying Cloud Landfill. 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 paid to the Fund through RP actions is shown in Figure 2.

## Key Points • • • • •

In FY 93, over \$2.3 million was paid to the Fund:

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



# Legal Actions and Superfund

## District Court Actions

The MPCA was directly involved in four lawsuits in the state District Courts during FY 93. These cases included three actions to recover Superfund cleanup and oversight costs incurred by the MPCA, and one action to obtain access to a potential Superfund site to carry out preliminary site investigation.

*State of Minnesota v. Milton J. LaPanta, et al.* This case included a claim by the MPCA for recovery of \$115,000 in state Superfund emergency response costs incurred to control the February 1989, fire at the Andover tire dump operated by Mr. LaPanta. Trial in the case was held in June 1993. The Court subsequently entered a verdict in favor of the MPCA, holding two defendant corporations and Mr. LaPanta personally liable for the emergency response costs. The Court also ordered the defendants to pay the state's attorney fees and legal costs. Post-trial motions are currently under consideration by the District Court.

*State v. McGowan, et al.* The MPCA and defendants settled this lawsuit in which MPCA sought recovery of state Superfund money spent for agency oversight expenses related to response actions taken at the Freeway Landfill in Dakota County. Under the settlement the Defendants, who are owners and operators of the landfill, will pay \$127,000 to the state Superfund. MPCA has reserved the right to recover additional costs from the defendants if the defendants fail to comply with the requirements of the MPCA's Request for Response Action which specifies the remedial actions remaining to be completed at the landfill. Defendants have also agreed to assist MPCA in locating other RPs.

*State v. LGE Holdings, Inc.* The MPCA and the Harmful Substance Compensation Board (HSCB) filed a lawsuit against LGE Holdings, Inc. (formerly Aero Precision Engineering Company), the owner and operator of the Aero Precision Superfund Site in St. Paul Park, Washington County. The MPCA seeks to recover state Superfund money spent to investigate and take remedial action at the site. The HSCB seeks to recover money spent for decontaminating and monitoring a residential drinking water supply. Ground water in the area is contaminated with a number of volatile organic compounds originating at the Aero Precision Site. The MPCA has also filed an environmental lien on the property under Minnesota Statute Sections 514.671-.676.

## Key Points •••••

In FY 93, the MPCA was involved in:

- four District Court actions;
- three insurance cases;
- three bankruptcy cases; and
- a challenge to EPA Superfund rules.

**State v. John Thro.** In this action, MPCA sought a temporary injunction to obtain access to property known as the Old Mankato Dump in Nicollet County to conduct a preliminary investigation necessary to score the site for possible inclusion on the PLP. The matter was resolved by execution of an access agreement between the owner and MPCA allowing the investigation work to proceed and the lawsuit was voluntarily dismissed.

### **Insurance Cases Related to Cleanup Cost Recovery**

The Attorney General's Office and the MPCA continue to monitor the development of case-law in Minnesota trial and appellate courts on issues related to insurance coverage for Superfund cleanup costs. The Minnesota Supreme Court, in a 1990 case, decided that coverage of property damage under comprehensive general liability insurance policies includes coverage for certain environmental cleanup costs. However, the Supreme Court has not yet determined whether pollution exclusions, and especially all of the "sudden and accidental" exception to coverage, in such insurance policies limit or preclude coverage for environmental contamination. Several cases are currently moving through the state and federal appellate process that may resolve these and other disputed questions about insurance coverage for Superfund cleanup costs. The key cases decided by or pending before the Minnesota appellate courts are summarized below.

**Sylvester Bros. Development Co. v. Great Central Insurance Co.** This case involves insurance claims by the owner/operator of the East Bethel Demo Landfill for cleanup costs expended by the owner/operator. The case was considered twice by the Minnesota Court of Appeals. The state filed an amicus brief in the first appeal to the Court of Appeals. In its first decision, the Court of Appeals upheld the District Court's finding that the "sudden and accidental" language affecting pollution coverage in the owner/operator's insurance policy has a clear and unambiguous meaning. According to the Court of Appeals, to be "sudden and accidental" a pollution occurrence must be both of relatively short duration (that is, "sudden") and unexpected or unforeseen (that is, "accidental"). Based upon this meaning of "sudden and accidental," the District Court, on remand, found that the releases from the landfill to ground water were not sudden and accidental and, therefore, not covered by the insurance policy. The Court of Appeals affirmed and the Supreme Court has denied review.

**Schloff Chemical and Supply Company v. Allied Mutual Insurance Company.** This case involves insurance claims for costs incurred to clean up ground water contaminated by releases of dry cleaning chemicals from a bulk distribution facility. A jury in the Hennepin County District Court found that the Schloff Chemical and Supply Company's insurance policy covered these cleanup costs and that, under the reading of "sudden and accidental" as determined by the Court of Appeals in the Sylvester Bros. case, the releases of dry cleaning

chemicals were sudden and accidental. Six present or former MPCA staff members were subpoenaed to testify at trial. This case has been appealed to the Minnesota Court of Appeals. The state has been granted permission to file an amicus brief in the case supporting the recovery by Schloff, a large portion of which is owed to MPCA for costs incurred for response actions at the site. The MPCA took over performance of remedial action, including operation of a ground water pump and treat system, in 1991 when the Schloffs discontinued work based on a claimed lack of funds.

*Dakhue SLF, Inc. v. Employers Insurance of Wausau, et al.* In this case, the bankruptcy trustee for the bankrupt operator of the Dakhue SLF is seeking to establish coverage for environmental cleanup costs under the operator's insurance policies. The Dakhue SLF is currently being cleaned up as a federal/state fund-financed site. The MPCA is the major creditor in the bankruptcy proceeding and would be the primary beneficiary of any insurance recovery obtained by the trustee. The case is currently on appeal to the Minnesota Court of Appeals after the District Court found that the trustee's claims were not covered. The MPCA has not intervened or filed an amicus brief in this case. The Attorney General's Office is monitoring the case.

### **Bankruptcy Matters**

The Attorney General's Office continues to pursue recovery of Superfund cleanup costs in bankruptcy proceedings filed by responsible persons. Successful claims in a number of bankruptcy cases have demonstrated that responsible parties cannot escape liability for Superfund cleanup by filing bankruptcy petitions. A growing body of case-law nationwide is particularly favorable to government claimants in Chapter 11 corporate reorganization proceedings where the corporation is the owner of a Superfund site that requires cleanup. In such cases, the corporation may be required to pay 100 percent of the cleanup costs as an administrative expense of the bankruptcy proceeding. Administrative expenses must be paid before the corporation pays any claims to its ordinary unsecured creditors.

*Amdura Bankruptcy Settlement.* In September 1992, the MPCA Citizens Board approved a settlement of the MPCA's claims against the Amdura Corporation in that corporation's Chapter 11 bankruptcy proceeding. The settlement was approved by the bankruptcy court in Denver, Colorado in December 1992, and is now being implemented. In this case, the Attorney General's Office sought to require Amdura to pay 100 percent of the cost of cleaning up the Crosby American Properties, Inc. Landfill (CAP Landfill) in Dakota County as an administrative expense of the bankruptcy proceeding. Although the CAP site was owned by Crosby American Properties, Inc., not by Amdura, the Attorney General's Office contended that Amdura treated its subsidiary as an alter ego and should be held responsible

for the cleanup of the subsidiary's property as if it belonged to Amdura. Under the approved settlement, the new Amdura Corporation (the reorganized corporation) is required to design and implement cover, drainage and gas control systems at the CAP Landfill. MPCA agreed to supply some materials for the cover system and to limit Amdura's operation and maintenance responsibilities to two years after the remedy is fully operational. Amdura's cleanup actions at the CAP Landfill are valued at \$2 to \$3 million. The settlement also resolved MPCA's unsecured claims for cleanup costs for two other Superfund sites where Amdura is a responsible party. MPCA was allowed claims of \$945,000 for the former Amhoist manufacturing site near downtown St. Paul, and \$218,000 for the Waste Disposal Engineering SLF in Anoka County. Under current estimates, these two unsecured claims are expected to be paid at about 20 cents on the dollar.

**Wasteco Bankruptcy Proceeding.** In June 1992, the Attorney General's Office filed a general unsecured claim on behalf of the MPCA in the Chapter 11 bankruptcy proceeding of Wasteco, Inc., a RP for the release at the Waste Disposal Engineering SLF in Anoka County. The claim was filed in the amount of \$350,000, representing the MPCA's response costs incurred at Waste Disposal Engineering SLF. The claim was uncontested by Wasteco and was therefore allowed in the full amount under the corporation's reorganization plan. It is expected that unsecured claims will be paid at approximately 28 cents on the dollar, in 12 semi-annual payments. The MPCA should receive payment of approximately \$100,000 on its claim.

**Evans Products Bankruptcy.** The Attorney General's Office continues to work with the U.S. Department of Justice to settle claims of the EPA and the MPCA for cleanup costs at sites in Minnesota and several other states for which Evans Products Company and its subsidiaries and affiliates are responsible. A Minnesota subsidiary of Evans Products Company was identified as a generator of hazardous substances disposed at three landfill Superfund Sites in Anoka County. Settlement negotiations have been complicated by the number of sites involved and the closed status of the bankruptcy proceeding. EPA and MPCA expect to submit consent decrees for entry by the U.S. District Court for the Southern District of Florida, the district where the original bankruptcy proceeding took place.

### **Challenge to EPA Superfund Program Rules**

Minnesota was one of the lead states in a challenge of EPA's rules governing administration of the federal Superfund program brought in the U.S. Circuit Court of Appeals for the District of Columbia (*Ohio v. U.S. Environmental Protection Agency*). Nine states brought this challenge to the 1990 revision of the EPA's National Contingency Plan (NCP), which establishes the procedures and standards for Superfund cleanups under federal law as well as



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**"The Court decision ... invalidated EPA's broad limits on state actions under federal law, one of the priority issues for Minnesota ..."**

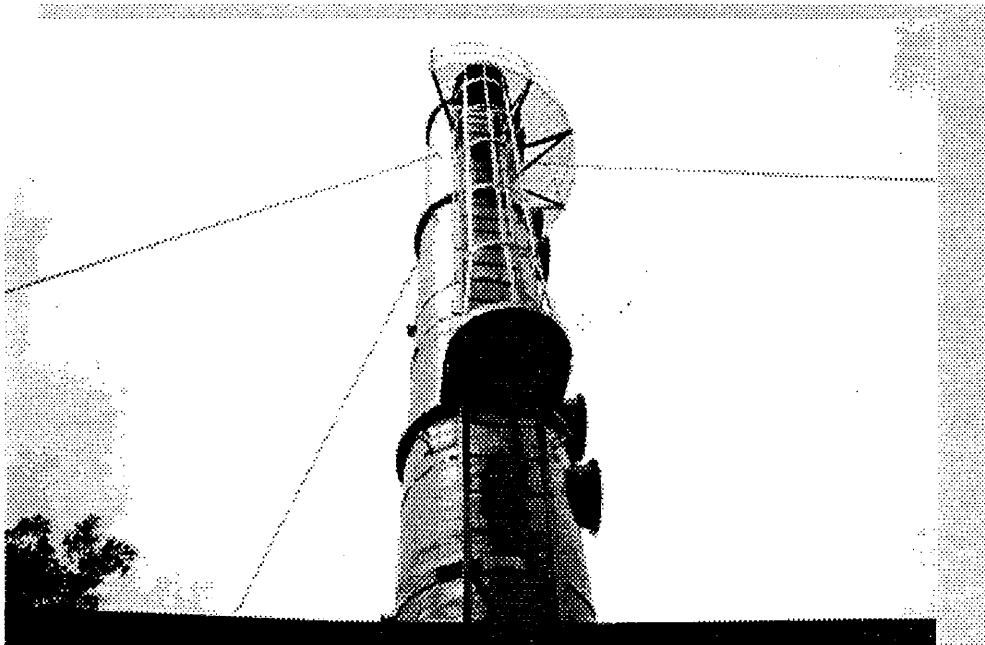
the process for states to participate in the federal program. Thirteen other states filed a joint amicus brief supporting the challenge. Minnesota took the lead on issues involving state participation, particularly EPA's limitations on actions states are allowed to take under the federal Superfund law and the EPA requirement that states pay 100 percent of long-term operation and maintenance costs of fund-financed response actions. Oral argument was held in February 1993, with Minnesota arguing the state participation issues. The Court decision, announced in July 1993, invalidated EPA's broad limits on state actions under federal law, one of the priority issues for Minnesota in this case; however, the Court upheld the EPA rules on most issues except where it found that the states' challenges were premature. In the latter issues, the court allowed future site-specific challenges at the time the rule is applied by EPA. Minnesota is actively exploring options for expanding state participation in the federal program through EPA administrative action and amendment of the federal law in the current Congressional reauthorization process.

### **Other Superfund Cases**

*Actions Related to Kummer SLF Superfund Site.* The Attorney General's Office filed an amicus brief on behalf of the MPCA Commissioner in the case of Northern Township v. Waughtal, in which owners of residential property near the Kummer SLF Superfund Site sought to overturn their misdemeanor conviction for refusing to allow hookup of their residence to the public water supply system serving their area. The water system was installed pursuant to federal and state Superfund programs to remedy ground water contamination from the landfill. Hookup was required under an ordinance passed by Northern Township. The amicus brief explained the relationship of the township ordinance to the Superfund RAs addressing the ground water contamination, and the importance of such local ordinances in assuring the effectiveness of Superfund remedies. The residents convicted of violating the ordinance argued that the township lacked authority under state law to enact the ordinance, and that the ordinance violated privacy rights and amounted to a taking of property without just compensation. The ordinance was upheld and the conviction affirmed by the Court of Appeals in August 1993, but Supreme Court review has been requested.

In another matter related to the Kummer SLF Superfund Site, the MPCA has reached a settlement in principle with several responsible parties for costs incurred by MPCA at this site. The site is listed on both the PLP and the NPL and RAs have been financed by EPA, MPCA and Northern Township (the township supplied the ten percent match of federal funds for the extension of the public water supply). EPA is the lead enforcement agency for the

site. Response action has been divided into three "operable units." Operable Unit 1, extension of public water supply to affected areas, and Operable Unit 2, landfill cover, drainage and gas control systems, have been implemented. MPCA's settlement provides for recovery of \$270,000 in costs incurred by MPCA for Operable Units 1 and 2 (\$135,000 from three private parties, and \$135,000 from Bemidji State University), and for performance of long-term operation and maintenance of the cover and related systems by the city of Bemidji. Settling parties are not responsible for Operable Unit 3, which would address the ground water contamination, if necessary. A unique aspect of the settlement is that it was reached through formal mediation arranged by EPA in which MPCA, EPA and the settlers all participated.



**The Attorney General's Office also assists MPCA staff with negotiations on day-to-day matters in Superfund. One such negotiation resulted in a cleanup agreement that allowed an air-stripping system, above, to be installed at the Isanti Schumacher site in FY 93.**

# Voluntary Investigation and Cleanup (VIC) Program

## Background

The MPCA Property Transfer Program was created by the Legislature as part of the 1988 Waste Management Act Amendments. The Property Transfer Program was created to respond to requests for information and technical assistance from the MPCA by business and industry involved 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. For this reason, many of the parties requesting technical assistance were also interested in obtaining administrative assurances and Superfund liability protection from the MPCA.

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 allowed the MPCA staff to respond far more quickly to requests for file information and technical assistance. In 1993, the technical assistance portion of the Property Transfer Program changed its name to the Voluntary Investigation and Cleanup (VIC) Program. The name change reflects the availability of the program to any voluntary parties wishing to investigate and/or clean up the soil and ground water at a property, not just those voluntary parties involved in a property transaction.

While cleanup standards for the VIC Program and the rest of Superfund are the same, the voluntary process enhances how quickly a site moves to cleanup, primarily due to the cooperation exhibited by voluntary parties. The MPCA staff has

## Key Points • • • • •

Accomplishments during FY 93 include:

- rapid site investigation and cleanup;
- four interim and 17 final cleanup plans approved;
- 14 "no cleanup required" letters issued;
- eight "off-site source determination" letters issued;
- 98.9 percent of state costs reimbursed by individuals requesting file evaluations and 92.9 percent by individuals requesting VIC Program assistance;
- 296 investigations overseen to date; and
- the Land Recycling Act Amendments of 1993

found that when a voluntary party is motivated to clean up property for purposes of expansion, refinancing or resale, a cleanup can happen quickly.

Staff in two sections of the MPCA's Ground Water and Solid Waste Division are currently 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 VIC Unit provide technical assistance and written assurances related to administrative and liability issues.

### **Land Recycling Act and Amendments**

To further encourage voluntary action to investigate and clean up contaminated property, the Land Recycling Act was passed by the 1992 Legislature. The broad purpose of the Land Recycling Act is to encourage voluntary action to investigate and clean up property, and in the process to encourage reuse and development of otherwise underutilized contaminated property. It also offers powerful incentives to owners, prospective buyers and lending institutions to use the MPCA staff resources available to them on request. The Land Recycling Act also offers relief from the fear of Superfund cleanup liability, which is often expressed by prospective real estate buyers, developers and lenders.

The Land Recycling Act was amended by the 1993 Legislature (Minnesota Laws Chapter 287) to provide additional protection from cleanup liability to mortgagees and purchasers of contaminated property. Under these new provisions, if the RP undertakes and completes RAs that fully remedy or remove all releases and threatened releases, the liability protection applies to persons and their successors who either purchase the property from the RP or provide financing to the responsible party for the response action or to develop the property.

The 1993 amendments also specify that the persons who conduct response actions required in accordance with an MPCA-approved response action plan will not aggravate or contribute to any release or threatened release. In addition, the amendments to the Land Recycling Act codify a practice by which the MPCA Commissioner provides determinations, referred to as "no association determination letters." The Commissioner may issue determinations that certain actions proposed to be taken on contaminated property will not constitute conduct associating the person with the release or threatened release that caused the contamination.

### **VIC Program Effort**

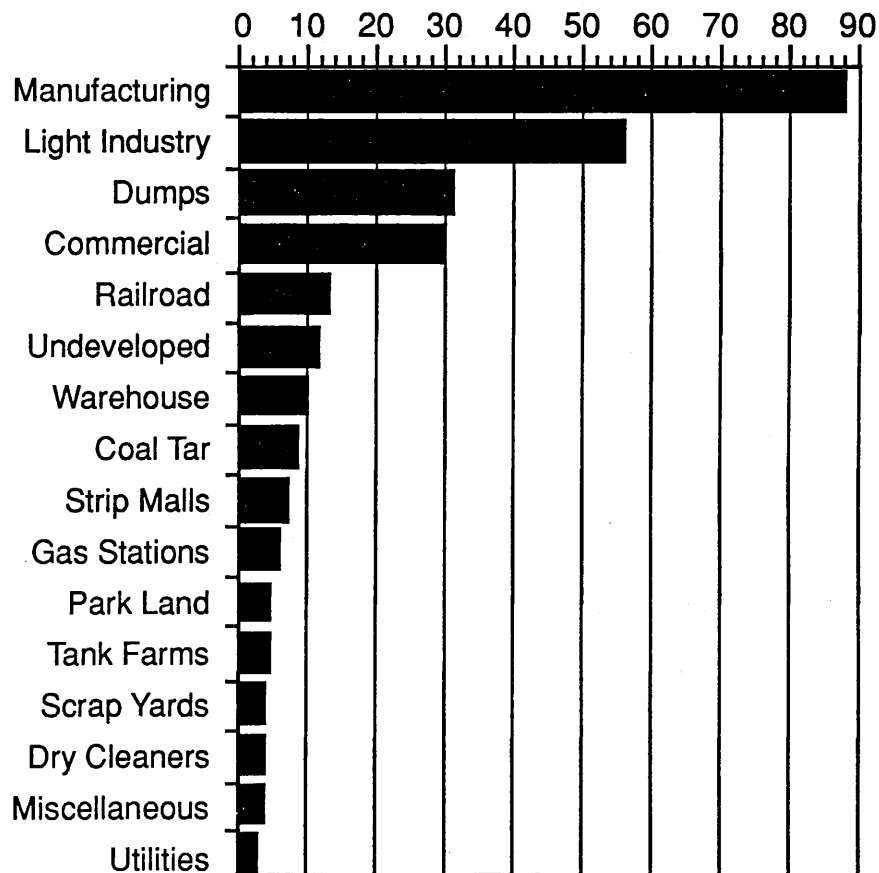
The key function of the VIC Program is to set the standards for an adequate site investigation, to provide MPCA review of the completeness of such investigations and to approve cleanup plans to address the identified pollution. By obtaining MPCA approval of investigation and

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.

The VIC Program staff has developed a series of revised guidance documents intended to provide voluntary parties with clear and concise direction on how to conduct investigation and cleanup activities. These documents are intended to assist 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 investigation and cleanup process.

Figure 3 depicts the types of sites in the VIC Program. Manufacturing sites are the most common type of sites on the list.

**Figure 3: Types of Sites in the VIC Program**



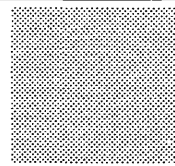
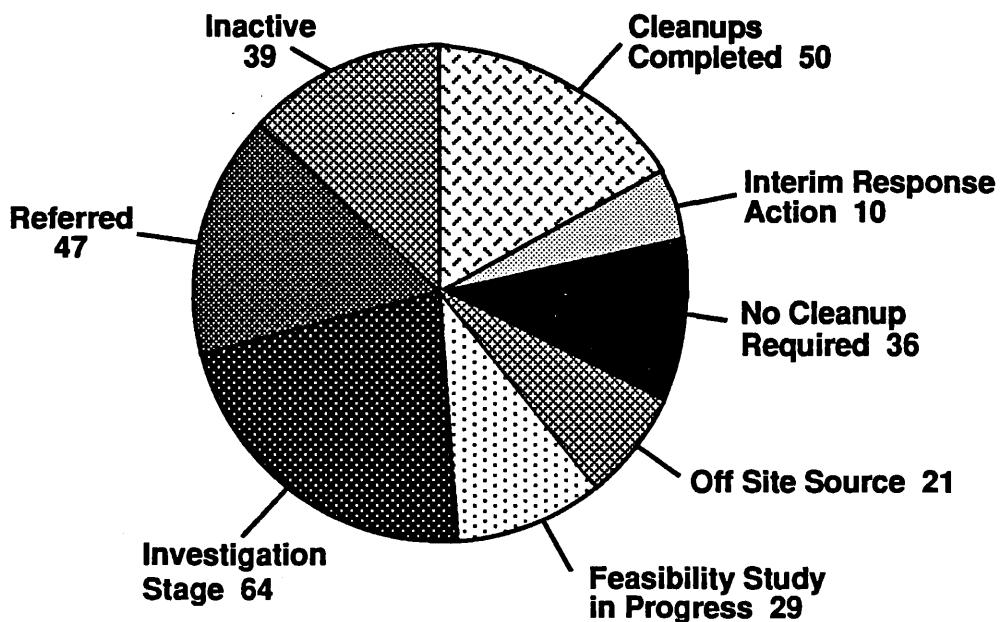


Figure 4 shows the status of all sites in the VIC Program. In addition, a more detailed status report on each site can be found in Appendix 2 to this report.

Figure 4: Status of Sites in VIC



### Major Accomplishments (Cumulative)

The VIC Program has achieved the following to date:

- revised and expanded a series of written guidance documents to assist users of the service;
- provided oversight for 296 investigations;
- approved 10 interim response actions;
- approved 50 final cleanup plans;
- issued 36 “no cleanup required” no action letters;
- issued 21 “off- site determination” letters regarding an off-site source of contamination;
- assisted in putting back into service approximately 1,000 acres of industrial and commercial property; and
- identified and referred as appropriate 47 contaminated sites to other MPCA programs and staff for follow-up.

## **Reimbursements for VIC Program Assistance**

Figure 5 shows the technical assistance reimbursements to the Fund at six-month intervals since the inception of the program in 1988.

To date, 92.9 percent or \$690,866 of the money requested has been recovered from the users while 7.1 percent or \$53,146 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 cannot be located. The MPCA staff continues to pursue all delinquent accounts.

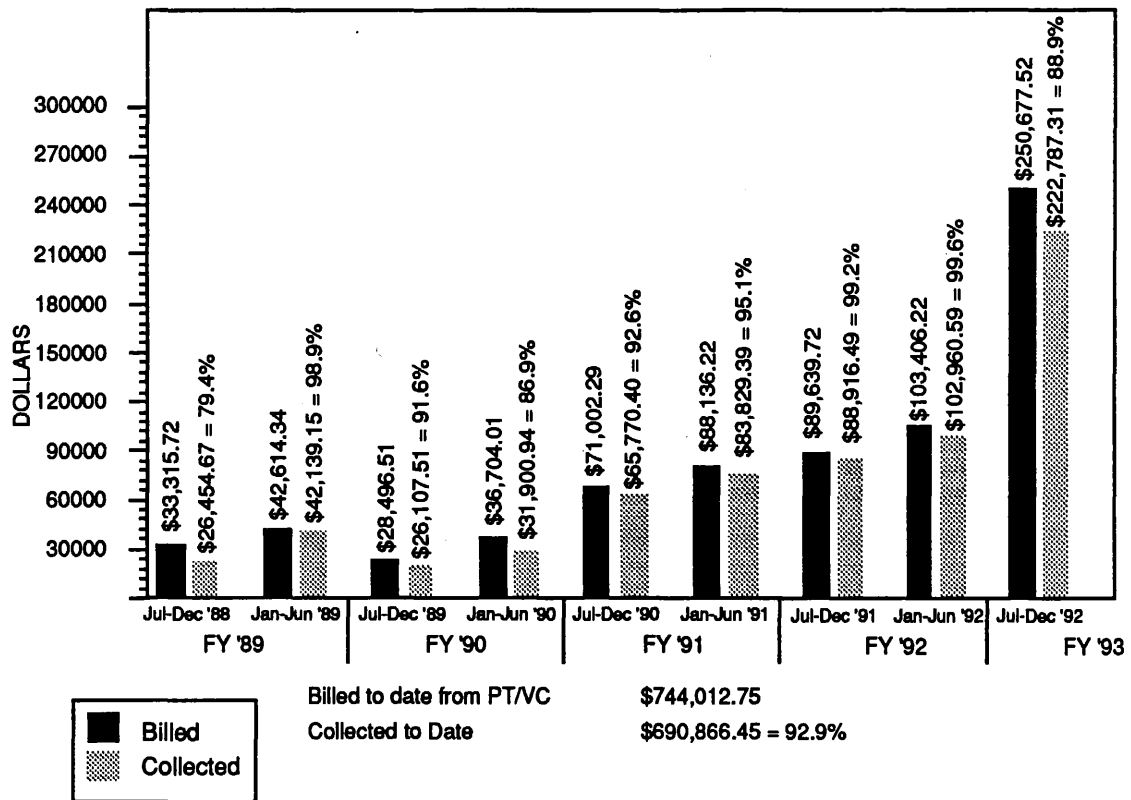
These figures illustrate that the VIC Program has been quite successful at recovering staff costs from voluntary parties. Moreover, collection efforts are ongoing, and staff anticipates greater than 98 percent cost recovery for most billing periods. However, staff costs have increased measurably since the enactment of the Land Recycling Act. These increased costs are attributable to a number of factors, most significantly, start-up costs associated with a rapidly expanding program and the growing demand on staff to educate a large number of private and public sector clients. According to VIC Program records, at least 15 percent of staff time is spent on "marketing" and education activities. MPCA staff believes these activities are essential. However, time spent conducting these activities becomes an indirect cost passed on to all active voluntary parties.

The MPCA staff has made a concerted effort to develop and manage the VIC Program so all parties, including small businesses and local units of government, can utilize the types of assistance provided. The MPCA staff is concerned that increased indirect costs will deter parties from volunteering. The MPCA staff would like direction from the Legislature on the issue, and would appreciate an opportunity to discuss ways to keep the VIC Program affordable for all parties.

## **Programmatic Initiative with EPA-Superfund Accelerated Cleanup Model (SACM)**

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

Figure 5: Reimbursements for VIC Program



# Property Transfer File Evaluation Program

The File Evaluation Program completed 1,946 file evaluations during FY 93. A routine file evaluation includes a review of various lists, maps or databases that identify sites at or within one mile of the property being investigated. These include the PLP, CERCLIS, RCRA Enforcement Log, RCRA Permits List, 1980 Metropolitan Area Waste Disposal Site Inventory, Underground Storage Tank Information System Data and VIC Program sites.

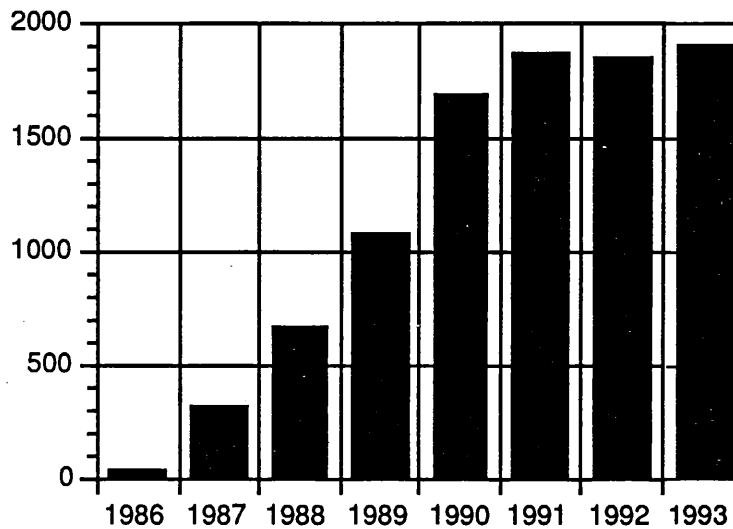
## Key Points • • • • •

The Property Transfer File Evaluation Program performed 1,946 file evaluations in FY 93.



**Figure 6: Increases in File Evaluation Requests**

Figure 6 shows 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 6, FY 93 is the peak year for such requests.

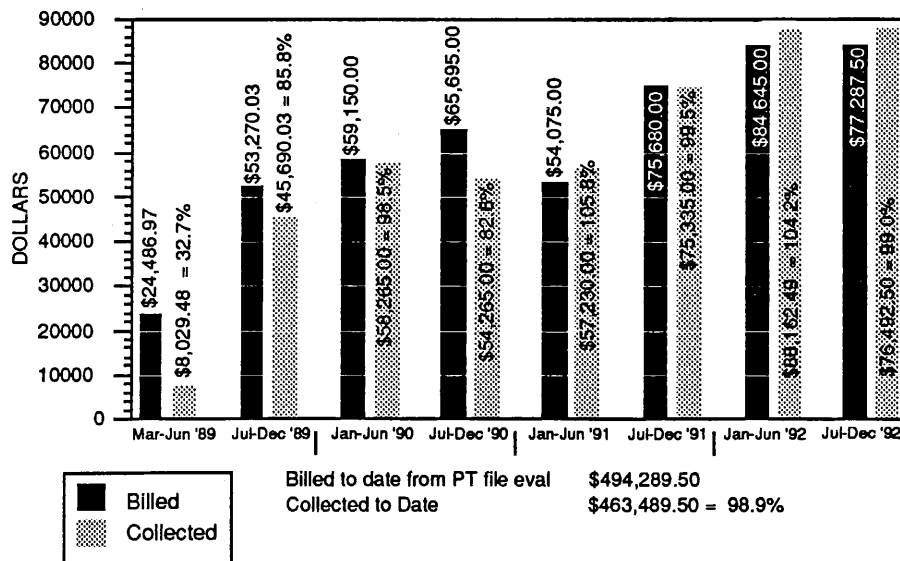


**Reimbursements for File Evaluations**

Figure 7 shows the reimbursement amounts collected by the file evaluation staff since the beginning of the program.

The reimbursement rate is 98.9 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.

**Figure 7: Reimbursements for File Evaluations**



# Actions at Sanitary Landfills

## Use of Superfund

While the MPCA continues to use the Superfund process to clean up SLF sites listed on the PLP in FY 93, the primary focus of the MPCA's Solid Waste Management Section is to assess the condition of closed sites (see below). There are 63 SLFs on the PLP, 11 of which are also on the NPL. Because of landfill assessment activities and limited staff resources, no new landfills were added to the PLP for the second year in a row.

It has been determined that landfills are not effectively addressed by the Superfund liability process. The Fund will soon run short if money is spent trying to clean up all of the state's SLF sites. However, since MERLA and the Superfund process remain the only tools for addressing contamination at landfills when owners/operators will not or cannot do so, the Superfund will be used until a more effective mechanism is available.

## Superfund Accomplishments

Construction of a permanent alternate water system for residents around the Pine Bend SLF was initiated in June 1993. A bankruptcy settlement was finalized at the CAP site and construction of the final cover was initiated in June 1993. After signing a ROD in September 1992, a remedial design was completed at the LaGrande SLF and construction is ongoing.

A remedy also was identified for ground water at the East Bethel Demo Landfill. An RA is scheduled for FY 94. Final covers have been completed at the Oak Grove SLF and the Isanti-Chisago SLF. Additional gas venting has been installed at the Kummer SLF.

Closure has been completed at the Dakhue SLF and a ROD was signed for further ground water monitoring. A ROD was signed for the Burnsville SLF recognizing ground water containment actions being implemented and suspending further Superfund activities since the landfill is still operational. Cleanup actions have been initiated at the Pickett SLF where a water emergency was declared. The lawsuit involving the Freeway SLF was settled. Studies at the Freeway SLF and Olmsted County SLF are near completion.

## Key Points • • • • •

To address Minnesota's SLFs:

- the Superfund process is not effective for SLFs, there is not enough money in the Fund to address SLFs, therefore the MPCA recommends a new law and program;

- the Legislature appropriated \$2.2 million for an assessment of closed permitted landfills to be undertaken during FY 93 and 94; and

- the MPCA so far has identified ground water contamination, methane gas, and a lack of impermeable cover as the most serious problems at closed landfills.

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**"...MPCA staff is working to compile information and interpret data from two field seasons of intense data gathering..."**

These activities represent the result of ongoing use of the Superfund law and process to remediate SLFs. The Solid Waste Section has also been completing a guidance document on presumptive remedies. Presumptive remedies identify remedial actions that MPCA staff believes will best achieve the goal of protecting public health, welfare, and the environment. There are a limited number of remedies available to deal with SLFs, and the presumptive remedy guidance document will be useful whether sites are addressed using the Superfund law and process or some new "closed landfill cleanup" process.

In the past year, the Solid Waste Section has turned its primary efforts toward assessing the condition of all closed landfills, regardless of PLP status. It is hoped that SLFs can be addressed by a process governed by new legislation in the very near future.

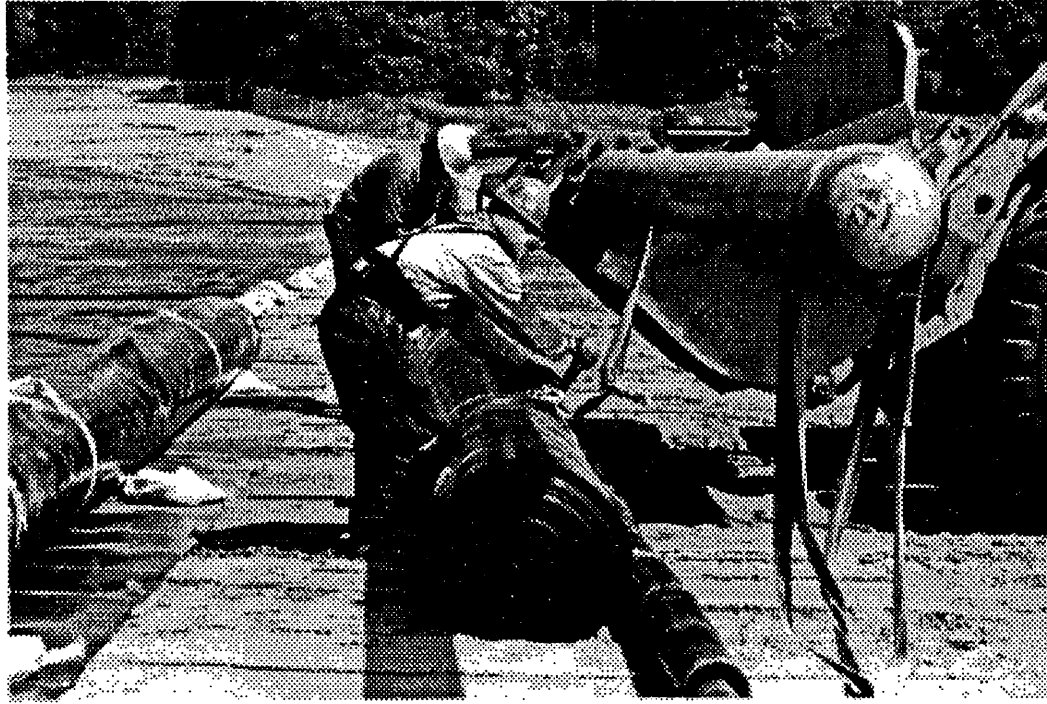
### **Assessment of Closed Landfills**

The MPCA is working with \$2.2 million allocated by the Legislature for landfill assessment during the last two legislative sessions (\$1.2 million for FY 93 and \$1.0 million for FY 94). A two-part mandate was established by the Legislature to: 1) summarize the conditions at SLFs with regard to the potential impact of these sites on human health and the environment; and 2) make recommendations on the remediation needed at the sites and provide cost estimates.

That money has been used to install ground water monitoring wells, sample and analyze ground water, drill into solid waste and carry out cover borings, sample soil, complete topographic surveys, and complete surveys of methane gas around sites to obtain accurate data on the condition of closed landfills. Expenditures and accomplishments of the assessment program to date are included in Tables 13 and 14. Table 15 includes investigations of sites using Superfund money prior to the establishment of the closed landfill assessment program. These investigations served as precursors to the current program.

In November 1991, the MPCA submitted the report "*Alternatives to Superfund for Landfill Cleanup*" as requested by the Legislature. This report stated that closed landfills are a societal problem and contained broad recommendations and estimates of the cost of cleaning up the state's landfills. The current assessment provides more specific information and estimates of cleanup costs.

At this time, MPCA staff is working to compile information and interpret data from two field seasons of intense data gathering. Working as teams, staff are comparing sites to categorize and prioritize them for cleanup according to the threat to human health and the environment and current solid waste closure standards.



Liner installation at the Oak Grove Sanitary Landfill

**Table 13: Closed Landfill Assessment Expenditures, FY 93**

Contractual Site Work	\$757,679
Supplies, Expenses	146,421
<b>Total</b>	<b>\$904,100</b>

So far, the expectations about ground water contamination have been confirmed by the assessment, as nearly all closed landfills show some degradation of ground water quality. This is not surprising, however, given that nearly all closed landfills are unlined and were not covered adequately. The assessment has also identified that methane gas produced by the decaying wastes in landfills may also pose a serious threat to humans and the environment.

By November 1994, the MPCA expects to have a report ready for the Legislature that will summarize its findings concerning closed SLFs. Included in this report will be findings of MPCA staff, along with recommendations and cost estimates for cleanup at each closed landfill in the state. Within the next year, however, it is hoped that legislation can be set in motion that will prepare the state to deal with these landfills by some process other than the Superfund law and process.

**Table 14: Closed Landfill Assessment Work Summary**

Number of Sites	86
Number of Monitoring Wells Installed	68
Number of Soil Borings	50
Number of Solid Waste Borings	146
Number of Wells Sampled	132
Number of Sites Surveyed	56
State Plane Coordinate Controls Established*	86

**Table 15: Closed Landfill Site Investigation Work Summary**

Number of Sites	9
Number of Wells	18
Number of Soil Borings	10
Number of Solid Waste Borings	33
Number of Wells Sampled	37

# Community Relations in Superfund

The trend within both the state and federal Superfund programs is toward streamlining, "less is more." The exception to the rule is in the area of community relations, where "more is better." The public demand for an active role in the Superfund decision-making process is increasing, and the need for clear and comprehensible general information about the program is greater than ever.

Several factors have made 1993 a particularly busy year for the MPCA Public Information Office staff charged with community relations for Superfund sites:

- The reauthorization of CERCLA has raised public debate about the law, and general information about the key issues in reauthorization is growing.
- The Legislature's restructuring of the Hazardous Waste Generator Tax to provide a long-term funding source for the state Superfund program was preceded by a great demand for information about the issues.
- The hot debate about whether landfills belong in the Superfund program became hotter when the largest third-party action in Minnesota took place at the Oak Grove SLF.
- State and federal Superfund program sites that have been "in the pipeline" for a number of years arrived at the cleanup phase in unprecedented numbers, requiring substantial community relations efforts.
- Developers, realtors, assessors, and other professionals dealing with property issues sought information in greater numbers than before, becoming a new audience for public information efforts.
- Increased awareness among citizens around Superfund sites has created a need for increased community relations activities.

Staff respond to an estimated 300 calls and 50 information requests a month; coordinate public meetings; respond to news media inquiries; provide fact sheets, update letters, or news releases; and produce educational information about the Superfund program.

## Key Points • • • • •

**In FY 93, MPCA's public information efforts:**

- provided information and opportunities for public participation at 184 sites;
- responded, on a monthly basis, to an estimated 300 phone calls and 50 information requests;
- performed outreach activities involving a variety of interested Superfund stakeholders; and
- informed the public about CERCLA reauthorization issues.

Increasingly, staff are providing general information to diverse audiences who want a voice in the Superfund process. Among the projects undertaken or planned in FY 93 were: 1) working with the MDH to provide general Superfund presentations to Community Health Services agencies in all counties with one or more federal NPL site; 2) providing support for managers appearing before U.S. Congressional committees to discuss Minnesota's views about key CERCLA reauthorization issues; 3) undertaking presentations to the city councils of Minneapolis and St. Paul on the redevelopment of contaminated land; 4) assisting Anoka County realtors in providing information to clients about Superfund sites in their sales areas; 5) providing education about the problems of landfills in Superfund to businesses affected by the Oak Grove site; and 6) helping residents new to the Twin Cities area to find information about contaminated sites.

Other activities have included: 1) publication of the "*Minnesota Superfund Quarterly*," 2) fact sheets on general Superfund issues; 3) assisting university students studying Superfund issues; 4) developing and establishing information repositories or Administrative Records so that communities have convenient access to important documents on nearby sites; 5) helping prepare the yearly legislative report; 6) providing communications assistance during environmental emergencies; and 7) presenting the state's positions on national Superfund issues to various audiences.

# Minnesota Department of Agriculture Cleanup Program

The Minnesota Statutes Chapter 115B (1992) authorizes 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.

The MDA Incident Response Program has authority to address agrichemical contamination under the Agricultural Chemical Liability, Incidents, and Enforcement Law (Chapter 18D), and MERLA (Chapter 115B). MDA staff conduct most agrichemical site response work under Chapter 18D, whereby MDA staff request RPs to perform the necessary investigations and cleanups.

RPs who conduct investigations and cleanups according to MDA guidance are eligible for reimbursement of their costs through the Agricultural Chemical Response and Reimbursement Account (ACRRA). ACRRA provides partial reimbursement for the costs of investigation and cleanup of an agrichemical incident, as requested, or ordered and approved by MDA staff. Using this authority, MDA has had 39 RPs complete \$1,594,476 worth of investigation and cleanup in FY 93.

ACRRA reimbursement has been an effective incentive for RPs to perform site investigation and cleanups. Explicitly defining eligible versus ineligible costs has proven beneficial to cost containment. Additionally, ACRRA is not available if there is no willing or known RP or landowner, nor does it cover costs of providing alternative sources of drinking water.

When an RP is unwilling to pay for cleanup costs, MDA evaluates the site and elects to use enforcement and financing authority under Chapter 18D and 18E, or Chapter 115B. Sites which require alternative drinking water can be addressed using Superfund monies, or in certain cases, funds managed by the HSCB.

MDA staff currently manage 73 active remedial site investigations (including seven PLP sites) where agricultural chemical contamination has been documented. These sites typically are sites

## Key Points •••••

### The MDA Cleanup Program:

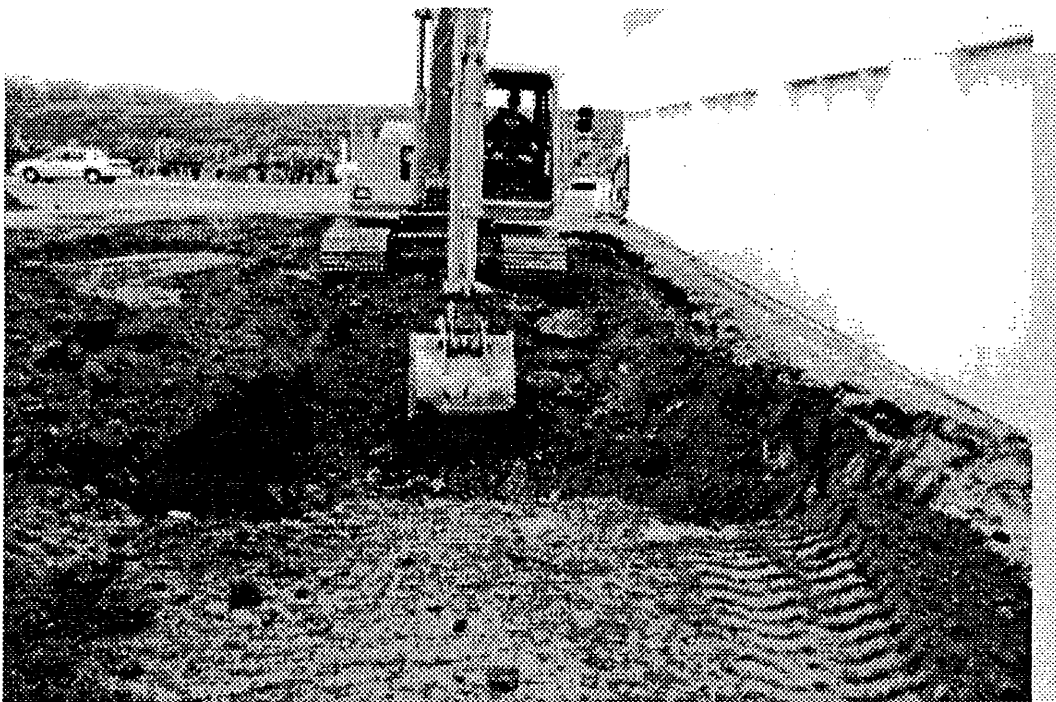
- is authorized by Minnesota Statutes Chapter 115B (1992), and 18D (1992);
- incorporates the effective incentive of the ACRRA reimbursement program; and
- addressed seven PLP sites, 66 comprehensive remedial site investigations and 215 emergency response spills.



of businesses that store, handle and distribute agricultural chemicals at the retail and wholesale level. The MDA has identified ground water contamination at approximately 32 of these sites.

In addition to the above described remedial site investigations, there were approximately 215 emergency response releases reported to the MDA in FY 93. These incidents generally occur as a result of spills during the storage, handling and distribution of agricultural chemicals by facilities and other end-users. Although nearly all of these incidents are managed by the RPs, with MDA Spills Team guidance, FY 93 found three of these sudden releases required Fund emergency response financing.

MDA had four positions in FY 93 funded under the Superfund program. MDA Superfund activities include: 1) overseeing investigation and cleanup activities at seven PLP sites; 2) scoring and listing new sites for the PLP; 3) reviewing and overseeing investigation and cleanup activities at voluntary cleanup sites; 4) responding to voluntary cleanup file search requests identifying sites which have agrichemical contamination; and 5) contract administration.



Cleanup work at the Farmer's Mill and Elevator in Castle Rock took place in FY 93.

# MDA Actions Using Fund Dollars

## Site Delisted from PLP

In FY 93, MDA delisted Lund's Farmer Seed and Nursery from the PLP. A fire occurred in April of 1989 at this garden center in St. Cloud, and MDA took the lead in the emergency response cleanup, with the help and delegation of Superfund authority from MPCA. In September 1992, the state and Joseph Laughlin, the site land owner, agreed on a settlement and payment schedule. In February 1993, the state reached a settlement for cost recovery and payment schedule with the Lunds, the business owners on the site. MDA staff will continue to oversee and, if necessary, enforce the agreed payment schedules.

## Above-Ground Arsenic

MERLA funds enabled MDA to target above-ground quantities of arsenic for collection and disposal. The approximately 4,400 pounds of arsenic collected in FY 93 augmented ongoing statewide waste pesticide collection efforts that have netted more than 235,000 pounds of banned and unusable pesticides.

Products with calcium arsenate, calcium arsenite, sodium arsenate, and lead arsenate were collected from many sites in central and southern Minnesota. Most of these products had been stored for decades. Arsenic collection is continuing in FY 94.

Lab pack (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.

## Site Investigation and Cleanup Actions

MDA continues to provide drinking water to five residences in the Castle Rock community, as a part of the Castle Rock Ground Water Contamination Site. The community, through Dakota County Department of Environmental Health, is currently involved in negotiations with Housing and Urban Development for cost-share funds to replace contaminated wells with several cluster wells. The MDA has completed a RI/FS at a potential source site using MERLA funds. Further investigation and remediation options remain to be implemented for FY 94. An adjacent site PRP is voluntarily conducting a RI/FS and phased response action.

### Key Points • • • • •

During FY 93, the following MDA Superfund activities were undertaken:

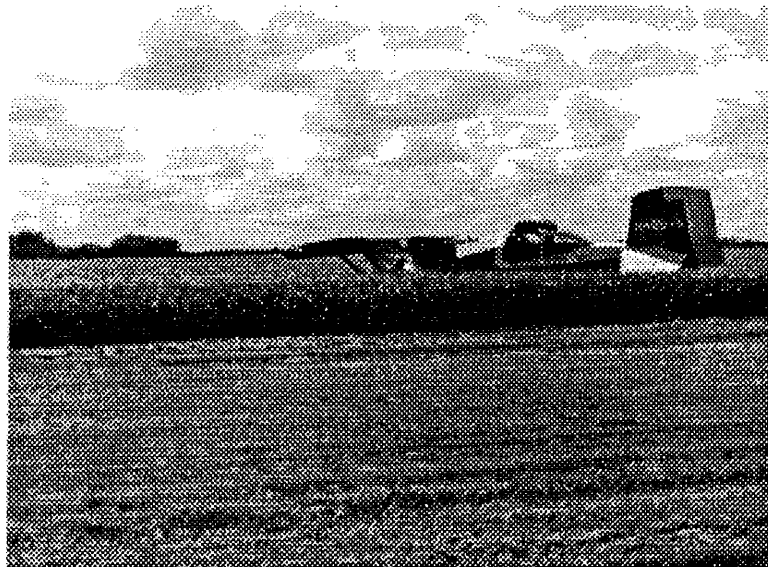
- delisted one site;
- collected 4,400 pounds of arsenic products;
- continued cleanup at several PLP sites; and
- coordinated with the Harmful Substance Compensation Board for an alternative water source.

MDA staff successfully completed the second (final) phase of the response action at the Howe Chemical Soil Contamination Site in Martin County during FY 93. The site is now remediated and supports agricultural plant growth. MDA staff will continue to monitor the site and adjacent residential wells during FY 94. The project is being carried out with MERLA funds.

During FY 93, monitoring continued at an agricultural chemical dealer site in Medford. MDA staff is in the process of evaluating this information to determine if previously implemented remedial actions were effective and whether the site should be delisted.

A homeowner in Gully, Minnesota, received a well advisory from MDH due to excessive atrazine levels in his well. Further ground water data was needed from an adjacent agricultural chemical dealer site before the dealer would agree to pay for well replacement. MDA staff coordinated with the HSCB to arrange for reimbursement to the homeowner for the drilling of a new well. When sufficient data are collected and if the information proves the culpability of the facility, MDA will pursue reimbursement by the facility to the Harmful Substance Compensation Account.

Of the 215 releases that the MDA Spills Unit handled in FY 93, three had to be managed with Superfund monies. One involved a truck accident in Fridley, and the other two involved old arsenic containers found by two separate homeowners, one in East Grand Forks, the other in Montgomery.



MDA staff responded to 215 emergency response spills, including this Polk County plane crash in which insecticides were released.

## Further MDA Program Accomplishments

In FY 93, 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. A good percentage of the consultants replied. As a follow-up, on January 21, 1993, MDA staff met in a roundtable discussion with the consultants to discuss the survey results, and how to improve the working relationship between the RPs, the consultant community, and the MDA staff.

The roundtable discussion was centered on the consultants' concerns as highlighted in the survey. Some consultants felt that more focus should be placed on ground water effects as opposed to source (contaminated soil) removal. MDA staff is reviewing this recommendation. The consultants found the MDA guidance documents were pertinent and helpful, and that MDA staff directions were very clear in written communication, in meetings and on the telephone. The survey had asked the consultants where they thought MDA could make improvements; consultants mentioned streamlining the work plan review, providing justification for changes to consultant proposals, formalizing cleanup goals, and revisiting the overall goals and objectives of the MDA program. One consultant asked for more flexibility for land-spreading requirements, and the staff have since done in-house research to create a document which addressed the environmental aspects of land-spreading and which was responsive to the consultant's concerns.

## MDA Legal Actions

During FY 93, 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 in August 1992, and with the Lunds in February 1993. Both settlements involve payments and schedules, and MDA staff is tracking these payments. MPCA and MDA have arranged for the deposits to be made to the MERLA account in accordance with Department of Finance procedures.

# MDA Voluntary Cleanup Technical Assistance Program

Requests for voluntary cleanup technical assistance have become an increasing responsibility for MDA staff. File search requests regarding past practices at various properties, and requests to review site investigations conducted as a part of property transactions have increased over the past year.

Staff continue to work with farm lenders to evaluate their inventory of farms for agricultural chemical contamination. Investigation and cleanup continue at several agricultural chemical wholesale/retail operations as a result of property transactions. MDA's program has been expanded to provide technical assistance to investigations conducted as part of property transactions or to situations where the current landowner wants to volunteer to investigate and potentially cleanup a site.

MDA will obtain reimbursements to MERLA for staff time spent in providing technical assistance. MDA staff is continuing to work with the ACRRRA Board on the relationship between the Voluntary Cleanup Technical Assistance Program and the ACRRRA reimbursement program.

MDA is in the process of reorganizing its database to include the locations of all licensed and permitted agricultural chemical storage facilities, past and present. The locating of these facilities will be further defined with the use of a Global Positioning System (GPS). This reorganization will complement the already existing data of reported incidents that currently dates back to 1977.

## Key Points • • • • •

**Program accomplishments include:**

- continuation of assistance in evaluation of several farm lender sites;
- continuation of cleanups at agricultural chemical operations; and
- expansion of property transfer program to include voluntary cleanup.

# Conclusions and Recommendations

The Minnesota Superfund Program has been very effective in cleaning up traditional Superfund and voluntary sites. Response actions are underway at 147 sites. The MPCA and MDA have been successful in their efforts to seek 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 depends on relieving the Fund from the pressures exerted by old municipal solid waste landfills, reducing transaction costs and the burden on communities of third-party suits, and streamlining the Superfund cleanup process to speed cleanups while providing protection for public health and the environment.

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

## **Alternatives to Superfund for Landfill Cleanup**

Although work on several SLFs has progressed under the Superfund program during FY 93, the growing consensus among regulators is that MERLA does not fit SLFs well. The state Superfund law and program is currently the only tool available to address contamination problems at closed SLFs, 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 standard contained in MERLA, which can lead to very expensive legal entanglements at landfill sites where the number of RPs can be in the hundreds. 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 timely agreement or speed cleanup.

A separate landfill program would relieve fiscal pressure on the Fund, cut the cost of cleaning up landfills from an estimated \$800 million to \$250 - \$450 million by eliminating huge lawsuits, and eliminate the current burden on communities surrounding such sites as the Oak Grove SLF. It also would provide a fairer way to make sure landfills are cleaned up promptly and fairly. An initiative to address landfills under a new program is strongly recommended.

**"The polluter-pays liability standard in CERCLA should be retained because it is an effective force in driving cleanup of traditional hazardous waste sites."**

### **Reauthorization of CERCLA**

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.

The dismantling of CERCLA's liability standard now seems unlikely, but continuing pressure will be brought to bear on the U.S. Congress to weaken CERCLA. MPCA staff has worked with Congressional committees, the Minnesota Congressional delegation, and national groups to maintain those parts of the law that work best and has proposed changes that will improve CERCLA.

**The four main issues that the reauthorization process should address are:**

1. The polluter-pays liability standard in CERCLA should be retained because it is an effective force in driving cleanup of traditional hazardous waste sites.
2. Under CERCLA, Congress should mandate that the EPA develop national cleanup standards or policies for soil and ground water. This would assure that RPs would understand up front "how clean is clean."
3. The scope of CERCLA should be extended to encompass all sites, not just those 1,200 or so on the federal Superfund list. A national registry of sites, including all of the 10,000 - 20,000 sites nationwide needing cleanup, would assure that cleanup standards would be consistently applied.
4. Congress should delegate the Superfund program to the states. There is precedent for this delegation; the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, and Safe Drinking Water Act have all been delegated to the states.

The MPCA staff recommends that the Legislature adopt these four goals for CERCLA reauthorization, and provide Minnesota's Congressional delegation with a resolution supporting these changes.

## VIC Program

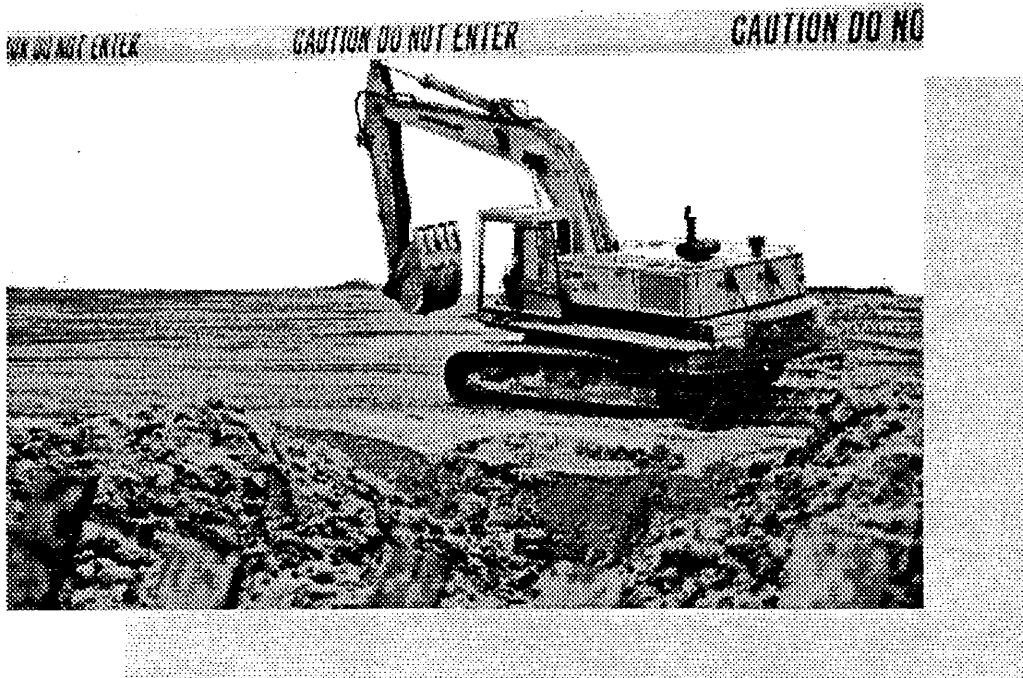
Through alterations to MERLA and passage of the Land Recycling Act, the Legislature has supported efforts by the MPCA and MDA to speed voluntary cleanups, solve problems associated with contaminated land, and provide a streamlined process to address sites where voluntary parties are willing to perform investigations and cleanups. Such efforts, also underway at the national level through programs such as SACM, have made Minnesota a model for other state programs.

The MPCA and MDA plan to continue streamlining efforts by applying state cleanup standards or models for soil and ground water cleanup; preparing "prescriptive guidances," generic cleanup plans, for common types of soil and ground water contamination; outlining cleanup objectives and goals early in the Superfund process; and providing liability releases in some circumstances to remove some of the risk faced by cities, developers, and banks in bringing contaminated land back into productive use.

The MPCA and MDA recommend that the Legislature continue to support VIC and other efforts by the agencies to help solve issues involving contaminated property.

## MDA Funding

MDA requests that funding be maintained at the FY 93 levels for MDA Superfund activities.



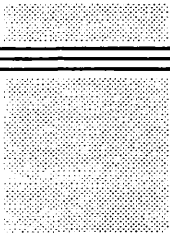


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# Appendix I: Acronyms

**ACRRA** - Agricultural Chemical Response and Reimbursement Account  
**ASTSWMO** - Association of State and Territorial Solid Waste Management Officials  
**CY** - Calendar Year  
**CAP** - Crosby American Properties  
**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  
**EPA** - U.S. Environmental Protection Agency  
**ESI** - Expanded Site Investigation  
**Fund** - Superfund  
**FY 93** - Fiscal Year 1993  
**GPS** - Global Positioning System  
**HSCB** - Harmful Substance Compensation Board  
**HRS II** - Hazard Ranking System  
**LCWM** - Legislative Commission on Waste Management  
**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  
**NCP** - National Contingency Plan  
**NPL** - National Priorities List  
**PA** - Preliminary Assessment  
**PLP** - Permanent List of Priorities  
**RCRA** - Resource, Conservation and Recovery Act  
**RD/RA** - Remedial Design/Remedial Action (or 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  
**SI** - Site Investigation  
**SLF** - Sanitary Landfill  
**VIC** - Voluntary Investigation and Cleanup  
**VOC** - Volatile Organic Compounds



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# Appendix 2: VIC Program Status Report

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-Ground Water
RA - Response Action		4-Petroleum/Fuel Oil	SW-Surface Water
M - Groundwater Monitoring		5-PAH	PPM-Parts per million
LI - No Action Letter Issued		6-PCB	PO-Pump Out
LLI - Limited No Action Letter Issued		7-Pesticides	PPB-Parts per billion
		8-Dump/Demo Debris	

PT #	Active	Project Name	City	Status							Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
				RI	FS	IRA	RA	M	LI	LLI					
1920	No	1000 Block Valley Park Drive	Shakopee	C						C	Completed	1, 8	Ground Water	Off-Site Source	Debris removal
2310	No	1144 Seventh Street	Hopkins	C						C	Completed	1	Ground Water	Off-Site Source	
3570	Yes	1200 Trapp Road (aka: unisys)	Eagan	I								1	Ground Water		
1380	No	16000 Minnetonka Industrial Blvd.	Minnetonka	I							To CERCLIS	1, 5	Soil and GW		
1390	No	15171 Freeland	Hugo	C						C	Completed	1	Surface Soil	To Background	Removal
1270	No	1551 Vernon Drive (See PT 1440)	Golden Valley	C						C	Completed	1	Ground Water	None Needed	
1880	No	1716 Hastings Avenue	Newport	I							Inactive	1	Soil and GW		
2690	No	1977 West River Road	Minneapolis	I							Inactive	1, 4	Ground Water		
2170	No	2811-2827 Franklin Ave.	Minneapolis								To Tanks	1, 4	Soil		
2570	No	28811 Fallbrook Ave. (aka: Manufacturing Safety)	Wyoming	C						C	Completed	1	Soil	None Needed	
3200	Yes	2nd Street Business Center	Minneapolis	I											
2140	Yes	3008 Third Avenue South	Minneapolis	I								3, 2	Soil		
1770	No	3100 28th Street E. (AT&T)	Minneapolis	C							To CERCLIS	1, 5	Soil and GW		
2380	No	345 Main Street	Bayport	I							Inactive	4, 5	Soil and GW		
2400	No	3K Paper	Minneapolis	C		C				C	Completed	1	Soil and GW	Soil - 5ppm on hNu	Landfarm soil-PO GW
3010	Yes	3M Woodbury	Woodbury	I				I				1, 2	Soil and GW	RALs	Pumpout
1890	No	42 Ave. N and Aldrich Ave.	Minneapolis	C							To CERCLIS	1	Soil		
2300	No	494/RES (See PT 1990) (part of Gen. Coatings)	Eagan	C						C	Completed				
2370	No	650-700 Industry Ave.	Anoka	C						C	Completed	1, 5	Ground Water	None Needed	
2890	No	7825 Building (Parklawn)	Edina	C	N	N	N	N	N	N	Withdrawn	2	Ground Water	None Needed	
1800	No	800 Jefferson Street	Lake City	C						C	Completed	1	Ground Water	None Needed	
1730	No	825 Boone Avenue	Golden Valley	C						C	Completed	1, 2	Soil and GW	GW-RAL, Soil <3.6ppm	Excavate soil
2280	No	89th Avenue Dump	Blaine	I							Inactive	None	Soil and GW		
3340	Yes	Action Construction	Lino Lakes	I								1	Ground Water		
2540	No	Air Quality Vehicle Inspection (See PT 3140)	Roseville								Withdrawn	Staining	Soil	None Needed	
3840	Yes	Airway Products	Princeton	C								1	Ground Water		
2480	Yes	Albert Lee Gas	Albert Lee	I								4, 5	Soil and GW		
1310	No	All Saints Lutheran Church	Eagan								To Tanks	4	Soil		
1010	Yes	American Can	Minneapolis	C	C	N	I	I			Clng in progress	1	Soil and GW	RALs	Pumpout to sewer
3310	Yes	AMPI, Inc.	Rochester									1	Ground Water		
3940	Yes	Anderson Iron Works	Plymouth									1	Ground Water		
1810	No	Andrec Metals	St. Louis Park	C						C	Completed	7	Soil and GW	Non - Detect	Excavation and PO
1680	No	Argus Development	Blaine								Withdrawn	4, 8	Soil and GW		
1150	No	Armour Meat Plant	South St. Paul								Inactive				

RI - Remedial Investigation	C = Completed	1-VOC	RAL-Recommended
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		8-Dump/Demo Debris	

PT #	Active	Project Name	City	Status							Comments	Contam.	Media Impacted	Cleanup Level	Technology Used	
				RI	FS	IRA	RA	M	LI	LLI						
3070	No	Army Corps Chaska Dump	Chaska	C						N	N	Completed	8		None Needed	
3300	No	Arrowhead Stator and Rotor	Sandstone	C	N	N	C				C	Completed	2	Soil	Visual	Excavate
3240	Yes	Ashland James Avenue	St. Paul	I									1, 4	Soil and GW		
3350	No	Astleford, M.G.	Burnsville	I								Inactive	1, 5	Soil		
3480	Yes	Avecor	Plymouth	I	I								1, 4	Soil and GW		
3280	Yes	Barton Sand and Gravel	Maple Grove	I									1, 4	Soil		
2180	No	Bayport Public Works Facility	Bayport	C							C	Completed	5	Soil	None Needed	
2800	Yes	Bayport Wildlife Mngmnt Area(See PT2530)	Bayport	I	I								1	Ground Water		
1340	No	Bendix Corp.	Bemidji									Withdrawn	None			
2880	No	Bergmeier (See PT 2260)	White Bear Lake	C	C	C	C	C	C			Completed	1	Ground Water	Remove Barrels	Landfill
3390	No	Beumer Parcel	St. Cloud	C							C	Completed	8	Soil		
3670	Yes	Blaine Central Avenue	Blaine	I									6	Soil		
2410	No	Blaine Office Park	Blaine	I						I		Inactive	2	Ground Water		
3700	Yes	Bloomington Good Samaritan	Bloomington	I									4	Ground Water		
3180	No	Bob Lewis Olds.	Hermantown									To Tanks	1			
2810	No	Brandt-Jen-Kluge Building	St. Paul	C							C	Completed	4	Soil	10 ppm	Thermal treatment
1170	No	Brockway Glass	Rosemount	C					I			To Solid Waste	2	Soil		
1710	No	Brooklyn Park Dump	Brooklyn Park	C								To Superfund	1, 6	Soil		
2030	No	Buffalo Cleaners	Buffalo									To CERCLIS	1	Soil and GW		
3050	Yes	Buffalo Municipal Parking Lot	Buffalo	I									1	Soil		
1900	No	Burr Properties	Minneapolis	I								Inactive	5	Soil and GW		
2210	No	Butler Taconite	Waukegan									Withdrawn				
1440	No	Cabot, Cabot, Forbes (See PT 1270)	Golden Valley	C							C	Completed	1	Ground Water	None Needed	
1880	No	Caliber Development Corp.	Plymouth	C			C				C	Completed	1, 4	Soil	5 ppm on the hNu	Landfarm
2470	No	Capital Corporation	South St. Paul	I								Inactive	5	Soil		
2130	Yes	Carpenter's School	St. Paul	C	C	N	I					Clng in Progress	5	Ground Water	Visual	Ash & Rubbish rem
2280	Yes	Centerville Road Site (See PT 2880)	White Bear Lake	C	C	C	I	I			C	Partially completed	1,2	Soil and GW	Visual	Landfill / drum rem
3490	Yes	Central Avenue Grocery	Minneapolis	I									1	Soil and GW		
3910	Yes	Chemrex	Bloomington	I									1	Soil	Below 5ppm	Soil used in asphalt
2340	Yes	Chicago Northwestern	Minneapolis	C	C		I						1, 5	Soil and GW		
1280	No	Circuit Science	Plymouth	C			C				C	Completed	2	Soil	5 ppm	Excavation
1140	No	City of Foley	Foley									Inactive				
3230	No	Clark Oil	St. Paul	C							C	Completed	1	Ground Water	Off-Site Source	
3410	Yes	Como Foundry	St. Paul	I									1, 4, 5	Soil		

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-Ground Water
RA - Response Action		4-Petroleum/Fuel Oil	SW-Surface Water
M - Groundwater Monitoring		5-PAH	PPM-Parts per million
LI - No Action Letter Issued		6-PCB	PO-Pump Out
LLI - Limited No Action Letter Issued		7-Pesticides	PPB-Parts per billion
		8-Dump/Demo Debris	

PT #	Active	Project Name	City	Status							Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
				RI	FS	IRA	RA	M	LI	LLI					
3720	Yes	Crystal Lake Good Samaritan Center	Robbinedale	I								4	Ground Water		
2390	Yes	CSM	St. Paul	I								4	Soil and GW		
2080	No	Dakota Business Plaza	Mendota Heights	I						Inactive		1	Soil		
3680	Yes	Dale Street Railroad Yard	St. Paul	I								1, 4	Soil and GW		Pumpout free product
1470	Yes	Dane Corporation	Minneapolis	I								1	Soil and GW		
3780	Yes	Daybreak Foods, Inc.	Long Prairie	I								1, 4	Soil and GW		
2820	Yes	DBL Labs	St. Joseph	I								1, 2	Soil and GW		
3730	Yes	Denson Complex	Minneapolis	I								4	Soil		
2100	No	Diagnostics, Inc.	Minneapolis							Inactive		5	Soil		
3380	No	District Energy	St. Paul	C	N	N	I			To Tanks		1, 4, 5	Soil and GW		
1180	No	Dixie Chemical	Rosemount	C					C	Completed		1	Ground Water	Off-Site Source	
2530	Yes	DNR/Stillwater Prison Dump (See PT2800)	Bayport	I	I							1	Ground Water		
2120	No	Duane's Auto Body	Litchfield							Withdrawn					
3000	No	Duluth Cement Plant	Duluth	I						Inactive					
1050	No	East River Road	St. Paul							Inactive					
2320	No	Econotherm	Arlington	I						Inactive		1, 2, 5	Soil		
3500	Yes	EDCO Products	Hopkins	I								1	Soil		
1980	No	Elliot Avenue Site	Rush City	C					C	Completed		1	Soil	10 ppm	Landfarm
3890	Yes	Elm Street Ash Dump (See PT 2780)	St. Paul	I								2, 5	Soil and GW		
2250	No	Elmwood Partners	Caledonia	C					C	Completed		1	Soil and GW	None Needed	
2650	No	Empire Dump	Empire	I						To CERCLIS		2	Soil		
2430	Yes	Energy Park West	St. Paul	C			I					5	Soil	None Needed	
3130	Yes	Envon Gas	Owatonna	I								1	Soil and GW		
1500	No	Excello	St. Paul	I						To CERCLIS		1	Soil and GW		
2710	No	Fina Station	Eagan				C		C	Completed		2	Soil	Visual & Above Detect.	Haz. waste landfill
1720	Yes	Ford Deep Rock	Minneapolis	C	I							1, 4	Soil and GW		
3150	No	Foremost Facility	New Hope	C	N	N	N	N	C	Completed		1	Ground Water	Off-Site Source	
3030	Yes	Former Great Northern RR	St. Paul	I								1, 5	Soil and GW		
3620	Yes	Former Sears Owatonna	Owatonna	I								1	Ground Water		
3880	Yes	Former Super America	Roseville	I								1	Ground Water		
1230	No	Franchise Assoc/Aero Precision	Cottage Grove	C					C	Completed		1	Soil and GW	None needed	
3450	Yes	Freeway Blvd.		I								1, 4	Soil and GW		
3740	No	Frisbee Hill	St. Paul	C						Inactive		4, 5	Soil		
2110	Yes	Frost Paint	Minneapolis	C								1	Soil and GW		

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-Ground Water
RA - Response Action		4-Petroleum/Fuel Oil	SW-Surface Water
M - Groundwater Monitoring		5-PAH	PPM-Parts per million
LI - No Action Letter issued		6-PCB	PO-Pump Out
LLI - Limited No Action Letter issued		7-Pesticides	PPB-Parts per billion
		8-Dump/Demo Debris	

PT #	Active	Project Name	City	Status							Comments	Contam.	Media Impacted	Cleanup Level	Technology Used	
				RI	FS	IRA	RA	M	LI	LLI						
2520	No	Gateway Foods	Warroad	C						C		Completed	None		None Needed	
2690	No	General Fabrication	Forest Lake	C						C		To Superfund	1, 2	Soil and GW		
2840	No	General Mills, Inc.	Minneapolis	C						C		Completed	1, 4	Soil and GW	Off-Site Source	
2930	No	GL Contracting	Minnetonka	I							C	Partially completed	1, 4	Soil and GW		
1020	No	Glacier Park (See PT 2740)	Minneapolis	C						C		Completed	5	Soil	1 ppm on hNu	Landfarm
3790	Yes	Glenn Bolles	Elk River										1, 2	Ground Water		
2200	No	Glennwood Junction	Golden Valley	I								To Tanks	4	Soil and GW		
1870	No	GNB	St. Paul	I		I						Inactive	1, 2	Soil and GW		
3260	Yes	GNB Berry Street	St. Paul	C	I							Clnp In Progress	2	Soil	300 ppm / 1000 ppm	Stabilization
1560	Yes	Golden Valley HRA	Golden Valley	I									1, 4	Soil and GW	Off-Site Source	
1550	No	Gopher Shooter Supply	Faribault	C								Inactive	1	Ground Water		
2020	Yes	Grace-Lee Products	Minneapolis	C	C	N	C	I		C		Partially completed	1,4	Soil and GW	No detect on Hnu	Landfill soil-rem.tank
3510	Yes	Grace Inc.	Minneapolis	I									1	Ground Water		
3850	Yes	Great Dane	Roseville	I		I							1, 4, 5	Soil and GW		
1060	No	Great River Development	Minneapolis									Inactive	5	Soil		
2720	No	Greater Huron Development Corp.	St. Paul	I								Inactive	1	Soil and GW		
3430	Yes	Griggs Midway	St. Paul	C							C	Completed	1	Ground Water		
3470	Yes	H.B. Fuller	Minneapolis	I									2, 5	Soil		
1290	No	Hancock Nelson	St. Paul	C								Inactive	1, 4	Soil and GW	Off-Site Source	
3560	Yes	Harcros Chemicals, Inc.	St. Paul	I									1	Soil and GW		
1510	No	Harriet Island	St. Paul	C	C							To CERCLIS	2	Soil	3 ppm Lead	Excavation planned
2060	Yes	Harvest States	St. Paul	I		I							1, 4, 5	Soil and GW		Landfarm on 4 and 5
3750	Yes	Herbst Landfill	New Brighton	I									1, 5	Soil and GW		
3880	Yes	Hiawatha Country Club	Minneapolis	I									5	Soil and GW		
2450	No	Hiawatha Metalcraft	Minneapolis	C	N	N	N	N		C		Completed	1	Ground Water	Off-Site Source	
3440	Yes	Hibbing Industrial Park	Hibbing	I									2	Soil		
3520	Yes	Hitchcock Industries	Bloomington	I									1	Ground Water		
2910	Yes	Hoffman Corner	Shoreview	I		I							1, 2, 6	Ground Water		Pump out free product
1820	No	Holiday Gas Station	Forest Lake							C		Completed	Asphalt	Soil	None Needed	
2480	Yes	Holiday Store, Washington Ave.#69	Minneapolis	I									1	Soil and GW		
1300	No	Honeywell Columbia Heights	Columbia Heights	C	C		C			C		Completed	2	Soil	<1000 ppm	Excavated
3580	Yes	Honeywell Date Serve	Hopkins	I									1	Ground Water		
2150	No	Honeywell Minnetonka	Minnetonka	I								Inactive	1	Soil and GW		
2290	No	Honeywell New Hope	New Hope	I								Inactive	1	Ground Water		

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

PT #	Active	Project Name	City	Status							Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
				RI	FS	IRA	RA	M	LI	LLI					
2850	Yes	Honeywell Plaza	Minneapolis	I								1, 4	Ground Water		
2070	Yes	Hopkins Tech	Hopkins	I								1, 4	Soil and GW		
3190	Yes	Hormel Building 134	Austin	I								1			
1930	Yes	Hormel Corporate Annex	Austin	I								1	Soil		
1410	No	Huset Park Dump	Columbia Heights	C					C	Completed		2	Soil and GW	None Needed	
3370	Yes	Ideal Security Hardware	Roseville	I								1	Ground Water		
2490	Yes	Industrial Airsystems	St. Paul	C	I					Clng In Progress		1	Soil and GW	Below RALs	Proposed airsparging
2760	No	International Square	Golden Valley	C					C	Completed		1	Ground Water	Off-Site Source	
3420	Yes	ITT Schadow	Eden Prairie	I								1	Soil and GW		
3040	Yes	J & J Casting	Two Harbors	I								1, 2, 4	Soil and GW		
1110	Yes	J and B Auto	New Brighton	I								1	Ground Water		
2780	No	Jae's Precast	Stacy	C			C		I	Completed		1, 2	Soil	1 ppm on hNu	Excavation
2970	No	Japs Olson	Minneapolis	C					C	Completed		1	Ground Water	Off-Site Source	
2220	No	Jays Truax Co.	Minneapolis	I						To CERCLIS		4, 5	Soil and GW		
2510	No	Jerry Clipper Machine Shop	Baytown Twp.	C			C		C	Completed		1	Soil	1 ppm on hNu	Landfarm
1890	No	John Hancock Properties	Roseville						C	Completed		4	Ground Water	Off-Site Source	
3600	No	Johnson and Johnson	Minnetonka	C					C	Completed		1	Soil and GW	None Needed	
2820	No	Joyners, Inc.	Brooklyn Park	I						Inactive		2, 5	Soil and GW		
2330	Yes	Kellogg Blvd.	St. Paul	C								5	Soil and GW		
3870	Yes	Kellogg Blvd. PMA	St. Paul									1	Soil and GW		
1780	No	Kellogg Blvd. Post Office	St. Paul	C					N	Completed	Asphalt		Soil	To Background	Soil used in asphalt
3900	Yes	King Pallet	Brooklyn Park	I								1, 2, 5	Soil and GW		
2860	Yes	Kondrator, The	Minneapolis	I								1, 2, 5, 6	Soil		
3590	Yes	Krawczewski (aka: Metals Reduction)	St. Paul	I								2	Soil		
3260	No	Lakeland Avenue Dump	Brooklyn Park	C	C	N	C			Completed		1, 4, 5, 8, Tar	Soil and GW	Visual/Non-Detect	Reuse/Recycle/Thermal
3690	Yes	Lakewood Hills Apartments	White Bear Lake	C				I				2	Soil and GW	None Needed	
3110	Yes	Latzke Iron Works	Brooklyn Park	C		I						1, 2	Soil		
1910	No	Le Loup Site	St. Paul	C						To CERCLIS		2	Soil and GW		
3220	Yes	Leaseback Properties	Richfield	I								1, 4			
1160	No	Lightning Transfer Station	St. Paul							To RCRA		6	Soil		
1070	No	Lilydale Park Dump	St. Paul	C						Completed/CERCLIS		2, 4	Soil		
1180	Yes	Lindsay Warehouse (See PT 2740)	Minneapolis	C			C		N	Completed		1, 4, 5	Soil	1 ppm on hNu	Landfarm
1080	No	Longyear	Minneapolis	C					C	Completed		4, 5	Soil	5 ppm on hNu	Excavate, Landfarm
3800	Yes	Lou-Rich Albert Lea	Albert Lea	I								1	Soil and GW		



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-Ground Water
RA - Response Action		4-Petroleum/Fuel Oil	SW-Surface Water
M - Groundwater Monitoring		5-PAH	PPM-Parts per million
LI - No Action Letter Issued		6-PCB	PO-Pump Out
LLI - Limited No Action Letter Issued		7-Pesticides	PPB-Parts per billion
		8-Dump/Demo Debris	

PT #	Active	Project Name	City	Status							Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
				RI	FS	IRA	RA	M	LI	LLI					
2770	Yes	Lyndale Super America	Minneapolis	I								1, 4	Soil and GW		
2830	No	Malcolm and 5th Street	Minneapolis	C							Completed	1, 2, 4, 5	Soil and GW	None Needed	
1990	No	Mall Site (See PT 2300)	Eagan	C						C	Completed	None		None Needed	
3320	Yes	Malt-O-Meal	Northfield	I		C						1, 4	Soil		
1210	No	Mankato Plating Company (See PT 3400)	Mankato	I							To CERCLIS	1, 2	Soil		
2840	No	Marigold Foods	Rochester	C						C	Completed	1	Ground Water	Off-Site Source	
1800	No	Marvin Windows	Warroad	I							To RCRA				
1840	Yes	Mayo/Telex Building	Rochester	C			C	I			Clnp in progress	1	Soil and GW	Detection Limit	Landfarm soil-mon GW
3140	Yes	Meam Properties (See PT 2640)	Roseville	I											
1700	Yes	Midway Plaza	St. Paul	C	I							1, 4	Soil		
2040	No	Midwest Book	Minneapolis								Completed				
2090	No	Midwest Cylinder	Swift Falls	I							To WQ				
3820	Yes	Milwaukee Road Depot	Minneapolis	I								5	Soil and GW		
2670	No	Minneapolis Sculpture Gardens	Minneapolis	C							To CERCLIS	5	Soil and GW		
1490	No	Mnnetonka City Garage	Mnnetonka	C						C	Completed	5	Soil	< 50 ppb	None
2350	No	MnDOT Crooked Lake Pit	Anoka County	C						N	Completed	2	Ground Water	None Needed	
1850	Yes	MnDOT Dump	St. Cloud	C	C		I	I				5	Soil and GW		Soil used in asphalt
3530	Yes	MnDOT Savage Truck Station	Savage	I								1	Ground Water		
1850	No	Motley Bypass	Minneapolis	C	C		C			N	Completed	4, 6	Soil and GW	10 ppm	Landfarm
1540	No	Multitech	New Brighton	C						C	Completed	1	Soil	Non-Detect	Excavate, Landfarm
1970	Yes	Napco - East (Venturian Corp)	Hopkins	I								4, 8	Soil and GW		
2010	Yes	Napco - West	Hopkins	I								4	Soil		
2900	No	Neal State Building	Eden Prairie	I		C	I				Completed	1	Soil and GW	10 ppm	Landfarm soil-mon GW
3770	Yes	New Brighton Redevelopment	New Brighton	I				I				1	Ground Water		
3540	Yes	New Hope Distribution Center	New Hope	I								1, 2	Soil		
1810	No	New Hope HUD	New Hope								To RCRA				
2790	No	Newport Building, The	Newport	I							Inactive	1, 2, 4, 7	Soil and GW		
3710	Yes	Nicollet Good Samaritan	Minneapolis	I								4	Ground Water		
3090	Yes	Nobles Industries	St. Paul	C	C		I				Clnp in Progress	1	Soil	Non-Detect	Soil Venting
3080	No	Norm McGrew and 3rd	Minneapolis	I							To CERCLIS				
2240	No	Norm McGrew Place	Minneapolis	C						C	Completed	5	Soil	None Needed	
1530	Yes	North St. Paul Dump	North St. Paul	I								8	Soil		
2680	No	Northern Package Corp.	Bloomington	C						C	Completed	1	Ground Water	Off-Site Source	
2640	No	Northern Star ADM	Minneapolis	C							To Superfund	1, 2, 5, 6	Soil and GW		

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-Ground Water
RA - Response Action		4-Petroleum/Fuel Oil	SW-Surface Water
M - Groundwater Monitoring		5-PAH	PPM-Parts per million
LI - No Action Letter Issued		6-PCB	PO-Pump Out
LLI - Limited No Action Letter Issued		7-Pesticides	PPB-Parts per billion
		8-Dump/Dam/D debris	

PT #	Active	Project Name	City	Status							Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
				RI	FS	IRA	RA	M	LI	LLI					
2630	No	Northern Star Westgate	St. Paul	C							To Superfund	1, 2, 5, 6	Soil and GW		
3480	Yes	Northtown Mall	Blaine	I								2, 4	Soil and GW		
2580	Yes	Northwest Automatic Products	Minneapolis	C	I	N						1	Soil		
3830	Yes	NSP Gas Pipeline	St. Paul	I	N	N	I	N							
1750	Yes	NSP High Bridge	St. Paul	C	I	I		I				3, 4, 5	Soil and GW		
2440	No	NSP/Junkers	Oak Park Heights								To CERCLIS				
1760	No	Old Highway 8 Site	New Brighton	C					C		Completed			None Needed	
1680	Yes	Old Minnetonka Dump	Minnetonka	I	I						Design phase	1,2,4,5,6,8	Soil and GW	RAIs	Encap/Cap/GW pumpout
1080	No	On the Avenue (Cleanup under PT 1370)	St. Louis Park	C	C	N	I				Clnp in progress	1	Ground Water	RAIs	Pumpout
2190	Yes	Orient Square (See PT 2100)	Minneapolis	I	I							5	Ground Water		
3360	Yes	Ottertail Power Co.	Ortonville	I								Ash	Soil		
2950	Yes	Paper Calmerson	St. Paul	I								1, 4	Soil		
1370	Yes	Park Nicollet (See PT1080)	St. Louis Park	C	C	N	I	I			Clnp in progress	1, 6	Soil and GW	RAIs	HW rem/PO/Meth vent
3330	Yes	Paryana Elevator	Feribault	I								5	Soil		
1350	No	Pavelicak Property	New Brighton	I							To CERCLIS				
2560	No	Pioneer Portec	Minneapolis	C					C		Completed	1	Ground Water	Off-Site Source	
3950	Yes	Pioneer Power, Inc.	St. Paul									1	Ground Water		
1830	No	Polymer Composites	Goodview						C		Completed	1, 2	Soil and GW	Off-Site Source	
2610	No	Prairie Center Drive	Eden Prairie	C	N	N	C	N		C	Completed	1	Soil	No Detect	Landfarm
3210	No	Q. Carriers	Shakopee	C						C	Completed	1		None Needed	
3930	Yes	Quebecor	St. Cloud	I								1	Soil and GW		
3270	Yes	Rathcke Property	Pequot Lakes	I								1, 5, 7	Soil		
2990	Yes	Red Wing Publishing	Red Wing	I	I	I					Clnp in progress	1	Soil and GW	Soil - 5 ppm	Landfarm/Bioventing
2660	No	Restaurant, The	Minneapolis	I							Withdrawn				
3020	No	Ritter Phase II	St. Paul								To CERCLIS	1, 4	Soil and GW		
2600	Yes	Rochester Riverfront	Rochester	C			I					1	Soil	None Needed	
2730	No	Rochester Sewage Lagoons	Rochester	I							To CERCLIS	1, 2	Soil and GW		
1740	No	Rosemount Die Casting	Rosemount	C			C			C	Completed	2	Soil	5 ppm on the hNu	Excavate
3080	Yes	Roseville Diesel	New Brighton	I				I				2, 4, 5	Soil and GW		
1220	No	Rubbish Ranch Dump	Inver Grove Hts.								To CERCLIS	1, 2	Soil		
3400	No	Ruby Development (See PT 1210)	Marketo								To CERCLIS	1, 2	Soil		
2740	Yes	Sawmill Run	Minneapolis	C			I				Clnp in progress	1, 4, 5	Soil and GW	Soil- 2 ppm on hNu	Incinerate soil
1280	No	Schult Automatic	Blaine	C			C				Completed	1	Soil	Non-Detect	Landfarm
2880	No	Sentinel Building	Edina	I	N	N	N	N	N	N	Withdrawn	2	Soil and GW	None Needed	

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RA = Response Action		4-Petroleum/Fuel Oil	SW-Surface Water
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LLI = Limited No Action Letter issued		7-Pesticides	PPB-Parts per billion
		8-Dump/Demo Debris	

PT #	Active	Project Name	City	Status							Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
				RI	FS	IRA	RA	M	LI	LLI					
2620	Yes	Shakopee Dumps	Shakopee	I	I		I					8	Soil		
1620	Yes	Shepard Road Sites	St. Paul	I								1, 2, 3, 4, 6, 8	Soil I and GW	See Individual Sites	Various
2270	No	Shopco Site	Hutchinson	I							To CERCLIS	1			
1880	No	SOCS Home Site	Moose Lake	C					C		Completed	6	Soil	10 ppb	Excavated
1840	No	Soo Line Century Mill	Minneapolis	I							To CERCLIS	1	Soil		
1120	No	Soo Line/Marshalling Yards	Minneapolis								To CERCLIS	1, 5	Soils		
3980	Yes	SPS Companies	St. Louis Park												
2650	Yes	St. Paul Contingency Plan	St. Paul	N	N	N	N					N/A			
2980	No	St. Paul FC Project #2	St. Paul	C					N	N	Completed	4, 7			
1790	No	St. Paul Park Boat Launch	St. Paul Park	C					C		Completed	None		None Needed	
1480	No	Standard Solvents	Brooklyn Center								To CERCLIS	1	Soil		
2870	Yes	Stearns Rubber	Staples	C		C	I	I	C		Clnp in progress	1	Soil and GW	Soil-10ppm, GW-RAL	Lndfrm soil-PO GW
2700	Yes	Superior Dairy Fresh	Minneapolis	I								1	Ground Water	Off-Site Source	
1640	Yes	Superwood	Duluth	I								5	Soil and GW		
1130	No	Superwood NuPly	Bemidji	I							To Superfund	5	SW and GW		
1240	No	Technical Sealants	St. Paul	C							To CERCLIS	1, 2	Soil and GW		
1620	No	Tennant Company	Plymouth	C	C	N	C	N	C		Completed	5	Soil	10 ppm	Landfarm
1450	No	Terry Brothers Construction	St. Louis Park	C					C		Completed	5	Ground Water	Off-Site Source	
3120	No	Tiedel Properties	Minneapolis	C					C		Completed	1	Ground Water	Off-Site Source	
1630	No	Twin City Testing	St. Paul			C				C	Completed/CERCLIS	1, 5, 7	Soil		
1460	No	Union Carbide	Minneapolis	C						C	Completed	1	Ground Water	Off-Site Source	
1250	Yes	Unisys Eagan	Eagan	C	C	N	I	I			Clnp in progress	1	Soil and GW	RALs	Pumpout to sewer
1420	No	Unisys Jackson	Jackson	C						C	Completed	1, 2, 3	Ground Water	None Needed	UST removed
1580	Yes	Unisys Midway	St. Paul	I			I					1	Ground Water	RALs	Pumpout and treat
1320	No	Unisys Park Defense Plant	Eagan	C							To RCRA				
1570	No	Unisys Roseville	Roseville	C							To RCRA				
1590	No	Unisys Shepard Road	St. Paul	I							To RCRA				
1400	Yes	United Properties	Minneapolis	I								1, 4, 5	Soil and GW		
3610	Yes	United States Postal Service -VMF	St. Paul	I								2	Soil		
3920	Yes	Unitog	Minneapolis	I								1	Ground Water		
1100	No	University Corridor	Minneapolis								Inactive				
3170	No	University Health Care	Minneapolis	C					C	C	Completed	1, 7	Ground Water	Off-Site Source	
1670	Yes	Unocal	St. Paul	I	I	I					Pilot study	1	Soil and GW		Soil vapor-pilot study
2160	No	Unocal Dewater	St. Paul	C							Inactive	N/A			

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-Ground Water
RA - Response Action		4-Petroleum/Fuel Oil	SW-Surface Water
M - Groundwater Monitoring		5-PAH	PPM-Parts per million
LJ - No Action Letter Issued		6-PCB	PO-Pump Out
LLI - Limited No Action Letter Issued		7-Pesticides	PPB-Parts per billion
		8-Dump/Demo Debris	

PT #	Active	Project Name	City	Status							Comments	Contam.	Media Impacted	Cleanup Level	Technology Used
				RI	FS	IRA	RA	M	LJ	LLI					
3650	Yes	Unocal, City	St. Paul	C	C							1, 5	Soil and GW		
1950	No	URAP Industrial Park	St. Paul	C			C		C		Completed	1, 4	Soil	10 ppm	Landfarm
3630	Yes	Viking Gas, Humbolt	Humbolt	C			I					1, 5, 6	Soil		
3640	Yes	Viking Gas, Staples	Staples	C				I				1, 5, 6	Soil and GW		
3100	No	Vinyl Therm	Bloomington	I							To CERCLIS	1	Ground Water		
2760	No	Vogel Manufacturing (See PT 3890)	St. Paul	I							Inactive	2	Soil and GW		
2420	Yes	Vomele Specialty Co.	St. Paul	I								1	Ground Water		
2500	No	Wards Midway	St. Paul	C			I		C		Completed	1	Soil and GW	Off-Site Source	
1200	Yes	Warner/Shepard Road	St. Paul	C			C	I		C	Lmt'd Cleanup	5	Soil and GW		Excavate to landfill
3810	Yes	Warren Shade	Minneapolis	I								1	Soil		
3760	Yes	Waterville Health Care	Waterville	I								4	Soil		
3290	Yes	West Duluth K-Mart	Duluth	C								1	Ground Water		
1380	No	West River Parkway	Minneapolis	C	C						To Superfund	5	Soil		
2230	Yes	Westgate	St. Paul			C					Partially Complete	1, 2, 4, 5	Soil and GW	Remove Barrels	Lndfrm /Tank & Drum rem
3180	No	Westin, Inc.	St. James	I							To CERCLIS	2			
1030	No	Whirlpool	St. Paul	C					C		Completed	2, 7	Soil	None	
1040	No	Whirlpool	St. Paul	C					C		Completed	2, 7	Soil	None	
1330	No	White Bear Lake Rod & Gun Club	White Bear Lake								Withdrawn	2	Soil		
2000	No	White House Site	Golden Valley	I							To CERCLIS	5			
2050	No	White Way Cleaners	Minneapolis	I		I	I				Inactive	1	Soil and GW		
2360	No	White Way Cleaners Whittier	Minneapolis	I							Withdrawn	1	Soil and GW		
3680	Yes	Wilensky Properties		I	I							2, 5	Soil and GW		
3650	Yes	Wilkins Pontiac	St. Louis Park	I								2	Soil		
1430	Yes	Zane May	St. Paul	I								1	Soil and GW		

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# **Appendix 3: Minnesota Hazardous Waste Site Status Report**

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

October 1993

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLAS (MILLION)	MERLAS (MILLION)	ESTIMATE OF RESP. PARTY \$ (MILLION)	CLEANUP PHASE								CLASS	
										RI	FS	RD	RA	DRINK- ING WATER	GROUND WATER RA	RA MONITOR	RA O&M		
ADM / HIGHWAY 280	15								0.050	O									C,D
AGATE LAKE SCRAP YARD	30 **	X	1/28/86						0.600	X	X	O	R			R	R		C
AMDURA (AMHOIST)	13			2/28/89	8/28/90			0.651	0.250	C	XS	XS	OS		OS				C,D
ANCHOR GLASS CONTAINER, SHAKOPEE	16								0.775	O	O		O						C,D
ANDERSEN WINDOW, BAYPORT	24			1/27/87				0.025	2.000	X	C	C	C		O	O	O		C,D
ANOKA MUNICIPAL SANITARY LANDFILL	51			5/30/85					4.000	X	X	X	IO		IO	IO	IO		C
ARROWHEAD REFINERY CO., HERMANTOWN	40	X	11/27/90			9/29/86	2.150	0.025	2.250	XF	XF	R	R	X	X	R	R		C
ARSENIC SITES - ABOVE GROUND, STATEWIDE ^ (MN DEP. OF AG.)								0.415		XS			OS						
ARSENIC SITES - BELOW GROUND, STATEWIDE ^								0.812		XS		OS	OS						
ASHLAND OIL CO. - COTTAGE GROVE	34		3/26/85						0.367	X	R	R	R			R	R		C,D
ASHLAND OIL CO. - PINE COUNTY	22		12/18/84			6/5/92			0.271	X	X	X	O			R	R		C,D
ASHLAND OIL/PARK PENTA/SONFORD PROD., ST. PAUL PARK	32		6/22/93						1.100	X	R	R	R			R	R		C,D
ASHLAND REFINERY, ST. PAUL PARK	32			1/22/91					3.000	X	O	R	R	O	R	R	R		C,D
B.J. CARNEY COMPANY, MINNEAPOLIS	38								0.010	O									C,D
BASSETT CREEK/IRVING AVENUE DUMP, MINNEAPOLIS	10								0.234	X						O			C,D
BATTLE LAKE AREA SAN. LDFL., OTTER TAIL COUNTY	34		4/23/91		4/23/91			0.119		XS	O	O							C,D
BAYTOWN TWP. GRND. WTR. CONTAMINATION, WASHINGTON CO.	38	X	8/27/91		12/17/91		0.050	0.410	0.250	XS	R	R	R	OS		R	R		C,D
BECKER COUNTY SANITARY LANDFILL	28									X	O			OS					C,D
BELL LUMBER AND POLE CO.	48	X	2/28/84	5/30/85					6.000	X	X	O	O		O	O	R		C,D
BEMIDJI GAS MANUFACTURING	14																		C,D
BOISE CASCADE/MEDTRONIC, FRIDLEY	59	X		1/24/84					2.000	C	C	X	X		IO	O	O		B
BOISE CASCADE/ONAN, FRIDLEY	59	X		12/28/84					3.800	C	C	X	X		IO	O	O		B
BOISE CASCADE PAINT WASTE DUMP, RANIER	17		2/26/85	6/25/85					2.000	X	X	X	X			O	O		B
BRAINERD FORMER CITY DUMP	38																		C,D
BROOKLYN PARK DUMP, HENNEPIN CO.	36						1.200	0.025	0.160				OF						C,D
BUECKERS #1 SANITARY LANDFILL, STEARNS COUNTY	25		10/11/90		10/11/90			0.025		OS									C,D
BURLINGTON NORTHERN, BRAINERD (HAZ WASTE DIV.)	47	X	11/28/83	3/26/85		6/10/86			2.000	X	X	X	O		IO	O	O		B
BURLINGTON NORTHERN CAR SHOPS-BRAINERD	38								0.320	O					IO				C,D
BURLINGTON NORTHERN CAR SHOP-WAITE PARK	38		10/22/85				0.030		2.000	X	O	R	R		R	R	R		C,D
BURNSVILLE SANITARY LANDFILL	43		4/28/87			4/19/92			1.000	X	X				O	O	O		C,D
CASTLE ROCK GND. WTR. CONTAM. (REFER TO DEPT. OF AG.)	25							0.017		O			O	OS	O				C,D
CEDAR SERVICE, MINNEAPOLIS (REFER TO DEPT. OF AG.)	17														O	O			C,D
CENTRAL COOP. OIL, MEDFORD (REFER TO DEPT. OF AG.)	16									X	X	X	O	O	O	O			C,D
CLAY COUNTY SANITARY LANDFILL	17									O									C,D
CONOCO INC. - WRENSHALL REFINERY	41		6/23/87						0.800	X	O	R	R		R	R	R		C,D
CONTROL DATA CORP. - PRINTED CIRCUITS OPERATION	6			4/26/88		6/12/90			1.620	X	X	X	O		IO	O	O		C
CROW WING COUNTY SANITARY LANDFILL	14																		C,D
DAKHUE SANITARY LANDFILL, DAKOTA COUNTY-COVER	42 **	X		6/23/87	9/27/88	6/30/91	3.258	0.030	0.300	XF	XF	XF	XF			OSF	OSF		C,D
-GND WTR-						6/30/93				XF	XF	XF	OF						
DEALERS MANUFACTURING CO., FRIDLEY	28																		C,D

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

October 1993

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLAS\$ (MILLION)	MERLAS\$ (MILLION)	ESTIMATE OF RESP. PARTY \$ (MILLION)	CLEANUP PHASE								CLASS
										RI	I	FS	RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	
DODGE COUNTY SANITARY LANDFILL	25																	C,D
DULUTH AIR FORCE BASE	21		8/28/90						3.5	C	O	R	R		R	R	R	C,D
DULUTH FORMER CITY DUMP	28		8/23/88		11/22/88			0.05	0.17	O	R	R	R		R	R	R	A,C,D
EAST BETHEL DOMOLITION LANDFILL	31	X		4/28/87		12/30/92			3.1	X	X	Q	R		R	R	R	C,D
EAST MESABA SANITARY LANDFILL	14																	C,D
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		B
8701 CONCORD BLVD. DUMP - INVER GROVE	28																	C,D
ELECTRIC MACHINERY, ST. CLOUD	38		3/25/86			1/5/89			2.500	X	X	X	X		IO	O	O	B
ELECTRONIC INDUSTRIES, INC., NEW HOPE (HAZ WASTE DIV.)	26			1/24/84					0.150	O	O	C	O		O	O	O	C
ELK RIVER SANITARY LANDFILL	25									O								C,D
ELYSIAN FORMER CITY DUMP	23																	C,D
FMC CORP. - FRIDLEY PLANT (VAULT)	66	X		6/08/83		12/3/85			6.000	C	C	X	X			O	O	B
(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			1.210	X	X	X	X			O	O	B
FARIBAULT MUNICIPAL WELL FIELD	36									O								C,D
FERGUS FALLS SANITARY LANDFILL, OTTERTAIL CO.	25									O								C,D
FLYING CLOUD SANITARY LANDFILL, EDEN PRAIRIE	40			9/25/85					10.000	X	X	X	X		R	R	O	C
FOOT, S.B. TANNING SLUDGE DISPOSAL AREA, RED WING	25																	C,D
FREEWAY SANITARY LANDFILL, BURNSVILLE	46	X	2/25/86					0.228	1.400	X	R	R	R		O	O	O	C,D
FRIDLEY COMMONS PK. WELL FIELD, FRIDLEY	42																	C,D
GENERAL COATINGS	10									O								D
GENERAL FABRICATION, FOREST LAKE	34																	C,D
GENERAL MILLS, MINNEAPOLIS	39	X		10/23/84					1.533	C	C	X	X		IO	O	O	B
GLIDDEN, MINNEAPOLIS	11									O								C,D
GOFER SANITARY LANDFILL, MARTIN COUNTY	26																	C,D
GOPHER OIL-DELAWARE, MINNEAPOLIS	3		8/28/90						2.000	X	O	R	R		R	R	R	C,D
GOPHER OIL-THORNTON, MINNEAPOLIS	3									O								C,D
GRAND RAPIDS AREA SANITARY LANDFILL	34									X	X	O						C,D
GREATER MORRISON SANITARY LANDFILL, MORRISON COUNTY	29																	C,D
HANSEN AND MANKATO SANITARY LANDFILL, BLUE EARTH CO.	19																	C,D
HASTINGS FORMER CITY DUMP	31								0.135	O	C	R	R			O	R	B
HIGHWAY 96 DUMP	31		7/22/86					0.100	1.000	X	O	R	R		IO	R	R	C,D
HONEYWELL, INC.- GOLDEN VALLEY PLANT	31		5/30/85	11/19/85		6/19/90			3.030	C	C	C	X		IO	O	O	C
HOPKINS AGRICULTURAL CHEM./ALLIED CHEM., MINNEAPOLIS	3		6/25/85						1.000	X	X	X	X			O	X	B
HOPKINS SANITARY LANDFILL	15			6/30/88					2.500	O								C,D
HOUSTON COUNTY SANITARY LANDFILL	25		6/28/92						0.600	O	R	R	R	X				C,D
HOWE CHEMICAL SOIL CONTAM. (DEPT. OF AG)	12								0.115	X	X	X	O			R		B
HUTCHINSON TECHNOLOGY, INC., HUTCHINSON	9								0.550	C	C	C	O		IO	O	O	B
INTERPLASTIC CORP., MINNEAPOLIS	18		7/23/91						0.425	O	R	R	R	R	R	R	R	C,D
IRONWOOD SAN. LDFL. (ADV. TRANSFMR.), SPRING VALLEY	34			8/26/86					1.400	X	X	X	X	X	IO	O	O	B

**STATUS OF MINNESOTA HAZARDOUS WASTE SITES**

**October 1993**

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLAS (MILLION)	MERLAS (MILLION)	ESTIMATE OF RESP. PARTY \$ (MILLION)	CLEANUP PHASE								CLASS			
										RI	I	FS	RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR		RA O&M		
ISANTI-CHISAGO SANITARY LANDFILL-COVER- -GND WTR-	34		6/16/88			2/19/92			0.109	0.800	X	X	X	O		R	R	R	R	C,D	
ISANTI RUMPEL	13		7/1/83	11/12/87		3/15/91			0.015	0.404	X	X	X	R		R	R	R	R	C,D	
ISANTI SOLVENT SITE	30		7/17/83	11/12/87	9/28/83	6/15/90	1.250		0.015	0.982	X	X	X	R		R	R	R	R	C,D	
JOSLYN MFG. & SUPPLY CO., BROOKLYN CENTER	44	X	9/27/83		7/31/89					8.500	X	X	X	O		IO	O	O	O	C	
KANABEC CO. SANITARY LANDFILL, ARTHUR TWP.	21										O					O				C,D	
KANDIYOHI COUNTY SANITARY LANDFILL	41										O									C,D	
KAPLAN, H.S. SCRAP IRON AND METAL CO., ST. PAUL	4									0.200	X	X								C,D	
KARLSTAD SANITARY LANDFILL, KITTSOON COUNTY	10																			C,D	
KILLIAN SANITARY LANDFILL, TODD COUNTY	19								0.020											C,D	
KLUVER SANITARY LANDFILL, DOUGLAS COUNTY	39														X					C,D	
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	R	C	
KOOCHICHING COUNTY SANITARY LANDFILL	27																			C,C	
KOPPERS COKE, ST.PAUL	55	X	3/25/86							1.000	X	X	R	R		R	R	R	R	C,D	
KORF BROS. SANITARY LANDFILL, PINE COUNTY	25								0.025											C,D	
KUMMER SANITARY LANDFILL, BELTRAMI CO.-DRINKING WTR. -COVER -GND. WATER	42 **	X	6/26/84		8/28/84	6/12/85 9/30/88 8/28/90	2.033 3.390 1.990		0.067 0.274 0.191	0.245		XF	XF	XF	XF	IO			OSF	OSF	C,D
KURT MANUFACTURING, FRIDLEY	31 **	X	4/24/84	8/24/84		5/13/86				0.550	X	X	O	O		IO	O	O	O	B	
La GRAND SANITARY LANDFILL, DOUGLAS COUNTY	34 **	X	7/28/87		9/22/87	9/30/92	0.600				XF	XF	XF	OF					OF	C,D	
LAKELAND GROUND WATER CONTAMINATION	38					4/21/91		2.200			XS	XS	XS	XS	XS				XS	XS	A,C,D
LANSING GROUND WATER CONTAMINATION	17		4/21/89					0.455	0.600		X	X	X	O	IO				R		C,D
LEECH LAKE SANITARY LANDFILL, HUBBARD CO.	25							0.030			XS										C,D
LeHILLIER/MANKATO	42 **	X				9/30/85	2.900	0.172			XF	XF	XSF	XSF	XS	XSF	OSF	OSF	OSF	B	
LEWISTON GROUNDWATER CONTAM. (REFER TO DEPT. OF AG.)	34							0.002	0.080		O	O	O	O							C,D
LINDALA SANITARY LANDFILL, WRIGHT COUNTY	29																				C,D
LONG PRAIRIE GROUND WATER CONTAMINATION	32 **	X				6/27/88	0.750	0.300			XF	XF	OF	OF	XS				R	R	C
LOUISVILLE SANITARY LANDFILL, JORDAN	29		9/23/86							0.360	X	O	R	R		R			R	R	C,D
MacGILLIS & GIBBS CO., NEW BRIGHTON -OPERABLE UNIT #1 -OPERABLE UNIT #2 (EPA LEAD)	48 *** *	X	2/28/84		11/28/89	12/31/92 9/30/91	0.575	0.310		0.030	XF	XF	OF	OF							C,D
-OPERABLE UNIT #3	*										OF	OF									C,D
McGUIRE WIRE SALVAGE SITE, MORA	20		8/28/90		8/28/90				0.266		XS	XS	OS								C,D
McLAUGHLIN GORMLEY KING, MINNEAPOLIS	4		1/22/85	11/19/85		9/28/87				0.526	X	X	X	X		IO	O	O	O	B	
MEEKER COUNTY SANITARY LANDFILL	15																				C,D
METALS REDUCTION, ST.PAUL	2																				C,D
MIBCO, MINNEAPOLIS	40																				C,D
MINNEAPOLIS COMM DEV. AGENCY/FMC, MINNEAPOLIS	1			11/26/85						1.000	X	X	X	O					O	O	B
MINNEGASCO, MINNEAPOLIS	42		6/24/86							5.000	X	O	O	O		R			R	R	C,D
NL INDUSTRIES/TARACORP/GOLDEN AUTO, ST. LOUIS PARK	40	X	1/11/84	2/26/85		9/23/88				0.985	X	X	X	X					O	O	C
NORTHWEST REFINERY, FORMER, NEW BRIGHTON	9		4/22/86							0.100	O	R	R	R					R	R	C



STATUS OF MINNESOTA HAZARDOUS WASTE SITES

October 1993

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								CLASS
										RI	I	FS	RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR	
NORTHWOODS SANITARY LANDFILL	18																	C,D
NUTING TRUCK AND CASTER CO.	38	X	9/22/83	4/26/84					0.180	X	X	X	X		IO	O	O	B
OAK GROVE SANITARY LANDFILL	43	X	8/28/84		9/27/84	12/21/90	1.277		0.400	XF	XF	X	X		O	O	O	C,D
-FINAL COVER-						9/30/88	0.256	0.078	5.000		XF	X	X					
OAKDALE DUMP	59	X		7/26/83					16.000	C	C	X	X		IO	O	O	B
OLD FREEWAY DUMP	66																	C,D
OLMSTED COUNTY SANITARY LANDFILL	34	X	7/25/89	12/19/89			0.037		1.800	X	O							D
PCI, INC., SHAKOPEE	52			6/25/85				0.020	0.250	C	C	C	X			O	O	B
PERHAM AIRPORT	23																	C,D
PERHAM ARSENIC SITE -GROUND WATER	38	X	7/26/83		9/22/83		0.200	0.225		OF	OF							B,C,D
PICKETT SANITARY LANDFILL, HUBBARD COUNTY	34		4/26/88						0.410	O	R	R	R	R	R	R	R	C,D
PIG'S EYE LANDFILL	43						0.025											D
PINE BEND/CROSBY SLF, INVER GROVE HEIGHTS--DRINKING WTR	52	X	10/22/84	10/23/90		9/30/91		0.150	5.000	X	X	O	O	O	O	R	R	C,D
-SOURCE										X	O							
PINE LANE SANITARY LANDFILL, CHISAGO COUNTY	25									X								C,D
PINE STREET DUMP	32																	C,D
PIPESTONE COUNTY SANITARY LANDFILL	27																	C,D
PONDEROSA SANITARY LANDFILL	25									R								C,D
RED ROCK SANITARY LANDFILL	29		12/17/91		6/9/92					R	R	R	R	O				C,D
REDWOOD COUNTY SANITARY LANDFILL	15																	C,D
REILLY TAR, ST. LOUIS PARK	59	X	12/18/84	9/22/86			1.972		5.000									B,C,D
-PRAIRIE DU CHIEN-JOR. AQUIFER																		
-SLP # 10 & #15 GAC. ROD						6/6/84				X	X	X	X	O	IO	O	O	
-SLP #4-GRAD. CONT.										X	X	X	X	O	IO	O	O	
-SLP #23 SOURCE CONT.										X	X	X	X	IO	O	O	O	
-DRIFT-PLATTEVILLE AQUIFER	59	*																
-GRADIENT CONT. -S.L.P. #422						5/15/86									IO	O	O	
-SOURCE CONT. -S.L.P. #421															IO	O	O	
-NORTHERN AREA:																		
-DRIFT AQUIFER						9/30/92				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		R	R		
-OPEN TO ST. PETER										O	O	R	R		R	R		
-NEAR SURFACE CONTAMINATION	59	*								O	O	O	O					
-BIOREMEDIATION-SOURCE -UNIV. OF MINNESOTA STUDY	59	**						0.070										
-UNIV. OF NORTH CAROLINA STUDY																		

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

October 1993

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLAS (MILLION)	MERLAS (MILLION)	ESTIMATE OF RESP. PARTY \$ (MILLION)	CLEANUP PHASE								CLASS
										RI	FS	RD	RA	DRINKING WATER	GROUND WATER RA	RA MONITOR	RA O&M	
-EPA SITE-FUNDED BIO-VENTING STUDY -MPCA STUDY RICE MUNICIPAL WELL #2 RITARI POST AND POLE ROBBINSDALE DEVELOPMENT SITE	22 30 36		5/21/91 2/25/86		5/21/91 4/22/86		0.862	0.010		XS XF OS	XS OF	XS	OS					D C,D C
ROCHESTER GAS MFG. -ZUMBROE RIVER WASTES -RIPARIAN WASTES ST. AUGUSTA SAN. LDFL./ENGEN DUMP, STEARNS COUNTY ST. LOUIS RIVER/INTERLAKE, DULUTH -TAR SEEPS OPERABLE UNIT	37 34 32 **		7/23/91 3/26/91 3/26/91			9/14/90 9/14/90	0.120 1.140	0.095	0.750 0.050 0.500 0.600	X O X X			R R	R R	R R	R R	C,D C,D C,D	
-SOIL OPERABLE UNIT -SEDIMENTS OPERABLE UNIT ST. LOUIS RIVER/U.S. STEEL, DULUTH	32	X	5/25/93 3/26/93 5/25/93 9/27/83	3/26/85		2/17/89			-0.650 5.000	O O O		X O	O O		R R	R R	C	
ST PAUL LEVEE PROPERTY, ST. PAUL ST. PAUL PARK GROUND WATER CONTAMINATION ST. REGIS PAPER, CASS LAKE SALOL SANITARY LANDFILL, ROSEAU CO. SAUK CENTRE SANITARY LANDFILL	20 36 53 22 38		6/27/89 4/24/84 9/27/88	2/26/85				0.433	10.000 0.543	XS X O XS	XS X O	OS X R R	OS X	XS IO R	OS O R	OS O R	C,D A,C,D B C,D C,D	
SCHLOFF CHEMICAL, ST. LOUIS PARK SCHNITZER IRON & METAL CO., ST. PAUL SHAFER METAL RECYCLING, MINNEAPOLIS SHELDAHL, NORTHFIELD SIBLEY COUNTY SANITARY LANDFILL	7 10 41 21 9		3/27/90 6/26/91	7/28/87				0.175	0.200 0.550 0.520 0.445	OS X O O	OS		R R	IO R	R R	R R	A,C,D C,D C,D C,D C,D	
SOUTH ANDOVER, ANDOVER -OPERABLE UNIT #1 -OPERABLE UNIT #2 (EPA LEAD) STILLWATER FORMER CITY DUMP SPRING GROVE MUNICIPAL WELL FIELD SUPERIOR PLATING, INC., MINNEAPOLIS	35 * 27 28 6	X	6/26/84 1/27/91			6/9/92 12/24/91 3/23/88 2/23/88	0.084 0.070	0.100		XF XF C O	XF XF	O O		IO R	IO R	OF R	OF R	C,D C,D C C,D
3M CHEMOLITE DISPOSAL SITE, COTTAGE GROVE 3M KERRICK DISPOSAL SITE TELLJOHN SANITARY LANDFILL TONKA MAIN PLANT TONKA/WOYKE SITE	33 9 17 31 9		1/22/85 1/25/84 7/22/86 5/30/85	5/30/85 1/25/84					0.500 0.200 0.750 0.500	X X X X	X X	X X	X X	IO O	O O	O O	C B C,D C B	
TOWER ASPHALT TRIO SOLVENT SITE TWIN CITIES AIR FORCE RESERVE BASE, MINNEAPOLIS TCAAP/NEW BRIGHTON/ARDEN HILLS/ST. ANTHONY SITE OFF TCAAP: -GROUND WATER	40 21 34 59 - **		8/26/86 11/28/89		1/24/89	4/27/93		0.040	0.040 0.560 3.550 55.000	O X O	X X O	X X R	X R	X IO	X R	O R	D B B,C,D C,D	
							2.884			XF	R	R	R	R	R	R		

STATUS OF MINNESOTA HAZARDOUS WASTE SITES

October 1993

SITE NAME/LOCATION	HRS SCORE	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLAS (MILLION)	MERLA\$ (MILLION)	ESTIMATE OF RESP. PARTY \$ (MILLION)	CLEANUP PHASE								CLASS		
										RI	I	FS	RD	RA	DRINK-ING WATER	GROUND WATER RA	RA MONITOR		RA O&M	
-SEWER																				
-ARDEN MANOR																				
-NEW BRIGHTON WELL #7	- *					4/21/89	0.431													
-NEW BRIGHTON CARBON (TEMPORARY 1983)	- *																			
-ARDEN HILLS PIPELINE	- **						0.237	0.024												
-YEPMA CONNECTION								0.004												
-ST. ANTHONY INTERCONNECTION	- **						0.140	0.014												
-NEW BRIGHTON PERMANENT CARBON									7.900											
-ST. ANTHONY CARBON	- **						3.300	0.332	3.000											OF
-OPERABLE UNIT 1																				
-OPERABLE UNIT 3																				
ON TCAAP:			8/26/86	12/31/87		9/30/92														
-OPERABLE UNIT 2						9/25/87														
-SITE A REMOVAL AUTHORITY																				
-SITE D						6/27/89														
-SITE F RCRA ACTION																				
U.S. NAVAL INDUS. RES. ORD. PLT. (NIROP), FRIDLEY	63	X	5/22/84	2/26/91		9/28/90			7.422											C,D
U OF MINNESOTA - ROSEMOUNT RESEARCH CENTER	46	X	9/25/84	5/30/85		6/29/90			10.600											C
UNION SCRAP II & III, MINNEAPOLIS	12																			C,D
VALENTINE-CLARK, ST. PAUL	4							0.050												A,C,D
VOSS SCRAPYARD	48																			C,D
WABASHA COUNTY SANITARY LANDFILL	22																			C,D
WADENA SANITARY LANDFILL	25																			C,D
WAITE PARK GROUND WATER CONTAMINATION	32	X	10/22/85		11/25/86			0.200	3.000											B
WASECA COUNTY SANITARY LANDFILL	13																			C,D
WASHINGTON COUNTY LANDFILL, LAKE ELMO	42	X		10/24/84		9/27/90			3.000											C
WASTE DISPOSAL ENGINEERING	51	X	9/24/91	3/21/84	3/22/88	12/31/87			8.000											C
WEISMAN SCRAP, WINONA	25		3/25/86						0.500											B
WEST DULUTH INDUSTRIAL SITE	11		1/28/86	9/08/86	3/26/86			1.100	0.810											B
W. LAKE SUPERIOR SANITARY DISTRICT LDFL./DULUTH DUMP	34																			C,D
WESTLING MANUFACTURING, PRINCETON	32								0.100											C,D
WEST RIVER PARKWAY, MINNEAPOLIS	10																			C,D
WHITTAKER CORPORATION, MINNEAPOLIS	40 **	X	4/23/85						1.505											B
(FORMER) WHITE HOUSE RESTAURANT	39																			C,D
WINDOM DUMP	38	X	6/24/86			4/7/89			1.250											B
WINONA COUNTY SANITARY LANDFILL	34		3/26/85						0.400											B
WINONA GROUND WATER CONTAMINATION	25		2/26/91		5/21/91			0.350	0.010											A,C,D
WINONA MUNICIPAL WELL FIELD, WINONA	42																			C,D
WOODLAKE SANITARY LANDFILL, MEDINA	16																			C,D
YONAK SANITARY LANDFILL, WRIGHT COUNTY	28																			C,D

**STATUS OF MINNESOTA HAZARDOUS WASTE SITES**

**October 1993**

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

SITES ADDED TO THE PLP IN JUNE 1993

BEMIDJI GAS MANUFACTURING—HRS @ 14  
 OLD FREEWAY DUMP—HRS @ 66  
 STILLWATER CITY DUMP—HRS @ 27  
 VOSS SCRAPYARD—HRS @ 48  
 (FORMER) WHITE HOUSE RESTAURANT—HRS @ 39

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	TELLJOHN
GREATER MORRISON	WASECA COUNTY
HANSEN-MANKATO	W. LAKE SUP. SAN. DIST. LDFL.
HOPKINS	WOODLAKE
KANABEC	YONAK
KANDIYOHI COUNTY	
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

SITES DELETED FROM THE PLP AS OF JUNE 1993

ADRIAN MUNICIPAL WELL FIELD  
 ATWATER MUNICIPAL WELL FIELD  
 FRITZ CRAIG SALVAGE OPERATION  
 DM&IR CAR SHOPS  
 DNR-DUXBURY PESTICIDE SITE  
 FORD TWIN CITIES ASSEMBLY SITE  
 HWK/MEEKER/DESIGN CLASSICS/LITCHFIELD SITE  
 JACKSON MUNICIPAL WELL FIELD  
 LUND'S FARMER SEED AND NURSERY  
 OWATONNA DUMP SITE

## STATUS OF MINNESOTA HAZARDOUS WASTE SITES

October 1993

	NPL	RFRA ISSUED	CONSENT ORDER	DIR EXECUTED	ROD ISSUED	CERCLAS (MILLION)	MERLAS (MILLION)	ESTIMATE OF RESP. PARTY \$ (MILLION)	RP & GOV FIN CODE	CLEANUP PHASE							
										RI	FS	RD	RA	DRINK-ING WATER	GROUND WATER RA	RA ONIT	RA O&M
NUMBER OF SITES THAT HAVE INITIATED "RI'S" _____	143								O	42	28	18	25	8	13	49	44
NUMBER OF SITES THAT HAVE INITIATED "FS'S" _____	114								X	75	60	52	41	7	3	2	1
NUMBER OF SITES THAT HAVE INITIATED "RD'S" _____	102								C	12	12	5	1	0	0	0	0
NUMBER OF SITES THAT HAVE INITIATED "RA'S" _____	101								OS	5	2	4	6	3	2	1	1
NUMBER OF SITES INITIATING A DRINKING WATER "RA" _____	27								OF	1	3	2	4	0	0	3	2
NUMBER OF SITES INITIATING A GROUND WATER "RA" _____	77								XS	9	5	4	3	5	0	1	1
NUMBER OF SITES WITH INITIATED "RA" MONITORING _____	103								XF	17	19	9	3	1	0	0	0
NUMBER OF SITES INITIATING "RA" OPER. AND MAINT. _____	84								XSF	0	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	13	31	37	3	30	45	43
									IO	0	0	0	1	5	33	1	1
TOTAL NUMBER OF SCORED SITES _____	184	43	82	48	21	50	33.994	12.854	270.367	162	142	127	125	34	82	104	95

### 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

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# **Minnesota Superfund**

## **A Report on Use of the Minnesota Environmental Response, Compensation and Compliance Fund during Fiscal Year 1993**

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**Prepared by the Minnesota Pollution Control Agency and the  
Minnesota Department of Agriculture**



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